## Rare section

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## MAP or HINDOOSTAN;

OR THE
MO GU LE MP IR E:

## With an INTRODUCTION, illustrative of the Geography and Present Division of that Country:

And a MAP of the Countries situated between the Head of the Indus, and the Caspian Sea.

Br IA MES $\bar{R} E N N E L L$, F.R.S. Late Major of Engineers, and Surveyor General in Bengal:-

> The flow'r and choice
> Of many Provinces from bound to bound, From Arachosia, from Candaor east And Margrana, to the Hyrcanian Cliffs Of Caucasus
> From Samarchand́ by Oxus, Temir's Throne, To Agra and Labor of Great Mogul,
> Down to the Golden Chersonese And utmost Indian Isle Tafrobane.


Milton.

## TO WHICH IS ADDED,

An Appendix, containing an Account of the Ganges and Burrampooter Rivers.

- LONDON:

Printed for the Author: $\qquad$
And Sold by George Nicola, Bookseller to his Majesty, Pall-Mall; and W, Richardson; Royal Exchange. MDCCLXXXVIII.

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# TO <br> Sirjoseph banks, bart. PRESIDENT of the ROYAL SOCIETY, \&cc. \&cc. 

THIS ATTEMPT<br>TO IMPROVE THE GEOGRAPHY OF INDIA,<br>AND THE NEIGHBOURING COUNTRIES,

IS INSCRIBED,
BY HIS MUCH OBLIGED, AND
FAITHFUL FRIEND AND SERVANT,

## $\begin{array}{lllllll}\text { P } & \mathrm{R} & \mathrm{E} & \mathrm{F} & \mathrm{A} & \mathrm{C} & \mathrm{E} .\end{array}$

$A$S almoft every particular relating to Hindóostan is bècome an object of popular curiofity, it can hardly be deemed fuperfluous to lay before the public an improved Syftem of its Geography. Indeed, the flattering reception that was given to my former work, on the fame fubject, has, in a manner, made that an object of duty, which was originally an object of choice: for the public̣ having condefcended to receive the imperfect information afforded them in 1782 , I felt an indifpenfible obligation on me, to render that information more perfect, whenever I might poffefs the means of accomplifhing it. I hefitated only at the meafure of fubjecting. them to an additional tax ${ }_{2}$ fo recently after the payment of the formèr one.

A large collection of materials of various kinds, having, been added to my former flock, I have been enabled to produce a work of a more perfect kind than the former; and have therefore drawn it on a larger fcale: the furface of the prefent map, exceeding that of the former one, in the proportion of 2 and a quarter to 1 . The fcale of this map, is one inch and a half to an equatorial degree : and:
and the quantity of land reprefented in it, is about equal to one half of Europe. It is contained in four large theets, which may either be joined together for the purpofe of bringing the whole into one point of view; or bound up feparately, in an Atlas; as may fuit the fancy or convenience of the purchafer.

By the aid of a feries of obfervations of latitude and longitude, taken by Capt. Huddart, along the Malabar coaft, or weftern coalt of India, the form of the peninfula, \&c. is now brought very near to the truth: and the eaftern coaft, by the obfervations of Col. Pearfe, is much improved, in the diftribution of its parts, although its general form has undergáne but little alteration. A meafured line has alfo been drawn from the Bengal provinces to Nagpour, in the very centre of India: which has not only eftablifhed an important geographical point, in a part where it was moft wanted; but has been the means of furnifhing a great deal of matter, towards filling up the vacant intervals on three fides of that point. Laftly, the war with Hyder Ally and Tippoo Sultan, hiș fucceffor, has produced much new geographical mat$\mathrm{ter}_{2}$ in variqus parts of the peninfula, by the marches of the different armies, and their detachments; particularly that of Col. Fullarton, in the fouthern provinces and Coimbettore. Thefe are the moft material acquifitions to the prefent map, as they, in effect regulate a confiderable
fiderable patt of the general outline, and determine the proportions of fome of the principal nembers of it. But 'of the kind of naterials, which without affecting the general proportions of the map, ferve the purpofe of filling up the void faces in it, there' will be found very great abündarice. In particular, Guzerat, and the Rajpoot provinces, have andergone very connfiderable improvement; as well as the Panjab country and Sindy. The upper part of the courfe of the Ganges, to the cow's mouth, or cavern through which the Ganges paffes ; and the courfe of the Gogra river to its fountains; are both inferted fron the work of M. Bernoulli. In Chort, additions and corrections are diffeminated over the whole map: and in general, if we except the fouth part of Beraf, the wefterin part of the peninfula, and the countries. Bordering on the river Indus, and the Panjab, the map is filled up in füch a degree, as to have no confiderable: blanks in it.

As Mr. Forfter's route from India to Rulfia furnifhed fome new ideas, and elucidated many former paffages, F judged it proper to exprefs his route to the Cafpian fea, on a feparate map; and at the fame time to add to $\mathrm{it}_{\text {, }}$ the countries contiguous to Hindooftan on the north and north-weft; fo as to include Samatcand, and the marchess: of Alexander from the borders of the Cafpian fea to the: river Iaxartes (the modern. Sirr).

In the divifion of Hindoostan into foubahs, \&c. I have followed the mode adopted by the Emperor Acbar, as it appears to me to be the moft permanent.one: for the ideas of the boundaries are not only impreffed on the minds of the natives by tradition, but are alfo afcertained in the Ayin Acbaree; a regifter of the higheft authority. But for the lower parts of the Deccan, and the peninfula in general, this fandard being wanting, I had recourfe to the beft information I. could get, which was not, indeed, of the moft perfect kind: and therefore I directed my attention principally to the ftate of the modern divifions in thofe quarters, the impreffing a clear idea of which, is one principal aim of the work.

It muft be obferved, that fince the empire has been, difmembered, a new divifion of its provinces has alfo taken; place ; by which means, fome foubahs now form a part of the dominions of three or more Princes; and very few are preferved entire. Thefe modern divifions are not only diftinguifhed in the map by the names of the prefent poffeffors; but the colouring alfo is entirely employed in facilitating the diftinctions between them.' So that the modern divifions appear, as it were, in the fore ground: and the ancient ones in the back ground; one illuftrating and explaining the other.

Confidering the valt extent of India, and how little its interior parts have been vifited by Europeans, till the
latter part of the laft century, it ought rather to furprife us thatt fo much geographical matter fhould be collected during fo fhort a period; efpecially where fo little has been contributed towards it by the natives themfelves, as in the prefent cafe. Indeed, we muft not go much farther baek than thirty-five years, for the matter that forms the bafis of this Map. And it muft not be forgotten, that the Eaft India Company hiave caufed a mathematical furvey to be made, at their own expence, of a tract equal in extent to France and England taken together; befides. tracing the outline of near 2000 miles of fea coaft; and a chain of iflands in extent 500 miles more *.

In general, I have acknowledged in the courfe of the: Memoir, the affiftance that I have received from the different Gentlemen, who have obligingly furnifhed me

[^0]with the materials, therein difcuffed. But there were other kinds of affiftance afforded, for which no opportunities for acknowledgement occurred; fuch as the furnifhing of ufeful hints, and correcting of errors, into, which I had unavoidably fallen, through ignorance of local circumftances, or hiftorical facts. The Gentle-: men to whom I fland particularly indebted on this fcore, are, Mr. Francis Ruffell, Mr. David Anderion, and Mr., James Anderfon *; Capt. Jonathan Scott, Mr, Wilkins, Mr. Middleton, Col. Popham, and the late Col. Camac; all of the Bengal eftablifhment: Mr. Benfley, and Mr. Inglis, both of the Eaft India Direction': Mr. John Sulivan of the Madras eftablihment, and Mr. Callander late of Bombay.

To Lord Mulgrave I am indebted for a copy of Mr, Forfter's route from Jummoo to the Cafpian fea: as well as for his Lordhip's very ready communication of every fpecies of information that could be of fervice to the work in queftion.

The routes of Mr. Smith ${ }_{x}$ and of General Goddard acrofs the continent,' from the Jumna river to Poonah and Surat, contain muck uifeful matter; and have been the means of determining a number of geographical points.

[^1]A MS.

A MS. account of the country of the Rajpoots, and other provinces, on the fouth, and SW of Agra; together with a map, both of them by P. Wendell *, were of very great ufe in defcribing the geography of thofe parts. And to render the MS. more valuable, there has been added to it, Mr. James Anderfon's account of the changes that have taken place fince that period, in confequence of Sindia's attacks, and negociations. The former was communicated by Col. Popham, and the latter by the Right Hon. Charles Greville.

Mr. Dalrymple, to.whom I made my acknowledgments for the affiftance afforded me, in the courfe of my former work, has, on the prefent occafion, not only procured for me every new material that fell under his notice, but inftructed me how to procure others, and to draw information from various fources, that I was before ignorant of. To his valuable, and perhaps unequalled, collection of MS. charts, and of voyages and travels, I have alfo had accefs, on all occafions: and I wilh to be underftood to fpeak with the utmoft fincerity, when I fay, that without this affiftance, my performance mult have been extremely imperfect: or in other words, that Mr . Dalrymple is intitled to the thanks of the public, in a pofitive degree; although my fhare of thofe thanks, may be only comparative.

Although the new tranflation of the Ayin Acbaree may have in part fuperfeded the value of the extracts furnifhed me on the former occafion by Mr. Boughton Roufe, as the tranflation contains the whole fubjeet in a connected form ; and was alfo a tafk which none'but a perfor who devoted his whole time to it, could effect; yet I am by no means unmindful of my former obligations to this Gentleman.

I have borrowed largely from M. D'Apres' New Neptune Orientale, for the fea coafts and inlands: and alfo, though in a fmaller degree, from M. D'Anville's maps of Afia and India publifhed in 1751 and 1752 . When it is confidered that this excellent Geographer had fcarccly any materials to work on for the inland parts of India, but fome vague itineraries, and books of travels, one is réally aftonifhed to find them fo well defcribed as they are. It is with regret that I find myfelf obliged to differ in opinion from him concerning fome pofitions in ancient Geography : I mean, that of Palibothra, in particular; and fome few others. I have generally avoided all difquifitions of this kind, from a conviction of the general obfcurity of the fubject; and which even an intimate knowledge of the Indian languages would not enable me to clear up: for the fimilitude between ançient and modern names, is very fallacious, unlefs ftrongly corroborated by fituation. But we cannot well refufe our affent to the opinion that Ptole-
my meant the Suttuluz, or Setlege by the Zaradrus; the Rauvee by the Rbuadis, or Adaris; and the Fenaub, or Cbunaub by the Sandabalis: becaufe not only the names, but the pofitions have an affinity to each other. And yet this is a part of Ptolemy, which M. D'Anville difcredits the moft: but the reafon was, that he was not himfelf acquainted with the true names of the rivers.
M. Buffy's marches in the Deccan afford data for fixing the pofitions of many capital places there; particularly Hydrabad, Aụrungabad, Bifnagưr, and Sanore. But ftill there are plans of fome of his marches wanting, which, could they be procured, would throw much light on the geography of the peninfula, and the Deccan: fuch as that from Pondicherry to Cuddapah, Adoni, and Hydrabad; that from Aurungabad to Nagpour ; and the cam; paign towards Poonah. There are alfo exifting; itineraries kept by very intelligent people, who have travelled from Pondicherry, direct to Delhi ; but I know not how to fet about procuring them. The public records at Goa, I am informed; contain a valt fund of geographical knowledge; and yet we are more in the dark; concerning the country on that fide of the peninfula; than we are with refpect to the centre of the Deccan.

Could the whole mals of geographical matter that refpects India (much of which, is probably in the hands of people who are ignorant of its value) be collected, I make
no doubt but that very complete maps of the reveral provinces of it, might be conffruted, on fcales large enough for any ordinary purpofe.

It is intended by this Memoir to particularize the feveral authorities from whence the pofitions in the map aredrawn; together with the manner of comparing them, in cafes where they difagreed: as alfo, the manner of combining them, when more than one circumftance was required to eftablifh a pofition. By this means, the authority for each particular, may be known to thofe who have curiofity enough to enquire after it: and the defective parts being thus pointed out, fome future Geographer may be fimulated to feek for better materials. It may alfo tempt thofe who are already in poffeffion of fuch materials, when they are apprized of their ufe, to contribute them to the public fock. Any communications of the kind will be thankfully received; and a proper ufe made of them.

There will be found, at the end of the work, two diftinct Indexes; the one referring to the matter of the Memoir, the other to the names of countries and places in the map. The great wafte of time occafioned by fearching after particular fituations, in maps of any extent ${ }_{y}$ renders an index as neceffary an appendage to a large map, as to a large book. For an index will in the firft inftance inform the reader whether the place fought after, be in the map, or not. If in the map, he is directed to
it with as much facility, as to a paffage in a book, from an ordinary index. And if it be not there, although he may $_{2}$ indeed, blame the map for its deficiency, he muft allow that it does not rob him of his time, by encouraging fruitlefs refearches. There are alfo added, Tables of diftances between the principal cities and towns of Hindooftan; and a fmall map, which brings into one view the refpective pofitions of all the places mentioned in the tables.

As there does not exift at prefent, under any form whatfoever, a connected abftract of Indian hiftory, it is a very difficult tafk for any reader, although poffefled of inclination and leifure, to make himfelf acquainted with the principal events that form the groundwork of the hiftory of that country : and particularly thofe which laid the foundation of the Britifh power there. The many valuable tracts on this fubject, that have appeared at different times, are fo disjointed in point of chronology, that no idea of general hiftory can be obtained from them : nor can the chafms be readily filled up. I have therefore been tempted to compile a fort of chronological table of events, from the æra of the firft Mahomedan conquefts, to the final diffolution of the Mogul empire : and wifh the reader to underftand, that what is offered to his perufal under that form, is intended as a mere fketch; and that, chiefly with a view to render fa dry and fo unentertaining a fubject as the geography of a country, fome-
fomewhat more interefting, by accompanying it with an account of the principal events and revolutions, to which the country has given birth. I am but too confcious of the deficiency of this part of my performance. Befides, many of the events are related fo differently by different people, who pretend to an equal knowledge of the circumftances of them; that it will be no matter of furprife if I am found (by thofe whofeknowledge of eaftern languages has gained them accefs to authentic records) to be often miftaken. In whatfoever cafe this may happen, I make no doubt but that I fhall experience the exercife of their candour, as to the motives by which I was actuated, when I adopted any particular opinion, or mode of relation. Thie prefent difputes concerning fome 'recent' hiftorical facts in this and the neighbouring countries, fhew how extremely difficult it is to come at the truth, even when the refearches after it, are made under every favourable circumfance that can'poffibly attend them.

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Explanation of the Colouring of the Map
INT R ODUCTION

## [ xvi ]

## Explanation of the Colouring of the MAP.

The Colours are ufed to point out the Boundaries of the principal States now exifting in Hindooftan, and thefe are divided into fix Claffes, (viz.)

Class 1. The British Possessions; or thofe of the East India $\quad$ Company, diftinguilhed by -
II. The Powers in Alliance with the Company, by Yellow.
III. The Mahratta States, by - - Green.
IV. The Nizam's Territories, by -- Orange.
V. Tippoo Sultan's, by - - Purple. .
VI. The Seiks, by - - - Blue.

The following are the Territories comprifed in each Clafs.
I. British Possessions.-Red.

1 Bengal and Bahar, with the Zemindary of Benares.
2 Northern Circars.
3 Jaghire in the Carnatic.
4 Bombay, Salfette 28 .
II. British Allies.-Tillow.

I Azuph Dowlah. Oude.
2 Mahomed Ally. Carnatic.

## xvii ]

- III. Mahratta States_-Grezn.


For the Errata, fee the lugh Pages of the Book.

## I NTRODUCTION.

HINDOOSTAN, has by the people of modern Europes: Been underftood to meán the tract fituated between the rivérs' Ganges and Indus, on the eaft and weft; the Thibétian and Tartarian momitains, on the north; and the fea on the fouth. But ftrictly fpeaking, the extent of Hindooftan is much more circumferibed, than théfe limits convey an idéa of : and thé nàmée oüght tb Betapplied only to that part of the above tract, which lies to the north of the parallels of $21^{\circ}$ or $22^{\circ}$. The Nérbudda river, is indèed, the reputed d fodtherr' boundary of Hindöoftan, as fár as it góses'; and ${ }^{2}$
 of it. The countriles on the fouth of this line, according to the Ihdian gedgraphers;, go under the gèneral name of Decicañ: aṇd: comprife nearly one half of the tract geneerally known by the năme
 aptlied in' a lax fenfe to this whote' region, it may be neceflary to' diftinguifi the northern patto of it, by the náme of Hindoootàn pró= per: This tract has cindeed the Indus'; and the mountaño of Thíbet and Tartary, for its weftern and northern boundaries: but the Gäriges wàs impropetly applied as an eattern boundáry; as it interfects in its courfe, fome of the richeft provinces' of the 'mpire : while the Burrampooter, which is much nearer the mark; as an: eaftern boundary, was utterly unknown. In this circumfcribed: ftate, the extent of Hindooftan proper, is about equal to France, Germany, Bohemia, Hungary, SwitzerIard, Italy, and the Loww Countries, collectively: and the Deccan. and peninfula, are:

## [ xx ]

about equal to the Britih Inlands, Spain, and Turkey in Europe. I have here called the tract which lies on the fouth of the Kitna river, the peninfula; in conformity to general practice; although. its form does by no means warrant it. The term Deccan, which fignifies the sourt, is applied (as before-faid) in its,moft extenfive fignification, to the whole region that lies on the fouth of Hindooftan proper: I apprehend, however, that in its proper and limited fenfe, it means only the countries fituated between Hindooftan proper, the Carnatic, the weftern fea, and Oriffa: that is, the provinces of Candeifh, Dowlatabad, Vifiapour, Golconda, and the weftern part of Berar.

The term India, by which this country, as far as it was known, is diftinguifhed in the earlieft Grecian hiftories, appears to be derived from Hind, the name given it, by the ancient Perfians; through whom, doubtlefs, the knowledge both of the country and its name, were tranfmitted to the Greeks. We have the Itrongeft affurances from Mr. Wilkins, that no fuch words as Hindoo, or Hindoostan, are to be found in the Sanfcrit Dictionary. It ap $\rightarrow$ pears that the people among whom the Sanfcrit language was yernacular, fyled their country Bharata*; a name, which is, I believe, quite novel to the ears of the learned in Europe. It is probable then, that the word Hind furnifhed that of India, to the, Greeks: and the termination stan, fignifying country in the Perfic, is of more modern date : for we find it joined to many of the ancient Perfian names of countries; as to Dahx, whence Daheftan:

[^2]
## [ xxi ]

and Tapuri, is Taberi-ftan; Corduene,' Curdi-ftan: together with many others. It has Kappened in the application of this name, India, as on fimilar occafions; that is to fay, it has been applied, not only to the country originally defigned by it, but to others. adjacent to, and beyond it *: for the countries between Hindooftan and China, came to be called the furtber India; or India extra Gatigen: whereas, Hind, or India, properly belonged only to the country of the people called Hindoos; or thofe of India intra Gangem: The name' is as ancient as the earlieft profane hiffory extant : and this may ferve among many other inftances ${ }_{2}$ to prove the high antiquity of the Perfian language.

India has in all ${ }^{\prime}$ ages excited the attention of the curious, in almoft every walk of life. Its rare products and manufactures, engaged that of the merchants; while the mild and inoffenfive religion' "of Brama, and the manmers inculcated by it, attracted the notice of philofophers. The ffructure of its language too, is remarkable; and has a claim to originality. It had been happy for' the Indians, if they had not attracted the notice of a clafs of men more inimical to the happinefs of mankind : for the foftnefs and effeminacy induced by the climate, and the yielding nature of the foil ${ }_{x}$ which produces almoft fpontaneoully, invited the attacks of their more hardy neighbours; and rendered them an eafy prey to everyforeign invader. Hence we find them fucceffively conquered by the Perfians, Patans, and Moguls: and it is probable, that, like the Chinefe, they have feldom had a dynafty of kings, from among. their own countrymen. The accounts of' 22 centuries ago, reprefent the Indians as a people who food very high in point of civili-zation: but to judge from their ancient monuments, they had not

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## [ 7 7 朕 ]

carried the imitative arts to any thing like the degree of perfection attained by the Greeks and Romans, of even by the Egyptians. Both the Hipdoos apd Chineff appear to have carried the arts junt to the point requifite for ufeful purpofes ; but never, to haye approached the fummit of perfection, as it refpects tane, or boldnefs of defign.

The principal monuments of Hindog feperftition are, found in the peninfula, Some have concluded from, this and from other, circumfances, that the original feat of the Hindoa religion, was there. Others, perhaps with moge appeatance of probability, fup-pofe it to have originated on the banks of the Ganges. Monuments of a fuperfition, apparently anterior to the Hipdoo, exif in the caves of Saleette and Elephanta, two illands on the weftern coaft of India : thefe confift of apartments of extenfive dimenfions, exca-, vated from the live rock, and decorated with figures and columns.

India was but little known to the Greeks until Alexander's expen dition, about 327 years before Chrift Hgrodorus, who wrote about 113 years beforfe appears to have heard but indifinctly, of, any but the weftern part of it; and that only, by its being tribu ${ }_{t}$ tary to Perfia, He informs us; (Book fl.) that Darius Hyftafpes. had difpatched Scylax of Caryandra to explore the Indus, abopt, 508 y yars before Chrift; and that he departed from Ca/patyrus. and Paciya, which were fituated near the head of the Indus. He-: rodptus continues to fay, that the Indians who inhabit towards the north, and border on thef territories of Cafpatyrus, and Pactyan refemble the Baftrians, (that is, their neighbours) in manners ; : and are the moft valiant people of all. India. The eaftern paft of India, feys he is rendered defert by fands: which defcription applies only to the country lying eaft of the Indus, and fouth of the PANJAB *: and this fhews pretty evidently, that Herodotps's knowledge of India, as to particularss extended no further, than to the above tract: and a collateral proof is. that hedoes not mention.

[^4]
## [ xxiii $]$

the Ganges, which became fo famous, a century afterwards. Indeed, he tells us very plainly, that this fandy defert, was the extreme point of his knowledge eaftward.

With'refpect to Scylax's difcoveries, this is Herodotus's account. ", Darius being defirous to know in what part, the Indus (which is the fecond river that produces crocodiles) runs into the fea, fent Scylax of Caryandra, with others of approved fidelity; to make the difcoivery. . They departed in divers hips from Cafpatyrus, and the territories of Pactya*; failed down the river, eaftward to the fea; and then, altering their courfe to the weft, arrived in the 30 th month, at that place, where the King of Egypt (Nechao) had caufed the Phenicians I mentioned before, to embark in order to furround the coaft of Lybia (Africa). After this voyage, Darius fubdued the Indians, and became matter of that fea." Herod. Book IV. In another place, in the fame book, he takes notice of fome Indian nations, fituated to the fouthward, very remote from the Perfian conqueft; and whofe complexions were as black as Ethiopians: : thefe ought to be the people of the peninfula. He had alfo learned that they killed no animals, but contented themfelves with the produce of the earth; that they expofed thofe whom they deemed too ill to recover; lived chiefly upon rice; had horfes of a fmaller breed than their weftern neighbours; and that they manufactured their fine cotton wool into cloathing.

- Now, after thè above account of Scylax's expedition, can we give credit to the ftory of Alexander's fuppofing that he had difcovered the head of the Nile, when he was at the Indus? Are we to fuppofe that Ariftotle concealed the books of Herodotus from his pupil? Or, on the contrary, ought we not rather to believe, that the matter of them was on his mind : and that the difcoveries of Scylax, made within 180 years of his own time, and of a kind

[^5]
## [ xxiv]

that particularly interefted him; were detailed to him; when we find them given incidentally in Herodotus?

The fory of Alexander's. furprife at feeing the tides in the Indus, appears to me equally improbable; feeing that the fame Herodotus (Book II.) fpeaks very particularly of the tides in the Red fea; and defcribes them as being not only ftrong, but ebbing and flowing every day. (That moft intelligent and ingenious traveller, M. Volney, informs us, that the tide ebbs and flows three feet and a half at Suez). Arrian takes no notice of the tides until Alexander's fleet had arrived near the mouth of the river. It is true, that the tide in the Indus does not go up fo high, as in otherrivers of equal bulk, and that run orn fo frall a defcent ; but neverthelefs, as the tide is perceptible at 50 or' 60 miles above the river's mouth *, we may conclude that it could hardly efcape the notice of Alexander and his people, in their voyage from Pattala to the fea: fuppofing they had not been apprized of the circumftance. Befides, Arrian's account of the coming in of the tide, which did fo much mifchief to the fleet, is defcriptive of the bORE, or fudden influx of the tide, in a body of water, elevated above the common furface of the fea; fuch as occurs in the Ganges, scc. He fays, thofefhips that lay upon the fand, were fwept away by the fury of the tide; while thore that fuck in the mud, were fet afloat again without damage. To the generality of readers, no reafon will appear, why the circumftances of the ihips hould be different, in the mud, and on the fand: the fact is, that the bottoms of channels in great rivers, are muddy; while their frallows are formed of fand: and it is the nature of the bore, to take the thorteft cut up a river; inftead of following the windings of the channel : confequently, it muft crofs the fand banks it meets in its way ; and will alfo prove more deftructive to whatever it meets with aground, than what is afloat.

[^6]; It appears alfo from Herodotus (Book III.) that the parts of India bordering on the Indus, were fubjected to regular tribute, if pot totally reduced, under the Perfian Government: for in enumerating the 20 Satrapies of Perfia (under Darius Hyftafpes) India is reckoned as one of them, and is rated the higheft: it being affeffed in the proportion of 4680 Eubean talents of filver, out of 14,560, the whole annual revenue. To explain this, the author informs us, that the Indians were very numerous; and that the tribute charged upon them, was proportionably great. It is worthy of remark, that this tribute was paid in gold, whereas that of the other Satrapies was paid in filver. Much light is thrown on this circumftance, by the intelligence furnifhed by the Avin Acbarees namely, that the eaftern branches of the Indus, as well as fome other ftreams, that defrend from the northern mountains, yield gold duft. (See page 108 of the Memoir.) We are told on the fame occafion, by Herodotus, that gold was eftimated about that time, at the value of 13 times its weight in filver.

Alexander's expedition furnihed the Greeks with a more extenfive knowledge of India: although he traverfed only the countries mentioned by Herodotus: that is, the tract watered by the Indus, and its various branches, and adjunct rivers. But the fpirit of enquiry was now gone forth : and the long refidence of Megafthenes, the ambaffador of Seleucus, at Palibotbra, the capital of the Prasir, furnifhed the Grecians with the principal part of the accounts of India, that are to be found in Strabo, Pliny, and Arrian : for Megafthenes kept a journal, and alfo wrote a very particular account of what he had feen and heard, refpecting India in general, during feveral years refidence : which account exifted in Arrian's time. His embafly was about 300 years before our æra.

The communication by land, between the Syrian empire and India, was dropt very early: for Bactria foon became independant: and by that means, the link of the chain that connected India with Syria, was broken. The Indian trade was about the fame time

## [ xxxi$]$

transferred from Tyre to Alexandria in Egypt, where it flourifhed under the aufpices of the Ptolemies, until Egypt became a Romand province; and was continued on a more extenfive fcald unider the Romans themselves: nov did' it forfake Alexandria, unitil the rea' difcavery of the paffage by the Cape of Good Hope. I fiall takeoccafion to feeak more fully concerning the particulars of the navigation from the Red fea to India, hereafter.

This traffick openect to the Egyptians and Romans a knowledgeof the coafts and products of India; as we find by various notices; in the abovementioned authors; and in Ptolemy in particular:' But confidering haw much the detail of the coafts was known to: him, as is evident by bis map (Täb. X. Afix) it is very' extraordi-: nary that the general form of, it, ghould be fo far from the truth: for he makes the coafts Between the Indus and Ganges, to project' only in a llight curve; whereas, they are known to form the fides' of a. triangle, whofe perpendicular almoft equals its bafe:' Cape' Comorin, being the apex of it. Whoever compares the proportional dimenfians: of India, found in Diodorue Siculus; Fliny, and Arrian; will.find them toletably juft : and will be inclined to think that the worft fet of ancient maps of India, has travelled down to us: and that Ptolemy, in conftructing ihis map of that part, did: not exprefs the ideas of well informed people of his own time, on that fubject: Bliny $\quad$ was about 60 years before Ptolemy; and Ar: rian about:2q years after Ptolemyt theiraccounts of the dimenfions of Indis, were taken from Eratoflienes and Megaflienes:

Diodorus Eys that India is 3 z;000 ftadia- from north to fouth, and 28,000 from eaft to weft: that is, the breadth is feven-eighths of:the length.

Arrian gives the meafures collected by Eratofthenes and ${ }^{\prime}$ Megarthenes:" and fays that is " India- is bounded "ont the weft' by the Indus; an the norths. by'a continuation of Mount Taurur; called-


## [ xxvii ]

fouth, by the ocean, which alfo chuts up the eaftern parts of it *. Few authors (fays he) have given us any account of the people, that inhabit towards the mouths of the Ganges, zobere Palibothra is fituated."

From the mountains at the head of the Indus, to its mouth, according to Eratofthenes, is 13,000 ftadia; and from the faid mountains, to the eaftern fea, the extent is fomewhat lefs: but as a huge tract of land runs out 4,000 ftadia into the fea (meaning the peninfula) it may be reckoned $\mathbf{1 6 , 0 0 0}$ ftadia. From Palibothra to the weftern extreme 'of India, meafured along the great road, is 10,000 ftadia : and the whole length (that is, from eaft to weft) is 20,000 ftadia. Arrian likewife gives the meafures according to Megafthenes, who reckoned India 22,300 fadia from north to fouth; and 16,000 broad, from eaft to weft; making that the breadth, which Eratofthenes reckons the length. We may obferve, that Megarthenes's proportion, is, on the whole, the trueft: for India is about 28 degrees of a great circle, in length, from norti to fouth; or from the Indian Caucafus, to Cape Comorin: and about 20 in breadth, from the Indus to the mouth of the Ganges: and if we reckon from the moft diffant mouth of each river, it will be 22 degrees in breadth. This fhews that Arrian had as juift an idea of the proportional dimenfions of India, as we had, 40 years ago: for we then reckoned it narrower than the truth, by at leaft two degrees. It is impoffible to tell what length Megafthenes meant to exprefs by a ftade, as there appears to be fo confiderable a variation in the length of this itinerary meafure, at different times: but by proportioning the number of ftades, to the number of degrees, included in the above meafures of India, by Megafthenes;

[^7]
## [ xxviii ]

there fhould be 800 ftades in a degree of a great circle. M. D'Anville has at different times reckoned 1050 , and 1100 . I conceive it probable that Megathenes gave the meafures according to the road diftance, from one extreme of the country to the other; and not according to the horizontal diftance; or actual length, and breadth of the country. Part of the apparent differences, in the length of the ftade, may arife from thefe different methods of reckoning diftances.

Pliny gives the meafures along the coafts between the mouth of the Ganges, and Pattala (or Tatta) in the mouth of the Indus, at 3320 miles (Roman miles I fuppofe, of 1000 paces.) The true meafure of thefe coafts, rejecting the finuofities, and attending only to the general form of it, is 40 degrees of a great circle. M. D'Anville allows 75 Roman miles to a degree; and by this rule, the above number of miles, will come out 44 degrees, inftead of 40, the true meafure. But if the pace be reckoned at 4 feet, 10,02 inches, Englif, there ought to be $78 \frac{1}{2}$ Roman miles to a degree ; and by this calculation, the 3320 Roman miles, will be $42^{\circ}$; or within $\frac{{ }^{\prime} \text { T }}{}$ part of the truth. Whichfoever of the two calculations may be adopted, it is clear that Pliny knew nearly the form of the peninfula; and that Ptolemy, who living at Alexandria, might be fuppofed to be in the way of obtaining the beft information on the, fubject, was in truth, ignorant of the general form of it, although he knew fo much concerning the particulars.

Arrian's Indian hiftory, which is extremely curious, and merits more notice than it commanly meets with, fhews us how very little change, the Hindoos have undergone in about 21 centuries, allowances being made for the effect of foreign conquefts; which how-ever, have produced fewer changes here, than they could have done, any, where elfe: for cuftoms, which in every country, acquire a degree of veneration, are here rendered facred, by their connexion with religion: the rites of which, are interwoven with the ordinary occurrences of life. To this, and to the feclufion from the

## [ xxix ]

reft of mankind, inculcated by the braminical religion, we are to afcribe the long duration of the Hindoo religion and cuftoms; which are only to be extirpated, together with the very people, among whom they prevail : and which have been proof againft the enthufiafm and cruelty of the Mahomedan conquerors; nay more, have taught a leftion of moderation to thofe conquerors; who at laft faw no danger arifing to the flate, from a religion that admitted no profelytes.

We are at the firft view furprifed to find that Arrian, who profeffes to treat of India, fhould confine himfelf to the defcription of a particular part only; while he had authors before him, who had treated the fubject at large. It may, however, be accounted for, in this manner, that he chofe to follow thofe only, who had been eye-witneffes to what they wrote; not compilers: and it is pretty clear that his account of India, is meant chiefly to illuftrate the hiftory of his hero. The following particulars, felected from among others, will hew to thofe who are converfant with India, how nearly the ancient inhabitants, refembled the prefent. i. The fflender make of their bodies.. 2. Their living on vegetable food. 3. Diftribution, into fects. and claffes : and the perpetuation of trades in families. 4. Marríages at feven years of age : and prohibition of marriages between different claffes: 5. The men wearing ear-rings ; parti-coloured floes ; and veits, covering the head, and great part of the Chotilders.' 6. Daubing their faces with colours. 7. Only the principat péople having umbrellas carried over them. 8. Two-handed fwords: and baws, drawn by the feet. 9. Manner of taking elephants; the fame as in the prefent age. io. Manufactures of cotton, ot extraordinary whitenefs. in. Monfrous ants: by which the Termites; or white ants are meant; though exaggerated. (Herodotus Book III, alfo: mentions the ants: :i and his account is more extravagant than Arrian's.) 12. Wooden houfes, on the banks of large rivers; to be occafionally removèd, as the river changed its courfe.: 13. The Tala tree, or

## [ $\operatorname{mxx}$ ]

Tal; a kind of palm. 14. The Banian (or Burr tree) and the Indian devotees fitting under them.

We may perceive, however, on a reference to Arrian, that in many of the above particulars, he had either been indintinctly informed, or elfe, mif-informed; as in the cafe of the Tal tree ; the white ants (which he difcredits, at the time he relates it) and the manner in which the people daub their faces. The wooden houres, are, as far as I know, peculiar to the fide of the Indus; and are remarked to be fo, in the Ayin Acbaree. Arrian informs us, that he took his account of India from Nearchus and Megafthenes. In the account of the wooden houfes, it may be perceived that he followed Nearchus; who feeing them on the fide of the Indus, concluded they were in ufe, every where elfe. As to Megarthenes, Arrian thought he had not travelled far over India; although farther than Alexander's followers. This opinion may ferve partly to explain, why Arrian did not preferve the journal of Megathenes, by inferting it in his hiftory of Alexander; or in his account of India.

His geography of India relates chiefly to the northern parts, or thofe feen by Alexander and Megatthenes. And his catalogue of rivers, moft of which are alfo to be found in Pliny, and among which we can trace many of the modern names, contain only thofe that difcharge themfelves into the Ganges or Indus : fuch as Cainas, the Cane; Cofoanus, Cofa, or Cofs; Sonus, Soane; Condocbates, Gunduck; Sambus, Sumbul, or Chumbul; Agoramis, Gogra; Commenafes, Caramiaffa, \&cc. \&cc:

Of the different hiftories of Alexander that have travelled down to us, that by Arrian appears to be the moft confiftent; and efpe:cially in the geography of Alexander's marches, and voyage in the Panjab; which country, by the nature of its rivers, and by their mode of confluence, is particularly favourable to the talk of tracing his progrefs. Diodorus and Curtius, had, or ought to have had, the fame materials before them, as Arrian: that is, the journals or relations
$[$ Xxxi]
relations of Ptolemy and Ariftobulus; who as friends and companions of Alexander, had opportunities of being well informed. We may conclude alfo, that there were among the followers of Alexander, journalifts of a very different ftamp; and indeed, the experience of our own days, furnifhes us with examples enough of that kind, to make it probable: and there are alfo to be found, compilers, who according to their taftes and difpofitions, prefer the relation of the marvellous, to thofe of the fober and rational kind. Such as thefe, we may conceive Diodorus and Quintius Curtius to be; the latter particularly, under whofe hand, every incident grows into a miracle or wonder. Arrian too, relates his wonders; but in fuch a manner, as not to commit himfelf: or, as if he meant rather not to withhold what he thought himfelf bound to communicate, than as if he believed them himfelf, or wihed to inculcate a belief of them, in others.

It is to be regretted that Arrian did not preferve the journal of Megafthenes, as well as that of Nearchus. The lofs of Bæton's, or Biton's book, which contained the geography of Alexander's marches, is alfo to be regretted. It exifted in the time of Pliny, who quotes him : but I think, if Arrian had feen it, he would have been more particular in his geography, in certain places; as he ordinarily, fudies to be, Certainly, Arrian had not read Herodotus attentively : otherwife he would not have paffed over in filence, the voyage of Scylax, down the Indus; nor reprefented his hero, as being ignorant of fo curious a fact as the tides mult have appeared, to thofe who read the fame book. But that hee had read part of Herodotus, is evident by his quoting his opinion, refpecting the delta of the Nile; and by an allufion to his account of the ants that dug up gold, in India, \&c.

There is no reafon to doubt that the Hindoo or Braminical religion was univerfal over Hindooftan and the Deccan, before the tirme of Alexander's conqueft, if we regard the notices afforded by'Herodotus and Arrian. Nor is it more extraordinary that one religion

## [ xxxii ] ]

Should prevail over India, although compofed of dininct governments, than that the Chriftian religion hould prevail over a larger itract in Earope; or the Mahomedan over a fill larger tract in Europe, Afia, and Africa. But although there riight be an univerfality of religion, there were, as the learned well know, 'many diftinct languages : and hiftory, both ancient and modern, givés us the mont pofitive affurances, that India was divided into a number 'of kingdoms or fates, from the time of Herodotus, doivn to that of Acbar. Not only Herodotus, Diodorus, Pliny, "and Arrian, are pofitive, as to this point; but even Abul Fazil, who compofed a hiftory of the Indian provinces, in the reign of Acbar, in the 16 th century. It is probable, that the almoft univerfality of religion, and the union of fo large a portion of this vaft region, under. the family of Tamerlane (particularly under Aurüngzeze) has 'occafioned an idea, though a very erroneous one, that the Mogul empire, fo called from the Mogul (or Mongul) dynafty, or that of Tamcrlane, was always under one head..'

But whatever kind of divifion may have taken place in the reft of Hindooftan, there appeats to have been, generaily, a large empire or kingdom, which occupied the principal part of that im'menfe valley or plain, through which the Ganges takes its courfe: -the !capital of. which has fluctuated between Delhi and•Patna, as the limits of the empire have varied. That fuch a' 'one 'does not exift at prefent, is probably owing to the Bengal provinces being in the hands of foreigners : but if we confider the union of interefts between Bengal and Oude, the cafe is-not effentially altered. Leave ;matters' to their natural coutfe, the "whole valley will form one. ftate 'again. The kingdom I feake of, was that of the Prasil and, Gangarides, in the times of Alexander and Megathenes: and which was very powerful, as appears by the ftrength of its armies, and the number of elephants trained to war. It feems to have extended weftward to the Panjab country: and if Palibotbra. food on the fite of Patna, as late accounts feem to render'probable (fee page

## [ xxxiii ]

50 of the Memoir) we may fuppofe that it included at leaft, part of Bengal. In effect, the kingdom of the Prafii could not well be of lefs dimenfions than France : and the state of it (according to Arrian) was rich, the inhabitants good hufbandmen, and excellent foldiers; governed by nobility, and living peaceably; their rulers impofing nothing harfh, or unjuft, upon them. Thofe who are fonder of contemplating the filent happinefs of a whole people, than of tracing the fteps of aiconqueror, will be gratified on reflecting that: Alexander fopt hort, on the borders of the country above defcribed,

The trade from the weftern woild to India, which has ever enriched thofe wha have carried it on, has often changed hands, and been turned into different chininels. A paffion for Indian marufactures and products, has actuated the people of every age, in lower Afia, as well as in thè civilized parts of Europe: the delicate and unrivalled, as well as the coarfer and more ufeful, fabricks of cotton; of that country, particularly fuiting the inhabitants of the temperate regions, along the Mediterranean and Euxine feas. To this trade, the Perfian and Arabian gulfs, opened an eafy paffage; the latter particularly: as the land carriage between the Red fea and the Nile; and between the Red fea and the Mediterranean, took up only a few days. It is highly probable, and tradition in India, warrants the belief of it, that there was from time immemorial, an intercourfe between Egypt and Hindooftan; at leaft, the maritime part of it: fimilarity of cuftoms in many inftances (as related of the ancient Egyptians, by Herodotas, and which can hardly' be refegred to phyfical eaufes) exiting in the two countries: The intercourfe, wer may conclude, was carried on, by fea; if wé confider, the nature of the intervening countries, and the feat of the manufactures : and it might, moreover, be expected, that a nation so enterprifing as to undertake the circamnavigation of Africa (as there can be no doubt, the Egyptians did, under the Pharaohs) would fcarcely leave unexplored, the coafts of a fea, fo much

## [ xxxiv ]

nearer; and which, from the regularity of the periodical winds, was fo eafy of accefs. Whether Solomon's profitable traffick included that of India, there are, I believe, no means of determining; but it appears highly probable that it did: as alfo that the voyages of three years, made by the hips that arrived at Tar /hijh (Tarfus, in Cilicia) were to the remote parts of Africa. We muft carry in our minds, this fact, that Solomon's fleets were difpatehed from the ports of the Red fea, as well as from thofe of the Mediterranean : David's conqueft of Idumea (Edom) giving him poffeffion of the ports in the north-eaftern branch of the Red fea: that is, Eziongaber, \&c. Tyre was founded about two centuries and a half, before this period: and from the very flourihing fate the was in, under Hiram, the cotemporary of Solomon, it may be concluded that her.merchants poffeffed the greatelt part of the trade of the known world, at that time; and the trade of the eaft among the reft, in all probability. Commerce being fo ready a way to riches, it is no wonder that fo enlightened a Prince as Solomon, fhould profit by the example of his neighbours: and avail himfelf of his fituation, from the enlarged fate of his kingdom, which extended from the Euphrates to the Red fea; and to the borders of Egypt (1 Kings, chap. 4. ver. 24 : and. 1 Chron. chap. 18. ver. 13.) and which opened to him, two of the great avenues to the eaft, by way of the Red fea, and the Perfian gulf. M. Volney's idea; refpecting the object that Solomon had in view, when he took poffeffion of Tadmour, or Palmyra, is, in my opinion, no lefs probable, than ingenious : namely, to ufe it as an emporium of the Eaft India trade, by way of the Perfian gulf, and the courfe of the Euphrates. This was abrout 1000 years before our æra. But Solomon's trade, notwithftanding, was merely temporary : and reminds us of fome feeble efforts, made in our own days, by an inland Prince, who (in this refpect, like Solomon) poffeffes two ports fituated in oppofite chores of the continent; and who. is conftrained to bortow the mariners of the modern Tyre, as Solomon did thofe of the ancient. Whether

## [ xxxy ]

Whether the Indian trade was carried on at the fame time, by the Tytians and Egyptians, as well as by the Judeans, cannot now be afcertained; but I think it probable that it might; and that, both by the route of the Perfian gulf, and the Red fea; as we have feen it, in our days. But whatever might be the mercantile ftate of Tyre, in the days of Solomon, we find it about a century after, eftablining a colony at Carthage; and about three centuries after that, its greatnefs was proverbial. I mean, about the date of Ezekiel's prophecy concerning it.

When Tyre fell into the hands of Alexander (Before Chrift 332, and about 260 after the time of Ezekiel) that city was in full poffeffion of the Indian commerce. The route of their trade from India, was up the Red fea to Eziongaber; and thence acrofs the deferts to Rbinocorura, a town on the Mediterranean, and on the common frontiers of Paleftine and Egypt: both of which countries were then in the hands of the Perfians. From Rhinocorura, the goods were carried by fea to Tyre, and circulated from thence. The deftruction of Tyre by Alexander, and the confequent foundation of Alexandria, turned the trade into a new channel : or rather perhaps, returned it into its ancient one, Egypt. The Ptolemies, into whofe hands Egypt fell, on the divifion of Alexander's empire, beftowed a foftering care on the new emporium, which alfo became the capital of the kingdom. Ptolemy Philadelphus conftructed a canal from Arfinoe (near the prefent Suez) to the Pelufiac branch of the Nile: and afterwards, poffibly becaufe of the tedious and dangerous navigation of the upper part of the Red fea, founded the city of Berenice on the weftern fide of that fea, and nearly under the tropic (that is, 450 miles below Suez) from whence the merchandife was tranfported acrofs the defert of. Thebais, to Coptus on the:Nile; and thence, down the fream of that river; to the neighbourhood of Alexandria; which thus became the centre of trade between the eaftern and weftern world; and, of courfe, one of the moft opulent cities in either. It would appear,
that under the Ptolemies, the Egyptians extended their navigation to the extreme point of the Indian continent, and even failed up the Ganges to Palibothra,

Alexandria held its rank as an emporium, even after Egypt became a Roman province: and preferved it in a confiderable degree, during the various revolutions that happened in the eaft*; until the re-difovery of the paffage round the fouth point of Africa, about 300 years ago, turned the bulk of the Indian trade into an entire new channel ; and from which it is not likely ever to be divetted.

Berenice continued to be the port of outfit for the Roman Eaft India trade in the time of Pliny (A.D. 79) who details, in his fixth book, the account of the navigation to India; with many curious particulars relating to it: and among other matters, we may gather, that it was a complaint even in his time, that the trade to India, drained Europe of its riches. Pliny fays, that it coft 50 millions of fefterces every year (at $18.3 \mathrm{~d}^{\frac{3}{7}}, 3,275,0001$.) and yet the trade is not defcribed as being extended to every part of India. I fhould apprehend a miftake in this ftatement: as the prime coft of the cargoes brought into England, from India and China, in any one year, has been little above three millions, freight included; and one would not expect that the value of the goods imported by the Romanss was equal to that, imported from China and Hindooftan, into England.

From Berenice it was reckoned 30 days napigation, down the Red fea, to Ofelis (Gella) juft within the ftrait of Bab-el-mandel. Another port was Muæ̈̆a (Macha) but Ocelis was reckoned the beft, and moft commodious for departure, From thence to $M u$ ziris, the firft port of merchandife in India, was 40 days fail: fo that, as they left Berenice about midfummer; they might arrive in India in the latter end of Auguft, when the violence of the $S \mathrm{~W}$ monfonn was abated; and the coafting navigation, fafe and eafy:

The 才emetian trade to the eaft, was by the chanpel pf the Red fea, fad Alexandrize

## [ Xxxii ]

Pliny does not forget to mention that they departed with the weft wind: and thefe 40 days failing, would be about 15 days run, for an Europeant fhip, in the modern ftyle of navigating: being about 1750 marine (the farrie as geogtaphical) miles, on a ftraight coüre.

We are told that the firft of there voyages were midde by coáating the Arablan thore to the promontory Syagrous (Cape Rafalyate) and therice along the coalt of Perfia to the mouth of the Indus, \&c. In the next age, a fhorter and fafer courfe was difcovered : for from Cape Rafalgate, the fhips made a dirett courfe to Zizerus, a port in Indias fituated, as wotild appear by circumftannces, on the northern part of the Malabar coaft. After this, a direct courfe Whas made from the outlet of the Red fea to Muziris, as above related. It is pröbable, after all, that they coafted a great part of the Arabian codaft, in order to reduce the length of that part of their courfe, that lay out of the fight of land: unlefs the habit of depending on the compafs, has, in my idea, increafed the difficulty of thaping a courfe without one.

Muziris' is faid by Pliny' to have been 'an intcommodious place of merchandife, becaufe the fhallownefs of the port, or river's mouth; made it neceflaty to difcharge or take in the cargo in finall boats, at a diftance from the emporium : and beffdes; there was danger from the pirates, at Nitrida ${ }^{1}$ Airother port, more cọmonodious and better flored with merchandife; was named Barace (or Becare) in the country of the Niconidians; 'and as the pepper of Cottonara was brought to this place in fmall boats, it may bee concluded that Batace was within, or near to, the country of Canará ; which produces the beft pepper in thofe parts; at the prefent day. After truch fuady' and invéftigation 1 catnot'apply to any "patícular fot, thefe ports of Muziris and Barace: for the Malabàrí coaft abounds with ports of the above defcriptioni : and it mult be confidered, too, that a flallow port for one of tire Ronitn trateress, which, in all probability's !wete fimaller than ours, would be reckoned, in the prefent times, no port at all. The circumftances of the pirate

## [ xxxviii ]

coaft, and pepper country, however, confine us within certain lif mits: for, in the courfe to Muziris, the traders paffed near the pirate's ftations; and as thefe, by the lights which I have received from Pliny and Ptolemy, were nearly the fame as the prefent (that is, between Bombay and Goa) I conceive the trading ports meant by Pliny, were fituated between Goa and Tellicherry. The Periple of the Indian fea, and the geography of Ptolemy, throw fome faint light on the fubject.

Ptolemy's ideas are thefe: 'Tyndis (going fouthward) fucceeds Nitria; then Muziris; Becare (which is one of the readings of Barace) Melcynda, or Nelcynda; Cottiara; and then Comaria, or Cape Comorin; whofe proper name is Komrin or Komry. And the Periple (my information is from. M. D'Anville) enumerates iṇ the fame order, Tyndis, Muziris, and Barace: allowing 500 ftadia between each, refpectively. No three places appear more convenient to this relative difpofition, and to the circumftances of the pirate coaft and pepper country, than Goa, Meerzaw :(yulgarly, Merjee) and Barcelore, or Baffinore. The firf, namely, Goa, is juft clear of the pirate coaft: having Newtya; poffibly the Nitrias of Pliny and Ptolemy (near which the pirates cruifed on the Roman veffels in their way to Muziris) on the north of it. The fecond place, Meerzaw, or Merjee, has even fome affinity in found, with Muziris; and is fituated on a river; and at fome diftance from the fea. And Barcelore, or Baffinore, which may poffibly be Barace," is one of the principal pepper factories, at prefent: and therefore anfwers fo far to Barace. Nelcynda, I take to be Nelifuram : and do not, with M. D'Anville, fuppore Barace to be the port of Nelcynda, but a diftinct place. It is faid by Pliny, to be fituated within the kingdom of Pandion; which is pretty well undertood to be Madura: or to be comprifed, at leaft, within the fouthern part of the peninfula: and therefore, the farther fouth we go for Nelcynida, the lefs we are likely to erro, But even all this is conjecture, as far as relates to particular pofitions: nor is it of much
[ x x́xix . ]
confequence: for we are clear that the ports of merchandife, murt be fituated, in or near to the country of Canara, the Cottonara, or pepper country of Pliny: that is, between Gox and Tellicherry; ass before obferved.

The fhips returned from the coaft of India, about the month of December, with the north-eaft monfoon: and when entered into the Red fea; they had a fouth; or fouth-weft wind: fo fays Pliny. The voyage was made much within the compars of a year: and the profits are fated to be immenfe: but the particulars of the cargoes are not recorded.

There are no notices in Pliny (as far as I know) concerning any voyages of the Romans, to the gulf of Bengal, or to the peninfula of Malay (the golden Cherfonefe) although it is clear from Strabo, who wrote before Pliny, that the Ganges had then been failed up, as high as Palibothra. Ptolemy's geography, faid to be compofed about 60 years after Pliny, contains evident proofs that both of the Indian peninfulas had been explored : fuch is the mention of the pearl fifhery, between Ceylon and the continent; the diamonds found on the banks of the Sumbulpour river; and the point from whence fhips that traded to the Malay coaft, took their departure (fuppofed 'to be Point Gordeware:) befides many names, that can hardly be mifunderftood in the application of them; as Arcati, the capital of the Sorce (or Sora-mandalum, from whenced corruptly Cboromandel) Mefolia, the diftrict which contains Mafulipatam; the rịver Cauvery, under the name of Cbaboris; \&c. The peninfula beyond the Ganges is alfo defcribed in Ptolemy, as far as Cochin China, or perhaps, to the borders of China, on Sina. (See M, D'Anville's Antiquité Geographique de L' Inde.) We may here obferve alfo, by the way, that the iflands fcattered over the gulf of Bengal; in Ptolemy, and probably meant for the Andaman and Nicobar iflands; are moft of them faid to bee inhabited by Anthropoppagi: and this idea: has allo been adopted by the modern navigators:". Other iflands, which may, be:meant either

## [ xl ]

for certain patto of Sumatra, of for fonte of the iflands that lie extended along the weftern fide of it, are alfo branded with the farne character : and we find by Mr. Marfden, that it is generally belived, that man-eaters exift in Sumatra, even at this day. I refer the Bona Fortuna illand to the Great Andamang and the 'ro Maniotie, to the northern Nicobars; being juft the numiber of them : the 5 Baralfa, and 3 Sindre illands, together with the 3 Sabadibots are the illands I allude to, as being either parts of Sutmatra, 'or illands near it.

Shetches of the Hifory of Hindoostan, fince the Commencement of the Mahomedan Coneuests.

There is no known hiftory of Hindooftan (that refits on the foundation of Hindoo materials or records) extant, before the period of the Mahomedan conquefts : for either the Hindoos kept no regular hiftories; or they were all deftroyed, or fecluded from common eyes by the Pundits. We may judge of their traditions, by that exifting, conceming Alexander's expedition: which is, that he fought a great battle writh the Emperor of Hindooftan, near Delhi: and though victorious, retired to Petfia, acrofs the northern mountains: fo that the temarkable circumftance of his failing down the Indus, in which he employed many months, is funk al-together- Andiyet, perhaps, few events of anteient times, reft on better foundations, than this patt of the hiftory of Alexander (fee Section. III. of the Methoir) as appear's by its being fo highly celebrated, not only by his cotemporaries, but by feveral of the moft celebrated authors, for fome centuries following. As for the notices above referred to, in Herodotus, Pliny, and Arrian, \&c.

## [ xli ]

they are rather trangient views of the then flate of Hindooftan, with a general account of manners. and cuftoms; than a hiftory. Not but that thefe accounts are infinitely more pleafing and fatisfactory, than a hiftory would have been, if it contained nothing more than that of the Mahomedan conquefts: that is, an account of battles and maffacres: an account of the fubverfion of (apparently) one of the mildeft, and moft regular governments in the world, by the vileft and molt unworthy of all conquerors: for fuch the Mahomedans undoubtedly were, confidered either in refpect to their intolerant principles; contempt of learning, and fcience; habitual Ioth; or their imperious treatment of women: to whofe lot, in civilifed focieties, it chiefly falls, to form the minds of the rifing generation of both fexes; as far as early leffons of virtue and morality may be fuppofed to influence them.

The travels of Cofmas in the 6th century, and of the two Mahomedan travellers in the 9 th, afford few materials for hiftory: and but little çan be gleaned from Marco Paulo, who croffed the peninfula, and went up the weftern. fide of it, to Guzerat, in the $13^{\text {th }}$ century. Indeed, it is exceeding difficult to refer any incident related in this laft author, to any particular country; as the geography of his travels is an enigma, for the moft part.

It is chiefly to Perfian pens that we are indebted for that portion of Indian hiftory, which we poffers. The celebrated Mahomed Ferifhta, early in the 17 th century, compiled a hiftory of Hindoom ftan, from various materials; moft of which, in the idea of Col. Dow (who gave a tranflation of this hiftory to the world; about 20. years ago) were collected from Perfian authors. The Mahabarut, an hiforical poem of high antiquity, and which I underfland, Mr. Wilkins is now tranlating from the original Sanfcrit (as he has already done an epiode of it, under the title of Bhagivat Greta) is fuppofed to contain a large portion of interefting hifoticial matter : but if the father of Grecian poetry made fo total a change in the ftory of Helen, in order to give a full foope to his imagina-

## [ slif ]

tion; whát fecurity have we that another poet may not miflead us in matters of fact ; that is, in all that is valuable in hiftory, confidered as fuch? Mr. Dow was far from fuppofing that the Hindoos were deffitute of genuine biftories of their own country: he was not indeed acquainted with the Sanferit language, in which they muft be written, if at all: but founded his belief on the information of people on the fpot. If the fpecimens of early Hindoo hiftory given in the Ayin Acbaree, are akin to thofe which Mr. Dow had in contemplation, I confefs I can place no dependance on them. The moft valuable part of Ferifhta's hiftory, he allows to be that, pofterior to the firft Mahomedan conquefts, about the year 1000 : and the following abftract of it is offered to the reader's notice, in order to fix in his mind, an idea of the fucceffive changes' in the fate of the empire of Hindooftan; which from a pure Hindoo government, became a Mahomedan one; and continued to be fo, under various dynafties of Monarchs, from Perfia, Afghaniftan, and Tartary; until the beginning of the prefent century : thefe Princes, moreover, adding to the original country of Hindooftan, all the other provinces fituated within the Ganges. This unweildy ftate then dropping to pieces, anarchy fucceeded; which in moft parts of it, is fcarcely compofed at prefent: and which had nearly given rife to a new Hindoo empire, under the Mabrattas : but the intervention of foreign powers, prevented it. Laftly, one of thofe foreign powers feizing on the faireft provinces, and taking the lead in the empire, although removed from it ${ }_{2}$ the diftance of an actual route of fifteen thoufand miles*!

Even after the commencement of the Mahomedan conquefts, we find little more in Ferifhta, fave the hiftories of the empire of Ghizni (or Gazna) and Delhi; until the fubjection of all Hindooftan, by the Patan Emperors in the beginning of the 13 th century : for Hindooftan continued to be divided into a number of feparate

[^8]king-

## [ xliii ]

kingdoms, each of which, required a particular hiftory: and of which we know only fuch parts of it, as were interwoven with the hiftory of the conquering country. Many of thefe old Hindoo kingdoms, bore the fame names as the prefent foubahs (or viceroyalties) do; and had, probably, nearly the fame limits. The hiftory of the Deccan, is yet more obfcure than that of Hindooftan: being brought into view later, as the Mahomedan conquefts extended thither : and which began to encroach on it about the year 1300, although the entire conqueft of it, was not made until late in the $\mathbf{1 7}$ th century.

It may be obferved that the firft Mahomedan conqueror who made any eftablifhments; that is, Mahmood, found little lefs difficulty in fubduing the country, than the latter conquerors did; when fo many kingdoms were united under the Patan Emperors: for thefe kingdoms, now become provinces, were too extenfive, and compofed of materials too difcordant to unite properly : not to mention, that they were never long enough united, to produce the happy effects refulting from a lorig period of intercourfe under one common head, and which affimilates the whole into one mafs, like the French or Britilh provinces. And this muft 'ever' be the cafe' in very extenfive empires, where a delegation of great powers, and diftant fituation, prepares the provinces for independency; whenever the fupremé government happens to be placed ini weak hands. Hence, Hindooftan, event under the Moguls, may be confidered only as a collection of tributary kingdoms: each accuftomed to look no fatther thari to its. own particular Viceroy; and, of courfe, ever in a flate to rebel, when the imbecility of the Emperor, and the ambition of the Viceroy; formed a favourable conjuncture. To this muft be attributed the little refiftance that was made to the arms of Tamertarie; Baber, Humaioon; and Nadir Shah; although fo many provinces were at thofe times united, under one Prince.

## [ xliv ]

The firt Mahomedan conquerts that led to permanent eftabliihments in Hindooftan, were thofe of the beforementioned Mahmood, Emperor of Ghizni: for I make a diftinction between thefe, and the firt irruptions of the Mahomedans; which left fuch night traces behind them, as to be fcarcely apparent. Among others, was that of the Caliph Valid in the firt century of Mahomedanifm. The empire of Ghizni was founded by Abiftagi, Governor of Korafan (A. D. 960) who revolted from the King of Bucharia; whofe anceftor, in his turn, had arifen to power, on the ruins of the Caliphat empire, about 87 years before. Ghizni confifted chiefly of the tract, which compofed the kingdom of Bactria, after the divifion of Alexander's empire : that is, the countries lying between Parthia and the Indus; and fouth of the Oxus*. Ghizni (or Gazna) a city placed among the weftern fources of the Indus, and not far from the Indian Caucafus, was the reputed capital; though Balk or Balich claimed this honour, likewife.

Mahmood (commonly ftyled Sultan) was the third in fucceffion from Abiftagi: and was himfelf the fon of Subuctagi, who appears to have meditated the conqueft of the weftern part of India; and, like Philip, left his projects, as well as his kingdom, to his fon. Subuctagi had carried his arms acrofs the Indus, and ravaged the Panjab; but made no effablifhments : for we find, that at the time of his fon Mahmood's invafion, a Prince of the Bramin race, or religion, namied Jeipal, poffeffed the whole country, along the eaft fide of the Indus, to Cahmere; and that he had the Kings of Delhi, Agimere, Canoge, and Callinger, for allies: fo that it may be concluded, from the circumftance of the frontier provinces being under a Hindoo government; and from the ftate of the Hindoo religion, throughout the fcene of Mahmood's conqueits; that the Mahomedans, whatever ravages they might have committed, previous to this time, had not, as we have before oblerved,

[^9]
## [ xly ]

formed any eftablifhment in Hindooftan : but that the whole country was perfectly Hindoo, at the time of Mahmood's conqueft. It muft be obferved, that I do not clafs the country of Cabul; or any of the provinces on the weft of the Indus, as belonging to Hindooftan proper.

Before Mahmood began his firf expedition into India, which was only three years after his acceffion, he extended his empire northward, by reducing Bucharia; from whofe king, his anceftor had revolted, as has been obferved above.

In A. D. 1000, he entered Hindooftan: but in the courfe of eight years, he made na further progrefs than Moultan. The people of Moultan ${ }_{3}$ who were the Malli, and Catseri (that is, the Kuttry or Rajpoot tribe) of Alexander, muft have preferved their ancient fpirit, to be able to oppofe, for fo long a time, fuch formidable armies, headed by fo. furious an enthufiaft. In 1008, we find all the Hindoo Princes, from the weft of the Ganges to the river Nerbudda, united againft him, for the common defence of their religion; the extirpation of which, was to Mahmood, an object equal to that of the acquifition of territory, or fubjects. It may be doubted whether the acquifition of fubjects, the rational end of conqueft, ever enters into the minds of barbarous. conquerors; fuch as this Mahmood, Tamerlane, or Nadir Shah. One would rather fuppofe the contrary; or, at leaft, that they were totally indifferent about it, by their maffacres, and exterminations. The confederate Hindoos were defeated, and Mahmood's firf effay towards effecting the downfall of their religion, was the deftruction of the famous temple of Nagracut, in the mountains bordering on the Panjab country. His next expedition, being the fixth, was in 1011; when Tannafar, a more celebrated place of Hindoo wormip, on the weft of Delhi, experienced a like fate with Nagracut $;$, and the city, of Delhi itfelf, was taken at the fame. time. In 1018, he took Canoge, and alfo deftroyed the temples of Matra, or Matura, (the Metbora of Pliny) a city of high anti-
quity,

## [ xlvi ]

quity, and no lefs an object of religious veneration, near Agra. After this, turning his arms againt the Rajpoots of Agimere, he found either them, or their country, which is full of mountains and faftneffes, too ftrong for him.

His twelfth expedition, in 1024, was fatal to the celebrated temple of Sumnaut, in the peninfula of Guzerat, adjoining to the town of Puttan, on the fea coaft; and not far from the illand of Diu, now in the hands of the Portuguefe. His route was by Moultan and Agimere, the citadel "of which he was compelled to leave in the hands of the enemy: and in croffing the defert, between it and Moultan, he hazarded the lofs of his army, for want of water. The deftruction of Hindoo temples; with their Priefts and votaries, appears to have afforded this monter the higheft de.light. Nothing offends our feelings more, than the progrefs of deftruction urged by religious zeal: as it allows men to fuppofe themfelves agents of the Divinity; thereby removing thofe checks which interfere with the perpetration of ordinary villiany; and thus makes confcience a party, where fhe was meant to be a judge: Such alfo was Tamerlane: but to the alleviation of the misfortunes of the Hindoos, the enthufiafm of Mahomedanifin had loft its edge, before the invafion of Nadir Shah. Had this predominated in his favage nature, the whole fcene of his conquefts, muft have remained a folitary defert.

Thie city of Nehrwalla, the ancient capital of Guzerat, together' with that whole peninfula, fell into the hands of Mahmood; who died four years afterwards (1028) poffeffed of the eaftern, and by much the largeft part of Perfla; as well as, nominally; of all the Indian provinces from the:weftern part of the Ganges, to the pehinfuld of Guzerat; and from the Indus, to the mountains of Agimeresibut the Panjab: was the only part of it, that was fubjected to regular governments under the Mahomedans; as being in the vicinity bof the Ghiznian empire - As for the Rajpoots-of Agimere; they Atill'preferved their independance, among their rugged mouri-

## [ xlvii ]

tains, and clofe vallies; and not only them, but in a great meafure, down to the prefent time': being in refpect of Hindooftan, what the country of Switzerland, is to Europe; but much more extenfive, and populous. From Mahmood to Aurungzebe, the Indian conquerors were contented with the nominal fubjection of thofe hardy tribes: among whom, military enthufiafm, grafted on religious principles, is added to Atrength and agility of body; and this race is diffeminated over a tract equal to half the extent of France. It goes under the general name of Rajpootana: and is the original country of the Mahrattas; who about 30 years ago, alpired at univerfal empire in Hindooftan.

The Ghiznian empire, fubject to the fame caufes of decay, with other unweildy ftates of rapid growth, was in i1 $5^{8}$, forcibly divided: the weftern and largeft part, and which ftill retained the ancient name of the empire, being feized on by the family of the Gaurides (fo denominated from Gaur, or Ghor, a province and city, lying beyond the Indian Caucafus) while the provinces contiguous to both hores of the Indus, remained to Chufero, or Cufroe, who fixed his refidence at.Lahore *. And even his pofterityx were in 1184, driven out of their kingdom, by the Gaurides. The Mahomedans, thus become nearer neiglibours to the Hindoos, by fixing their refidence at Lahore, extended, as might be expected, their empire eaffward; Mahomed Gori; in' 1194s perpetrating, in the city of Benares, the fame fcenes as Mahmood had before done, at Nagracut and Sumnaut. Benares was regarded as the priscipal univerfity of Braminical learning j' and we may conclude that abouf this period, the Sanferit languagel which was before the current language of Hindooftan, began to decline in its purity, by the admixture of words from that of the coniqueror's $;$ until the langiage of Hindooftan became what it now is: the original Sanfcrit, prew ferved in their ancient writings, becomingia dead langade.: Such

[^10]
## [ xlviii ]

mutations have taken place in every country, where the conquerors have been numerous eñough to effect it : the Saxon language was at the fame period fuffering from the Norman conqueft, what the Sanfrrit did from the Ghiznian. Mahomed Gori alfo carried his arms. to the fouth of the river Jumna, and took the fortrefs of Gwalior; which then gave name to a kingdom, that has fince compofed nearly the foubah of Agra: he alfo reduced the eaftern part of Agimere.

The death of this Emperor, in 1205, occafioned a new divifion of the Ghiznian empire, the Perfian part remaining to Eldoze, and the Indian part to Cuttub, who founded the Patan or Afghan dynafly in Hindooftan. The Afghans originally inhabited the mountainous tract lying between India and Perfia, or the ancient Paropamifus, Before the elevation of Cuttub, to the throne; he had carried his arms, under Mahomed Gori, into Agimere and Guzerat. Lahore was his capital, originally: but the neceffity of fixing the imperial refidence, nearer to the centre of the new conr quefts, occafioned him to remove to Delhi. It may be obferved of the capitals of ftates, in general, that fuch as are neither emporiums of trade, nor meant as citadels in the laft refort, are (as, it were) attracted towards the quarter, from whence hoftility is either intended, or expected.

The Emperor Altumf, who fucceeded to the Patan throne, in 1210, completed the conqueft of the greateft part of Hindooftan proper. He appears to be the firf Mahomedan that made a conqueft of Bengal; the government of which was from this time beftowed on one of the reigning Emperor's fons. It was during this reign (1221) that Gengiz Cawn, among his extentive conquerts (perhaps the moft fo, of any conqueror in hiftory) accomplifhed that of the empire of Ghizni ; putting an end to the dynafty of Charafm, which then occupied that throne: and driving before him, the unfortunate Gelali, fon of the reigning Emperor; who fwam the Indus to avoid his fury. Gengiz, however, left Hindooftan undifturbed.

About A. D. 1242, the Moguls, or Munguls, fuccefiors of Gengiz, who poffeffed, or rather over-run, the countries on the north-weft of Hindooftan, made feveral irruptions into it: and Turmechirin Khan, is reported by Sherefeddin (the hiftorian of Timur) to have carried his arms into the Dooab; but without' making any eftablifhment. Ferifhta takes no notice of the progrefs' of this defultory conqueror, but only defcribes the inroads of the Moguls into the Panjab; which now frequently happened : although it was not till more than 150 years afterwards, that, under Timur, or Tamerlane, they penetrated to the centre of India. Ferifhta defcribes alfo an irruption of Moguls into Bengal, by way of Cbitta and Thibet, in 1244.

I have before obferved, that the provinces of Hindooftan were held rather as tributary kingdoms, than as provinces of the fame empire: and that they feldom failed to revolt, -when a favourable opportunity offered. In 1265 , Malwa regained its entire independance from the crown of Delhi; having gradually thaken off the yoke, laid on it by Cuttub, in: 1205 : and the Rajpoots were on every occafion, notwithftanding their comparative vicinity. to the capital, afferting their independency likewife. Of the ftate of the internal government of Hindooftan, a judgment may be formed, by the punifhment inflicted on the Mewatti, or the Bariditti tribe, which,inhabit the hilly tract, within 8 a miles of Delhi. In 1265, 100,000 of thefe wretches, were put to the fword; and a line of forts was conftructed, along the foot of their hills. Re-' bellions, maffacres, and barbarous conquéts, make up the hiftory of this fair country, which to an ordinary obferver, feems deftined to be the paradife of the world : the immediate effect of the mad ambition of conquering more than can be governed by one man: the whole empire being portioned out to rapacious Governors; who domineering over the governed, 'until their 'fpirits were fufficiently' debafed; ..were at laft able to perfuade them, that their common ${ }^{\text {i }}$ intereft lay in taking up arms; to render thefe Governors indepen-: dant :

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dant; and indeed, had it brought them nearer to the point of having a regulat, permanent, goveroment, this might be;true: but, in fact, it only fubjected them to a new conqueror; or to the punifhment of tebellion from the formet one. It would appear as if the warm climates, and more efpecially the open countries; fituated' within them, were deftined to be the feats of defpotifm : for that the climate creating few wants, and the foil being productive without any great exertion; the inhabitants of it do not poffefs thofe energies, that in a cooler climate prompt mankind to inveltigate their patural rights; and to affert them. This, however, is a point that I fhall not venture to decide on; although I believe it is a fact not to be difputed, that throughout the knowa parts of the world, defpotifm prevails moft in the warm climates. The Patan, Mogul, and Tartarian conquerors, in Hindoortan and China, however hardy at firft, have in a courfe of ages, funk into the fame ftate of effeminacy with their fubjects : and, in their turn, have, with them, received a new mafter. Let thofe who are in the habit of complaining of the feverity of northern climates, reffect, that whatever phyfical evils it may produce, it matures the. great qualities of the $\operatorname{mind}_{i}$ and renders its inhabitants pre-eminent among their fpecies : while a flowery poet, or a more flowery hiftorian, is the moft eminent production of the tropical regions.

While, the Kings of Delhi. were profecuting their conquefts in the eaft and fouth of Hindooftan, the provinces on the wief of the Indus, werè, of courfe, neglected; although not avowedly relinquifhed. It might have, been expected, that fo excellent a barrier as the upper part of the Indos, and the deferts. beyond. Agimere, would have indueed an Emperor of Hindooftan, ta give up, of choice, all the provinces that lay on the weft of this frontier: and the neglect of fo prudent a condut, occafioned the peace of the empire to be often difturbed; and ended. in their being forcibly taken away at laft, by the Moguls: who, not contented with theio new acquifitions on the weft of the Indus, crofed that river and
invaded the Panjab: and fo formidable did they appear to Ferofe If. that fome tribes of them were permitted to fettle in that country (A. D. 1292.) The reader will not forget the fimilar conduct of the Roman Emperor Valens, with refpect to the Goths, who were permitted to crofs the Danube, and fettle in Thrace: and the fimilitude is the more ftriking, in that the Hindooftan empire was afterwards conquered by the affiftance, of the defcendants of thofe Moguls: This Ferofe II. was of the tribe of Chilligi or Killigi (from Killige, near the mountains of Gaur) but is, neverthelefs, included in the Patan dynafty: the name Patan, or Pitan, being applied rather in a loofe manner, to all the tribes bordering on the common frontiers of India, Perfia, and the province of Balk : that is, the ancient province of Paropamifus.

In 1293 this Emperor gave into the fcheme of attacking the Deccan; which, at this period, muft be underftood to mean the country lying generally to the fouth of the Nerbudda and Mahanada. (or Cattack) rivers: $x$ tract nearly equal in extent to what he already poffeffed in Hindooftan; and which extended from the fhores of the Indus, to the mouth of the Ganges; and from the northern mountains, to Cattack, Sirong, and Agimere: the greatelt part of Malwa, with Guzerat, and Sindi, being then independant. The riches of the King of Deogire (now Dowlatabad) one of theprincipalities or ftates of the Deccan, gave birth to this project; and the projector was Alla, Governor of Gurrah, which nearly bordered on the devoted country. The covetoufnefs of the Empe-. ror made him embrace a propofal, which eventually involved in it, his own ruin ${ }_{\mathbf{i}}$ for Alla afterwards depofed him, by means of that. very plunder.

Alla's firft expedition was attended with the capture of Deogire. (or Deogur) and with it, an incredible quantity of treafure and jewels : with which, having increafed his army, he depofed and murdered the Emperor. We cannot help acknowledging the juftice of this punifhment; when we recollect the motives, on which

## [ lii ]

the expedition to the Decean, was undertaken : and that moreover, the Emperor had been bribed by Alla, with part of the plunder, taken in a former predatory expedition to Bilfah.

When Alla (who was the firt of the name) had poffeffion of the throne, in 1295, he began his plan of conqueft, by the reduction of Guzerat; which, while it continued independant, was, by its local fituation, a Atrong obftacle to his defigns on the Deccan. Next, he reduced Rantampour, and Cheitore, two of the frongeft holds of the Rajpoots, in Agimere. This was the firf time that Cheitore had fallen to the Mahomedans. In 1303 , he alfo reduced Warangole, the capital of Tellingana, another principality of the Deccan; and comprehending nearly the prefent country of Golconda. This, as well as Cheitore, was a city and fortrefs of vaft extent, and population. But in the midft of there conquefts, and probably the effect of them, the watchful and reftlefs Moguls, from the oppofite quarter, penetrated even to Delhi; and plundered the fuburbs of it.

In the following year; the remainder of Malwa, was conquered: and in 1306, the conqueft of the Deccan was refumed, under Cafoor, the General of Alla; who proceeded to the Deogur country, by the route of Baglana, which he reduced in his way: and which Ferifhta* calls the country of the Mahrattas. Cafoor not only carried his arms into Deogur (Dowlatabad) and from thence into Tellingana, but into the Carnatic likewife, in 1310 . By the Carnatic, is here meant the peninfula in general, lying on the fouth of the Kiftna river. It is not known, how far he penetrated, fouthward, but he was directed by Alla, to reduce Maber, which we underftand to comprehend the fouthern part of the peninfula. His expedition appears to be rather predatory, than otherwife; agreeable to the genius of bis mafter, Alla. The quantity of treafure

[^11]
## [ liii ]

amaffed, exceeds all belief. It was faid that filver was found too cumberfome for the foldiery; gold being in fuch plenty: The hiftorian obferves on this occafion, as well as on the taking of Deogur, that the Princes of the Deccan had been for a great number of ages, amaffing this treafure : fo that their country had probably continued undifturbed all that time.

In 1312 Cafoor ravaged the northern part of the Deccan again, and laid Tellingana and the Carnatic under a tribute: but the entire conqueft of thofe countries was not effected until about three centuries afterwards, under the latter Princes of the houfe of Timur. Alla died in 1326. At this period all Hindooftan proper was comprehended in the Patan empire (fo called from the dynafty in poffeffion of the throne) : and the interior policy is faid to be fo well regulated, that ftrangers might travel throughout the empire, in perfect fecurity.

Rebellions breaking out in Tellingana, in 1322, and 1326, it was again fubjected : and the whole Carnatic ravaged from fea to fea. But under a fucceeding Emperor, Mahomed III. the Princes of the Deccan affumed courage, and headed by Belaldeo, King of the Carnatic, they drove the Mahomedans entirely out of thofe countries; nothing remaining to them, fave the fortrefs of Dowlatabad (or Deogur). About the fame time (1344) the city of Bijimagur, corruptly called Bifnagar, was founded by the fame Belaldeo. Mahomed, who appears to have been a weak Prince, loft much territory, alfo, by rebellions in Bengal, Guzerat, and the Panjab: mean while, he was occupied in attempting the conqueft of China, but was repulfed on the frontier. It is probable, from circumftances, thatt he went by way of Affam. This Emperoralfo planned the abfurd fcheme of transferring the feat of government, from Delhi ta Dowlatabad: and, attempted it twice, but: without fuccefs.

Ferofe III. who fucceeded in 1351, appeared more defirous of: improving the remains of the empire, after the defection of Bengal.
and the Deccan, \&xc. than of extending it, by arms. Canals, and public works, for the improvement of agriculture, and of the inland navigation, were his favourite objects, during a reign of 37 years. (See the Memoir, page 72.) The Moguls made another irruption in 1357, and the time now approached, when a more ferious one was to take place under Timur, or Tamerlane. After the death of Ferofe, in 1388 , rebellion and civil war, during a courfe of feveral years, prepared the empire for foreign fubjection: and a minority, in the perfon of Mahmood III. who fucceeded in ${ }^{1393}$, brought matters to a crifis. During the confufions attendant on the ftate of a minority, in an empire which could with difficulty be held together, by a veteran defpot, the hifforian remarks an unufual circumftance : two Emperors in arms againft each other, refiding within the fame capital. In this ftate of things, Timur, who had already extended his empire over all the weftern Afia and Tartary, turned his arms towards Hindooftan in 1398. In the preceding year, he had fent his grandfon Peer Mahomed, to. reduce the Panjab, and Moultan; and in October, croffed the In: dus himfelf; and joining his grandfon near Moultan, his army proceeded in different divifions to Delhi, which fubmitted, without what may be properly termed, a battle. This inhuman monfter, who had credit enough with a poet of the prefent century, to be brought on the ftage, as a hero, poffeffing great and amiable qualities, obtained in Hindooftan, the title of "the deftroying Prince :" and was truely worthy of it, from the numerous maffacres and exterminations executed under his immediate direction. Timur ftaid in Delhi only 15 days: and then appears to have been on his return to the feat of his empire, when, hearing of a fortrefs in the Dooab, that had refifted the arms of a former Mogul invader (Turmecherin Khan) he marched towards it and took it. From thence he proceeded to the place where the Ganges iffues out of the mountains, and where the Hindoos refort at certain feafons, in vaft numbers, to pay their adorations to, and to purify themfelves in that
facred ftream. His object was the extermination of thefe inoffenfive people; and he partly fucceeded. From this place, turning to the north-welt, along the foot of Mount Sewalick, he continued bis maffacres, though not without oppofition, until he arrived on the frontiers of Calhmere. He fpent little more than five months between the time of his croffing and recroffing the Indus: and appears to have paid more attention to feafons than Alexander did: as Timur chofe the fair feafon for his expedition, whereas Alexander was in the field in the Panjab, during a whole rainy feafon (fee Memoir page 101). Timur, however, may be faid rather to over-run, than to fubject, or conquer: for he did not difturb the order of fucceffion in Hindooftan, but left Mahmood on the throne: referving to himfelf the poffeffion of the Panjab country only; and this, his fucceffors did not retain long. His views were at this time, directed towards the Turkih empire; and this made him neglect India; which did not promife fo plentiful an harveft of glory, as the other. . During his life, which ended in 1405, he was prayed for in the mofques of Hindooftan, and the coin was ftruck in his name : but this might be more the effect of policy in the ufurpers of Mahmood's throne, than the act of Timur. It does not appear from Ferihta, any more than from Sherefeddin, that this Prince carried much treafüré, out of. Hindooftan, with him. But Nadir Shah's acquifition of the precious metals, at a later period, was great, beyond all ideas of accumulation, in Europe: and is only to be accounted 'for, by the influx of thofe metals from America, during that interval.

For the geography of Timur's marches, the reader is referred to the third fection of the Memoir; and to the map.

If Hindooftan was in confufion before this invafion, it may be expected that on Timur's departure, matters became much worfe. The death of Mahmood happened in 141 3; and with him ended the Patan dynafly, founded by Cuttub in 1205 . The throne was then filled by Chizer! a Seid (that is, one of the race of the prophet

## [ lvi ]

phet Mahomed).whofe pofterity cantinued in it, until. 1450 : when Belloli, an Afghan of the tribe of Lodi, took poffeffion of it, on the abdication of Alla II. under whom all Hindooftan fell into feparate governments; and a potentate, ftyled King of the East, whofe refidence was at Jionpour, in the province of Allahabad, became the moft formidable, among them : 'while the King of Delhi, had but the fhadow of authority remaining to him. The fon of Belloli recovered a confiderable part of the empire; and in 1501, made Agra the royal refidence, It was during this seign, that the Portuguefe firft accomplifhed the paffage to India, by the Cape of Good Hope : but as their connexions were entirely with the maritime parts of the Deccan; and a part of it that had ever been independant of Delhi, no notice of this event, is taken by Ferifhta. The empire fell again into utter confufion, under Ibrahim II. in 1516; and this paved the way for the conqueft of Hindooftan, by Sultan Baber, a defcendant of Tamerlane and of Gengiz Kan; who reigned over a kingdom compofed geterally of the provinces fittuated between the Indus and Samarcand. Being difpoffeffed of the northern parts of his dominions, by the Ufbecs, he determined to try his fortune in Hindooftan, whofe diftracted fituation flattered his hopes of conqueft. His refidence at this time was at Cabul, from whence he undertook his firft expedition acrofs the Indus, in 1518. After this, he made fourothers: and in the fifth (A.D. 1525) he defeated the Emperor of Delhi, and thus. put an end to the dynafty of Lodi. It is faid that Baber croffed the Indus, this laft time, with only 10,000 chofen horfe; the enemy's Generals, by their revolts, furnifhing him with the reft of his army. In this, we have a frefh inftance of the fimall dependance that the Hindooftan Emperors could have, on their Viceroys and Generals. Baber reigned only five years in Hindooftan; duting which, his chief employment was the reduction of the eaftern provinces. Nor did he relinquilh his Perlian provinces, by crofling the Indus. His fon, Humaioon, fucceeded him in 1530 ; but
the Chort reign of Baber, did not allow time enough to compofe the diftractions' that had fo long prevailed; or to exterminate the feeds of rebellion : for the intrigues of his brothers, and the open rebellion of Sheer' Kan'; drove Humaioon, although a Prince of confiderable abilities, and great virtues, from his empire, in 154 r . His flight towards the Indus, and his fojourn among the Rajpoot Princes of Agimere, furnifhes a ftriking picture of royal diftrefs. During his ftay there, his fon Acbar was born, whom we may reckon among the greateft of the Sovereigns of Hindooftan. The provinces on the weft of the Indus were held by a brother of Humaioon: The ufurper Sheer, did not long furvive his new dignity ; being killed at the fiege of Cheitore in 1545 : and was buried at Saferam in Bahar, his original eftate; in a magnificent maufoleum, which he had ordered to be conftructed, during his life time: and of which, a drawing has lately been exhibited in this country, by. Mr. Hodges. Sheer Kan was of Afghan origin; and held the foubahhip of Bahar, when he rebelled : and at his death, his empire extended from the Indus to Bengal. He left his throne to his fon Selim, but fo very unfettled was the fate of Hindooftan, that no lefs than five Sovereigns appeared on its throne, in the courfe of 9 years. In. effect, there could not exift in the minds of the people, any idea of regular government, or regular fucceffion: for there had fcarcely ever been 12 years together; during the laft, or the prefent century, without furnihing fore example of fucceffful rebellion. This induced a frong party in Hindooftan, to invite Humaioon back; and accordingly, in 1554 , he returned, and met with but little refiftance : but died in confequence of an accident, the following year. He was celebrated for the mildnefs and benevolence of his nature: and his return, notwithftanding the fhortnefs of his reign, was a public bleffing; as it was the means of feating his fon Acbar quietly on the throne. When he was driven from his empire, by Sheer, he refided with Shah Tamalp, of Perfia,

## [ lviii ]

who aided him in the recovery of it : and in the early part of his exile, he recovered poffeflion of the provinces beyond the Indus.

Acbar was about 14, when his father died, in 1555. The reign of this Prince has been celebrated by the pen of the famous Abul Fazil, in a book called the Acbar-namma, or hiftory of Acbar. The bufinefs of this 1 ketch, being rather to give a fort of chronological table of events, than to aim at a circumftantial hiftory, I fhall not attempt to particularize the great events of this long and bufy reign of 51 years: but refer the reader to the hiftory of Hindooftan, by Col. Dow : in which, not only a full account of Acbar, but alfa of his defcendants, down to Aurungzebe, will be found. As in the perfon of Baber, the line of Tamerlane firft mounted the throne of Hindooftan : fo in that of Acbar, the grandfon of Baber, it may be faid to be eftablifhed. The conqueft of their anceftor, about a century and a half before, had no hare in effecting the prefent fettlement. Baber, was in reality the founder of the Mogul dynafty; and from this event, Hindooftan came to be called the Mogul, empire *.

The firft years of Acbar's reign were employed in the reduction of the revolted provinces, from Agimere to Bengal ; in which the great Byram, who had a thare in recovering the empire for $\mathrm{Hu}-$ maioon, was a principal actor. Thefe conquefts were fecured in. a manner very different from thofe, atchieved by former Emperors : that is, by a proper choice of Governors; by wife regulations; by an unlimited toleration in religious matters; and by a proper attention to the propenfities of the people: to all which, a long and vigorous reign, was peculiarly favourable. The Hindoos ftill formed the bulk of the people; even in thofe provinces, that, from their vicinity to the country of the conquerors, had been the moft

[^12]frequently over-run : and experience had taught the Mahomedars conquerors, that the paffive religion and temper of the Hindoos, would, if left to themrelves, never difturb the eftablifhed government. But the Deccan was a fumbling block to the Mogul Emperors. In 1585, Acbar refolved on the attack of it, and foon after carried the war into Berar, while another army was reducing Cafhmere; in an oppofite corner of the empire. The Deccan appears at this time ${ }_{3}$ to have been divided into the kingdoms or ftates of Candeih, Amednagur (or Dowlatabad) Golconda (or Bagnagur) and Vifiapour. Berar and the Carnatic, each of which included. feveral diftinct governments, are not fpecified by the hiftorian, as, members of the Deccan: by which it would appear that they do. not, in ftrictnefs $s_{z}$ appertain to it. In the popular language of the times, there were reckoned to be four principalities in the Deccan: that is to fay, the four firft mentioned, above. Moft, if not alle of thefe, were. at this time governed by Mahomedan Princes; although we are not in poffefion of any hiftory of the conquefts or revolutions, that transferred them from the Hindoos tee the Mahot medans. At the time of Acbar's. death, in 1605 , no farther progrefs was:made in the reduction of the Deccan, and the adjoining countries, than the taking poffeffion of the weftern part of Berar, Candeih, Tellingana (a divifion of Golconda) and the northern part of Amednagur; the capital of which, bearing the fame name, was taken in 160r, after a long and bloody fieges. and an unfuccefsful attempt to relieve it, by the confederated. Princes of the Deccan.

Acbar was the glory of the houfe of Timur. Hindooftan proper, had never, at any period fince the firft Mahomedan conqueft, experienced fo much tranquillity, as during the, latter part of his reign : but this tranquillity would hardly be deemed fuch, in any other quarter of the world; and muft therefore be underfood to mean a ftate, fhort of actual rebellion, or at leaft, commotion. Prince Danial, his eldeft fon, died juft before himi. and Selim,

## [. Ix ]

the next, in right of primogeniture, fucceeded under the title of Jehanguire.

Jehanguire reigned about 22 years. Under him, the conqueft of the Deccan was not loft fight of, though but faintly purfued. War was made on the Rajpoots, and the Rana, or chief Prince, brought to terms. The rebellions of the Emperor's fon, Shah Jehan, embittered the latter part of his reign; and the influence of his miftefs Noor Jehan, rendered his councils weak, and conItrained his government. 'However, the provinces having been held together for near 70 years, the empire had acquired a degree :of confolidation; and was not fo liable to be fhaken, as it'would have been at rome former periods, under the operation of fimilar events. It was in this reign, and in the year 1615 , that Sir Thomas Roe was fent as the firft Englinh Ambaffador to the Emperor of Hindooftan. The Portuguefe, had by this time, acquired confiderable fettlements in Bengal and Guzerat; but only thofe in Guzerat, where they alfo:poffeffed fome extent of territory, attracted the notice of the court: and it is curious to obferve what the author of the Ayin Acbarce fays of them, about the year 1560.' Speaking of the lands of Guzerat, he fays, ". By the neglect of the King's Governors, feveral of thefe diftricts are in the hands of Europeans." Ferilhta, allo, Ipeaking of the fite of an ancient Hindoo temple, near Diu, fays that it was fituated in the diftricts, that were fubject to the " 4 Idolaters of Europe.;

Shah Jehan fucceeded his father.in 1627. The conqueft of the Deccan was purfued with more vigour in this reign: and the plunders and devaftations perpetrated there; occafioned moft, or all of its Princes, to make fubmiffion; and acknowledge the Emperor, lord paramount. Golconda was in part, actually taken poffeffion of: but Vifiapour and the Carnatic, together with the regions of the Gauts, remained in the hands of their ancient poffeffors:.' •

Candahar, $\cdot \mathrm{a}$ fortrefs fituated on the common boundary of Perfia, and of the Mogul provinces beyond the Indus, was, at this time, a fub-

## [ lxi ]

a fubject of contention, between the two Monarchs of Perfia and Hindooftan. Thid firf ferious quarrel between the Europeans (Portuguefe) and Moguls, happened during this reign, 1633 : when the Portuguefe were expelled from Hoogly, in the Ganges. In $165^{8}$, the civil wars commenced between the Emperor and his fons; as well as between the fons themfelves: which ended in the elevation of Aurungzebe, the youngeft; after he had depofed his father, and murdered or expelled his three brothers. The account of thefe tranfactions may be feen at large, in Bernier and Dow : and is a very curious piece of hiftory. In 1660, Aurengzebe (wha took the name or'title of Allumgire and was the firt of that name) was in peaceable' poffeffion of the thrones: and fromin that periods until the year $167^{8}$, there prevailed, throughout Hindooftan in general, the moft profound peace that. had ever, 'perhaps, been known: but the remainder of the Deccan, wäs fill a defideratum; and. Aurungzebe difdained to have any other boundary' on the fouth, than the ocean. Accotdingly; the conquelt of the remote part of the Deccan employed a very confiderable part of his leifure duiting the latter part of his reign: when the whole of that region, together with the peninfula, a few mountainous and inacceffible tracts only excepted, were either entirely fubjected, or rendered tributary to the throne of Delhi.. What might appear to Aurung + zebe to render this ftep of fubduing the Deccan', neceffary, was; the determined fpirit and growing power of Sevagee, the founder of the Mahratta ftate'; who, by his conquefts in Vifiapour, appeared almoft in the character of a rival to Aurungzebe. ...
$\therefore$ A rebellion of the Patans beyond the Indus, in $16 j 8:$ called for the prefence of Aurungzebe, there : which was no fooner quelled, than his perfecution of the Hindoos fitred up the Rajpoot tribes. in Agimere: He undertook this war alfo, in perfon: but was hemmed in with his whole army, Betweer the mountains, and the Emprefs herfelf, was taken prifoner': fhe was afterwards, however, permitted to efcape, as well as the Emperor. This did not dif-

## [ 1xii ]

courage him from carrying the war into the Rajpoot country again, in 168 I : when he took and deftroyed Cheitore, the famous capital of the Rana; as well as all the objects of Hindoo workhip found there. The fpirits of thefe gallant people, were, however, fill unfubdued: and Aurungzebe was neceffitated to grant them a peace*.

Seyagee died in 1680, and left his rifing fate of Mahrattas, to his fon Sambajee; who was afterwards betrayed into the hands of Aurungzebe, and barbaroully put to death. Still, however, the mountainous parts of Baglana were unfubdued; and although the kingdom of Vifiapour was reduced in 1686, and Golconda, in the following year; yet he found great difficulty in profecuting his conquefts on the weft: as appears by his camp being fixed on the Kiftna river, about 200 miles to the north-eaftward of Goa, in 1695: I fay, appears: for we have at prefent, no regular hiftory of any later period, than the toth year of Aurungzebe: that is, to the year 1670; when Mr. Dow's hiftory finifhes: all the events that are fubfequent to this date, are from other authorities.

It is faid that Aurungzebe was employed in the Deccan from the year 1678 , to the time of his death, and was actually in the field, during the greateft part of the laft 15 years of his life. This dereliction of his original empire and capital for nearly. 30 years, occafioned various diforders in them: and laid the foundation of many more: among others, the fecond rebellion of the Rajpoots in Agimere; that of the Patans towards the Indus; and of the Jats, or Jates, in the province of Agra. This was the firft time that the Jats appeared, otherwife than as banditti: fince which, they grew

[^13]
## [ lxiii ]

up to be a confiderable fate : and at one time, were of fome confideration, in the politics of upper Hindooftan.

Aurungzebe died in 1707, in the 90th year of his age, at Amednagur, in the Deccan; which he had fixed on for his refidence, when in winter quarters. Under his reign, the empire attained its full meafure of extent. His authority reached from the roth to the $35^{\text {th }}$ degree of latitude; and nearly as much in longitude: and his revenue exceeds 32 millions of poends fterling, in a country where the products of the earth are about four times as cheap as in England. But fo weighty a fceptre could only be wielded by a hand like Aurungzebe's : and we accordingly find, that in a courfe of 50 years after his death, a fucceffion of weak Princes and wicked Minifters, reduced this aftonihing empire to nothing.

Aurungzebe obvioully forefaw the contefts that would arife between his fons, for the empire: and it has therefore been afferted, that he made a partition of it, among them. This account, however, is not-warranted by the memoirs of a nobleman of Aurungzebe's Court, lately publifhed, in this country*; nor by the beft living authorities that I have been able to confult. Two letters, written by Aurungzebe to two of his Cons, a few days before his death, indicate no intention of dividing the empire; but exprefs in doubtful terms, his apprehenfions of a civil war 4 . He left behind him, four fons: Mauzam, afterwards Emperor, under the title of

[^14]
## [ lxiv ]

Bahader Shah; Azem, and Kaum Bukfh, who feverally contefted the empire with their, elder brother; and Acbar, who 30 years before had been engaged in rebellion and fled to Perfia. The death of their father, was the fignal of hoitility between Mauzum and Azem; the former approached from Cabul, and the latter from the Deccan, and difputed the poffeffion of the whole empire (for Azem had propofed a partition of it) with armies of about 300,000 men each. Near Agra, it was decided by a battle, and the death of Azem: and Mauzum took the title of Bahader Shah. His title; before his acceffion, was Shalh Aulum ; by which mame he is conftantly mentioned in the memoirs of Eradut Khan.

Bahader Shah reigried about five years, and twas a Prince of confiderable ability, and great attention to bufinefs: but the convulfions with which his elevation had been attended (notwithrtanding his pretenfions, as eldeft fon of the late Emperor) added to the various diforders that had taken root, during Aurungzebe's long abfence in the Deccan, had reduced the govermment to fuch a flate of weaknefs, as required not only the exertion of the beft talents, but alfo much time, to reftore. The rebellion of his brothet Kaum Bukih, foon after his acceffion, called him into the Deccan; and this being quelled by the death of Kaum Bukih, and the total difperfion of his followets, he wifely quitted this fcene of his father's miftaken ambition ; although the Deccan:was far from being in a fettled ftate. He had in contemplation to reduce the Rajpoot Princes of Agimere, who had formed a very ftrong confederacy; to which the Iong abfence of Aurungzebe had been too favourable; and they appeared to act with much confidence and fecurity. However, an'evil of a more preffing nature, drew the Emperor's attention to another quarter. The Seiks, a new fect of teligionifts, appeared in arms in the Lahore province; and ravaged the whole country from thence to the banks of the Jumna river. The Seiks had filently eftablifhed themfelves, along the foot of the eaftern mountains, during the reign of Shah Jehan. They difer from mon

## [ ${ }^{\mathrm{lx}} \mathrm{v}$ ]

moft religionifts, in that, like the Hindoos, they are perfectly tolerant in matters of faith; and require only a conformity in certain figns and ceremonies: but unlike the Hindoos, they admit profelytes; although thofe from among the Mahomedans, are the leaft efteemed. They are now become one of the moft potent Ptates in Hindooftan. Thefe, the Emperor marched againft in perfon, and after much trouble and delay, reduced them; but their Chief efcaped. The Emperor then took up his refidence at Lahore, and feems to have continued there a very long time: probably, to check the remnant of the party of the Seiks; and to fettle the affairs of the province, in general. Here he died, after a flort illiefs, in 1712 : and, it would appear, that he. never had an opportunity of vifiting Agra, or Delhi, during his refgn.

He alfo, left four fons : among whom, a war for the fucceffion, commenced on the fpot. The fecond fon, Azem Oohawn; took poffeffion of the treafures; but was oppofed by his three brothers, who agreed to divide the empire among them. A battle, in which Azem iras killed, decided matters in their favour ; chiefly by the addrefs and bravery of the youngeft, Jehaun Shah ; who feemed refolved to abide by the agreement, to divide the empire; and as a proof of his intention, directed the treafures to be divided. But Zoolfecar Khan, an Omrah' in high truft, intrigued to prevent it; intending to taife to the throne, Jehaunder Shah, who was the beft fitted for his-purpofes.: A fecond battle was fatal to Jehaun Shah; and left his two remaining brothers to difpute the empire, by a third battle; which left Jehaunder, who was originally the eldeft, in poffeffion. He did not long enjoy his dignity: for at the end of nine months, he was dethroned by Ferekfere; for Füriockferee fon of the deceafed Azem Oofhawn; and, of courfe, great grandifon of Atrungzebe: The weaknefs and meannefs of jehaunder' is almoft without parallel, in the annals of Kings*: and gave occafion to the

[^15]
## [ lxvi ]

Syeds (or Seids) Houffein Ali Khan, and Abdoolla Khan, two brothers, and Omrahs of great power, to fet up Ferokfere Having been poffeffed of governments in the eaftern provinces, their influence enabled them to collect an army, with which they defeated that of Jehaunder, near Agra, in the fame year, 1712.

The Seiks appeared again in arms, during the following year: and in 1716, they were grown fo formidable, that it appeared neceffary to march the grand army againft them, with the Emperor at its head; but we are ignorant of the particulars of the campaign.

It was in this reign that the Englifh Eaft-India-Company, obtained the famous Firman, or grant, by which. their goods of export and inport, were exempted from duties, or cuftoms; and this was regarded as the Company's Commercial Charter in India, while they food in need of protection, from the Princes of the country.

In the year ${ }^{3717}$, Ferokfere was depofed and blinded by the Seids : who raifed to the throne Ruffieh-ul-Dirjat, a forn of Bahader Shah. Both this Emperor and his brother, Ruffieh-al-Dowlat, were, in the courfe of a year, raifed to the throne; and afterwards depofed and put to death by the Seids; who had.now the difpofal of the empire and all its concerns. Thus, in in years from the death of Aurungzebe, five Princes of his line, who had mounted the throne, and fix others wha had been competitors for it, had been difpofed of: and the degraded tate of the regal authority, during this period, had introduced an incurable anarchy, and a difpofition in all the Governors of provinces, to fhake off their dependency on the head of the empire. From this time, affairs declined very rapidly: and the empire, which had acquired fome degree of confiftency under the houfe of Timur, was now. about to be difmembered, in a degree beyond what it had experienced, even before the æra of the Mahomedian cònquefts.

Mahomed, Shah, grandfon of Bahader Shah, was placed on the throne by the Seids, in ${ }^{7} 718$. This Prince, warned by the fate of

## [ lxvii ]

his predeceffors, and having very early in his reign acquired power fufficient for the purpofe, got rid of the Seids : but not without a rebellion and a a battle.

Nizam-al-Muluck, Viceroy of the Deccan, had for fome time been rifing into power; and the times being favourable, he meditated independency. He had received fome affronts from the Seids, which furnihhed him with an excufe for withdrawing to his government: from whence; in 1722, he was invited to Court, and offered the poft of Vizier: This offer, however, he declined, as not fuiting his projects: which had for their object, fovereignty, inftead of miniftry; in the Deccan, at leaft. The Mahrattas too, whofe power had progrefliyely increafed, and who even held their ground againft fo, mattial and perfevering a Prince as Aurungzebe, were, as might bee expected under a fucceffion of weak ones, grown truely formidable to the reft of the empire : and their vicinity to the Nizam, afforded him a complete: pretence for increafing his army:' When the Princes of the houfe of Timur were fo eagerly purfuing the conqueft of the Dècan, it feems to have efcaped their penetration, that this region, which poffeffed ample refources within itfelf, and innumerable local advantages in point of fecurity from an enemy swithout, was alfo fituated at fuch a diftance from the capital, as to hold out 'to its Viceroy, the temptation of independence, whenever a favourable opportunity might offer. Perhaps, if the Deccan had been originally left to itfelf, the pofterity of Timur might ftill have fwayed the fceptre of Hindooftan.

While the Nizam continued fo formidable in the fouth, the Mahrattas diregted their attacks againft the :middle :and northern provinces. Malwa and the open parts of Agimere were over-run by them : and their detachments infulted even the capital of the empire.. The weak Mahomed, had in the early part of his reign, endeavoured to fatisfy, their' demands, by paying them a tribute amounting, to one fourth of the net revenue of the invaded provinces : but this, as might haye been expected, only increared

## [ Ixviii ]

their infolence, and ended in their feizing on the provinces themfelves.

In 1738 , the Nizam, confident of his intereft with a powerful faction at Court, came thither, attended by a large body of armed followers. Dowran, the commander in chief of the army of the empire, was at the head of the Court party; which the Nizam finding too ftrong, to be eafily' difpoffeffed of their places, he invited Nadir Shah, the ufurper of the Perfian throne, and wha was then engaged in the fiege of Candahar, to invade Hindooftan:hoping that he and his faction might get tid of Dowran ; or at any rate, that they might profit by the confufion it would occafion. Many thought that the Nizam's views extended to the empire itfelf. Accordingly, in the following year, Nadir Shah entered Hindooftan, and advanced to the plains of Carnawl, where Dowran had affembled the army, but was foon after killed in a fkirmifh. Sa uncertain was the fate of things, even at this time, that Nadir Shah offered to evacuate the empire for fifty lacks of rupees (ralf a ${ }^{\text {i }}$ million). But the intrigues of the Nizam and his party, orcafioned the weak Emperor to throw himfelf on the clemency of the invader; who entered Delhi, and demanded 30 millions fterling, by way of tanfom. Tumults, maffacres, and famine, were the refult: 100,000 of the inhabitants wete maflacred, and 62 millions of plunder, were faid to be collected. Nadiz married his fón to a grand daughter of Aurungzebe, reftored Mahomed Shah to his. throne, and returned to Perfia, after obtaining the ceffion of all the countrieg fubject to. Hindooftan, lying on the weft of the Indus.

His departure left the Nizam in poffeffion of the whole remaining power of the empire $\because$ and which he facrificed to his own views. in the Deccan, where he eftablifhed an indeperidant kingdom for himfelf. The Mahratta invafions of the Carnatic in 1740 and 1741, and particularly the defeat and deathiof. Doaft Ally (Nabob of Arcot) by their arms, called the Nizam bome; after delegating. his power at Court to his eldeft fon Gazi o'dien.

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## [ lxix ]

The Nizam, on his arrival, fettled the Carnatic for the prefent, by placing Anwar o'dien, father of the prefent Mahomed Ally, in the government, or Naboblhip of Arcot; which was then underflood to comprehend nearly the prefent Carnatic.

Bengal became independant of Delhi a little before this time (1738) under Aliverdy Cawn; and not long after, a vaft army of Mahrattas; both from Poonah and Berar (for they were now divided into two flates) invaded it, under the fanction of the Emperor's name, who being: at a lofs to fatisfy their repeated demands, fent them to collect for themfelves, the arrears of revenue, fince the defection of Aliverdy. About the fame time the Rohillas, a tribe from the mountains that lie between India and Perfia, erected an independant ftate on the eaft of the Ganges, and within 80 miles of Delhi. Very ftrong fymptoms of the univerfal difflutution of the empire, appeared, at this time.

Nadir Shah died in 1747: and in the confufion that followed, Abdalla, one of his Generals, feized on the eaftern part of Perfia, and on the bordering provinces of India, that were ceded by Mahomed Shah to Nadir: and thefe he formed into a kingdom, known at prefent by that of Candahar; or more familiarly by that of the Abdalli. It comprifes nearly the ancient empire of Ghizni.

Mahomed Shah died the fame year, having reigned 29 years: a long period, confidering the fate of his immediate predeceffors, and the fate of anarchy: that prevailed fo univerfally in Hindooftan.

Ahmed Shah, fon of Mahomed, fucceeded his father. In his reign, which lafted about 6 years, the entire divifion of the remainder; of the empire took place; nothing remaining to the houfe of Timur, fave a frmall territory round Delhi, together with the city itfelf (now no longer a capital) expofed to repeated depredations, maffacres, and famines, by the contefts of invaders. The laft army that might be reckoned imperial, was defeated by the Rohillas, in 1749; by which their independency was firmly eftablifhed in the

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## [ lxx ]

eaftern part of the province of Delhi. The Jates, or Jats, a Hindoo tribe under Soorage-Mull, eftablimed themfelves, and founded a ftate in the province of Agra. The Déccan and Bengal we have already feen, ufurped by their Viceroys, the Nizam and Aliverdy: Oude was feized on by Seifdar Jung (father to the late Sijah Dowlah, and grandfather to the reigning Nabob of. Oude, Azuph Dowlah) : Allahabad by Mahomed Kooli : Malwa was divided between the Poonah Mahrattas, and feveral native Princes, and Ze mindars; Agimere reverted of courfe, to its ancient lords; the Rajpoot Princes: and the Mahrattas, who had of late been making large ftrides towards univerfal plunder; if not to univerfal empire;' poffeffed, in addition to their chare of Malwa, the greatelt part of Guzerat, Berar, and Oriffa; befides their ancient domains in the Deccan: and were alternately: courted and employed by different parties, and were become the Swifs. of India; with this deviation from the cuifom of the European Swifs; that' they ufually paid themfelves, inftead of being paid by their employers: Abdalla; as has juft been faid, having eftablifhed his new kingdom:very early: in this reign, entered Lahore and Moultan (or the Panjab) with ai view to the conqueft of them. The whole country of Hindooftan: proper, was in commotion from one extreme to the other: each party fearing the machinations or attacks of the other; fo that all regular government was at an end, and villiany was practifed irr every form. Perhaps, in the annals of the world, it has feldomhappened that the bonds of government were fo fuddenly diffolved;: over a portion of country, containing at leaft 60 millions of inhabitants.,

The Nizam died; at a very advanced' age *, in $1 / 748$;'and was' fucceeded By his fon Nazirjung, in prejudice to the rights of his eldeft fon, Gazi, Viziee to the nominal Emperor. Thie contefts that followed foon after, between Nazijpung, and liis nephew:

[^16]
## [ lxxi ]

Murzzuffer Jung, for the throne of the Decean; and between the families of Anwar o'dien and Chunda Saheb, for the Nabobllip of Àrcot, one of its: provinces; occafioned the French and Englifh to engage as auxiliaries. in the wars that happened in confequence of them. In the firf, the French alone interfered: in the latter, both pations's the' Englifh efpoufing the caufe of the family of Anwar $Q^{\prime}$ dien. Thefe.wars latted till the year 1754 ; and ended,: after much bloodfhed by:battle and affaffination, in fixing Mahomed Ally, fecond: fon of Anwar o'dien, in the government of Arcot; and Salabidjung, fon of the late Nizam-al-Muluck, in the foubahbhip of the Deccan; the original difputants being either affafinated or killed in battle: By this refult, the Englifh gained the point of eftablifhing their fecurity and their influence in the: Carnatic: and the French; in addition to the folid advantage of getting poffeffion of the northern circars ${ }^{*}$, valued at half a million. flerling; of annual:revenue, gained the fplendid but uncertain privilege of-influencing the councils of the Nizam, by attending: his perfon with their army, commanded by the celebrated M. Bufly,

The . Mogul empire was now become-merely nominal:: and the Emperors mupt infuture be regarded as of no political confequence, otherwife than as their, names and perfons were made ufe of, by different parties, to forrward, their own views. . That the name and petfon of the Emperor were of ufe, as retaining a confiderable degree of vecneration' among the bulk of the people-in Hindooftan and: the Deccan; is evidents, from the application made at different times, forggrants of territory, forcibly.acquired by the grantee, but: which required the fangtion of the lord, paramount, in order to teconcile the tranfaction to the popular;, or perhaps, vulgar opinion. Thus every ufurper has endeavoured to fanctify his ufurpation, by either a real, or pretended grant from the Emperor: and others; by

[^17]
## [ lsxii ]

obtaining poffeffion of his perfon, have endeavoured to make their acts pafs for his. Another remarkable inftance of the effect of popular opinion, is, that the coin throughout the whole tract, known by the name of the Mogul empire, is to this day, ftruck in the name of the nominal Emperor.

In 1753, the Emperor Ahmed was depofed by Cazi ${ }^{*}$, after having reigned about 6 years. In the preceding year, the Mahrattas had been called in, to affift in reducing the Jats, who were in poffeffion of Agra, and become troublefome neighbours to the Emperor : and in the prefent year, the Berar Mahrattas eftablifhed themelves in Oriffa, by ceffion from Aliverdy, Nabob of Bengal: who was alfo compelled, for a fhort time, to pay them a tribute for Bengal and Bahar, amounting to one fourth of the clear revenue. This, together with the Mogul's former permiffion to collect the arrears of revenue due to him, is the foundation of their claims. on Bengal and Bahar; and which they have never relinquifhed, although the times may have been unfavourable to their afferting them.

Allumguire II. grandfon of Bahader Shah, was placed on the nominal throne by Gazi, with the concurrence of Nidjib Dowlah, a Rohilla Chief, and commander of the army. Abdalla of Candahar, was at this time in poffeffion of Lahore, and threatened Delhi. Ir. 1756, the Emperor, to get rid of Gazi, invited Abdalla to Delhi; who accordingly came, and laid that unfortunate city under heavy contributions; not even fparing the fepulchres of the dead: but being baffled in his attempt on Agra (held by the Jats) he proceeded no farther éaftward, but returned towards Perfia, in 1758. The Emperor and his family were now reduced to the loweft poffible ftate of toyalty : alternately foliciting the affiftance

[^18]
## [ [xxiii ]

of Abdalia, and of the Mahrattas; and as much in dread of their allies, as of their enemies.

In 1760 , Allumgire was depofed and murdered by Gazi. His fon, the prefent Emperor, who took the title of Shah Aulum, was then engaged in a fruitlefs attempt to reduce the Bengal provinces. He had fucceffively thrown himfelf, on the Mahrattas, Nidjib Dowlah, and Sujah Dowlah, for protection and affiftance; but without fuccefs. Mahomed Kuli of Allahabad, however, received him : and it was by means of an army furnihed by that Chief, and by Bulwantfing, Zemindar of Benares, that he was enabled to enter the Bengal provinces, where he was joined by fome refractory Zemindars of Bahar, and made up altogether a force of about 60,000 men : but notwithftanding his numbers, they were fo ill provided, that he ended his expedition (in 1761) by furrendering himfelf to the Britifh, who had taken the field as allies to the Nabob of Bengal: and who, having at that time no inducement to connect their fortunes with his, he applied with more fuccefs to Sujahr Dowlah, who, in Mahomed Kuli's abfence, had feized on Allahabad.

Abdalla, fiad vifited Hindooftan no lefs than 6 times during the late reign.; and appeared to have much more influence in the empire than Allumgire had. His fixth vifit, was in 1759 and 1760 ; when Delhi was again plundered and almoft depopulated, although: during the time of Aurungzebe it was fuppofed to contain two millions of fouls-

The Mahrattas in the midft of thefe confufions and revolutions, daily gathered ftrength. We find them engaged in every frene of politics and warfare from Guzerat to Bengal ; and from Lahore: to the Carnatic. Poffeffed of fuch extenfive domains and vaft: armies, they thought of nothing lefs than driving out Abdalla, and. reftoring the Hindoo government, throughout the empire. Thus, the principal powers of Hindooftan were arranged in two parties; the Hindoos and Mahomedans: for the Jats joined the Mahrattas;

## [ lxxiv:]

and Sujah Dowlah, with the Rohillas, and other Mahomedan Chiefs of lefs note, joined Abdalia : and a battle enfued in the old fceme of warfare, the plains of Carnawl and Panniput. There were faid, to be 150,000 Mahomedans, and no Iefs than 200,000 Mahrattas, whofe caufe the Jats deferted, before the battle. This was the moft important ftruggle that had taken place, fince the contefts between Aurungzebe's fons, in 1707. Victory declared for Abdalla, after a battle more obftinate and bloody than any that the records of Hindooftan can probably thew : the carnage of the day, and the number of Mahratta prifoners taken, were almoft incredible; and great deeds of valour were performed on both fides. This battle was decifive of the pretenfions of the Mahrattas, to. univerfal empire in Hindooftan. They loft the flower of their army, together with their beft Generals: and from that period ( 176 I) their power has been fenfibly on the decline.

Abdalla's influence at Delhi, was now unlimited; and he invited. Shah Aulum thither (then engaged in Bahar, as abovefaid) promifing to feat him on the throne of his anceftors: . He, however, did not venture to truft himfelf in the hands of Abdalla: who therefore, as his prefence was required in Lahore, where the Seiks were on the point of overpowering his garrifons, fet up Jewan Bucht, the fon of Shah Aulum.* for Emperor, under the tuition and protection of Nidjib. Dowlah; from whom he exacted an anņual tribute. Thus, in fact, Abdallia became Emperor of Delhi: and if his inclinations had led him to eftablifh himeelf in Hindooftan, it is probable that he might have began a new dynafty of Emperors, in his own perfon.. He meant, probably, at fome future time ${ }_{5}$ to purfue his defigns, whatever they were, either for himfelf or for the heir of the houfe of Timur, to which he had allied himfelf by a match with one of the Princeffes. His fon and

[^19]
## [ lxxv ]

fuccefior; the prefent Timur Shah, married another Princefs of the fame line.

After the departure of Abdalla, it appears that all the territory remaining to Nidjib Dowlah, for himfelf and the young Emperor, was the northern part of the province of Delhi. In the following year, 1762, both the Jats and Mahráttas prefied hard on Nidjib Dowlah; but he either baffled them, or bought them off; and held his ground during his life time : and then tranfmitted his country, which is chiefly fituated between the Ganges and Jumna, to his fon Zabeta Cawn, the prefent poffeffor.

Shah Allum the legal Emperor (whofe fon we have juft feen in the character of his father's reprefentative) was without territory, and without friends, fave only. a few Omrahs who were attached to his family; and were, like him, difpoffeffed of their property and ftation. The expulfion of the Nabob of Bengal, Coffim Ally, by the Englifh, in ${ }^{1763}$, by drawing Sujah Dowlah into the quarrel, was the means, once more, of bringing the wandering Emperor into notice. But he had more to hope from the fuccefs of the Britifh arms, than thofe of his patron, Sujah Dowlah: and the uninterrupted fuccefs that attended them in 1763,64 , and 65 , by the difperfion of the armies of Coffim Ally, and of Sujah Dowlah, and by the entire conqueft of Oude and Allahabad; left both the Emperor and Sujah Dowlah, no hopes, but from the moderation of the victors. Lord Clive, who affumed the government of Bengal, in ${ }^{176} 5$, reftored to Sujah, all that had been conquered from him, except the provinces of Corah and Allahabad; which were kept as part of an eftablifhment for the Emperor: at the fame time he obtained from the fame Emperor, a grant of the provinces of Bengal, Bahar and Oriffa, together with the northern circars; on conidition of paying the Emperor 26 lacks of rupees (260,00cl.) per annum, by way of tribute, or quit rent. The Corah provinces were valued at 30 lacks more. Thus was a provifion made for the Emperor; and a good bargain fruck for the Englih: for Bengal

## [ Jxxvi 〕

and the circars might be eftimated at a million and a balf net revenue. after the charges of the civil and military eftablifhments, were paid. The Emperor was to refide at the city of Allahabad; and was, in effect, under the protection of the Englih, to whom he owed all that he poffefied. A treaty offenfive and defenfive was entered into, with Sujah Dowlah, Nabob of Oude: and his territories being fituated fo as to form a barrier to ours, a competent force flationed within them, ferved to guard both, at the fame time'; and it was convenient to the poffeffor of Oude, to pay the expence of $\mathrm{it}_{\text {, }}$ as if it had been retained for his fervice only.

It was, however, the misfortune of the Emperor, that he could not accommodate his mind to the ftandard of his circumftances; although thefe were far more favourable now, than at any other period of his life. But being the lineal defcendant of the houfe of Timur, he afpired to poffefs the capital city of his anceftors; and in grafing at this fhadow, he loft the fubftance of what he already poffeffed. For after about 6 years quiet refidence at Allahabad, he put himfelf into the hands of the Mahrattas, who promifed to feat him on the throne of Delhi: thofe very Mahrattas, who had wrefted the fairelt of his provinces from his family; and whofe object was to get poffeffion of the reft: and who intended to ufe his perfon and name, as one of the means of accomplihing it. A ceffion of the Corah provinces to the Mahrattas, was the immediate confequence of this connexion : and had not the Englih interpofed, the Mahrattas would have eftablihed themfelves in that important angle of the Dooab, which commands the navigation of the upper part of the river Ganges, and the whole courfe of the Jumna; and which would have brought them almoft clofe to our doors : befides the evil of extending their influence and power; and of feeding their hopes of extending them fill further. The principle on which the Britifh Government acted, was this: they confidered the Corah, \&tc. provinces, which by right of conquert were originally theirs, as having reverted again to them, when they

## [ Jxxvii ]

were alienated from the purpofes, for which they had been originally granted to the Emperor ; and applied to the purpofe of aggrandizing a power, which was inimical to them and to their allies. They therefore took poffeffion of thofe provinces again, and immediately ceded them to the Nabob of Oude, for a valuable confideration, Indeed, it was a miftake originally, not to reftore the poffeffion of them to Sujah Dowlah, in common with the reft of his territories: and to fettle a certain fipend in lieu of them, to the Emperor: for they, forming the frontier towards the Mahrattas and Jats, fhould have been placed in hands, that were better able to defend them.

The Mogul, however, went to Delhi ; thereby lofing all that he had acquired from the Britifh; and has ever fince been a kind of ftate prifoner: living on the produce of a trifling domain, which he holds by a tenure of fufferance; allowed him partly out of veneration for his anceftors, and partly for the ufe of his name. It muft be allowed, that the Princes of Hindooftan, have generally mewn a due regard to the diftreffes of fallen royalty (when life has been fpared) by granting Jaghires, or penfions. Ragobsh's, is a cafe in point. The private diftreffes of Shah Allum (it is almoft mockery to call him the Great Mogul, or Emperor) were, however, fo preffing, during Mr. Haftings's laft journey to Oude (1784) that his fon Jewan Bucht came to folicit affiftance from the Englifl. Since the peace of ${ }_{1} 7^{82}$, Madajee Sindia, a Mahratta Chief, and the pofieffor of the principal part of Malwa, has taken the lead at Delhi; and has reduced feveral places fituated-within the diftricts formerly poffeffed by the Jats, Nudjuff Cawn, and the Rajah of Joinagur : and it may be concluded that Sindia has in view to extend his conquefts on the fide of $A_{0}$ imere : and to eftablifh for himfelf, a confiderable fate, or kingdom.

It might be expected that the Rajpoots of Agimere, \&c. would be lefs averfe to receiving a Sovereign of their own religion, than they were to fubmit to the Mahomedan Emperors: and, more-

## [ 1xxviii ]

over, that it would be more for the intereft of their people, to be fubjects, than tributaries, of the Mahrattas; there being mild as: Governors, although the moft unfeeling, as collectors of tribute, or as enemies : yet it appears, that they entertain the greatef jealoufy of Sindia's defigns; the accomplifhment of which would make their Princes fink into a flate of greater infignificance, than they are at prefent.

In a country fo fruitful of revolutions, it is difficult to forefee the event of Sindia's prefent meafures; but they point ftrongly towards raifing him to the head of the weftern Mahratta ftate, or to that of a new empire founded on its ruins. The provinces of Agra and Delhi, and that whole neighbourhood, are in the moft wretched ftate that can be conceived. Having been the feat of continual wars for near 50 years, the country is almoft depopulated, and moft of the lands, of courfe, are lying wafte: the wretchied inhabitants not daring to provide more than the bare means of fubfiftence, for fear of attracting the notice of thofe, whofe trade is pillage. Nothing but the natural fertility of the foil, and. the mildnefs of the climate, could have kept up any degree of population; and rendered the fovereignty of it, at this day, worth contending for. So that a tract of country, which poffeffes every advantage that can be derived from nature, contains the moft miferable of inhabitants : fo dearly do mankind pay for the ambition of their fuperiors; who, mif-calculating their powers, think they can govern as much as they can conquer. In the Mogul empire, many parts of it were 1000 miles diftant from the feat of government : and accordingly its hiftory is one continued leffon to Kings. not to grafp at too much dominion; and to mankind, to circumfcribe the undertakings of thair rulers.

It is highly improbable that the houfe of Timur will ever rife again, or be of any confequence in the politics of Hindooftan. It It was in 1525 that the dynafty of Great Moguls, began: fo that reckoning to the prefent time, it has lafted 262 years: a long period for that country.

## [ Ixxix ]

## Sietch of the Mahratta Hifory.

WE have frequently had occafion, in the courfe of the above Iketch, to mention the Mahratitas : and as the rife and progrefs of that ftate, is of much importance to the general hiftory of the decline of the Mogul empire; and fo remarkable in itfelf, from the fuddennefs of its growth; it may not be improper to give a fhort hiftory of it, in an uninterrupted narrative ; although fome part of the former one may be repeated.

The origin and fignification of the word Mahratta (or Morattoe) has of late been very much the fubject of enquiry and difcuffion, in India: and various fanciful conjectures have been made, concerning it. We learn, however, from Ferihta*, that Marhat was the name of a province in the Deccan; and that it comprehended Baglana (or Bogilana) and other diftricts, which at

[^20]
## [ lxxx ]

prefent form the moft central part of the Mahratta dominions. The original meaning of the term Marhat, like that of moft other proper names, is unknown; but that the name of the nation in queftion, is a derivative from it, cannot be doubted : for the teftimony of Ferifta may be received without the fmalleft fufpicion of error, or of defign to eftablin a favourite opinion, when it is confidered that he wrote, at a period, when the inhabitants of the province of Marhat did not exift as an independant nation; but were blended with the other fubjected Hindoos of the Deccan. Befides the teftimony of Ferifhta, there is that alfo of Nizam-ul-Deen*, an author who wrote at an earlier period; and who relates, in his general hiftory of Hindooftan, that one of the Kings of Delhi, made an excurfion from Deogur (Dowlatabad) into the neigbbouring province of Marhat $\dagger$.

Sevajee may be confidered as the founder of the Mahratta Empire. His anceftry is not very clearly afcertained; but the moft commonly received opinion, is, that his grandfather was an illegitimate fon of a Rana of Oudipour, the chief of the Rajpoot Princes; the antiquity of whofe houfe may be inferred from Pto-' leny. (See the Memoir, page 153.) The mother of this illegitimate fon is faid to have been an obfcure perfon, of a tribe named Bonfola (fometimes written Bouncello, and Boonfla) which name was affumed by her fon, and continued to be the family name of his defcendants, the Rajahs of Sattarah, and Berar. After the death of his father (the Rana of Oudipour) he having fuffered fome indignities from his brothers, on the foore of his birth, he retired in difguft to the Deccan, and entered into the fervice of the King of Bejapour (vulgarly Vifiapour). The reputation of his family, added to his own perfonal merit, foon obtained for him a diftin-

[^21]
## [ lxxxi ]

guithed rank in the armies of the King of Vifiapour ; in which he wwas fucceeded by his fon. But his grandfon, Sevajee, who was born in 1628; difdaining the condition of a fubject, embraced an early opportunity (which the diffractions then exifting in the Vifiapour monarchy, afforded him) of becoming independant. So rapid was the progrefs of his conquefts, that he was grown formidable to the armies of the Mogul empire, before Aurungzebe's acceffion to power :: having before that period, feized on the principal part of the mountainous province of Baglana; and the low country of Concan, fituated between it and the weftern fea. He had alfo acquired from the kingdom of Vifiapour, the important fortrefs of Pannela, which commanded an entrance into the heart of it, from the fide of Baglana; together with feveral other places of ftrength. In the Carnatic, he had poffeffion of Gingee, together with an extenfive diftrict round it * : and this perhaps may be confidered rather as an ufurpation of one of the Vifiapour conquefts, than as an acquifition made from the original Sovereign of the Carnatic: for the King of Vifiapour appears to have poffeffed the fouthern part of the Camatic, including Tanjore $\uparrow$. Great part of the hiftory of Sevajee will be found in Mr. Orme's hiftorical fragments of the Mogul' empire : and is well worth the reader's attention. At his death, which happened in 1680 , his domains extended from the northern part of Baglana, near Surat, to the neighbourhood of the Portuguefe diftricts of Goa, along the fea coaft; but probably not very far inland, beyond the foot of the Gauts, and other ranges of mountains, which may be confidered as branches of them: for Aurungzebe's army kept the field in Vifiapour, at that period, and neceffatily ftraitened Sevajee's quarters on that fide. Thefe con-

[^22]
## [ 1xxxii ]

quefts were the fruits of hardy and perfevering valour; partly, acquired in defpight of Aurungzebe; then in the zenith of his power. Sevajee had alfo plundered Surat and Golconda; and even attacked Goa, when the Portuguefe power was at its height. His fon Sambajee, though poffeffed of confiderable ability both as a flatefman and a foldier, fell a facrifice to debauchery. In one of his loofe excurfions, he was treacheroufly feized on, and cruelly put to death, by Aurungzebe, in 1689. This, however, produced no fubmiffion on the part of the Mahrattas; who ftill increafed in power, though not fo rapidly as before. The Roman fate had fcarcely a hardier infancy : and the mountains of Gatte, which fhelter from the ftormy Monfoon, the countries that are fituated to the leeward of them, afforded alfo a Melter to this rifing ftate.

Sahoo, or Sahojee (vulgarly, Saow or Sow Rajah) fucceeded his father Sambajee, at a very early age; and as he inherited the ability and vigour of mind of his immediate anceftors, and reigned more than 50 years; great part of it at a feafon, the moft favourable for the aggrandizement of a ftate, that was to rife on the ruins of another; the Mahratta power grew up to the wonderful height that we have beheld it at. For the confufions occafioned by the difputed fucceflion among Aurungzebe's fons, and their defcendants, opened a wide field to all adventurers: and particularly to this hardy and enterprifing people, bred in the fchool of war and difcipline; and who had fhewn themfelves able to contend even with Aurungzebe himfelf.' The conquefts atchieved under Sahoojee, are aftunifhing to thofe who do not know that Hindooftan is fo full of military adventurers, that an army is foon collected by an enterprifing Chief, who holds out to his followers a profpect of plunder ; which the then diftracted ftate of the empire, afforded the moft ample means of realizing. At the time of Sahoojee's death, which happened in 1740, the Mahratta ftate or empire had fwallowed up the whole track from the weftern fea to Orifla; and from Agra to

## [ lxxxiii ]

the Carnatic: and almoft all the reft of Hindooftan, Bengal excepted, had been over-run and plundered. They were engaged in alimoft every fcene of war and politics throughout the whole country; although it does not appear that they took any part in the conteft between Nadir Shah and Mahomed, in 1738-9; except by availing themfelves of the abferice of Nizam-al-Muluck, to commit depredations on his territories in the Deccan. Probably they thought that more advantage would arife to them, from the diforders confequent on Nadir Shah's invafion, than by their affifting: the Emperor in repelling him: we are alfo to confider the advanced age of Sahoojee, at that time.

It is difficult to trace the progrefs of the Mahratta conquefts, according to the order of time, in which they were made. We: find them taking part in the difputes between Aurungzebe's defcendants at Delhi, as early as 1718 : but it was not till 1735 . that they found themfelves frong enough to demand a tribute from the Emperor, Mahomed Shah. This demand terminated as we: have before obferved, in the acquifition of the greateft part of thefine province of Malwa; and in a grant of a fourth part of the net revenues of the other provinces in general. This proportion being named in the language of Hindooftan, a Chout, occafioned the future demands of the Mahrattas to be denominated from it: although they are by no means limited to that proportion, except in cafes where an exprefs compact has taken place $=$ as in fome inftances, between the Berar Mahrattas and the prefent Nizam of the Deccan. They alfo, about the year 1736 , took part in the difputes between the Nabobs of Arcot, in the Carnatic ; wittrin which; diftrict, the principal European fettlements on the coaft of Choromandel, are fituated : which difputes eventually engaged the French and Englifh Eaft India Companies, in fcenes of hoftility for feveral years, as has been before obferved.

The fucceffor of Sahoojee, Ram Rajah, who fücceeded in $\mathbf{1 7 4 0}^{2}$ was a weak Prince: and it happened in the Mahratta ftate, as in

## [ [xxxiv] ]

all defpotic ftates of rapid growth, and recent formation, that great part of what was gained by the ability of one derpot, was loit by the imbecility of another. The two principal officers of the ftate, the Paibwab, or Minifler, and the Bukbi, or Commander in Chief, agreed to divide the dominions of their matter: Bajirow, the Paifhwah, affuming to himfelf the government of the weftern provinces; and Ragojee, the Bukfhi, the eaftern provinces: the former continuing at Poonah, the ancient capital ; the other fixing his refidence at Nagpour in Berar.

The Paimwah is faid to have confined the Ram Rajah to the: fortrefs of Sattarah (about 50 miles from Poonah) and then adminiftered the government in his name. It is probable, from other accounts, that Sahoojee, during the latter part of his reign, had, by a long and unrevoked delegation of power to the Pailhwah, prepared the minds of the people for this meafure; which. to them, hardly appeared to be a change: as Sahoojee, in a manner, Thut himfelf up in Sattarah, and feldom appeared in any act of government. There is fome degree of analogy between this part of the hiftory of the Pailhwahs, and that of the Mayors of the palace, in France.

So violent a partition of the empire by its Minifters, encouraged, as might be expected, the ufurpations of others, according to the degree of power or opportunity, poffeffed by each : fo that in the courfe of a few years, the ftate became, from an abfolute monarchy, a mere confederacy of Chiefs; and the loofeft example of feudal government, in the world. The two Chiefs of the divided empire purfued. each their plans of conqueft, or negociation, feparately; on the general principle of refpecting each others rights. The local fituation of the Berar Chief, who was lefs powerful than the other, led him to a clofe connexion with the Nizam; though not profeffedly in oppofition to the Poonah Chief.

The invafion of Bengal (of the caufes of which we have fooken in page lxix) was undertaken by both the Mahratta ftates in 1742, and

## [ Lxaxvi]

and 1743; with armies, faid to contain 80,000 horfemen each. The leaders of thefe armies appearing each to act for himfelf, the confequence was, that the wily Aliverdy found means to bribe one party, and to fow diffenfions between both : by which the confequences were lefs dreadful to the Bengallers, than they otherwife muft have been. Still, however, they are remembered with horror: and I have myfelf beheld many of the objects of their wanton barbarity, mutilated and defaced. As 160,000 horfemen were let loofe, over the level country on the weft of the Ganges; and the capital, Moorhedabad, being 12 miles from that river, it was cut off from all fupplies of provifions and neceffaries *, until Aliverdy doubly intrenched the road leading from the city to the Ganges: and thus fupplies were conveyed in fafety to the city, which was inclofed by another intrenchment, or rampart, of about 18 miles in circumference. The Mahrattas, did not depart out of the provinces, until the year 1744; when they had collected a vaft mals of plunder, and had eftablihed the claim of the Cbout: which, however, was never regularly paid. The Berar Mahrattas having, fome years afterward, obtained poffeffion of the Oriffa province, partly by conqueft, partly by ceffion from Aliverdy, their-proximity to Bengal, from which they wete feparated only by a fhallow river, afforded them frequent opportunities of plundering its frontier provinces. And it was not till the year 1761, when Coffim Ally, Nabob of Bengal, ceded the provinces of Burdwan and Midnapour, to the Englifh, that the Mahrattas ceafed to plunder them. The demand of the chout, however, although made occafionally, previous to the ceffion of Bengal ta the Englifl, had never been enforced: and during the war of 1780 , when alnoft all the powers of Hindooftar were leagued together againf the Englih, it was. yery feebly, if at all, infifted on, although the Berar Rajah had an army at Cattack.

[^23]
## [ Ixxxvi ]

The adminiftration of Bajirow was as vigorous as could poffibly be expected, confidering how the reins of government had been flackened. To the Mahratta empire, it was glorious: for he wrefted out of the hands of the Portuguefe, the fortrefs of Baffeen, and the ifland of Salfette, near Bombay; places that ftood in the next degree of importance, to Goa. He died in 1759, leaving the Paifhwalhip, which was now confidered as an hereditary eftablifh. ment, to his fon Ballajee.

At this period the Mahrattas pufhed their conquefts into the Panjab, and even to the banks of the Indus. But the time was approaching, when this fudden elevation (which feems, in fome inftances at leaft, to operate in fates as in individuals) was to ferve only to make their downfall more confpicuous. Thry and Abdalla, had given each other mutual umbrage : and the wars that enfued between them, which ended with the famous battle of Panniput, of which we have already given an account, in page lxxiv, was de cifive of the pretenfions of the Mahrattas as Hindoos, to univerfal empire in Hindooflan; which they at that time (1761) found themfelves ftrong enough to difpute with the Mahomedans.

Ballajee died foon after. To him fucceeded his fon Maderow; a youth. The Mahrattas had now abated of their ardour for diftant expeditions, and their quarrels were chiefly with their neighbour, the Nizam; whom they by degrees, ftripped of a confiderable portion of his territories on the north, and weft of Aurungabad. Maderow died in 1772 ; and was fucceeded by his fon $\mathrm{Na}-$ rain Row, who was murdered the following year, by Ragobah, his uncle; and fon of Bajirow, the firft Pailhwah who affumed the fovereignty. The atrocity of this crime, made the author of it (who had been a General of reputation in the war againft Hyder Ally, and the Nizam) detefted by the body of the people, and caballed againft by the chiefs: he befides, failed in. the object of clearing his way to the Pailhwafhip: for the widow of Narain produced a boy, who was acknowledged Heir.

## [ [ lxxxvii ]

Ragobah, who ftood in need of allies, had engaged the Govern: ment of Bombay in his caufe ; with whom a treaty, very advantageous to the Englifh; and indeed, embracing the principal advantages fa long defired by the, Eaft India Company, was entered into $:-$ and the fleet and army belonging to the Prefidency of Bombay, were accordingly put in motion, to fecond the views of Ragobah; and to fecure the advantages derived from the treaty. Hoftilities. were commenced both by fea and land; and the illand of Salfette, feparated from Bombay only by a narrow channel of the fea; was taken poffeffion of by the Englih. This was a moft defireable acquifition; as the fettlement of Bombay poffeffed no territory; beyond the extent of the fmall ifland in which it is fituated; and confequently depended on: foreign fupplies for its fubfiftence.

About this time, the, Council General of Bengal was invefted with a controlling power, over the other fettlements in India: and the Mahratta war not meeting their approbation, Col. Upton was fent to Poonah in 4776 , to negociate a peace (fince known by the name of the treaty of Pooroondar) by which Ragobah was to renounce his pretenfions, and to receive a penfion for life: and the Englih were to retain poffefion of Salfette. But in the end of 1.777, the Bombay Government again efpoufed the caufe of Ragobah; which meafure terminated in a difgraceful convention, by which the Bombay army retired to their fettlement; and Ragobah furrendered to his enemies. Being of Bramin race, his life was fpared.

The war that followed between the Englifh and the Mahrattas, was purely defenfive on the part of the latter, after the arrival of a brigade of the Bengal army, under General Goddard : and was atr tended with the conqueft, on the part of the Englifh, of the finert parts of Guzerat, and the Coycan; including the important for treffes of Baffeen and Amedabaip in Mort, of the whole ccountry from Amedabad to the river Penn and inlapd to the foot of the

## [ fxxxviii \}

Gauts. And on the fide of Oude, the province of Gohud, and other diftricts, together with the celebrated fortrefs of Gwalior; were reduced; and the war carried into the heart of Malwa. But the expences of a fucceffful war, may be too grievous to be borne: and as a war with Hyder Ally had broke out in 1780, and ftill continued, it was juftly efteemed a moft defirable adrantage to.effect a peace with the Mahrattas; after detaching Sindia, the principal memBer of that fate, from the confederacy. This peace was negociated in 1782 and 1783 , by Mr. David Anderfon; whofe fervices on that memorable occafion, claim, as is faid in another place, the united thanks of Great Britain and Hindooftan. All the acquifitions made during the war, were given up, fave Salfette, and the fmall illands fituated within the galf formed by Bombay, Salfette, and the continent.

The government at Poonah, during the minority, was fhared among a junto of Minifters : and it is probable that fo long a minority, may yet make fome effential changes in the canflitution of a ftate, fo accuiftomed to revolutions in the fuperior departments of its government. The prefent Pailhwah, by name Madarow (fon of Narain Row, as beforementioned) was born in 1774.

The eaftern Mahratta State, or that of Berar, under Ragojee, kept itfelf more free from foreign quarrels, than the other: but had its thare of inteftine wars. For Ragojee, dying, after a long reign, left four fons, Janojee, Sabajee, Modajee, and Bembajee. The firft fucceeded his father: but dying childlefs, in 1772, a civil war commenced between Sabajee and Modajee: the former of whom fell, in 1774; and the latter fill holds the government of Berar, \&cc.: and Bembajee adminifters thofe of Ruttunpour and Sumbulpour, under him: though, I believe, with lefs reftraint from his fupetior, than is ordinarily impofed on Governors of provinces. Ragojee, the father of the prefent Rajah of Berar, being a defcendant of Sevajee, the original founder of the Mahratta ftate, the prefent Rajah is therefore by defcent, the lawful Sovereign of

## [ lxxxix ]

the whole Mahratta ftate; the Poonah branch being extinct *: but it appears that he wifely prefers the peaceable poffeffion of his own territories, to riking the lofs of them, where the object is no more than the nominal government of an empire, which even manifefts rymptoms of fpeedy diffolution.

It is not likely that either of the Mahratta fates will foon become formidable to the other powers of Hindooftan. The eaftern ftate has not refources for it: and as for the weftern, it cannot well happen there, until fome one of its Chiefs has gained fuch an afcendancy.over the reft,-as to re-unite that divided powei, to which the late confufions in their government, gave birth. It requires fome length of time to reduce a feudal government to a fimple monarchical one: and till then, the weftern Mabratta ftate cannot be formidable, to the Britioh power, at leaft. If Sindia proceeds with his conquefts to the north and weft, and eftablifhes a new empire in Malwa, ©tc. this Mahratta ftate (the weftern) muft be extinguilhed; and fuch a new empire would, perhaps, prove more formidable to Dude, ;and to the Britifh interefts, in confequence, than any pawer we have beheld fince the firft eftablifhmeat of the Britih influence in India.

[^24]> Conguests of European Powers, fince the doungall of the Mogul Empire.

AMONG the new powers that arofe on the downfall of the Mogul empire, we muft not forget to mention the French and. Englifh. As for the Portuguefe, their power had paft its meridian, before this period: befides, their views being (apparently) confined altogether to traffick, they wifely marde choice of infular fituations; fuch as Goa, Bombay, Salfette, Díu, \&cc. $;$ and never apm: pear to have poffeffed any very confiderable extent of territory, although they kept on foot a large army of Europeans. The Dutch fyftem was nearly the fame: and their profperity, in a greatmeafure, grew out of the misfortunes of the Portuguefe; who having fallen under the dominion of Spain, becamè obnoxious as. well to the jealoufy of rivalhip, as to the revenge of the Hollanders.

The French power was but of fhort duration, but remarkably brilliant. It was a bright meteor, that dazzled at firf, but which foon burnt itfelf out, and left their Eaft India Company in utter darknefs. It commenced during the government of M. Dupleix at Pondicherry, in 1749 . The French having affifted a Soubah of the Deccan in mounting the throne, attended his future fleps with an army, and eftablifhed an influence in his councils, that promifed to be permanent: but which vanifhed very early, by the mere breath of Court intrigue: for while M. Buffy, at the head of the French army, was at Sanore, in the weftern quarter of the peninfula (in 1756) a quarrel with the Minifter of the Soubah, effected the difmiffion of the French. They were then compelled to retreat through an enemy's country for near 300 miles, until they reached

Hydrabad; where they fortified themfelves, and waited for a rein: forcement from Mafulipatam, their neareft fettlement; which was upwards of 200 miles from Hydrabad!: 'Great dbility was difcovered by M. Buffy, on this memorable occafion: an account of which, as well as of M. Buffy's warfare and negociations in general, will be found at large, in Mr. Orme's invaluable hiftory of the military franfactions of the Britifh nation $n$ in Hindooftan. At Hydrabad; the quarrel was compromifed: and the followwing year ( 4.757 ) and part of the next, was, fpent by. M. Buffy, in reducing the reffactory Rajahs, or Zemindars, in the northern circars $\dot{;}_{2}$ and in affifting the Soubah in the execution of, his own plans, : But in the midft of thefe tranfactions, he was fuddenly recalled into, the Carnatic by M. Lally ; who determined to collect the whole forçe of the Erench, within that quarter:-fo that the Soubah was left at full: liberty to accede to the propofals of the Englifh. Lally was alfg jufly accufed of being jealous, of the fame of M, Buffy .

The circars $\mathfrak{j}$ : the fruits of $M$, Buffys wars and negociations in the Deccan (and which had been obtaiped in 1753) yet remained to the French: but Colonel Clive, who was at this time Governor of Bengal, with, that promptitude and decifion which fo firangly marked his character feized on them, with anforce from Bengal, in 1759 . $x$ although they were defended by: a much fuperior one: nand the French were deprived of refources to tharry on; the war in the Carnatic, So that Lally failed to accomplifh the purpofes for which the French intereft in the Deccan had been relinquifhed; namely $y_{\text {t }}$ that of expelling the Englifh from the, Carnatic, for or on the contrary the French pot only loft all their - poffections. in that: quarter, , but in every other part of India.: Thus, their political exiftence may, be faid to begin, in 1749 ; and to end in 1761 , by the capture of their principal fettlement, Pondicherry. ${ }^{\prime}$ They appear to have been the firlt European ${ }^{*}$ power $_{\text {; }}$, that trained the natives of India to regular difci-

## [ xcii ]

pline*; as well as the firft who fet the example of acquiring territorial pofferfions, of any great extent, in India ; in which thay have been fo fuccefsfully followed by the Englih.

THE expedition of the Britifh troops into Tanjore, in 1749, was the firft warfare in which they were engaged, againft the forces of an Indian Prince: aṇd it proved unfuccefsful, as to its main object; which was, the reftoration of a depofed King, or rather Rajah, of Tanjore, who had applied for affiftance to the Governor of Fort St. David. The price of this affiftance, was to be the fort and territory of Devicottah; fituated at the mouth of the Coleroon, or principal branch of the Tanjore river and this fort; notwithftanding their want of fuccefs in the caufe of the depofed Rajah, the Company's troops, aided by the fleet under Admiral Bofcawen, took joffeffion of, after a fhort fiege.' In the following year they were called on, by the circumitances of the times; to take part in the difputed lucceffion to the Nabobfhip of Arcot, in opporition to the French: who (as has been before obferved) had taken the lead, both in the affairs of the Carnatic, and of the Deccant. We have ailo obferved, that Nizam-al-Muluck, Soufbah of the Deccan,' had placed Anwar o'dier in the Nabobihip. of Arcot, (in 1743):' and that the death of 'the fame Nrizan, in '1748; had occafioned a confidétable change in the politics of the Deccan; in which the French engaged fo deeply. Churida Saib was the perfon whom the French wirhed to raife to the govertiment of Arcot : atia the expulion of the' family of Anwar o'dien, was a neceiflary flép towatds it: ${ }^{\text {i }}$ Thefe' contefts, 'which had been carfied on with great credit to the Britifh' arms, 'were put an end to; by the intesference of the two Eaft India

[^25]Companies,

## [ xciii $]$

Companies, in Europe; in ry's4: and Mahomed Ally, fon of Anwar o'dien, (who had fallen in the courfe of the war,) was left in poffeffion of the Carnaticit: or, at leaft, of that portion of it, which had been recolvered to him, by the Britinh arms. The particulars of thefe wars, witl be'found in 'Mr. Orme's hiftory, volume the firft.

War breaking out in' Europe; In $\uparrow 755^{\circ}$, the truce was reduced to a very thoit period. The firft object of the Britifh Councils, was to wreft the northern Circars out of the thands of the French; as their revenue furnifhed them with the means of paying their army. The fecond was to drive M. Buffy's force out of the Deccan, by means of an alliance with the Nizam, or Soubah. Both of thefe projects were at this time defeated: the firft by the mifcarriage of difpatches to India : 'the fecond,' by the capture of Calcutta, 'the chief Britifh fettlement inn Bengal, in June 1756 : and which induced the neceffity of relinquilhing every plan'of hoftility in the Dectan and Carnatic: in order that a force might be fpared, fufficient to accomplifh the recovery ' of 'fo important a 'fettlement' as 'Calcutta; on which the whole trade to ${ }^{1}$ Bengat'depended. ${ }^{\text {t }}$

Aliverdy Cawn, Nabob of Bengal, died in rybs, and was fucceeded by his grandion 'Surajah Dowlah. This young man either -was, 'or pretended to be, itritated at the conduct of the Englifh, Ywithin 'his dominions ${ }^{\prime \prime}$ " and was probably', Jealous of the rifing poter of Eurdpeans in general, In other parts of Thdia.' He determined to expel the Englifh (at Iealt) from Bengal : and accordingly itot'k their fort at Calcutta, and compelled thore aniong them, who Whete' fidt miade 'prifotets', to retire: "In the following year, an arruatment from Madras, "under Alaniral Wation and Cólonel Clive, not 'only decovered the fettlement of "Calcutta, but brougit the Nabob to terms. The fword, however, being thus drawn, no permanent fecurity could be expected on the fide of the intruders, unters fupported by power: which could not be ottained, while a Nabob, inimical to their interefts, poffefled the whole power of the kingdom. Surpicions on both fides foon brought matters to a
crifis: and Jaffier Ally Cawn, an Omrah in high truft and favour with the Nabob, was negociated with; and, on condition of their affirting him in his views towards the throne, engaged to be their future Ally, and confederate; for, fo much were matters changed by the late effay of their ftrength, and by the genius and good fortune of Clive, that protection would ill exprefs the current expectation of the Britio. The famous battle of Plaffey, fought in June 1757, and in which, Jaffier aided the accomplifhment of their wifhes, by ftanding neuter, laid the foundation of the future power of the Britifh nation, in Bengal and Hindooftan. From that time, they became the arbiters of the fucceffion to the Nabobfhip of Bengal; which fpeedily led to the poffeffion of the powers of government : for Coffim Ally, who had been placed in the room of Jaffiet, difliking his fituation, refolved to hazard a change at all events; and this brought on a war, which ended in the expulfion of Coffim, and left the Bengal provinces in the poffeffion of the Englifh, who reftored Jaffier to the Nabobfhip. He had been depofed, on a charge of imbecility, in: 1760, and was reftored in $1763^{\circ}$. Coffim retired to: Sujah Dowlah, Nabob of Oude, and prevailed on him to efpoufe his çaufe. Sujah hád diftinguifhed bimfelf in the celebrated battle of Panniput, in 176 r ; and. is reported, to have had a confiderable, fhare in turning the fortune of the day, at the very moment when victory, inclined towards the Mahrattas: Whether he over-rated his own talents for war; or miftook the military character and refources of the Britioh, he, however, engaged too rafhly in the war: and the confequences were, a total defeat of his forces, joined with Coffim Ally's; at Buxar, in:1764: and this was followed by the lofs of all his territories during that and the, following year.

Thofe, whofe belief has, been, ftaggered by the accounts of the conquefs made on the Indians and Perfians by the Grecian, Patap, and Mogul armiess may reconcile their doubts by attending the the eyents of their own days in whigh B handful of French, troops, effected
effected revolutions in the Deccan: and another of. Britifh, made an entire conqueft of Bengal, Bahar, and Oude, in little more than two campaignsi. Each of thofe conquerors, both ancient and modern, after gaining certain advantages, purfued them by means of levies raifed in the conquered countries themfelves; and thus rendered the vanquifhed fubfervient to the final reduction of their own country. This was even the cafe of Alexander, who fet out with 35,000 men, and left India, with 120,000. Such meafures could only be purfued in countries, where the habit of changing their Governors, had rendered the governed indifferent to the choice of them. Even the whole number of combatants on the fide of the Britioh, did not exceed 7000, at the battle of Buxar: and of thele 1200 might be Europeans. The battle of Plaffey was gained with an army of about 3000 men; of whom goo only, were Europeans.

Lord Clive, who reaffumed the government of Bengal, in 1765, found matters in the fate I have reprefented. He feized the opportunity of taking poffeffion of the Bengal provinces; the Nabob Jaffier Ally being juft dead; and obtained from the nominal Mogul, Shah Aulum (who, together with his nominal Vizier, Sujah Dowlah, had, as before related, thrown themfelves on the generofity of the Britilh); a grañt of the duanny, or adminiftration of the revenues of Bengal, Bahar, and Oriifa; ; on condition of paying the Mọgul 26 lacks of rupees per annum (260,0001.). Thus a territory producing at that time; aṭ leaft a million fterling, per annum, after every expence, was defrayed, and containing at leaft ten millions of inhabitants, was gained to the Company, on the fide of Bengal : together with the northern circars's valued at near half a million more, and for which a grant was alfo obtained. Sujah Dowlah had all his territories reftored to him, except the provinces of Corah and Allahabad, which wère retained for the Mogul; together with thé fortrèfs of alliahabad; which was àfligned to him, as a proper place of refidence. .

## [ x x́vi ]

Although the Englifh were thus firmly and peaceabty entiblified in Bengal, in. 1765 , yet within two years afterwards, they were engaged in a very arduous conteft in the peninfilita, with Hyder Ally, the Sovereign of Myfore, leagued witti the Nizaim or Soulah of the Deccan. Hyder's hiflory is now fo well known to the generality of readers in Europe, by means of the feveral publications that have lately appeared *, that it will be unneceffiry to give any thing more than a fhort abfract of it, here.
Hyder Ally was a foldier of fortune, and the fon of a perfon who ferved in quality of Killadar, or Governor of a fmall fortrefs, to one of the Kings of Myfore. He is faid to have açquired the rudiments of war, in the French camps: and in the year 1753, diftinguified himfelf, as their auxiliary, in the plains of Tritchinopoly. About ten years afterwards, being then at the head of the Myfore army, he dethroned his Sovereign, and governed under the title of Regent. Soon after, he extended his dominions on every fide, the Carnatic excepted: the fine province of Bednore (or Biddanore) 'and the Patan Nabobfhips of 'Cuddapah, Canoul, ©c. befides fome Mahratta provinces towards the river Kifnaz ; and the country of the Nairs, and other frall fates on the Malabar coaft; were added to his original poffefions; intil at latt he was at the head of a flate, in extent equat to Great Britain, and producing a grofs revenue of four millions ferting. The civil broils and revolutions in the weftern Mahratta fate, particularly in latter times, allowed Hyder to aggrandize himieff at its expence; but he, 'neverthelefs, received fome fevere checks from that quarter. He was not artived at the height of his power, when the war between him and the Englifh, broke out, in 1767 : but his power was fuch as to alarm his neighbours, and a refolution was taken to ättack him. The Mahrattas under Maderow, entered Hyder's country on the fide towards Vifiapour ; and the Nizam, joined by a de-

[^26]tachment
[ xcvii ]
tachment of Britih .troops, moved from Hydrabad towards the frontier of Myfore, foon after. Hyder firt contrived to buy off the Mahrattas with a large fum of money, and the reftitution of fome of the places he had taken from them. Next, he negociated with the Nizam, and had the addrefs, not only to detach him from the Englifh, but to draw him over to his party: fo that the Englifh detachment was compelled by neceffity to retire to the Carnatic; on the frontiers of which, their grand army was now affermbling. Befides the whimfical charater of the Nizam, feveral other circumftances might confpire towards the determining him to act in the manner he did. The grant of the northern circars, and the emancipation of the Carnatic from any dependance on the Deccan, both of which were obtained from the Mogul, by the Englifh; could not but be very mortifying to the Nizam; as having the appearance of a forcible partition of his territories. The circars, however, carne into their hands (as we have feen) by conqueft from the French, to whom they were originally granted by a former Soubah of the Deccan: fo that the grant from the Mogul was merely nominal: befides, the Nizam had ben prevailed on to acquiefce in the meafure, by an offer on the part of the Englifh, of five lacks of rupees ( go,oool) per annum, by way of tribute or quit rent. As to his fuperiority in the Carnatic, it had ever been nominal; yet Hyder, who now meditated the conqueft of it, was glad to obtain from the Nizam, a gtant, or Sunnud, for the Nabobhip of it: and from this time, at leaft, he confidered Mahomed Ally as his rival. It is proper to obrerve, that in the days of Mahomed Ally sifitrefs, when he poffeffed only a fmall part of the Carnatic, he had engaged to cede the fortrefs of Tritchinopoly, a moft important poft in the fouthern divifion of it, to the King of Myfore, for afiftance then afforded him : but this engagement never being performed, Hyder, as might be expected, adopted the claims and fefentments of the Prince, whofe throne he had taken poffeflion of; and neyer lof fight of his title to Tritchinopoly. Had the
engagement bcen fulfilled, it would have had the effect of feparating for ever, from the Naboblhip of the Carnatic, the provinces of Tanjore, Madura, and the reft of the fouthern provinces.

The war that immediately followed, was productive of fome fharp battles, on the common frontiers of the Carnatic and Myfure: befides which, a ftrong detachment of the Britifh army feized on Hyder's province of Coimbettore, 'a fertile diffrict on the fouth of Myfore, and commanding the readieft way to Hyder's 'capital, Seringapatam. This was the frrt war in which the Britifh arms had met with any fteady oppofition from a Prince of the country; for in the affair of Tanjore, in 1749, their arms were triumphant in the end, by the taking of Devicottah, their proper object. 'The war was continued with various fuccefs; during the years 1767, 1768, and part of 1769 ; when Hỳder, with a ftrong detachment of chofen troops, chiefly horfe, giving the Britifh army the llip, came within feven miles of Madras, and dictated a peace to the Government of that place. This peace was difreputable to the Britifh Councils only' fince the hands of the commander in chief (General Jofeph Smith) were tied up, at the very moment, the moft favourable for ftriking a blow; ánd when Hyder, fearing the General's approach, could purchafe his fecurity no other way than by intimidating. Goverriment into the meafure of laying their commands on the General, not to advance; "by which meafure he might pofibly have cut Hyder and his detachment to piéces.

The Nizam, very early in the war, had been detached from Hyder's alliance; chiefly by the 'ftrông meafure of fending a detachment from Bengal, into the heart of 'Golconda'; which made him tremble for his capital, Hydrabad.

The peace left matters much in the fame ftate às before the wai : and whatever credit Hyder might have gained by the conclufion of it, was done away by the total defeat which he fuffered, in "177), from the Mahratta army, within a few miles of his capital ; into which he efcaped with great difficulty', with a fmall rembant of

## [ xcix ]

his army, and afterwards defied the attacks of his numerous enemies, who poffeffed neither the fkill, nor the ordinary requifites for a fiege. Hyder waited in patience, until the enemy by defolating the country, were compelled to leave it. A few years of peace not only reftored matters to their former ftate, but improved both his revenues and his army, to a degree beyond probability; and at the fame time, the diftractions that prevailed among the Mahrattas, enabled him to extend his territories at their expence. Such are the effects of firmnefs, perfeverance, and economy.

It may be afked, how the Mahrattas, who are reprefented as fo inferior in point of difcipline to Hyder's troops, came to defeat him? It is accounted for, by the vaft fuperiority in numbers of the Mahratta army (chiefly horfe) which furrounding Hyder's troops, cut off their fupplies of provifions, and compelled them to retire towards their capital; through a level, open, country, the moft favourable to the attacks of cavalry. Hyder's army was formed into one vaft hollow fquare, and marched, clofely-furrounded. by the Mahrattas; when the advanced front of the fquare making. too hafty a flep, feparated from the others; and the Mahrattas, pulhing through the openings thus made, threw Hyder's wholearmy into irreparable diforder.

We have fooken: before concerning the treaty made with the $\mathrm{Na}-$ bob of Oude, and the mutual advantages derived. to both parties; but particularly to the Britifh, from the mode of defence adopted: for Oude; confidering it as a common frontier to bath-ftates: as alfo, concerning the departure. of the Mogul, in 177.1 ; which threw the Corali, \&xc; provinces, into the hands of Sujah Dowlah.

It may be fuppofed, that the oppoition made to the Mahrattas; when they attempted to take poffefion of thofe provinces in 1772, muft have created fome:difguft. Indeed the Britifh Government ${ }_{3}$ had long confidered the Mahrattas, in the general. fcope of theirdefigns, as inimical to its interefts. In 1773, the Mahrattas croffed. the Ganges to invade the Rohilla country.. A brigade of the

## [ c ]

Britioh armys, marched to the weftern frontier of that country, and: drowe the Mahrattas acrofs the river For this protection, the Robilla Chiefs hady ftipulated to pay Sujah Dowlah forty lacks of rupees : (it muft be obferved that the Britifh army moved, only as his allies) but when this effential fervice was performed, the payment of the money, was evaded. This breach of treaty led to the invafion and conqueft of the Rohilla country; the fallowing year, 1774. A confiderable tract of land in the Dooab was alfo conquered from the Jats, and other adventurers; by which the boundary of Oude was advanced weftward within 25 miles of Agra; north-weftward, to the upper part of the navigable courfe of the Ganges: and fouth-weftward to the Jumna river. In the following year (1775) on the death of Sujah Dowlah, and the acceffion of his for Azuph, a new treaty was made with the Britifh Gavernment, by which the quantum of the. fubfidy for the ufe of the brigade, was increafed, and the province of Benares, which produced a clear revenue of 240,000 . per annum, was ceded to the Company.

The war with the Poonah, or weftern Mahrattas, of which we have already fpoken (in page lxxxvii) occafioned the march of a brigade acrofs the continent to the fide of Bombay and Surat in 1778-9. This is, perhaps, the moft brilliant epoch of the Britih military hiftory in India. The brigade, which confifted of lefs. than 7000 men, all native troops, commanded by Europeanofficers; marched from the banks of the Jumna, to the weftern fed, in defpight of the Mahrattas, whofe empire they traverfed almoft the whole way. The French war breaking out at this time; and Hyder Ally expecting a communion of interefts with the French, he, in the Autumn of 1780 , broke into the Carnatic with. 100,000 troops; and thofe, both of foot and horfe, the very beft of their kind that had ever been difciplined by a native of India. His fuccers, in cutting to pieces Col. Baillie's detachment; and the confequent retreat of the Carnatic army;-occafioned the Britifh in-

## I ci I

terefts in that quarter, to be given up for loft, in the opinion of moft people in Europe. Happily, Mr. Haftings and Sir Eyre Coote:thought otherwife: and there was fent from Bengal, to the relief of the Carnatie; ; brigade of about 7000 men : together with ample fupplies of moneys: athe provifions. Until the arrival of thefe troops and fupplies, the'Britifh-pofferfed nothing more in the Car* natic, than the :gtound occupied by their camps and fortreffes. Under Sir Eyre Coote, Hyder was fuccefsfully combatted during two campaigns; at the end of which (October a782) he found the poffeflion of his object, the Carnatic, at fo great a diftance, that he appeared to be fincetely defirous of peace. So vaft an army as he brought into the field, could not long be fupported in it, by the revenues of Myfore aloné; and the Carnatic was quite exhaufted. Anticipation of tevenue in. Afiatic governments, has an immediate deftructive effect; and cannot often be repeated. Hyder therefore faw the neceffity of quitting his ambitious projects; and probably would never have purfued them, had he not expected a more early and effectual co-operation on the fide of the French; with whore affiftance he hoped to effect our expulfion, in a campaign or two. But he became, perhaps, more jealous of the French than of the Englifh: and had the peace of Paris left the Carnatic in his hands, inftead of;Mahomed Ally's, the French would eventually have been on a worfe footing than they are nowe likely to be $;$ for he cerd tainly never intended that they thould affume any charafter in it, beyond that of merchants; although their object was the obtaining of a territorial revenue; without which, they well, know, no. European power can eafily effect any thing againft another, already in poffeffion of one. In this difpofition of mind. Hyder died foon* o. $2 . \quad$ after ;

[^27]
## [ cii ]

after; and was fucceeded by his fon Tippoo, who feemed deter mined to profecute the war. It was fuppofed that an attack of Tippoo's provinces, on the weft of India, would, by giving an immediate entry into the mof valuable part of his dominions, draw him from the Carnatic: and although there could be little doubt of its producing this effect, yet that part of the plan, which regarded the retreat, or fecurity of the troops, afterwards; does not appear to have been fo well concerted. The deplorable end of this detachment *, which was commanded by General Matthews, is too well known. At laft, Tippoo finding that the Mahrattas, his natural enemies, were at peace with the Englifh, and confequently at liberty to purfue their ancient enmities; and moreover that the French had left him; he condefcended, though reluctantly, to make peace: and matters were reftored nearly to the condition they were in, before the commencement of hoftilities. This peace was figned in March 1784, at Mangalore.

During the whole courfe of Sir Eyre Coote's warfare with Hyder Ally, it appeared, that nothing decifive could be accomplifhed, while the latter poffeffed fo large a body of excellent cavalry, together with draught cattle fo fuperior to ours, that his guns were always drawn off, and their retreat covered; although his army was beaten. The inconveniencies arifing from the want of a fufficient body of cavalry, may, perhaps, be incurable; but with early and proper attention, we might furely have our choice of draught cattle,

[^28]
## [ ciii ]

- We have lightly mentioned a general confederacy of the powers of Hindooftan; againft the Britifh. The Nizam or Soubah of the Deccan, having taken difguft at the conduct of the Madras Government towards him, in 1779, determined on a very deep revenge. This was no leifs than to engage all the principal powers of Hindooftan and the Deccan to join in a confederacy to expel the Britifh. The Poonah Mahrattas were already engaged, and Hyder preparing; there remained: the Nizam himfelf, and the Berar Mahratta*. Each party was to purfue a particular fcheme of attack, fuited to his local pofition and means. Hyder was of courfe, to attack the Carnatic: the Nizam, the circars: the Poonah Mahrattas were to keep the Guzerat army under :Goddard, employed; and the Berar Mahratta was to invade and lay wafte the Bengal and Bahar provinces. It has been the fate of moft of the grand confederacies that we meet with in hiftory, that they have terminated rather in mutual blame, 'than mutual congratulation. The truth is, that they are feldom, if ever, purfied with the fame unity of action, and energy, that are difplayed by fingle ftates. Some are more deeply interefted than others: one fears that another will be too much aggrandized; and a third is compelled to take part, contrary to his wifhes. In the prefent cafe, the Poonah Mahratta and Hyder were each purfuing their proper, original plans, which had no reference to the particular object of the confederacy: the projector (the Nizam) had probably no intention ever to act at all: and the Berar Mahratta, appeared to act on compulfion: for although the Berar army did march, it was contrived that it Thould never arrive at the projected fcene of action. Be it as it will, it was an awful moment for the Britifh interefts in India. The fpeedy: pacification. of the Nizam, and the money advanced to the Berar army at Cattack (call it by what denomination we may, fubfidy, or

[^29]
## [ civ ]

loan) were means very opportunely ufed by the Bengal Government. Indeed the whole conduct of the war was fuch as reflected the higheft honour on that government: and when we fucceffively were made acquainted with the news of the capitulation of the whole Bombay army in 1779 ; of the total annihilation of the flower of the Madras army in 1780; the approach of the Berar army towards Bengal in 1781 (which feemed to preclude all poflibility of relieving the Carnatic by a brigade from Bengal) together with the grand confederacy: I fay, when the news of all thefe misfortunes, and threatening appearances reached Europe, every one had made up his mind to the certain lofs of some capital fettlement, or to the mutiny of one of the grand armies, for want of pay : and many perfons thought that they faw the total deftruction of the Britioh influence and power in India. How then were we furprifed, to find, that notwithftanding all thefe mifcarriages, we were able, foon after, not only to face, but to feek the énemy in every quarter : and to hear of victories gained by the Britifh armies, when we expected that even the very ground they fought on, had been abandoned to our enemies!

The eftablifhment of the Britifh power in the Mogul empire, has given a totally different afpect to the political face of that country, from what it would have worn, had no fuch power ever exifted. No one can doubt that the Mahrattas, had they been left to purfue their plans of conqueft, would have acquired Corah and Allahabad in 1772, as well as the Rohilla country in 1773: and afterwards they might have over-run, at their leifure, the province of Oude, and its dependencies. The Britih interference prevented this. On the other hand, Hyder might have kept poffefion of the Carnatic. Some may be tempted to afk whether Hyder might not be as good a Sovereign as Mahomed Ally b. or the Mahrattas, as Azuph Dowlah? Whatfoever may be the anfwers to thefe queftions, they have no reference to the Britifh politics ; which require that Hyder or Tippoo, thould not poffers the Carnatic, in addition to Myfore :

Myfore: and that the Mahrattas chould not poffers. Oude, on Robilcund.
I. believe there ane many who think that the Britifh might have extended their poffeffions in Hindooftan, ad libitam: however, one of the greateft of our Indian ftatermen, Lotd Clive, thought that the Bengal provinces and the circars, together with a moderate trąe of land round Madras*, and the illand of Sallette, near Bomhay; were fully'equal to the meafure of good policy, and to our powers of keeping poffeffion: Nor have his fucceffors acted otherwife: for our wars fince his time' have not been wars of conqueft for ourfelves; though erroneoully reprefented as fuch, The late war in India may convince fuch perfons, as require conviction or the fubject, that conquefts made either on Tippoo, or the Mahrattas, could not be preferved, with fuch an army as the revenues of the conquered tracts would fupport. We got poffeffion of Bengal and the circars, under circumftances particularly favourable; fuch as may never occur again. .

The Bengal provinces which' have beentin our àctual poffeffion neat $23^{\circ}$ years, (that is', from' the year 14652 to the prefent time) have, during that whole period, enjoyed a greater fhate of tranquillity, than any other part of India; or indeed, than thofe provinices hadi ever experienced; fince the days of Aurungzebe. During the apbove period of: 23 years; no foreign enemy has made any incurfion into any part of them, nor has: any rebellion happened in any of the provinces (the very inconfiderable one of the Zemindar of Jungleterry, in 1774, excepted $\dagger$ ): Previous to the eftabliftiment of ouf influence, invafions were frequent, particularly by the Mahrattas: and one province of other :was ever in rebellion; owing to a want

[^30]of energy in the ruling power; an ill paid, and mutinous army; or an excefs of delegated power. Thofe who know what miferies are brought on a country by its being the feat of war, will know how to appreciate the value of fuch a bleffing, as that of having the horrors of war removed to a diftance from our habitations. There are, doubtlefs, evils that are infeparable from the condition of a tributary fate, where the fupreme ruling power, refides at the diftance of half the circumference of the globe: but thefe are I hope, amply ballanced by the advantages of military protection: and it is a fact not to be controverted, that the Bengal provinces have a better government, and are in a better ftate, as to agriculture and manufactures, than any other of the Afiatic countries, China alone excepted. But this ftate is doubtlefs very fufceptible of improvement, even under a defpotic government : though it unfortunately happens that the grand object for which the Bengal provinces are held, militates againft the eafe and happinefs of their inhabitants: for there can be no inducement to increafe a national income for the purpofe of finally enriching another nation.

The fate into which Hindooftan has fallen fince the downfalk of the Mogul empire, is materially different from what it was before it was united under the Mahomedan conquerors. It was then parcelled out into feveral moderate kingdoms, which appear to have preferved a degree of balance among themfelves: but now, Hindooftan and the Deccan may be faid to confift of fix principal ftates, which hold as tributaries, or feudatories, all the inferior ones ; of which there are many. The reader will not be at a lofs to know that the two Mahratta ftates, the Nizam, Tippoo, the Seiks, and the Britilh, are thofe I mean : for whatever verbal diftinctions may be made, a compulive alliance is at leaft a dependant; if not in fact, a tributary fituation.

I have ran over the events of the late war in India, with a brevity which may probably be deemed cenfurable, confidering their importance and variety. But I reflected that the accounts of thofe

## [ cvii ]

events are in every body's hands; and that every day produces fome freh matter, illuftrative of them. The hiftory of events that have happened, and that have alfo been recorded, in our own times, may be referred to, by the aid of memory; their connexion or dependenicy traced; and their chroriology afcertained : but it was necef. fary to bring the events of a remoter period more within the view of the reader; the public records of thofe times being lefs copious, as the fcenes recorded ${ }_{2}$ were lefs interefting to public curiofity.

## [ cviii ]

## Geographical Division of HINDOOSTAN, into <br> Provinces or States.

THE following account is divided into two parts: the firf of which, contains the provincial divifion of the empire, under the Moguls, fo far as the particulars have come to my knowledge; the other contains the prefent divifion of it, into independant ftates, of very unequal extent and power. It will not be expected that the revenues or military force, of thofe ftates, fhould be, in general, well afcertained; or that the exact relation in which many of the inferior provinces ftand, to the more powerful ones in their neighbourhood, fhould be correctly known : fince the knowledge requifite for fuch a detail, can only be collected from perfons who have had opportunities either of making the proper enquiries on the fpot, or of confulting fuch documents, as have received the fanction of authority. In fome inftances, it has been found impoffible to refort to authorities of this kind; as there are large tracts within this widely extended country, which no European of character (as far as I have heard) has vifited, of late years. To this may be added, that the changes are fo frequent, that the progrefs of enquiry and information would fcarcely keep pace with them, throughout the whole region.

Acbar's Division of Hindoosfan.
I SHALL not attempt to trace the various fluctuations of boundary that took place in this empire, fince the æra of the Mahomedan conquefts, according as the feat of government was removed from Ghizni to Lahore, to Delhi, or to Agra, as fuited the politics of the times. It is fufficient for my purpofe that I have already impreffed on the mind of the reader, an idea that the provinces of Hindooftan proper have feldom continued under one head, during a period of twenty fucceffive years, from the earlieft hiftory, down to the reign of Acbar in the 16th century: and that Malwa, Agimere, Guzerat, Bengal, \&c. were, in turn independent; and that fometimes the empire of Delhi was confined within the proper limits of the province of that name.

During the long reign of Acbar in the 16th century, the internal regulation of the empire was much attended to, Enquiries were fet on foot, by which the revenue, population, produce, religion, arts, and commerce of each individual diftrict, were afcertained, as well as. its extent and relative pofition. Many of thefe interefting; and ufeful particulars, were; by Abul Fazil, collectèd into a book called the * Ayin Acbaree, or Institutes of Acbar; and which, to this day, forms an authentic regifter of thefe matters. Acbar began by dividing-Hindoostan proper into elever foubahst. or provinces, fome of which were in extent equal to large

[^31]
## [ cx ]

European kingdoms. The foubahs were again divided into circars, and thefe fub-divided into purgunnals. If I was to apply Englifh names to there divifions, I fhould ftyle them kingdoms (or vice-royalties) counties, and hundreds*. The names of the eleven foubahs were Labore, Moultan (including Sindy) Agimere, Delhi, Agra, Oude, Allahabad $\dagger$, Bahar, Bengal, Malwa, and Guzerat $\ddagger$. A 12th foubah, that is, Cabul, was formed out of the countries contiguous to the weftern fources of the Indus, and included Candahar and Ghizni ; and three new ones were erected out of the conquefts in the Deccan : viz. Berar, Candeif, and Amednagur; in all fifteen.

A flight infpection of the map will afford more information refpecting the relative pofitions of thefe foubahs to each other, and to the adjacent countries, than whole theets of writing. It may be neceffary, however, to make a few remarks on the boundaries of thofe foubahs that bordered on the Deccan, in order to underftand the extent of the new conquefts.

Guzerat, then, extended fouthward to Damaun, where it touched on the diftrict of Baglana, a divition of Amednagur.

Malwa extended to the fouth of the Nerbudda river; and an angle of it touched on Baglana and Candeifh on the fouth-weft and fouth, and on Berar on the eaft. The Nerbudda formed the reft of the fouthern boundary of Malwa, and alfo of Allahabad. The government of Bengal extended to Cattack $\|$ and along the river Mahanuddy ; but the foubah of Orifla appears not to have been formed at that time.

Of the newly erected foubahs in the Deccan, Candeifh § the fmalleft of them, occupies the fpace between Malwa on the north, Berar on the eaft, and Amednagur on the weft and fouth.,

[^32]
## [ kxi ]

Berar: according to the prefent definition, bas Allahabad and Malwa on the porth; Candeily and Amednagur on the weft; Tellingana and Golconda on the fouth; and Oriffa on the eaft, I apprehend that only the weftern parts of Berar were reduced by Acbar.

Amednagur *, the fouthmort of Acbar's foubahs; , had Candeih and Malwa on the north ; the Gatte; or Balagat mountains on the weft; Bejapour. (or Vifiapour) and Tellingana on the fouth; and Berar on the eart. The limits of this foubab (Amednagur) are not defined in the Ayin Acbaree; and as Acbar had wars in the Deccan during almoft his whole reign, it may be fuppofed that its limits. were perpetually fuctuating.

Tellingana, which in the Ayin Acbatee is called a circar of Berar, was poffeffed only in part by Acbar. Tellingana; of which Warangole $\dagger$ was the capital, comprehended the tract lying between the Kiftna and Godavery rivers, and eaft of Vifiapour : (anfwering to the modern province of Golconda) and was probably in more early times, an extenfive kingdom; as the Tellinga language is faid to be in ufe, at prefent, from the river Pennar in the Carndic, to Otiffa, along the coaft; and inland to a very confiderable-diftance.

Thus we have a flandard for the geographical divifion of Hindooftan proper, in the time of Acbar; but-for the Deccan in' general, no authority on record has ever come to my knowledge. It appears that Acbar reduced the weflern fide of it, as far downas the 18th degree of north latitude: and under his fuccerforts, the remainder of it, together with the peninfula, as we have already feen, was either entirely fubjected, or rendered tributary to the throne of Delhi (the mountainous tracts held by the Mahrattas, excepted) and formed into one.government under the name of the

[^33]
## [ cixii ]

Deccan*; which name, in its moft extenfive fignification, includes the whole peninfula fouth of Hindooftan proper. However, in its ordinary acceptation, it means only the countries fituated between Hindooftan proper, the Carnatic, and Oriffa; that is, the provinces of Candeifh, Amednagur, Vifiapour, Golconda, and the weftern part of Berar. When the Mogul empire was extended to its utmof limits, by the addition of this vaft province, its annual revenue exceeded 32 millions of pounds ferling $\dagger$ : and to enable the reader to make a juft eftimation of its abfolute value, it is neceffary to repeat, that the products of the earth are about four times as cheap in Hindooftan, as in England.

[^34]
## [ cxiii ]

Pregent Divigion of Hindoostan.

HAVING given this very general idea of the original divifion of India, I fhall next endeavour to convey an idea of the prefent divifion of it, as far as refpects the principal ftates, or the powers that have appeared on the political theatre, fince the eftablifhment of the Britioh influence.

The Britifh nation poffers, in full fovereignty, the whole foubah of Bengal, and the greateft part of Bahar; I fay tbe greateft part, becaufe it appears that there are feveral purgunnahs on the fouth-weft of little Nagpour, that were formerly claffed as belonging to Bahar, but are now in the poffeffion of the Mahrattas *. In Oriffa, they poffefs only the -diftricts of Midnapour, the reft being entirely in the hands of the Mahrattas and their tributaries. Thefe poffeffions contain about 1 - 50,000 . fquare Britifh miles of land; to which; if we add the diftrict of Benares, the whole will be $162,000 \dagger$; that is, 30,000 more than are contained in Great Britain and Ireland : and near eleven millions of inha-

[^35]
## [ cxiv ]

bitants. The total net revenue, including Benares, is at prefent about 287 lacks of ficca rupees, which may be reckoned equal to $3,050,000$. In this calculation, every branch of the revenue, is included; fuch as the profits arifing. from falt and opium, the cuftoms, \&xc, : and the amount of the charges attending the collection of the revenues, and the fipend to the Nabob of Bengat, scc. are deducted : the whole amount of the grofs revenue being $3,790,0001$. The fubfidy from the Nabob of Oude is not taken into this acccount *.

[^36]
## [ cxv ]

The natural fituation of Bengal is fingularly happy with refpect to fecurity from the attacks of foreign enemies. On the north and eaft it has no warlike neighbours; and has, moreover, a formidable barrier of mountains, rivers, or extenfive waftes, towards thofe quarters, fhould fuch an enemy flart up. On the fouth is a feacoaft, guarded by fhallows and impenetrable woods, and with only one port (and even that of difficult accefs) in an extent of three hundred miles. It is on the weft only, that any enemy is to be apprehended, and even there the natural barrier is frong; and with its population and refources, aided by the ufual proportion of Britifh troops * in addition to the fepoy eftablifhment, Bengal might bid defiance to all that part of Hindooftan, which might find itfelf inclined to become its enemy. Even in cafe of invafions, the country beyond the Ganges would be exempt from the ravages. of war, and furnih fupplies for the general defence. But, with the whole revenue in our poffeffion, the feat of war will probably be left to our own choice.
The late Nabob of Oude, Sujah Dowlah, poffeffed, at the tima when he firt became an Ally of the Eaft India Company, the whole foubah of Oude, and the gireateft part of Allahabad; to which, in ${ }^{\prime} 774$, were added the eaffern parts of Delhi and Agra, till that time poffeffed by a tribe of Afghan Rohillas, and by the Jats. . The Zemindary of Benares, which includes alfo the circars of Gazypour and Chunar, conflituted a part of the dominions of

[^37]
## [ cxvi ]

Oude until the year 1775, when its tribute or quit rent of twentyfour lacks (fince increafed to forty) was transferred to the Englifh. This Zemindary, which was lately in the hands of Cheet Sing, occupies the principal part of the fpace between Bahar and Oude, fo that only a fmall part of the territory of the latter, touches Bahar on the north-weft.

The dominions of Oude lie on both fides of the Ganges, occupying (with the exception of Fizoola Cawn's diftrict of Rampour) all the flat country between that river and the northern mountains, as well as the principal part of that fertile tract lying between the Ganges and Jumna, known by the name of Dooab *, to within forty miles of the city of Delhi. In Chort, the Britih nation, with their allies and tributaries, occupy the whole navigable courfe of the Ganges, from its entry on the plains, to the fea; which, by its winding courfe, is more than $\mathrm{r} 35^{\circ}$ Britih miles.

The dimenfions of Oude and its dependencies may be reckoned 360 Britifh miles in length from eaft to weft, and in breadth from 150 to 180 : and their area is about one third part of that of the Bengal provinces; being to each other in the proportion of 53 to 162. Generally fpeaking, the whole territory is one continued plain; and is a continuation of that extenfive level valley, through which the Ganges and its branches, take their courfe. It is, moreover, the central part of the ancient kingdom or empire of the Prasir. The capital city is Lucknow, fituated on the river Goomty : and about 650 miles from Calcutta.

The prefent Nabob of Oude, Azuph Dowlah, fucceeded his father, Sujah Dowlah, in $1775 . \mathrm{He}$ is in alliance with the Britih power; and a brigade of the Bengal army is conftantly fationed on his weftern frontier : thereby anfwering the purpofes of covering Oude as well as Bengal; and of keeping the weftern fates in awe.

[^38]It is advanced about 100 miles beyond Lucknow. The whole expence of it is paid by the Nabob of Oude, by a flipulated fum, under the name of a fubfidy. (See note page cxiv.)

The grofs revenues of the dominions of Oude are reckoned to be about two millions and a half fterling : of which the new acquifitions of Rohilcund, Corah, and other parts of the Dooab, are more than one million. The military eftablifhment, including the troops employed in the collection of the revenues, is from 50 to 60 thoufand men : but very few indeed of thefe, deferve the name of regular troops.

Fizoola Cawn, a Rohilla Chief, poffeffes the diftrict of Rampour, fituated at the foot of the northern mountains: and although included in Rohilcund, yet this territory was fecured to him, by the treaty of Loldong, in 1774. It is valued at 30 lacks of rupees* per annum : but he is in effect tributary to Oude, by being bound to furnigh his quota towards an eftablidhment for the common defence.

Contigunus to the weftern bank of the Ganges, and furrounded by the dominions of Oude, is a fmall difrict belonging to a Chief of the Patan Rohilla tribe. It is generally denominated from its capital town, Furruckabad : and is little more than 30 miles in extent.

On the fouth-weft fide of the Jumna, and feparated from it by a narrow tract of low countrys is the territory named Bundela or Bundelcund, inhabited by a tribe of Rajpoots, but deemed inferior to their brethren of Agimere. Bundelcund is furrounded by the dominions of Oude, Benares, and the Mahrattas: and was formerly fubject to a Rajah of the name of Hindooput: but is now chiefly divided among his fons, or their defcendants. It is a mountainous tract, of more than 100 miles fquare: and contains the

[^39]celebrated diamond mines of Panna * or Purña, "together with fome ffrong fortreffes; among which, Callinger is the principal. It is ${ }^{\text {i }}$ fubject to the depredations of the Mahrattas: and has of late years been attempted by Madajee Sindia; who, however could not make himfelf mafter of the principal fortreffes; and in confequence abandoned the open country. The ancient limits of Bundelcund were mucl2 more extenfive than the prefent; extending much further towards the Nerbuddah tiver. Chatterpour, is reckoned the capital.

The territories of Adjidfing are contiguous to Bundelcund, on the weft ; to the Mahrattas on the fouth, and fouth-weft; and to the Benares territory on the eaft. Their whole extent, including fome tributary Zemindars on the fouth-eaft, may be about equal to Bundelcund : and, like that, fubject to the occafional depredations of the Mahrattas. Rewah, or Rooah, is reckoned the capital; and lies on the great road between Benares and Nagpour. We know but little concerning the geography of the remote parts of this track : nop are the boundaries well defined. The river Soane flows through it, in its courfe to the Bahar province.

Shah Alum, the nominal Emperor, or Great Mogul, of whom we have fully fpoken, in the hiftorical part of this Introduction, is now a mere penfioner in the hands of Madajee Sindia: who, notwithftanding, appoints him a refidence at Delhi.

The Jats, Jates, or Jetes, were a tribe of Hindoos, who long fince the death of Aurungzebe, erected a ftate in the provinces of Agta and Delhi. They at laft fixed their capital at the city of Agra; and appear to have poffeffed a tract of country, along both fides of the Jumna river, from the neighbourhood of Gwalior, to that of Delhi; in length about 160 miles, and 50 broad. Col. Dow, in 1770 , eftimated their revenue (perbaps extravagantly) at 200 lacks of rupees; and their force at 60 or 70,000 men. This

[^40][ cxix ]
nation is traced by P. Wendell from the countries lying betweert the SE confines of Moultan, and Gohud. It is certain that Tamerlane made war on'a people called the Getes in his march fromBatnir to Semianah. Nudjuff Cawn, about 14 years ago, difpoffeffed the Jats of all their country, fave the very confined territory of Bhartpour. Madajee Sindia, has, in turn, ftripped Nudjufi Cawn's fucceeffors of thefe conquefts; which are now fcarcely worth poffieffing, although 20 or 21 years ago, under Soorage Mull, they ranked among the moft flourihing provinces of Hindooftan. It will be perceived that the Jats no longer exift, as a nation : all that remains to Runjet Sing, the fon of Soorage Mull, being the fort of Bhartpour or Burratpour, fituated about 45 miles on the weft of Agra, with a fmall tervitory of 4 or 5 lacks of rupees. The.Rajah. of Gohud is of the Jat tribe, but unconnected with Runjet Sing.

The late Nudjuff Cawn, whom we have juft mentioned, is an inftance, among others, of the very fudden rife and fall of the modern fates of Hindooftan. From the condition of a minor Jaghiredar, and the Commander in Chief of the imperial army, after the rettirn of the prefent Mogul, to Delhi, in 1771; he became, in the courfe of 7 or 8 years, the poffeffor of a domain, yielding 150 lacks of rupees annaally; and kept up an eftablifhment of 80,000 troops of all denominations; in which, were included 23 regular battalions of fepoys. His conquefts were on the Jats, the Rajah of Jyenagur, and the Rajah of Macherry (which laft had reduced a confiderable part of the Mewat) and in 1774 , he became poffeffed of the city of Agra. No veftige of this greatnefs hasremained for feveral years paft. His empire, in a manner, died with him: and Madajee Sindia poffeffes moft of it, at this time. This brings us to the fubject of Mewat, which is the hilly and: woody tract lying on the $\mathrm{S} . \mathrm{W}$ of Delhi, and on the weft of Agra; confining the low country along the weftern fide of the Jumna: river, to a (comparatively) narrow lip, and extending weftwards, about 130 B. miles. In length from north to fauth, it may be go

## [ cxx ]

miles. This tract is remarkable, in that, although it is fituated in the heart of the empire of Hindooftan; that is, within 25 miles of its former capital, Delhi, its inhabitants have ever been characterized as the moft favage and brutal : and their chief employment, robbery and plundering. We have mentioned in page xlix, the feverities practifed on them in the 13 th century. At the prefent time, Mewat is fo famous a nurfery for thieves and robbers, that parties of Merwatti are taken into pay by the Chiefs of upper Hindooftan, for the purpofe of diftreffing the countries which are made the feat of warfare. In Acbar's divifion, this tract made a part of each of the foubahs of Delhi and Agra: but moft of it was included in the latter. Mewat contains fome flrong fortreffes, on fteep, or inaccefible hills; among which, is Alwar, or Alvar, the citadel of the Macherry Rajah. It has changed mafters very often, during the contefts between its native Rajahs (or Kanzadeh) and the Jats, the Rajah of Joinagur, Nudjuff Cawn, and Madajee Sindia; and between thefe powers, fucceffively. Sindia has made a confiderable progrefs in the reduction of it.

Bordering on the north of Mewat, and approaching with its eaftern limit within 24 miles of Delhi, is a tract 80 or 90 miles in length, and from 30 to 40 broad, named Little Ballogiftan: its ancient Hindoo name was Nardeck. Within the prefent century, and moft probably fince the rapid decline of the Mogul empire, this territory was feized on by the Balloges, or Balloches; whofe proper country adjoins to the weftern bank of the Indus, oppofite to Moultan. Some tribes of them are alfo found in Makran. They are reprefented as a moft favage and crucl race; and appear to be very proper neighbours for the Mewatti. Their territory is full of ravines, and of caurfe, difficult of accefs to invaders: it has, however, undergone the fate of its neighbours, and been fucceffively tributary to the Rohilla Chief, Nidjib Dowlah; to the Jats, and Nudjuff Cawn. Weftward, it borders on the Seiks.

The territory poffefled originally by Nidjib Dowlah, an Afghan Rohilla (whom we have formerly noticed, as guardian to the young Emperor of Abdalla's fetting up, in 1761*) is, in part, in the pofieffion of his grandfon Golam Cawdir; his fon Zabeta Cawn dying in the end of 1784 , or beginning of 1785 . This territory occupies the head of the Dooab, or that part which borders on the Sewalick mountains. It compofed chiefly the circar of Sehaurunpour, in Acbar's divifion of the empire ; and does not exceed 100 B. miles in length, from ealt to weft, by 75 in breadth. The original poffeflions of Nidjib Dowlah comprehended alro the country: of Sirhind, on the weft of the Jumna river; and alfo the difo tricts round the city of Delhi : but the Seiks have not only encroached on the weft, and pofleffed that fhore of the Jumna, but commit depredations in Sehaurunpour, and even to the banks of the Ganges. Sindia having alfo encroached on the fouth, it is. highly probable that this tract will not long form a diftinct fate on. principality.

The Seiks may be reckoned the moft weftern nation of Hindoo* ftan; for the King of Candahar poffeffes but an inconfiderable extent of territory, on the eaft of the Indus.. Their progrefs as a nation has been fightly mentioned in pages lxiv and lxvi : and fince the complete downfall of the Mogul empire, they have acquired very extenfive domains. But their power ought not to be eftimated, in the exact proportion to the extent of their poffeffions, fince they do not form one entire fate; bat a number. of fimall ones, independant of each other, in their internal government, and only. connected by a federal: union. They have extended their territories. on the fouth-eaft, that is, into the province of Delhi, very rapidlyof late years; and perhaps, the Zemindars of that country may hayefound it convenient to place themfelves under the protection of theSeiks, in order to avoid the more oppreffive government. of their:

[^41]former:

## [ cxxii ]

former mafters. Certain it is that the eaftern boundary of the Seik's dominions, has been advanced to the banks of the Jumna river, above Delhi; and to the neighbourhood of that city: we have jult obferved, that the adjoining territory of Sehaurunpour, is fubject to their depredations, if not actually tributary to them: ind that they make excurfions to the very fide of the Ganges. On the fouth, they are bounded by the northern extreme of, the fandy defert of Regiftan, and on the S W their boundary meets that of Sindy, or Tatta, at the city of Behker, or Bhakor, on the Indus. On the weff, the Indus is their general boundary, as high up as the city of Attock; near to which begin the territories of the King of Candahar: and their northern boundary is the chain of mountains that lie towards Thibet, and Cammere. This being the cafe, they will be found to poffefs the whole foubah or province of Lahore, the principal part of Moultan, and the weftern part of Delhi : the dimenfions of which tract, are about 400 B . miles from NW to SE: and from 150 to 200 broad, in general: although in the part between Attock and Behker (that is, along the Indus) the extent cannot be lefs than 320. Their capital city is Lahore. We know but little concerning the fate of their government and politics : but the former is reprefented as being mild. In their mode of making war they are unqueftionably favage and cruel. Their army confifts almoft entirely of horfe, of which they are faid to be able to bring at leaft 100,000 into the field. It is fortunate that the Oude dominions have the Ganges for a barrier between them and this army of plunderers. - Abdalla was accuftomed to pafs through the country of the Seiks, during his vifits to Delhi, as late as the years 1760 and 1761 : and indeed meditated the conqueft of it: but it is probable, that with the prefent frength of the Seiks, ho King of Candahar will again attempt either the one or the other. It was lately reported that the Seiks were in amity with Timur Shah of Candahar, and meant to allow his army a paffage through their territories. This, however, appears highly impro-

## [ caxiii ]

bable: the progrefs of an Indian army effecting nearly an equal degree of defolation, whether it enters a country on terms of hoftility, or of amity. :

Timur: Shah (the fucceffor of Ahmed Abdalla; late King of Candahar, Korafan, \&c. who died about the year 1773) poffeffes in Hindooftan, nothing more than the country of Calpmere and fome inconfiderable diftricts contiguous to the eaftern bank of the Indus, above the city of Attock. . We have fpoken of the extent of the kingdom of Candahar ${ }_{i}$ in page 1.12 of the Memoir : and it, may be proper to. add, in this place, that the founder of that kingdom, the abovementioned Ahmed Abdalla, was originally the Prince, or Chief, of an Afghan tribe named Abdal (whence the term Abdalli) and that he was Atripped of his country by Nadir Shah, , and compelled, to join the Perfian army in 1739. On the death of Nadir, he fuddenly appeared among his former fubjects, and in a fhort time, erected for himfelf a confiderable kingdom in the eaftern part of Perfia: adding to it, moft, of the Indian provinces ceded by the Mogul to Nadir Shah. . It has been afferted, that Abdalla had, arifen to a high command in the Perfian army; and that, his department, of courfe, occafioning a large fum of money to centre, with him; he, on the death of Nadir Shah, availed himfelf of the, ufe of thefe treafures, to carry off: a part of the army. He eftablifhed his capital at Cabul near, the hither foot of the Indian Caucafus: and it appears by the accounts of Mr. Forter, who traverfed the country of Timur Shah in. 1783 , that his fubjects live under an eafy government : that is, for an Afiatic one. The revenues and military force of Candahar, have not come to my knowledge. The military eftablifhment bas been given at 200,000 men. Ahmed Abdalla had regular infantry, cloathed like the Britifh. fepoys: and, at one time, made ufe of the Britifh manufactures for. that purpofe: the trade went by Sindy, and up the Indus and its branches, to Cabul. This, trade has long been at an end.

The province of Sindy, or that lying on both fides of the lower part of the river Indus *, is fubjeet to a Mahomedan Prince, who is tributary to the King of Candahar; it being among the provinces ceded to Nadir Shah, by Mahomed Shah, in 1739. Although it properly belongs to Hindooftan, it is fo detached from it by the great fandy defert, that it takes no part in its politics. This province is defcribed in page 285 , to which the reader is referred.

The province of Cutch, on the S E fide of Sindy, as well as the wellern parts of the peninfula of Guzerat, are governed by Rajahs of their own : and do not appear to have undergone much change, by the late revolutions in Hindooftan. Cutch is not only a barren country, but in its nature too ftrong to be eafily attacked. And the weftetn part of Guzerat is mountainous and woody; and inhabited by a wild, hardy, race : and therefore on both accounts, unfavourable to the progrefs of a Mahratta army.

The Mahrattas, as has been obferved before, form two diftinct empires, or ftates; that of Poonah, or the weftern : and Berar, the eaftern. Thefe fates collectively, occupy all the fouthern part of Hindooftan proper; together with a large proportion of the Deccan. Malwa, Orifla, Candeih, and Vifiapour; the principal parts of Berar, Guzerat, and Agimere ; and a fmall part of Dowlatabad, Agra, and Allahabad, are comprifed within their extenfive empire; which extends from fea to fea, acrofs the widedt part of the peninfula; and from the confines of Agra northward, to the Kiftna fouthward; forming a tract of about 1000 Britifh miles lotrg; by 700 wide.

The weftern fate is divided among a number of Chiefs or Princes, whofe obedience to the Paifhwah, or Head, is, like that of

[^42]
## [ ccxxv ]

the German Princes to the Emperor, merely nominal at any time; and, in fome cafes, an oppofition of interefts begets wars, not only between the members of the empire themfelves, but alfo between the members and the head. In fact, they are feldom confederated but on occafions that would unite the moft difcordant ftates; that is, for their mutual defence: for few occafions of foreign conquefts or plunder, are of magnitude enough to induce them to unite their armies.

Was I inclined, I want ability, to particularize the poffeffions and fituations of all the Chiefs that compofe this Mahratta ftate. I hall therefore attempt orily to mention the principal ones, commonly ftyled Fagbiredars, or holders of Jaybires *: their titles to their poffeffions, being nominally during their life time only; although they have long fince become hereditary.

The Pailhwah, on nominal head of the weftern empire, refides at Poonah, which is fituated at the fouth-weft extreme of the empire, and about 100 miles from Bombay. There are three principal Jaghiredars on the north of Poonah; and ttwo on the fouth: the firft are, Madajee Sindia, Tuckajee Holkar, and Futty'Sing Gwicuar; and the latter, Pirferam Bow, and Rartah, who is more commonly ftyled the Meritch Wallab (or Meritch Man) from his having eftablifhed his capital at that city $\dagger$, previous to the conqueft of it, by Hyder Ally: .Before I proceed to particularize the

[^43]
## [ cxxvi ]

different partners or Marers, in the feveral provinces, it will be neceffary to obferve that the Mahratta dominions have in fome places, been portioned out among the different Chiefs, after a method that appears the moft confufed and intricate, imaginable. For not only the Purgannabs, or grand divifions of provinces, are divided in fome inflances, among three different powers; but even the revenues of particular villages, are divided in like manner; and in confequence, diftinct officers are appointed, for the purpofe of collecting the refpective Chares *.

The province or foubah of Malwa (to which this account particularly applies) one of the moft extenfive, and the moft elevated, and highly diverfified in Hindooftan, is divided among the Paifhwah, Sindia, and Holkar: as is alfo the fmall foubah of Candeifh, adjoining to it, on the fouth; and which contains the fine city of Burhanpour, in the poffeffion of Sindia.

The province of Agimere, has only in part been poffeffed by the Mahrattas, and that part is now entirely in Sindia's hands. What is here expreffed, relates only to what may be termed Agimere proper ; and not to the whole foubah of that name, according to its geographical definition in the Ayin Acbaree: fince the thitee great Rajpoot principalities, Oudipour, Joodpour, and Joinagur, as well as Rantampour, are there, included in it. Thefe Rajpoots principalities (of which more will be faid hereafter) have long been held tributary to the Mahrattas ; and now, by the afcendancy of Sindia, andby virtue of his local fituation, he converts the whole of the tribute to his own ufe.

The largeft, as well as the fineft part of Guzerat, is divided between the Pailhwah, and Futty Sing Gwicuar (or Gwicker) the latter holds his thare chiefly, in the northern part of it.

The provinces on the fouth of Poonah, are divided between the Paifhwah, and the Fagbiredars, Purferam Bow, and Raftah. So little is known in Europe concerning the Geography of this part

[^44]of the country, that the map of it is almoft a blank. I am by no means certain where to place; the common boundary of the Mahratta and Tippoo's countries, in this quarter. Hyder took pofferfion of Meritch (Meritz or Mirje) on the north bank of the Kiftna, in 1778 ; and, I apprehend, never relinquifhed it.

The Pailhwah; or his reprefentatives, poffers alfo many other diftricts in the NE, and eaft, parts of Malwa, \&cc., for the Poonah territories, or thofe of its Jaghiredars, clofe on the river Jumna, oppofite to Calpy: and alfo extend along the northern bank of the Nerbudda river, almoft to its fource; and encroach deeply on the SW fide of Bundelcund, according to its ancient limits. The diftricts of Sagur, and Mundella, are fituated in this quarter. Thus it appears, that the territories fubject to Poonah, are feparated, or rather infulated ${ }_{9}$ in an extraordinary manner; and this circumftance alone, muft influence the domeftic as well as the foreign pplitics of this ftate: fince, any confiderable Jaghiredar may eafily withhold the government's thare of the revenues, and convert it to his own ufe.

From what has been faid, it will appear impoffible to difcriminate the poffeflions of the Paikwah, any more than thofe of his Jaghiredars, on the map. All that can be done, is, to mark the body of each tratt of land, in which the Paihuwah and the particular Jaghiredars partiçipate. : It is underfood that the Paifhwah poffeffes a larger thare; in the weftern part of the Deccan, than elfewhere. This tract is naturally, very ftrong, particularly on the weft fide towards the fea, where $\beta$ ftupendous wall of mountains, called the Gauts, rifes abruptly from the low country, called the Concan (or Cockun) fupporting, in the: nature of a terrace, a vaft extent of fertile and populous plains, which are fo much elevated, as to render the air cool and pleafant (See Memoir, pages 179 and 213.$)^{\text {a }}$ This elevated tract, is continued not only through the Mahratta territories, but extends through the peninfula, to the fouthern extreme of Myfore; and is named Balla-Gauts
thrbughout its whole extent: meaning literally; the bigber, of upper Gouts *. In the peninfula, it is applied in contradiftinction to Payen-Gaut, of the lower Gauts: but in the Decedh; it appears to be ufed only a's a proper nathe, and not as a correlative: we having never heard of the Deccan, Payen-Gaut.

Nor is it lefs difficult to afcertain the fum of the revenue of this ftate, than to particularize the extent of the diftricts, from whence it is collected. The moft intelligent ahd beft informed perfons that I have confulted on the occafion, will not venture to give an opinion on it. One perfon (a native of India) has flated the revenue at 12 crores of rupees, or 12 millions ferling : and the net receipts, Jaghires deducted, at five crores. The fame account makes the military eftablifment in the field, to be 200,000 troops', foot and horfe; befides an equal number in garrifon. Another account of the revenue, by an European gentleman, reckons 7 crores for the net revenue. If the provinces poffeffed by this ftate, were to be rated in the fame proportion as in the time of Aurungzebe, the net revenue would be about 8 crores of rupees, of 8 millions fterling.

Sindia is unqueftionably the moft powerful Jaghiredar within this ftate; and ought to be regarded as a fovereign Prince. Since the Mahratta Peace ( ${ }^{7} 8{ }^{8} 3$ ) he has extended his frontier from Malwa towards the Jumna; fwallowing up moft of the petty fates that heretofore exifted there : and in patticular, that of Gohud, including the celebrated fortrefs of Gwalior (fee page 157 of the Memoir). He has alfo carried his arms northward to Delhi, and into the provinces of Mewat and Jyenagut; teducing many fortreffes, and a conifiderable trakt of country, which were heretofore fucceffively poffefied by the Jats, and Nudjuff Catwn. In fine, he poffeffes the perfon of the hominal Great Mogul, and all that can

[^45]be accomplifhed by virtue of his name. It would appear that Sin-. dia's plans embrack too great a variety of objects at one and the fame.time : for, not long ago, his troops were compelled to retire from Bundelcund, in which they poffeffed moft of the open country, the fruits of $a$ very recent conqueft. He feems bent on extending his conquefts on the north and weft: but time alone can difcover whether he will fucceed in eftablifhing a permanent empire, on that fide. The revenue of his paternal, ar original dominions, in Malwa, \&c. has been eftimated at one crore of rupees per annum. It is difficult to afcertain what the value of his new acquifitions are, in their prefent ftate : for thofe portions of Agra, Del$\mathrm{hi}, \& \mathrm{c}$. which he holds, having been fo long fubject to the depredations of contending armies, little benefit can be derived from them, at prefent *. Gohud, one of thefe acquifitions, is eftimated at 20 or 30 lacks per annum. Holkar is fuppofed to poffers 80 lacks per annum, in his thare of Malwa. Sindia's capital city is Ougein, near the ancient city of Mundu, the capital of the Chil, ligi Kings of Malwa : and Holkar's capital is Indore, fituated about 30 miles on the weft of Ougein.

The Berar or Nagpour Bajah, Moodajee Boonllah (or Bonfola) poffeffes the principal part of Berar, together with the province of Oriffa $\dagger$. :The remainder of Berar is held by the Nizam, or:Soubah of the Deeccan, who pays a cbout, or fourth part of its clear revenues to Moodajee. On the weft and fouth, the Berar dominions border on, or are intermixed with, thofe of the Nizam : on the N W and north, are the provinces of Bopal, Gurry-Mundella, \&c. tributaries of Poonah; together with the territories of Adjid Sing. On the eaft, the Nagpour territories thruft themfelves between the Britifh poffeffions in Bengal, and thofe in the northern circars, fo

[^46]
## [ cxxx ]

as to occupy near $: 80$ miles of the country adjacent ta the fea; and, of courfe, to break the continuity of their poffeflions on the fed coaft. Moodajees dominions are very exterifive, being:in length: from eaft to weft 550 Britih miles, and in fome places 1200 from: north to fouth. He does not poffefs all this in full fovereignty; for Ruttunpour and Sumbulpour are little more than tributary; and are governed by his brother Bembajee. We know lefs of the interior parts of Berar, than of moft other countries in Hindooftan; but, by what we do know, it does not appear to be either populous or rich. (See Memoir page 144.) Nagpour is the prefent capital, and the refidence of Moodajee ; and it is fituated about midway between Bengal and Bombay.

Cattack, or Cuttack, the capital of Oriffa, is a poft of confequence on the river Mahanuddy, as it lies in the only road between Bengal and the northern circars; and the poffeffion of this city and its dependencies, gives the Berar Rajah more confequence in the eyes of the Bengal government, than even his extenfive domain, and centrical pofition in Hindooftan.

Moodajee has been recognifed (pagelxxxviii) as a defcendant of the original founder of the Mahratta empire, Sevajee. The fum of his revenue, is varioully fated. Some have reckoned his part of Berar, at 84 lacks of rupees, per annum; and Cattack at 24; while others have allowed only 60 , for his whole revenue. If we take it at the higheft calculation, 108 lacks, he ought not to be confidered in a formidable light, by the Britifh power. But placing the actual fum of his income out of the queftion, his dominions are too widely extended, in proportion to their value, to form a powerful ftate. Cattack is no lefs than 480 miles, from the capital Nagpour. It has been well obferved, that the ordinary caufe of jealoufy between neighbouring fates, is done away, in the cafe of Bengal and Berar, by the nature of that part of the Berar dominions, which borders on Bengal ; it being generally, woody and uninhabited : fo that the virtual

## [ exxxi ]

boundaries of both countries are removed to a diftance from each other.

Thefe are the principal of the countries reduced into the form of governments, by the Mahratta Chiefs: but fo habituated are they to rapine and plunder, that few of the neighbouring fates, but have, at one period or other, felt and acknowledged their power. Bengal and Bahar were; .fqr :a: Chort'time, fubjected to a regular tribute; and the Carnatic, Myrore; the Nizam*s provinces, the Dooab, Bundelcund, and the fouthern parts of Delhi, have been frequently over-run. Their predatory excurfions fometimes carried them 1200 miles from their capital. But the lofs of the battle of Panniput in $176_{1}$, induced a degree of caution in their military enterprizes: and from that period, their: power appears to have been on the decline. Shut out of Bengal, Oude, and the Carnatic, by the Britifh arms, and out of Myfore by Hyder's, their field of action has been much circumfcribed $!$ and the late war with the Britifh power, difcovered their weaknefs to all Hindooftan.

I am not fufficiently informed on the fubject, to bee able to particularize all the different provinces, or diftricts', that are tributary to the Mahratta ftates.: Some have been already mentioned ; and ampng others, the Rajpoot: principalities of the Soubah of Agimere: : and which, from their former:importance and weight, in the internal politics: of the Mogul empire, deferve particular notice.

In the early part of the prefent century; thefe ftates, collectively', appeared fo. formidable to the fucceffor of Aurungzebe, that he was conftrained to leave them in quiet poffelion of their independency; during the fedition of the Seiks, in Lahore' (See page lxiv). Vaft have been the changes fince that time for what the difciplined armies of Aurungzebe and his fons, could not accomplifh', has been. effected by the Mahratta freebooters : • fó much eafier is it to ruin a country, than to make a conqueft of it. The hiftory of the decline of the Rajpoot principalities, is foreign to the prefent work: it is fufficient to obferve, that they are reduced to their prefent low fate,
merely by the depredations of Mahratta detachments; which being compofed of light horfe, and accuftomed to divide into innumerable fmall parties; they by their rapid and defultory movements, at once fpread defolation, and elude the attacks of the inhabitants. This muft be underftood to relate only to the open parts of Rajpootana : the mountainous parts being yet free from their incurfions.

Rajpootana was divided into three great principalities, under the names of Oudipour, Joodpour, and Ambeer, (or Amere) now better known by that of Joinagur, or Jyenagur. Oudipour was alfo named Meywar, or Midwar; and Joodpour, Marwar. In Acbar's divifion of the empire, thefe principalities were claffed as belonging to the foubah of Agimere, which is fometimes called Marwar. It is not an eafy tafk, by means of the geographical matter extant, to affign the precife limits and dimenfions of thefe principaJities; which occupy the fpace between the weftern confines of Agra, and the NE part of Guzerat ; and between the fandy defert (or Regiftan) and Malwa : that is an extent bf $33^{\circ}$ Britifh miles from N E to SW ; and 200 broad, in the wideft part. Their relative fituations, and comparative dimenfions, may be feen in the map; where Jyenagur or Jyepour, will be found to lie to the northeaft ; Oudipour to the S W ; and Joodpour to the N W, bordering, angularly, on the other two. Pere Wendell's MS. account of thefe ftates, from whence I have extracted many of the above particulars, ftates the revenues of Oudipour at io lacks of rupees, Marwar at 40, and Jyenagur at 40 , per annum, in the year 1779*. The two former are very mountainous, with a fandy foil, in the valleys: the latter is the moft fertile, and was, about the middle of this century, in a high fate of improvement, under the government of the celebrated Rajah Jyefing, or Jeffing; who founded the new capital of Jyepour, which has had the effect (not unufual in Hindooftan)

[^47]of changing the name of the province to that of the capital. P. Wendel reprefents Jyepour as a place of great wealth and commerce in ${ }^{1} 779$, being the entrepat of the principal part of the goods, that are brought from every quarter of India. The Rajah built alfo an obfervatory in his capital, and invited Pere Boudier to it, in 1734. It is feared that the confufions that have.fo long prevailed in this province, muft have greatly reduced the wealth and importance of the capital. We have mentioned before, that Sindia receives the tribute of all the three Rajpoot provinces, and 'converts it ta his own ufe': and that he had made fome coufiderable conquefts in them, particularly in Jyenagur.

It is probable that in early times, the whole Rajpootana conftituted one entire kingdom, or empire, under the Rana or Prince of Oudipour, who has in all times, fince we had any knowledge of his hiflory, been confidered as the head of the Rajpoot flates. A long eftablifhed cuftom of homage to a temporal Prince, from thofe, who do not acknowledge his fuperiority in any other way, feems to prove the exiftence of real power in the hands of his anceftors. In modern times the Rana of Oudipour feems to have been confidered fomewhat in the fame light as the general of the Amphyctions was in Greece. Cheitore was the ancient capital of the Rana, a place much celebrated for its frength, riches, and antiquity, when it was taken and defpoiled by Acbar in 1567: Oudipour is the prefent capital.

The Rajpoots are not confined entirely to the tract abovementioned, or even. to the foubah of Agimere : fince fome inferior tribes of them are fettled in Bundelcund, and in Gurry-Mundella. Others, according: to. Thevenot, are fettled in Moultan; and indeed he reprefents Moultan as the original country of the Kuttries ${ }_{j r}$ from whom the Rajpoots fprung. (See page 93 of the Memoir.).

Of the countries of Nagore, Bickaneer, Jaffelmere, and thofe bordering on the lower part of the courfe of the river-Puddar, and on the fandy defert, we know little at prefent, except that they form
a number of petty Rajahfips; and are underfood to be montly in. habited by Rajpoots.

The Rajpoots are ordinarily divided into two tribes or claffes; thofe of Rathore, and Chohan, or Sefsodya. Marwar, or the N W divifion of Agimere, is the proper country of the former; and Meywar, or Oudipour, of the latter. The reader will be pleafed to obferve, that Cheitore is alfo fynonimous with Oudipour, or Meywar. The Rathore tribe were originally the moft numerous of the two. It has often been afferted, and, by the late Col. Dow, among others, that the Mahratta Chiefs had their origin from the Rathore tribe : and to countenance this opinion, the etymology of the name Mahratta, has been drawn from Rathore: prefixing to it, Мана, or Great. We have feen, however, in page lxxix, that the fact is very different, and refts on the foundation of hiftoric records : the term Mahratta being derived from Marhat, or Marbeyt, the name of the province in which Sevajee firft eftablighed his independency : and this etymology appears to be perfectly natural. And by the fame rule, Sevajee muft have been of the Seefodia tribe, as drawing his lineage from Oudipour; and not of the Rathore tribe, as erroneoully reprefented.

Of the five northern circars, Cicacole, Rajamandry, Ellore', and Condapilly *, ate in the poffeffion of the Engliih; and Guntoor is in the hands of the Nizam. The four firft bccupy the fea coiaft from the Chilka lake on the confines of Cattack, to the northern bank of the Kiftna river; forming, comparatively, a long, narrow flip of country, 350 miles long, and from 20 to 75 wide. The nature of the country is fach, as to be eafily defenfible againft an Indiair enemy, it having a barrier of mountains and extenfive forefls on one fide, and the fea on the other; the extremities only being open. Its greateft defect is in point of relative.fitation to Bengal

[^48]and Madras, it being 350 Britifh miles from the firt, and 250 from the latter; fo that the troops deftined to protect it, cannot be reckoned on, for any preffing fervice that may arife at either prefidency. The circars, in point of ftrictnefs. appertain partly to Golconda (or the Deccan) and partly to Oriffa; and are held of the Nizam on condition of paying him i ftipulated quit rent. When the French took poffefion of the five circars, in 1753, they were valued at about 43 lacks of rupees per annum. The Englifh never poffeffed Guntoor, which was effimated at near 7 lacks of the above fum: fo that 36 lacks ( 360,0001 .) thould be taken for the true value of the Englifh poffeflions in the circars. In 1784, they were reckoned to produce about that fum. It would appear that the Nizam, by retaining Guntoor, has more than an equivalent for the pe $/ b c u / b$ or tribute, which is 5 lacks per annum.

The poffeffions of the Nizam, or Soubah of the Deccan (a younger fon of the famous Nizam al Muluck) comprife the province of Golconda, that is, the ancient province of Tellingana, or Tilling; fituated between the lower parts of the courfes of the Kiftna and Godavery rivers, and the principal part of Dowlatabad; together with the weftern part of Berar; fubject (as has been faid before) to a tribute of a chout, or fourth part of its net revenue, to the Berar Mahratta: The Nizam has the Pailhwah, or Poonah Mahratta on the weft and north-weft ; the Berar Mahratta on the north; the northern circars on the eaft; and the Carnatic, and Hyder Ally on the fouth. I am not perfectly clear in my idea of his weftern boundary, which, during his wars with the Mahrattas, was subject to confinual fluctuation : but I underftand generally that it extends more than 40 miles beyond the city of Aurungabad, weftwatds; and come's within 80 miles of the city of Poonah : and that on the'S W it goes confiderably beyond the river Beemah, and to the bordersi of Sanore-Bancapour. His capital is Hyderabad, or Bagnagur, fitua: ted on the Mouffi tiver, hear the Eamous fortrefs of Golconda.

## [ cxxxvi ]

The difricts of Adoni and Rachore, which were in the hands of Bazalet Jung (brother to the Nizam) during his life time, are now in the hands of the Nizam. The Sourapour, or Sollapour Rajah, on the weft of the Beemah river, together with fome other Rajahs, are his tributaries.

Probably the Nizam's dominions, including his tributaries and feudatories, are no lefs than 430 miles in length, from N W to SE, by 300 wide. Till he took poffeffion of the Guntoor circar in 1780 , his dominions no where touched on the fea coaft.

The Guntoor circar (called alfo Mortizanagur and Condavir) occupies the fpace between Condapilly, the fouthmoft of our four circars, and the northern part of the Carnatic; extending along the fea coaft of the bay of Bengal more than 30 miles. The poffefion of this diftrict to the Englif, would have been extremely eligible, as well for the purpofe of fhutting out the French nation from the Deccan, as to keep open a communication with the northern circars, and to preferve the continuity of our poffeffions, and thofe of our allies. Although the maritime parts of this circar are flat and open, yet the interior part of it contains fome very ftrong fortreffes, and pofts. The Nizam took poffeffion of it on the death of his brother Bazalet Jung, and fill holds it.

It bas not been in my power to obtain, even a tolerably exact account of the fum of the Nizam's revenue ; or of his military eftablihment : the latter, however, is far from being refpectable, on the fcore of difcipline. The former has been ever varying, and generally diminifhing; by reafon of the encroachments of the Poonah Mahrattas, and the Myforeans: it' is faid to be reduced fo low as 130 lacks of rupees, annually. But befides this fum of actual revenue, it muft be taken into the account, that he has depending on him, many Jaghiredars, who hold their lands on the tenure of military fervice.

The dominions of Mahomed Ally, Nabab. of the Carnatic, and an Ally of the Eaft India Company, commence on the fouth of

## [ cxxxvii ]

the Guntoor circar, and extend along the whole coaft of Coromandel to Cape Comorin. It muft be underfood that I mean here to include Tanjore, Marawar, Tritchinopoly, Madura, and Tinevelly ; all being appendages of the Carnatic. Under this defcription, the Carnatic is not lefs than 570 Britifh miles in length from north to fouth, but no where more than 120 wide, and commonly no more than 75. Such a long, narrow, tract of country, bordered by an active and powerful enemy, whofe territories are, moreover, of a compact form, and his force more readily collected, muft always be fubject to have its. diftant provinces cut off from its affiftance: or if it divides its force, for their feparate defence, the fafety of the whole will be endangered.

The Carnatic anciently comprifed all that part of the peninfula that lies fouth of the Gondegama and Tungebadra rivers, from the coaft of Coromandel eaftward, to the Gaut mountains weftward, and was divided into Balla-Gaut and Payeni $\angle$ Gaut, or the upper and lower Gauts. ${ }^{*}$; the former being the weftern part, and containing the diftricts which now compofe the country of Tippoo; and the latter, the eaftern part, or the Carnatic according to its prefent definition.

The revenue of the Nabob is ftated at about a million and a half fterling, annum : out of which, he pays a fubfidy of 160,000 I. to the Eaft India Company towards the expence of their inilitary eftablifhment. The evils attendant on the improvident conduct of the Nabob, were reverely felt, during the late war, and ought to be cautioufly guarded againft, in future.

The Britifh poffeffions in the Carnatic are confined, chiefly, to the tract called the Jaghire, which extends along the coaft, about 108 B. miles, and 47 inland, in the wideft part. Its revenue is reckoned 150,0001 . Befides the: Jaghire, there are lands dependant on Cuddalore, but the amount is not confiderable. The whole

[^49]
## [ ©xxxyiii]

amount of the land revenue dependant on Madras, including the circars, has been iftated, in page criv, at $7,25,0001$. per annum.

The dominions of Tippoo Sultan ${ }_{x}$, who fyles;himfelf. Regent' of Myfore, begin'on the weft of the ridge of mountains beyond Dalmacherrys: Sautgud, and Attore'; and extend fouthward to Travancore and Madura; northward to Soonda and Vifiapour (inveloping Adonis the territory of the late Bazalet. Jung) north-eaftward to Guntopr, and : Ongoles and weftward to the fea. They comprea hend; generally, the provinces of Myfore, Bednore, Coimbettore; Capara and Dindigul.; befides his late father's conquefts to the northward, which are Meritçh, or Meritz, Suonda, Chitteldroog, Harponelly, Sanore-Bancapour, Roydroog; Gooty, Condanore, Canoul, and Cuddapah,

Tippoo's prefent territory exceeds very confiderably, both in extent and revenue, that of his rival the Nabob of Arcot: but probably it will; for fome time at leaft, require a'Prince of confiderable talents, to prevent a ftate, compofed of fuch difcoindant parts, from falling, to pieces. A defcendant of the Hindad King of Myfore, whom Hyder dethroned, is living; and kept a ftate': prifoner at Seringapatam, Tippoo's capital. He is occafionally thewn to the populace: and the circumftance of his being permitted to live, is a ftrong proof how much the popular prejudices prevail, in favour of the family of their ancient Kings. . It was part of the plan of operations of the fouthern army, under Colonel Fullarton, in 1783, to march from Coimbettore to Seringapatam, in order to liberate this Prince, and encourage the people of Myfore to throw off their allegiance from Tippoo: and it was the opinion of many fober perfons that it might have fucceeded, if circumftances had permitted Col. Fullarton to undertake it. The general character of Tippoo, is that of a man of high ambition; with great abilities for war and finance; cruel, to an extreme degree; and obftinately attached to

## [ cxxxix ]

his fchemes. He is unqueftionably, the moft powerful of all the native Princes of Hindooftan ; but the utter deteftation in which he is held by his own fubjects, Yenders it improbable that his reign will be long. His dominions are very extenfive; and although the imperfect fate of the geography of the weftern part of the peninfula, does nof permit me to mark their northern boundary, yet it is pretty certain that it touches the river Kiftnah, on the fonth of the city of Vifiapour: and therefore, the extent of Tippoo's territory, or kingdom, from the valley of Ootampaliam on the fouth, to the Kiftnah on the notth (or rather N N W) cannot be lefs than $55^{\circ}$ Britifh miles. In breadth, it is very unequal : in the wideft place, that is, in the northern part of the peninfula, the breadth is at. leart 330 miles; but lefs than 150 in the parallel of Tritchinopoly; and further fouthward, it ends in a point. In. page xcvi, its area häs been compared to that of Great Britain; which is taken at 96,400 fquare Britifh miles: and the country of Tippoo is fuppofed to contain 21 fquare degrees; which in the parallel of $14^{\circ}$, produce about $97,65^{\circ} \mathrm{B}$. miles. By the peace of 1782, Hyder was tō relinquif all, but his ancient pofeffions: how far his fucceffor has fulfilled the terms of the treaty, I am not informed: but the term, ancient poffefions, was too general, or rather: too vague, to, be underftood in any. particular fenfe.

The revenue of Tippoo, has been ftated at four crores of rupees, or as many mittions fterling. His military eftablifhment is very great; being no lefs than 72,800 regulars, including 740 Europeans under the command of French officers:' befide troops. in the frontier garrifons, to the amount of 49,000 . The remainder of his force, confifts of irfegulars of various defcriptions, and amounts. to 33,000 and upwards : fo that the whole force of Tippoo, is reckoned 155,000 ; of which, near 73,000 , are of a clafs much fuperior to any troops that have ever been raifed and difciplined by

## [ xx ]

a native of India*. His defire of extending his kingdom, will keep him at perpetual variance with the Poonah Mahrattas, or the Nizam, or both; as it is only on their fide, that any acquifitions can be made, without quarreling with the Englih. Hyder long meditated the conqueft of the Travancore territory, fituated at the extreme of the peninfula; but was prevented by the Englith. Tippoo, is faid to have intentions of the fame kind. The reader may eafily collect, from a curfory view of the map, how hurtful to the intereft of the Carnatic, fuch a revolution would prove: fince it implies alfo the transfer of the Cochin territories, and all the tract lying on the weft of the Gauts.
eftablifment ; and which may be depended on.


| Recapitulaition. |  |  |
| :---: | :---: | :---: |
| Regulars - -.... 72,830 |  |  |
| Garrions |  |  |
| Irregulars | - | 7,000 |
| Ausiliaries |  | 26,300 |
|  | Total | 155 |

Chronological Table of Emperors, who have reigned in Hindoostan, fince the Ghiznian Conouest.

Ghiznian Emperors.


Modood - 041

$\left.\begin{array}{lll}\begin{array}{l}\text { Ali } \\ \text { Refchid } \\ \text { Feroch-Zad }\end{array} & - & -\end{array}\right\} \begin{aligned} & 1051 \\ & 1052\end{aligned}$
$\underset{\substack{\text { Feroch-Zaad } \\ \text { Ibrahim I. }}}{\text { - }} \quad\} \begin{aligned} & 1052 \\ & 1056\end{aligned}$
Mufaood III. - 1098
$\begin{array}{ll}\text { Arfilla } \\ \text { By }\end{array} \quad-\quad 1115$
$\begin{array}{lll}\text { Byram F. } & - & 1118 \\ \text { Chufero I. } & - & 1152\end{array}$
Chufero II. - ${ }_{1159}$
Ghorian or Gaurian Emperor.
$\left.\begin{array}{c}\text { Mahomed II, or Maliomed } \\ \text { Ghori }\end{array}\right\} \quad$ II84

$\begin{array}{ll}\text { Sultana Rizia, Emprefs } \\ \text { Byram II. } & 1236 \\ & 1239\end{array}$
Byram II. - 1239
$\begin{array}{lll}\text { Mufaood IV. } & - & 1242 \\ \text { Mahmood II. } & - & 1245\end{array}$
Balin - - $\quad 1265$

| Keikobad- | - | 1286 |
| :--- | :--- | :--- |
| Ferofe II. |  |  |



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## M E M O I R ORA

MAP of HINDOOSTAN, Goc.

## M E M O I R

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## MAP of HINDOOSTAN, $\mathscr{\sigma}^{\circ} c$.

S great an extent of country is contained in this map, and the
quality of the materials is fo various in different parts, that it became necceflary, in order to prevent confufion, to divide the account of its conffruction into feparate fections, agreeable to the natural divifion of the country ; and, in fome meafure, to the nature of the materials. It is aecordingly divided into feven fections:

The firft contains the fea coafts and iflands.
The fecond, the furveyed tract on the fide of Bengal; or that occupied by the Ganges and its principal branches, as far weft as the city of Agra,

The third, the tract occupied by the Indus and its branches.

- The fourth contains the tract between the Kifna river and the countries traverfed by the Ganges and Indus; that is to fay, the middle parts of India.

The fifth contains the peninfula fouth of the Kiftra.
The fixth, the countries fituated between Hindooftan and China; namely, Thibet, Bootan, Affarh, Pegu, Aracan, Ava, and part of Siam: and

The feventh, and laft, contains Tables of diffances between the principal cities, \&x.

But, before I proceed to the particulats of the coniftruction of the map; it will be neceffary to explain the itinerary meafure adopted B 2

## [ 4 ]

in places where no furveys have been taken. The ufual meafure of this kind in Hindooftan, is the cofs, or crores, commonly eftimated at two Britifh ftatute miles. I have not been able to get the true length of the cofs, as fixed by Acbar, and other Emperors; and, even if I had, it would be of no ufe in the prefent enquiry, as all my Hindooftanny itineraries and tables are in computed coffes.

It may reafonably be expected, that in a country of half the extent of Europe, the eftimated length of the itinerary meafures, allthough of the fame denomination, muft vary in different parts of it. It is no more than what happens in different provinces of the fame kingdom, in Europe. But as far as we have any data for making a juft comparifon, the cofs does not vary fo much as one-fixth part over the whole country; and between the northern and fouthern extreme of India, (that is, in an extent of about 1700 miles) the difference is not more than one-fixteenth part, The miles vary much more in their proportions, in the different parts of Europe.

Taking the medium of the cofs throughout Hindooftan, and the Deccan, there will be about 40 of them to a degree of a great circle on the globe: that is, each cofs is about a geographical mile and half. But this is to be underftood of horizontal meafure ; in which the windings and inflections of the roads are allowed: for the eftimated routes could not be applied to geographical purpofes, by any other rule. The cofs; in road meafure, is about one ftatute mile and nine-tenths; or at the rate of 190 Britih miles to 100 coffes; one part in feven, being allowed for winding, when the line of diftance is extenfive. Or, feven miles of road meafure, are allowed to produce fix miles horizontally, or in a direct line.

In Malwa and its neighbourhood, the coffes are larger than any where elfe, and are about 1,7 geographical miles, or 35 to a degree. And on the road from Baglana to Mafulipatam, they are fo Short, that 46 are required to make a degree. But having only one example for the latter proportion, I thall found no rule on it. The proportions that I have adopted for Hindooftan, Malwa, and the

Carnatic,

## [ 5 ]

Carnatic; from a great number of examples, are refpectively 1,43 ; 1,71 ; and $\mathrm{I}, 6$ of geographical miles to a horizontal cofs; or 42 x 35 , and $37^{2}$ to a degree of a great circle. The cofs of Hindooftan proper, is therefore fhorter than any other, and prevails throughout the greatef extent of country. There is again in Nagpour (the ancient Goondwaneh): a Goondy cofs, which by the medium of all the accounts. I could get, is about 2,76 geographical miles, reduced to horizontal diftance ; or 21,9 , or 22 to a degree. This meafure appears to be in ufe by the natives, throughout Mundilla and Boggilcund, as well as in Nagpour; and fometimes occafions great confufion in the reports of the cofids, or couriers: however, they have a computation of Hindooftanny coffes alfo, in the fame country; and the proportions agree in general remarkably well with that fcale, between the Bengal Provinces and Aurungabad; and between Mundilla and Hydrabad,

Having mentioned the windings of the roads, it may not be improper to give the refult of my enquiries on this head, for the benefit of thofe who may have itineraries,: kèpt in eftimated diftances, to work up. One in feven is allowed as above : and is what will be found to take"place indarge diftances, in fuch countries as are interfected by deep rivers, or watercourfes: or in fuch as have no artificial roads; and where thofe on the natural level, haye obftacles to furmount. The degree of winding of roads, in different countries, is, (cateris paribus) according to the-ftate of improvement, in which the roads are. In India, the roads are at beft, little better than paths, and whenever deep rivers, (which in that country are frequent, and without bridges) moraffes, chains of mountains, or other obftacles, oppofe themfelves to the line of direction of the road, it is carried round, fo as to effect the eafieft paffage; and for this reafon the roads there, have a degree of crookednefs, much beyond what we meet with in European countries, where bridges are laid over every confiderable watercourfe, and where hills are either levelled, or reduced to a convenient degree of acclivity; and after

## [ 6 ]

all, expences faved in many cafes, by the difference of labour bew tween the fmoothing of the direct road, and the forming of a road on the natural level. But the proportions, muft of courfe vary with circumftances; and may be only one in ten, in a dry, open, country, and one that has a tolerably even furface: but this happens too rarely to found any general rule on. As the line of diftance increafes, a greater degree of winding will take place; or, a fhort diftance will always be on a fraighter line than a long one: for in countries where the management of the roads is not arrived at a high degree of perfection, the road through a kingdom will be made up of portions, confifting of the particular roads leading from one city, or principal town, to another, although they may not lie in the general line of direction; and then there will be a general winding, added to the particular one : and the above proportion of i in 7 , is applied to this compound winding. And, added to this, in very long diftances, fome natural obftacle, will, very probably, oppofe itfelf: an arm of the fea; a rivet of difficult paffage; a morafs; or an impaflable ridge of mountains; and change totally the direction of the road: whilft the parts, on each fide of the obftacle, might háve buit an ordinary degtee of winding: and it is feldom, but that one or other of thefe, occurs in the fpace of 100 , or 150 miles. Probably 1 in $8^{*}$ may be a pretty jaft general proportion for diftances of about a 100 miles: that is, 8 miles by the road, will be feven direct; or what is commonly termed birdflight: and where the extent is from 200 to 300 miles, 1 in 7 .

Meafured diftances in Hindooftan, do not often occur, where, at the fame time, the true horizontal diftance is given, except in Bengal : and that is a country too full of deep rivers, lakes, and moraffes, to ferve as a general ftandard. In the Carnatic, a dryer country, the medium of winding, in diftances of about 100 miles, is 1 in 9 . In England, as far as we can truft the maps (which may

[^51]
## [7]

be done, where the diftance confifts chiefly of difference of latitude) 1 in it is the proportion, in diftances of about 100 miles; and in very great diftances, fuch as Edinburgh, I in 7.

It may happen that the direct route may lie-through a defert or an ill-governed country; in which cafe, travellers will avoid the way, in which famine, or robbery, threatens them, and by thefe means be carried out of the true line of direction; but it is obvious that no rule can be given for fuch cafes. Upon the whole, the degree of winding, as far as depends on natural caufes, muft be eftimated by the compound ratio of the length of the line of diftance, and of the nature of the country, as to evennefs, drynefs, and opennefs. And of courfe, fome local knowledge of it will be required, in order to correft the diftances in a juft degree*.

The term cofs is of high antiquity; and that of coffid, or courier, appears to be derived from it. It feems that the meafure of the coff, eftablifhed by the different Emperors of Hindooftan, has varied confiderably at different times; and has always been longer than the computed one. That fixed by Acbar appears to have been about 2 Britifh miles, and a fixteenth. But of this, I have no farther proof, than what refults from the comparifon of the different meafures of the road between Patna and Moorfhedabad; being a portion of the great road from Delhi to Bengal, meafured by order of one of the Emperors.
M. D"Anville concludes his enquiry $\dagger$ 'into the length of the cofs, by determining the number in a degree, on a medium, to be 37 ; but it muft be obferved, that he had no meafured lines with which he could compare his eftimated diftances. On the other hand, in the refpective diftances of Candahar, 'Cabul, and Attock, as defcribed by him, each degree contains 47 of Tavernier's coffes.

[^52]
## [ 8 ]

## SECTIONI.

## The Seacoasts and Islands.

CAlcutta is the point I hall fet out from, as well from its being determined by feveral obfervations of longitude and latitude, as from its having a meafured line of confiderable extent ftretching from it both to the eaft and weft. I fhall firft purfue the route weftward to the mouth of the Indus; and then return to Balafore, and go eaftward to the entrance of the ftrait of Malacca.
Calcutta, the capital of the Britifh poffeflions in India, as being the refidence of the General Council, has its citadel placed in latitude $22^{\circ} 33^{\prime}$ north; and in longitude, by a medium of the obfervations of four different gentlemen, $88^{\circ} 28^{\prime}$ eaft from Greenwich *.

Balafore, fituated about 101 geographical miles + from Calcutta, is the extreme point of the. Bengal furvey on the SW ; or on the quarter towards Madras. Col. Pearfe's return from the Carnatic, after the termination of the late war, afforded an opportunity of carrying a meafured line from Madras to Balafore, which had long been a defideratum; as the exact pofitions of the intermediate ftations of Mafulipatam, Vifagapatam, Ganjam, and Cattack, points on which many others eventually depended, were wanted : and although there might be no great reafon to fuppofe that Mafulipatam and

[^53]
## [ 9 ]

Vifigapatan were much out of place, in the former map, yet Ganjam and Cattack were doubtful. Col. Pcarfe's induftry and attention have amply fupplied what was wanting, within this line. He directed the whole to be meafured with a perambulator, and corrected each day's work; or at leaft, every confiderable interval, by obfervations of the latitude; and the general courfe being little more than 3 points from the meridian, the differences of latitude, were applicable to the correction of the diftance thro' each particular interval: and for a check on the whole, we had already in our poffeffion, obfervations of longitude repeatedly taken at Calcutta and Madras: The whole extent of Col. Pearfe's meafured line, in road diftance, was near goo Britifh miles; a work of no fmall labour.

The longitude of Fort William, the citadel of Calcutta, as abovefaid, taken at $88^{\circ} 27^{\prime} 45^{\prime \prime}$, from the medium of 4 obfervers; and that of Madras $80^{\circ} 24^{\prime} 40^{\prime \prime}+$, from the medium of 3 obfervers, gives a difference of meridians of 8 degrees, 3 minutes. It remains then, to compare with this, the difference of longitude found by Col. Pearfe's meafured route, as communicated by Mr. Pringle in the map drawn by him, and fent to the Eaft India Houfe.

Balafore, by the furvey, is $1^{\circ} 26^{\prime} 30^{\prime \prime}$ weft of Fort William, and muft therefore be in $87^{\circ} 1^{\prime} 30^{\prime \prime}$. Col. Pearfe reckons it $1^{\prime} 15^{\prime \prime}$ more wefterly ; but I adhere to the furvey. From Balafore to Ganjam, in lat. $19^{\circ} 22^{\prime}$, Col. Pearfẹ reckons 95 miles of wefting, or $1^{\circ} 41^{\prime} 26^{\prime \prime}$ difference of longitude; which brings Ganjam in lon. $85^{\circ} 20^{\prime} 4^{\prime \prime} \ddagger$. And from Ganjam to Madras he made $5^{\circ} 2^{\prime} 18^{\prime \prime \prime}$ weft: whence the


## [ 10 ]

longitude of Madras, would be $80^{\circ} 17^{\prime} 44^{\prime \prime}$. Here is found an excefs of about 7 minutes difference of longitude, more than the obfervations give. But in examining the map abovementioned, it appears that the difference of latitude between Ganjam and Madras by account, exceeded that by obfervation $8^{\prime} 30^{\prime \prime}$; and if this is to be imputed to excefs of diftance (which is highly probable) an excefs of longitude muft alfo have taken place; and this error will amount to about $6^{\prime} \cdot 48^{\prime \prime}$; or nearly the difference in queftion. This trifling error of 7 minutes in a difference of meridians of 6 degrees and a half, to whatever it may be owing; whether to overmeafurement by the wheel; variation of the compafs; defects in the inftruments; or errors in the obfervations of longitude; or partly to all thefe caufes; is very immaterial, to general geography. The refult fhews, that we may confider the difference of meridians between the two places, as determined near enough for the purpofes of navigation, or general Geography.

I muft not omit to mention that Capt. John Ritchie, by direction of the Bengal Government, in 1770 and 1771 , took the bearings and diftances in a general way, from Madras to Balafore ; and his refult came within one minute of the longitude by obfervation. But fome of his intervals wete not well proportioned. His pofition of Mafulipatam, indeed came out only $1^{\prime}$ to the eaft of Col. Pearfe's; but Vifagapatam was $7^{\prime}$, and Ganjam 22' more wefterly.

Although Col. Pearfe's route ferves to fix moft of the principal places, on or near the coaft, yet oftentimes it deviated confiderably, and for a length of fpace, from the coaft ; as between Balafore and Jagarnaut; and between Vifagapatam and Ongole. Thefe blanks are fupplied from the materials of Capt. Ritchie, Major Stevens, Major Polier, Mr. Cotsford, and others.

Firft, from Balafore, to Point Palmiras. This was done by Capt. Ritchie, by a feries of triangles, formed by three furveying veffels; and corrected by obfervations of latitude. The refult, placed Point Palniras, directly fouth of Balafore : that is, in lon.

## [ II ]

$87^{\circ} 1^{\prime} 30^{\prime \prime}$; lat. $20^{\circ} 44^{\prime}$. From Point Palmiras to Jagarnaut $\mathrm{Pa}-$ goda, the coaft was traced in a more curfory manner; and accordingly, the bearing and diftance between Balafore and Jagarnaut is very differently given by Col. Pearfe and Capt. Ritchie : the account of the former being only $54^{4} 30^{\prime \prime}$ difference of longitude; and that of the latter, $1^{\circ} 16^{\prime}$. This very confiderable difference is too friking, not to be particularly noticed; and requires that fome obfervations chould be made with time-keepers, to afcertain the relative pofitions of Jagarnaut, Point Palmiras, and Balafore. Wherever the miftake may lie, it is of great importance to have it rectified: for if Col. Pearfe's bearing be true (and there appears no reafon to doubt it) there muft be a very confiderable error in the courfe between Jagarnaut, and Balafore road, in Capt. Ritchie's chart.

The longitude of Cattack is fcarcely altered from what it was in the former map of India; where it was placed on the authority of Capt. Campbell, in lon. $86^{\circ}$. It is now in $86^{\circ} 1^{\prime} 30^{\prime \prime}$; and its latitude fands as before.

From Jagarnaut to Ganjam, the particulars of the coaft, are from Col. Pearfe's map, collated with thofe of Ritchie's and Campbell's. From Ganjam to Poondy, is taken from the map of the Itchapour diftrict; and Col. Pearfe's route on it, which may be traced from Ganjam to Bindi (near Poondy) furnifhes the means of correcting the compars of that map, which was faulty in a very confiderable degree. Bindi ferves as a connecting point for the two maps; as Nauparah or Nowparah, a little farther to the $S \mathrm{~W}$. does for Pearfe's, and Cridland's map of the Tickley diftrict. The coaft between Poondy and Bimlepatam is Iketched from Lieut. Cridland's map, from Major Polier's journal, and other MSS. From Bimlepatam to Vifagapatam is from Col. Pearfe; and from thence to Coringa from a MS. map, compiled during Col, Forde's expedition to Mafulipatam, in 1759; collated with Capt. Ritchie's map.CAs

As there have been fome obfervations taken at Vifagapatam to afcertain the longitude, it is proper to take notice of them, and to compare the refult with the longitude deduced from Calcutta and Ganjam, by Col. Pearfe's line. This gives 107, 1 miles of wefting, or $1^{\circ} 52^{\prime} 54^{\prime \prime}$ difference of longitude, from Ganjam to Vifagapa$\operatorname{tam}$; from which if we deduct the proportion of the error in the diftance (fee page 10 ) the true difference of longitude will be $1^{\circ} 50^{\prime} 39^{\prime \prime}$; which taken from $8.5^{\circ} 20^{\prime} 4^{\prime \prime}$, the longitude of Ganjam, leaves $83^{\circ} 29^{\prime} 25^{\prime \prime}$ for that of Vifagapatam. But Col. Pearfe's obfervation was $84^{\circ} 23^{\prime} 30^{\prime \prime}$ and Mr. Ruffel's $83^{\circ} 21^{\prime} 30^{\prime \prime}$. Its latitude is $17^{\circ} 42^{\prime}$.

From Coringa to Mafulipatam, the figure of the coaft is from Major Stevenis, as Col. Pearfe's route goes far inland, by way of Rajamundry, Ellore, \&cc. and does not again approach the coalt near enough to determine its pofition, till it comes to Vantipollam, near Ongole. Thefe maps of Major Stevens's and of Col. Pearfe's join at the points of Siccacollum, on the bank of the Kiftnah; at Rajamundry, and at Samulcota. Thefe 2 maps differ confiderably in the extent "bétween Siccacollum and Samulcota; Major Steven's giving $6^{3}$ miles lefs than the other (error of diftance allowed) but, I believe, Major Stevens's diftance was meafured, only between Siccacollum and Narfapour.

Mafulipatam has its pofition very fatisfactorily determined, by Major Stevens's meafurement from 'Siccacollum, a place in Col. Pearfe's map. It is ${ }_{17,4}$ G. miles eaft; and 3,3 fouth of it; and comes out $48^{\prime}$ of longitude, eaft of Madras, or corrected (fee again page 10) $47^{\prime}$; its longitude being $81^{\circ} 12^{\prime}$; lat. $16^{\circ} 8^{\prime} 30^{\prime \prime}$.

From Mafulipatam to Madras, the figure of the coaft, is generally from Capt. Ritchie, corrected in certain points by the land furvev, of Col. Pearfe. For as the latter came clofe to the coaft at Vantipollam, Carwaree, and Rameeapatam, it appeared that Capt. Ritchie's chart required correction in the great, bay between the latter place and Point Divy. I found it neceffary alfo to reduce:

## $\left[\begin{array}{ll}13\end{array}\right]$

the point at the mouth of the Pennar river, and make it lefs prominent; as the diftance from Nellore to the neareft fea coaft, would otherwife have been much too great *. Indeed, it was not expected that a veffel, failing along a flat, ftraight coaft, without land-marks, could afcertain every fmall bending of the coaft.

It is proper to remark, that the whole difference of longitude between Calcutta and Madras $\mathbf{2}_{2}$ in M. D'Anville's and D'Apres' maps, comes within a few miles of the truth, as they were in poffeffion of the obfervations taken at Ghyretty and Pondicherry : but their maps are exceeding faulty in the detail.

The longitude of Madras, or Fort St. George, as was faid before, (page 9 ) is taken at $80^{\circ} 25^{\prime}$; and its latitude is $13^{\circ} 5^{\prime}$. Pondicherry, by a feries of triangles obtained by means of the Jaghire. map, Wandiwah Hill, Permacoil, the red hills, and the difference of latitude, I make ta be $25^{\prime}$ of longitude, weft of Madras; fo that Pondicherry will be in $80^{\circ}$ juft. The medium of the different obfervations taken there, is $79^{\circ} 55^{\prime} 40^{\prime \prime}+$. Mr. Pringle, who meafured the routes of Sir Eyre Coote's army, during the late war, $\mathrm{m}=\mathrm{k} e \mathrm{~s}$ the difference of meridians the fame as I do, to a fraction. Its latitude is $11^{\circ} 5^{\prime}$.

Cuddalore, in lat. $11^{\circ} 41^{\prime}$, and lon. $79^{\circ} 45^{\prime} 45^{\prime \prime}$, is the mof fouthern point, determined by Mr. Pringle's meafured routes: but the fame gentleman furnifhes us, with the bearing of Portonovo from that place; which, with its latitude $11^{\circ} 30^{\prime}$, allows us to place it, almoft to a çertainty, in lon. $79^{\circ} .53^{\prime} 30^{\prime \prime}$.

The pofition of Chillumbrum Pagoda, in refpect of Portonovo, although fo confpicuous an object to the:fight, is varioufly reprefented. By the medium of what appeared to me to be the beft authorities, I have placed them South-weft $7^{\frac{1}{2}}$ G. miles from Por-

[^54]
## [ 14 ]

tonovo. Mr. Barker determined their pofition with refpect to Devicotta, by a meafured bafe, to be W. $16^{\circ} 45^{\prime}$ N. 8 G. miles; which added to the former line from Portonovo, gives $79^{\circ} 55^{\prime}$ for the longitude of Devicotta. Its latitude appears to be $11^{\circ} 21^{\prime}$. Moft maps allow a much greater diftance between Portonovo and Devicotta, than what arifes from the above conffruction; which is 9 G. miles on a SSE. bearing: and the foundation of the error, appears to me to be the giving the bearing of Devicotta from Chillambrum, too great a degree of fouthing.

From Devicotta, fouthward to Negapatam, my authorities are fome MS. maps; among which, is one, drawn by M. D'Anville, containing the principal pofitions between Madras and Tanjore; and feems intended for the bafis of a map of the fouth Carnatic. Had M. D'Anville's differed from the others, I fhould have been inclined to give the preference to the refult of his inveltigations; but it happens that all the different maps I have confulted, differ fo little among themfelves, that none make the difference of longitude between Devicotta and Negapatam more than $1^{\prime} 45^{\prime \prime}$; and the medium of the whole is $\mathrm{r}^{\prime} 15^{\prime \prime}$ eaft; fo that Negapatam may be taken at $79^{\circ} 5^{\prime} 35^{\prime \prime}$ lon. ; and latitude $10^{\circ} 46^{\prime}$.

Thus Negapatam appears to be $3^{\prime} 25^{\prime \prime}$ weft of Pondicherry, or $28^{\prime} 25^{\prime \prime}$ from Madras; and whatever error there may be, muft arife chiefly between Devicotta and Negapatam. If there be any, the different geographers and map-makers have all fallen into the fame kind of error. I obferve that the different maps made of late years, in India, have confidered Negapatam as being in lon. $79^{\circ} 53^{\prime}$ to $79^{\circ} 54^{\prime}$. I know not whence the idea is taken; but, whether founded or not, it differs but little from mine.

Negapatam is the fouthmoft point, on the eaftern fide of the peninfula, whofe pofition can be reckoned tolerably exact ; unlefs we except Point Calymere, whofe bearing being pretty well known from Negapatam, and its latitude determined with precifion; may be confidered as being nearly as well afcertained as

Negapatam, on which it depends. Its latitude is $10^{\circ} 20^{\prime}$; and longitude $79^{\circ} 54^{\prime} 30^{\prime \prime}$.

No connected meafured line that can be depended on, has yet been carried acrofs the peninfula; Col. Fullarton's marches, meafured by Col. Kelly, extending only to Palicaudchery; that is, not within 50 G . miles of the coaft of Malabar: and thofe extended fouthward, through Madura and Tinevelly, ending at Cape Comorin. Fortunately, however, we have a feries of longitudes by a time-keeper, deduced from Bombay, by Capt. Huddart, and extended at intervals, along the whole coaft, to Anjenga; of which, more will be faid hereafter.

Col. Fullatton's match into the fouthern countries of the Carnatic, gave an opportunity of meafuring the diftances, and afcertaining the relative pofitions of Tanjore, Tritchinopoly, Madura, Coïmbettore, Palicaudcherry, \&c. in refpect of Negapatam, where the march commenced. The plan of thefe marches communicated to me from the Eaft India Houfe, bears the name of Col. Kelly; and is declared to be actually meafured, through the points abovementioned. We have to regret that the fame attention was not beftowed in the march from Calicut to Palicaudcherry; the intended point of junction of the Bombay detachment, with that of Col. Fullarton : for, in that cafe, the exact width of the peninfula, had been no longer a matter of enquiry.

Tritchinopoly comes out, by the above map of Col. Kelly's, to be $1^{\circ} 10^{\prime}$ of longitude weft from Negapatam; which taken from $75^{\circ} 5^{\prime \prime} 35^{\prime \prime}$, leaves $78^{\circ} 46^{\prime} 35^{\prime \prime}$ for the longitude of Tritchinopoly *. The latitude is $10^{\circ} 49^{\prime}$.

Madura, by the fame authority, is $34^{\prime}$ difference of longitude weft from Tritchinopoly; that is,' in lon. $7^{8^{\circ}} 12^{\prime} 35^{\prime \prime}$. Here it muft be noted, that great difcordance arifes between the different

[^55]nccounts of the bearing and diftance between Tritchinopoly and Madura, as given by Kelly, Montrefor, and others. The two former differ $3,6 \mathrm{G}$. miles only, in diftance; but Col. Kelly's bearing, gives $12,3 \mathrm{G}$. miles, more of wefting, than Montrefor's. And a third map, communicated by Mr. John Sulivan, has the fame bearing with Kelly's, but exceeds it, $3,7 \mathrm{G}$. miles, in diftance ; thereby, increafing the wefting 1,3 G. miles; and of courfe, exceeding Montrefor's ${ }_{13}, 6 \mathrm{G}$. miles, or $14^{\prime} 15^{\prime \prime}$ of longitude.

The latitude of Madura, I have not yet Iearnt. Col. Call's map places it in $9^{\circ} 52^{\prime} 30^{\prime \prime}$; and Col. Kelly's difference of latitude from Tritchinopoly, $53^{\prime} 12^{\prime \prime}$, gives $9^{\circ} 55^{\prime} 48^{\prime \prime}$.

The authority for the remainder of this line, through Palamcotta (or Tinevelly) to Poolytopu on the fea coaft, weftward of Cape Comorin, is from the map of Madura and Tinevelly, made under the direction of Col. Call (then Chief Engineer at Madras) and from Mr. Pringle's road diftances; together with the latitudes of Palamcotta and Poolytopu. Firft, I find in Col. Call's map, $1^{\circ} 9^{\prime} 30^{\prime \prime}$ difference of latitude S. between Madura and Palamcotta; and $18^{\prime}$ of longitude, weft. This would place the latter in $8^{\circ} 43^{\prime}$ (Mr. Pringle informs us, that its latitude is $8^{\circ} 44^{\prime}$ ) and in lon. $77^{\circ} 54^{\prime} 35^{\prime \prime}$. Then, from Palamcotta to Cotate or Cotaur, on the weft of the Gauts, Mr. Call's map gives $29^{\prime} 12^{\prime \prime}$ difference of latitude S.; and $22^{\prime}$ difference of longitude weft; to which, if we add the deduction from Mr. Pringle's meafured diftance to Poclytopu, $5^{\prime} 30^{\prime \prime}$ difference of latitude $S$. ; and $6^{\prime}$ difference of longitude weft *; the whole difference of latitude will be $34^{\prime} 42^{\prime \prime} \mathrm{S}$. and difference of longitude $28^{\prime}$ weft; giving for the pofition of Poolytopu, lat. $3^{\circ} 9^{r}$ $18^{\prime}$; lon. $77^{\prime} 26^{\prime} 35^{\prime \prime}$.

Poolytopu village appears to be fituated on the fea coaft, ENE. 4 G. miles from Cadiapatam Point; which point, by Mr. Howe,

[^56]
## [ 17 ]

is reckoned in lat. $8^{\circ} 7^{\prime}$; and Poolytopu being about $1^{\prime} 30^{\prime \prime}$ to the N . of it, hould be in $8^{\circ}, 8^{\prime \prime} 30^{\prime \prime}{ }^{\prime \prime}$ s a according yery nearly with the above calculation. It muft, $I$, think, be acknowledged, that there is nothing, in this, deduction that appears forced. : Poolytopu, by the beft account I can get, (a French MS map in Mr Dalrymple's collection) is $16^{\prime}$, of longitude weft-of Cape Comorin; which Cape, by this account will be in lon. $777^{\circ} \cdot 42^{\prime} 35^{\prime \prime}=$

We have fome further light thrown on this fubject by the meafurement of the road, by Mr, Pringle, from Tanjore to Poolytopu. His whole road diftance is $25^{\frac{1}{2}}$ B. miles; and allowing 1 in $9^{*}$ for the winding of the road, the hofizontal diftance will be $223^{\frac{2}{2}} \mathrm{~B}$. miles, of A93 G. miles; which, on the fame bearing as the above deduction is fquaded on, $\left(\mathrm{S}_{3} 33^{\circ} 49^{\prime} \mathrm{W}\right)$ gives difference of latitude
 As Tanjore is in $10^{\circ} 46^{\prime} 30^{\prime \prime}$, the latitude of Poolytopu comes out $8^{\circ} 5^{\prime} \cdot 12^{\prime \prime} \cdot$ and its $l_{0 n} 77^{\circ} 1^{2} \cdot 3^{\prime} 15^{\prime \prime}$, (the , langitude of Tanjore by Col. Kelly's meafurement, beíng $29^{\circ}: 12_{11}^{\prime} 11_{5}^{\prime \prime}$ : deduced from Negapatam) and $16^{\prime}$ added to it, gives for the longitude of Gape Comorin $77^{\circ} 39^{\prime}$ I $5^{\prime \prime}$ or $3^{\prime} 20^{\prime \prime}$, to the weft of the firft calculation.

Again, if the proportion of 1 in $\$ \mathrm{~h}$ beadopted for the winding of the rond, (a, more, common one) it prgduces $190 \mathrm{G}_{-}$miles t of diftancè a and the latitude of Poolytgpu will be $8^{\circ} 8^{\prime}$; and its lon-


This is; all the fatisfaction that I have, been; ;able ta obtain, concenning the longitude of Caper Comorin, as deduced from the eaftern fide of, the peninfula in Something depends on the truthof the af fumption, refpefting the pofition of Negapatam; and fillimore on


## [ 88 ]

the accuracy of the map of Tinevelly, the hiftory of which, I am unacquainted with : but, I think, the near coincidence of Mr. Pringle's meafurement, with it (for I reckon $3^{\prime} 20^{\prime \prime}$ but a triffe in general geography) is a prefumptive prodf of its general truth. It is underftood that there is from 1 to 2 degrees of wefterly variation, between Negapatam and Cape Comorin: if this be allowed, it will remove the Cape $4^{\prime} 30^{\prime \prime}$ further to the weft; and place it, according to Kelly's and Call's lines in $77^{\circ} 3^{8^{\prime}} 5^{\prime \prime}$.

Let us now turn to the other coaft, and oblerve how Capt. Huddart's and Capt. Dundas's, deductions of longitude; from the weft to Anjenga, accord with the reputed "fpace," contained in the interval between Cape Comorin and Anjenga; which Ipace, by Mr. Dalrymple's obfervation of the difference of longltude thewn by his time-keeper, in 1777 , was $52^{\prime} 30^{\prime \prime \prime}$. This, taken from $77^{\circ} 3^{\prime \prime} 5^{\prime \prime}$, leaves $76^{\circ} 45^{\prime} 35^{\prime \prime}$ for the longitude of Anjenga.

Capt. Huddart's longitude of Anjenga, deduced by time-keeper from Bombay, reckoned in $72^{\circ} 4^{\prime}$ is $\quad 76^{\circ} 39^{\prime}$

Capt. Dundas's it $\quad \therefore \quad 76$
Mr. Dalrymple's D $\because \quad-\quad 7^{6} 38$
As Capt. Huddatt's Feries of longitudes commenced at Bombay in lat: $18^{9} 5^{8^{8}}$, and wete cótinued to Anjenga in lat $8^{\circ} 39^{\prime \prime}$, and then back'again to Bombay; wh which the error of his time-keeper was afcertained, and which "was' only as much as amounted to 2 2 mininutes' of longitude's we have every reafon to be fatisfied with this feries, as far as relpects general pofitions: and indeed, geography is greatly indebted to the labours of this gentleman, who has prefented us with the fongitudes of 16 places on this coaft, and by that means given the true general figure of it, which exhibits, to thofe who have been in the habit of contemplating it, a very different form, from what it ever diał beforé.

I am of opinion that more dependance may be placed on Capt. Huddart's longitude of Anjenga, deduced from Bombay, in the manner abovementioned, than on any other account : but at the fame

## [ 19 ]

fame time I have adopted Mr. Howe's obfervation of longitude at Bombay, as it appears the mont confitent with other accounts. I da not mean by this, to determine on the merits of the different obfervations (of: which indeed, I am incapable): but rather becaufes it accords with the obfervation taken at Goa, and with the routes acrofs:frome Negapatam to Tanore ; and, as far as may be judged, with the dediction from Negapatam toi Cape Comorin. It is true, that if Montrefor's pofition of Madura is admitted, it $\mathrm{i}_{\text {i }}$ will place Cape Comorin i2' farther ealtward;' and if the variation be not allowed, there will be $4^{\prime \prime} 30^{\prime \prime}$ more to be added $;$ in all $16^{\prime} 30^{\prime \prime}$, or théfall differerice between Capt. Howe's, and Capt. Huddatt's obfervations; the one being: $72^{\circ} 38^{\prime \prime} ;$ the other $72^{\circ} 54^{\prime}$.

It. now remains; after this'inneftigation, to be chewn, in what manner I have compounded the above differentes; that no diftortion of theintermediate parts mould take place. Anjenga, I have placed in $76^{\circ} 40^{\prime}$, being the medium of all the different accounts; by obfervation; and by:deduction from.'Negapatam, Mr, Dalrymple's difference of lon. $52^{\prime}: 3^{\prime \prime}: 1$ to Cape Comorin, is then adopted, which places the Cape in $77^{\circ}: 32^{\prime} 30^{\prime \prime}$. Madura, is placed in $99.52^{\prime}$, the latitude, given by Calls and its longitude is determined by: Col. Kelly's'diftance from Tritchinopoly, with the addition of 3 miles, to it ; that is, in $10 n_{5} .78^{\circ}$ It's and Palameota in lat: $8^{\circ} ; 4^{\prime}$; and lon: $77^{\circ}, 49^{\prime}$. $15^{\prime \prime \prime}$; according to the proportions furnifhed bỳ Can and Pringlel betweemMadura and Poolytopu.

The form of the coaat Betwéen Madras and Cape Comorin, is from various authorities. ';The furvey:of'the-Cémpany's lands (or Jaghire) extends beyoñá Alemparvé. From thence to Negapatam, is from a French MS map, collated with D'Anville's map of pofis; tions (above fpoken of) and feveral partículars' between Pondicherry and Portonovo, from Mr. Pringlè's map of the marches: The mouth of the Coleroone is from an:Englif MS: map: : From Negapatam to Tondi, is chiefly from Major Steivens"s, and my own obfervations ' from Tondi ta Goodwater Iftand, Major. Stevens's

D 2
alone :
alone: from thence to Tutacorin, Capt. Delafield's curfory furvey : and the remainder to Cape Comorin, is from Col. Call's map of Tinevelly; corrected occafionally by a printed chart, publifhed by Mr. Dalrymple. It is not pretended that any of thefe points beyond Cuddalore, are afcertained with precifion: but it is highly probable that Point Calymere cannot be'out in its longitude, 4 minutes. Tondi has the bearing: and difference of latitude from Point Calymere to correct its pofition; and there was alfo a line drawn from it to Tanjore. Ramanad is fixed by the interfection of two lines, from Madura and Tondi; and therefote mult partake of the errors incident to Tondi, and Point'Calymere! The Point of Ra'miferam is alfo dependant on Tondi., When I conftructed the map of India, in 1782 , I concluded that the refpective diftances between Tondi, Tritchinopoly, and Devicotta, had been meafured, and that I worked on fure ground : but I have fince been convinced of the contraty.

From Cape Comorin to Anjenga the: particalars of the coaft; appear fo be either dittle known to tes, or very ill defcribed; as the reports of it are various and contradietory. Between Cape.Comorin and Ruttera Point,' I took the particulars from a French MS. chart; the fcale of which appears to be faulty; for it gives only $35^{\circ} \mathrm{O}$ : miles of diftance between Cape Comorin anid Point Ruttera; and the difference of latitude only. i3 $3^{4} 8^{\prime \prime}$, by which the latter would be in $8^{\circ} 14^{\prime}$; whereas, it cannot well be ander $8^{\circ} 20^{\prime}$, according to Mr. Howe's obfervationt ${ }^{\prime}$ and Mr . Dalrymple' Dbferves. that Rutteta Point is nearly 2 gig. miles. from that of Cadiapatam, which is abqut, 19 from Cape Comorin. On thefe ideas, I havee extended the diftance to $46 \frac{2^{2}}{2}$ miles $;$ ' dnd fill Ruttera is only $28^{\prime}$ from Cadiapatam. M.D"Aptes" account of the bearings and diftances between Cape Comiorin and :Anjenga,' gives $42^{\prime}$ difference of lona gitude'; but then his chart corifradicts that account, and gives $44 \frac{1}{2}$; befides iani abfolute difcordante in particulars. Mr. Pringle meafured only $49^{\frac{2}{2}}$ B: miles of. roadd diftancé, between Poolytopur and Anjenga,

## [ 21 ]

Anjenga, which cannot be more than $3^{8}$. G: miles of horizontal diftance; and falls fhort of my expectations, more than 9 miles. All that I could do, was to give the coaft fuch a form, as my mind had conceived of it, by perufing thefe different accounts: at the fame time, I confefs, none of them appear conclufive: and untir we know the exact pofition of Poolytopu, in refpect of Cape Comorin, we cannot allow Mr. Pringle's meafurement, to difcredit in the leaft, Mr. Dalrymple's difference of longitude. We may here obferve, by the way, that coafts of fuch rotundity of figure, as the termination of this great peninfula, are feldom fo well determined, as thofe that embay, and where the fame point temains long: in view, and is of eafy difcrimination. Here the projecting points fucceed each other too rapidly to allow a fufficient degree of precifion in calculating either the bearing, or the diftance. The latitude of Cape Comorin thave taken at 8 degrees.

Coylan or Quilons, a Dutch factory about 14 G . miles to the N N W: or N W of Anjenga, is the next place, whofe longitude is noted by Capt. Huddart; but as it cannot be expected that places differing only; a few minutes of longitude from each, other, can be determined with precifion by this means ; I fhall pafs on to Porca, another Dutch factory, in lat. $\theta^{\circ}{ }^{\circ} 5^{\prime}$, and longitude by. Capt. Huddart $76^{\circ} 10^{\prime}$. I can by no means reconcile this longitude with the Dutch MS. maps of this coaft; for as the differance of longitude between Cochin and Porca by Capt. Huddart is only $8^{\prime}$, the bearing ought to be $\mathrm{S} 10^{\circ} \mathrm{E}$; whereas in the map, it is S 25 E . In order not to do too much violence to either report $\mathrm{I}_{2}$ I have allowed $16^{\prime}$ difference of longitude, inftead of the $8^{\prime}$ of Capt. Huddart's, and the $10^{\prime}$ of Capt. Dundas. The Dutch MS. in queftion contains the whole coaft from Coylar in lat. $8^{\circ} 5^{\prime}$, to Cranganore in lat. $10^{\circ} 23^{\prime} ;$ together with that vaft affemblage of lakes, that extend in fome places 30 miles inland; and are the repofitories of the waters that foring from the weft fide of the Gauts; the whole country hereabouts being very flat ${ }_{2}$ marfhy, and unwholfome. This MS.

## [ 22 ]

MS. map, which is alfo in Mr. Dalrymple's collection, contains a moft valuable addition to the geography of this part of the peninfula.

Cochin, the principal fettlement of the Dutch, on this coaft, is the next place in Capt. Huddart's table of longitudes: and is reckoned by him, in $76^{\circ} 2^{\prime}$; lat. $9^{\circ} 5^{8^{\prime}}$. Capt. Dundas makes it $75^{\circ} 5^{\prime}$; and M. D'Apres, in his new Neptune Orientale, $76^{\circ} 3^{\prime}$.

Capt. Huddart has not noted the longitude of any place between Cochin and Tellicherry, in lat. $11^{\circ} 48^{\prime}$ : and there being only a fingle obfervation at the latter, I am inclined to pafs over the confideration of it; and proceed to the next point of obfervation, Mount Dilla (or Delly) where 3 obfervations were taken. Mount Dilla is a remarkable promontory fituated in lat. $12^{\circ} 1^{\prime}$; lon. $75^{\circ} 2^{\prime}$; or $1^{\circ}$ weft of Cochin.

We have two accounts of the bearings of the coaft between thefe places; the one from M. D'Apres, the other has its particulars from different authorities. Neither of the two, differ effentially; and it is neceflary to examine them carefully, as the refult is to be ufed in comparing the longitudes of Paniany and Tanore, deduced from Capt. Huddart's obfervations; with that deduced from the marches of the Colonels Fullarton and Humberfone, acrofs the peninfula.
M. D'Apres account is as follows:

| Cochin to Cranganore | N by W | $25^{\frac{1}{2}} \text { G. miles. }$ |
| :---: | :---: | :---: |
| - Paniany | N7 ${ }^{\circ} 15^{\prime} \mathrm{W}$ | 21 |
| Calicut, | N N W | 42 |
| Mahé | N W by N | 30 |
| Mount Dilla | N W | 30 |

The whole, added together, gives a bearing of $N 25^{\circ} 30^{\prime} \mathrm{W}$, diftance $144,5 \mathrm{G}$. miles; on which, the difference of latitude is $2^{\circ} 10^{\prime} 30^{\prime \prime}$, and wefting 10,62 . But as the true difference of latitude

## [23]

cude is only $2^{\circ} 3^{\prime}$, there is an excels of 7,5 in northing, and 3,6 in wefting: and the corrected departure, $5^{8,4}$, gives the lame difference of longitude as fet forth in Capt. Huddart's table.

The fecond feries of bearings and diftances, are thefe:

Cochin to Cranganore (by the Dutch

| MS. map) | $\mathrm{N} \cdot 12^{\circ} \mathrm{W}$ | 24 |
| :---: | :---: | :---: |
| Paniany (by D'Apres) | $\mathrm{N} 7^{\circ} \pm 5^{\prime} \mathrm{W}$ | 21 |
| Tanore (by D'Auvergne) | $\mathrm{N} 20^{\circ} \mathrm{W}$ | 14,7 |
| Calicut (by Ditto) | $\mathrm{N} 19{ }^{\circ} 15^{\prime} \mathrm{W}$ | 24,3 |
| Mahé (by D'Apres) | NW by N | 30 |
| Mt. Dilla (by De Funck) | NW by W | 28,4 |

This feries, corrected by the difference of latitude, gives about $2^{*}$ of longitude, more than that of D'Apres; a matter hardly worth confidering.

Paniany is much the fame in both accounts; and when corrected in pofition, by the proportion applied as above to 'D'Apres' feries, will be in lat. $10^{\circ} 41^{\prime} 45^{\prime \prime}$, lon. $75^{\circ} 55^{\prime}$; or $7^{\prime}$ weft of Cochin. And Tanore, by D'Auvergne's account' of its pofition, in refpect of Paniany, will be in. lat. $10^{\circ} 55^{\prime}$; and lon. $75^{\circ} 49^{\prime}$; or $13^{\prime \prime}$ weft of Cochin.

It may be obferved that De Funck's bearing of Mount Dilla from Mahe is NW by W , while that of D'Apres' is NW , and 1,6 more in diftance. The fact is, that the compaifs in De Funck's plan is erroneous, the bearing of Mount Dilla being there W. $2.2^{\circ}$ $45^{\prime} \mathrm{N}$. from Mahé; and $\mathrm{W} 23^{\circ} 30^{\prime} \mathrm{N}$. from Tellicherry; althoughi the difference of latitude requires it to bealmoft a point more northwardly. The true bearing is. fill a defideratum, but I have obtained an approximation towards it; by means of bearings taken by two ahips in Tellicherry road. By the medium of thefe, the bearing

## [ 24 ]

of Mount Dilla from Mahé, appears to be W $33^{\circ} 15^{\prime}$ N. * or nearly N W by W; and the diftance on De Funck's plan (which is underfood to be meafured) is $28,4 \mathrm{G}$. miles. This gives $24^{\prime} 30^{\prime \prime}$ difference of longitude, or $75^{\circ} 26^{\prime} 30^{\prime \prime}$ for the longitude of Mahé; whofe latitude is $11^{\circ} 45^{\prime} 18^{\prime \prime}$. And Tellicherry being by the fame plan $3^{\prime} 30^{\prime \prime}$ weft of Mahé, will be in $75^{\circ} 23^{\prime}$ lon. and lat. $11^{\circ} 4^{8^{\prime}}$. Capt Huddart's Table gives only $16^{\prime}$ difference of longitude between Mount Dilla and Tellicherry, although fated above to be $2 \mathrm{I}^{\prime}$; but I have before obferved that thefe fort of obfervations are more to be depended on, in great differences of longitude than in fmall ones: not to mention that in the calculation of there differences, the actual place of obfervation (that is, on board the fhip at anchor in a road, or coafting along (hore) is often adjufted to the place whofe longitude is to be recorded, and which may be fyyled the nominal place of obfervation; by eftimated diftances.

Deducing the longitude back again from Mount Dilla to Tanore, a difference of $2^{\prime}$ muft of courfe be expected, as thee two feries of bearings give that difference in the longitude; and Tanore; will of courfe be $75^{\circ} 55^{\prime}$, or $2^{\prime}$ more eafterly thanithe dedpation from Cochin in the laft page.

And now. it. will be proper to examine how far the lines; of bearing and diftance, drawn by Col. Kelly, and tieut. D'Aupergne, acrofs the peninfula, in the parallels of Tritchinppoly and Tanore, agree with the refults drawn from Capt. Huddart's obfervations., i

Col. Kelly's furvey of Col، Fullartoñ's march to Palicaudchęrry, was, according to the paper accompanying it, in the Eaff India Houfe, meafured the whole way. : The: refult, according to the

[^57]
## [ 25. ]

map, gives 184,25 G. miles of wefting from Negapatam, or $3^{\circ} 7^{\prime}$ $48^{\prime \prime}$ difference of longitude ; placing Palicaud in $76^{\circ} 48^{\prime} 47^{\prime \prime}$; and in lat. $10^{\circ} 51^{\prime}$; that is, $5^{\prime}$ north of Negapatam. Of the route of Col. Humberfone from Tanore to Palicaud, $I$ have feen no lefs than 5 different plans; fome of them differing $6^{\prime}$ in longitude (that is, in diftance) where the whole .pace did not exceed 57 miles. One alone among thefe had the author's name to it ; and therefore demanded the preference: It was by Lieut. D'Auvergne. I am yet to learn, whether the diftance was meafured or not; but I Chould hope and expect it was, or a great part of it ; for one of the copies, and which appears to have been tranfmitted during the march, diftinguifhes between the meafured and eftimated parts*; the former feeming to be the part marched over, and the latter, the part the detachment had yet to march. D'Auvergne's plan gives $56 \div \mathrm{G}$. miles of wefting between Tanore and Palicaud, or $5^{8^{\prime}} 15^{\prime \prime}$ difference of longitude; thereby placing Tanore in lon. $75^{\circ} 50^{\prime} 32^{\prime \prime}$, according to the abovementioned longitude of Palicaud, deduced from Negapatam. The copies of this route, inferted in the maps of Col. Kelly and of Baron Wefebe, give only $50 \frac{1}{2}$ G. miles, or $6 \frac{1}{\tau}$ lefs of wefting than D'Auvergne's. Another map (communicated by Mr. J. Sulivan) and probably in this part, copied from D'Auvergne's, gives 57 miles; and a fifth, tranfmitted by an Officer in Col. Fullarton's army; precifely the fame as D'Auvergne's; that is $56 \frac{3}{4}$.

If we adopt D'Auvergne's diftance, the longitude of Tanore, deduced from Negapatam, will be - - $75^{\circ} 50^{\prime} 32^{\prime \prime}$

Deduced from Capt. Hudaart's obfervations at $\} 755$ I
Mount Dilla
And from thẹ fame at Cochin - - 7549

Medium of all $755^{\circ} 10^{\circ}$

[^58]
## $\left[\begin{array}{lll}{[ } & 26\end{array}\right]$

Scarce any difcuffion of the fort could be attended with a more fatisfactory refult : and I think it affords the ftrongeft prefumptive proofs of the truth of Capt. Howe's obfervations at Bombay ; from which, the longitudes thewn by Capt. Huddart's time-keeper, are deduced.

With refpect to my former ideas of the breadth of the peninfula, although the extent in longitude between Bombay and Madras, remains nearly as before; yet by the fwelling out of the coaft, on the fouth of Bombay, I reckoned it too narrow by about 30 G . miles in the parallel of Madras; and 27 in that of Pondicherry.
I have now concluded the difcuffion of the longitudes acrofs, and round the fouthern part of the peninfula' ; and alfo an account of their application to the map: for a rigid adherence to difference of longitude even by obfervations of the above kind, between places not far removed from each other, would in fome cafes, diftort the relative parts of the map beyond probability; and therefore, it was neceflary, in fome meafure, to accommodate the differences, when the exifting authorities appeared to carry more weight than the obfervations: which, as we have obferved before, are fubject to error ${ }_{5}$ even in the application: and they are no lefs fo, from a cafual variation in the rate of the time-keeper. A feries of obfervations, fuch as we have been confidering, muft in a general view, be regarded as decifive; but it, would be hazarding too much to adopt each particular longitude, when it was contrary to every other authority. Much lefs can any abfolute dependance be placed on lines of bearing and diftance taken from maps, whofe hiftory and conftruction is not before us. And where more authorities than one may occur, and thofe not agreeing; in fuch cafes, it muft be-left for the judgment to determine, which appears the moft probable. Now, although there are frong prefumptive proofs of the general truth of the relative pofitions of the principal points between Cuddalore and Anjenga, yet they do not reft on the fame folid foundations, as the pofitions in the north part of the peninfula: and there-

## [ 27 ]

fore, Cape Comorin is placed more with relation to Anjenga, than to the eaftern coaft. Again, the refpective differences of longitude between Anjenga, Porca, and Cochin, do not well accord with other authorifies; and therefore as thefe differences of longitude are very fmall, I thought the Dutch MS. map, might be better authority for them, than the differences mewn by the timekeeper. Another particular is to be noted, concerning the longitudes ọn the fouth of the parallels of Cuddalore and Mahé: (viz.) that thefe will be found fomewhat different in the map from the above account; for when the map was conftructed, I was not in poffeffion of fome papers which throw an additional light on the fubject: but thefe differences are very trifling. Some few errors alfo, crept into the conftruction; fo that upon the whole, this account contains rather what the map ought to be, than what it is: though, poffibly, the errors I am pointing out may be fo fmall, that they would have efcaped the notice of all but profeffed geographers.

Tanore and Cochin are both placed $3^{\prime}$ to the eaftward of the affigned longitude (page 23); and Negapatam $1^{\prime}$ to the weftward of what is given in page 14; by which double error the peninfula is made to be $4^{\prime}$ narrower than was intended, in that parallel. I was ignorant at that time, that there was a plan of Humberfone's march; which had the author's name to it ; and therefore had taken the medium of all the others. We will now refume the fubject of the conftruction.

The latitude of Calicut $I$ have taken at $11^{\circ} 18^{\circ}$. This cify is remarkable for being the firf Indian port vifited by Eutopean:hipping: that is, by the Portuguefe, who landed there under Vafco de Gama in 1498. It was then the moft flourihing place on the Malabar coaft, the Zamorin or Emperor making it the capital of a very extenfive fate. It appears to have fallen in its confequence foon after; the new power of the Portuguefe occafioning a revolution throughout the maritime parts of the peninfula.

The form of the coaft-between Calicut and Mahé, is taken from a fketch of Major Abingdon's. Chitwa is faid to be in lat. $10^{\circ} 3^{8^{\prime}}$, E 2
by

## [ 28 ]

by Capt. Drummond; but I cannot reconcile its fituation to that parallel ; as it cannot well be fo near to Paniany. I have placed it in $10^{\circ} 33^{\prime} 15^{\prime \prime}$.

Mangalore is the next place to Mount Dilla, in Capt. Huddart's table, and its longitude given is $74^{\circ} 44^{\prime}$; lat. $12^{\circ} 50^{\prime}$. For about $5^{\frac{1}{2}}$ leagues to the NW of Mount Dilla, the form of the coaft is taken from a French map in Mr. Dalrymple's collection; the reft of the coaft, to Mangalore, and from thence to Coondapour (or Bal(elore) in lat. $13^{\circ} 36^{\prime}$, is little known as to particulars. A large river named Cangerecora, whofe courfe is from the north-eaft, falls in about 4 miles to the north of Mount Dilla; previous to which, its courfe is parallel with the fea coaft for about in miles, being feparated only by a fpit of fand. The forts of Nelifuram, Ramdilly, and Matteloy are fituated on this river, which is joined by feveral other rivers, or ftreams, that defcend from the Gaut Mountains; which, in this part, approach within 22 miles of the coaft. I cannot help confidering this Nelifuram, which is fituated about 12. miles up the river, as the place meant by Nelcynda and Melcynda, by Pliny and Ptolemy; a place vifited by the Egyptian and Roman thips.

We have been lately brought acquainted with the particulars of the coaft, between Barcelore and. Meerzaw (or Merjee). by means of a map drawn by Lieut. Reynolds, during the war which terminated fo unfortunately for the Britifh arms in 1783 , in the Bednore country ; to which this part of the coaft is oppofite. This map is drawn in a moft mafterly. ftyle, and contains near 60 G . miles of the coaft : and extends inland to the foot of the Gauts, which here; approach in fome places within 6 miles of the fea, and are never more than 20 from it. It includes the pofitions of Bednore and Bilghey within the Gauts; and alfo, Onore, Batcole, and Coom; tah on the coaft. We are furnihed with the means of joining this portion of geography to the reft, by having the longitude of Pigeon Iland determined by Capt. Huddart ; and by the pofition of it in.
refpect of Fortified Inand, near Onore. Pigeonifland is very fmall, and lies about 8 G . miles from the coaft, and 15 from Onore *, and is in lat. $14^{\circ} 1^{\prime}$. Its longitude is $74^{\circ} 6^{\prime} 30^{\prime \prime}$.

From Meerzaw, to Cape Ramas in the neighbourhood of Goa, we are but ill informed concerning the particulars of the coaft. Between thefe, are fituated the port of Carwar, and the inlands of Angedive, both of them better known to the Englifh in the early period of their India trade, and before they were in poffeflion of Bombay. Capt. Huddart fixed the longitude of Oifter Rock in the mouth of Carwar Bay, and alfo that of the Aguada Point and cafle, on the north fide of the entrance of Goa Bay, or road. This he makes to be in $72^{\circ} 34^{\prime} 30^{\prime \prime}$; and it is worthy of obfervation, that the city of Goa, which is $\mathrm{II}^{\prime} \mathrm{I}_{5}^{\prime \prime}$ more to the eaftward, and confequently in $72^{0^{\circ}} 45^{\prime} 45^{\prime \prime}$ by the fame account, was placed in the fame pofition within a fraction of a minute, by the obfervation in the Con, de Temps; and which, for want of being better informed, I formerly difregarded. The pofitions of Cape Ramas, Angedive, and Carwar Points, are corrected in refpect of Aguada, by a fet of obfervations and bearings of the late Capt. Howe, whofe attention to marine fcience, was equal to his gallantry, and knowledge of the practical part of his profeftion. I have had occafion repeatedly to acknowledge the aids I have been furnifhed with, by means of his collection of Obfervations and Remarks, in the poffeffion of Mr. Dalrymple.

The figure of the illand of Goa, and its environs, to the foot of the Gauts, is taken from a Portuguefe MS. map of Mr. Dalrymple's. The latitude of Goa, and of the Aguada Caftlé, is $15^{\circ} 28^{\prime} 20^{\prime \prime}$.

Goa, the capital of the Portuguefe fettlements in India, and thefeat of a Viceroy, is a very confiderable city. It was firft taker poffeffion of by Albuquerque in i510, and from a Prince of Saracen extraction, according to Jarric.

[^59]The coaft between Goa and Bombay, near 220 G. miles, is little known to us in detail, nor indeed was the general bearing of it known, until Capt. Huddart furnifhed us with his feries of longitudes. By his account it appears, that this coaft, although in the neighbourhood of our principal marine fation and arfenal in India, was defcribed in the charts, with an error of very near a whole point of the compafs, in bearing. Indeed the whole weftern coaft of India has far too great an obliquity from the north towards the. weft, in all the former charts; my own not excepted. Mr. Dalrymple accounted very rationally for it, by bringing to our recollection the great quantity of wefterly variation of the needle, that prevailed here, during the time of our firf voyagers; and which is now reduced to lefs than 2 degrees. It is well known that it was a long. time before the true north was difcriminated in charts; and the original idea of the direction of this coaft, was tranfmitted down to our days.

Perhaps there are few coafts fo much broken into fmall bays and harbours, and that at the fame time have fo ftraight a general outline. This multitude of fmall ports, uninterrupted view along. fhore, and elevated coaft, favourable to diftant vifion, have fitted. this coaft for the feat of piracy; and the alternate land and fea breezes that prevail during a great part of the year, oblige veffels to navigate very near the fhore. No wonder then, that Pliny fhould, notice them in his time as committing depredations on the Roman Eaft India trade; and although a temporary check has been given them, in the deftruction of Angria's fleets, \&c. yet we may expect that they will continue the practice while commerce lafts. They are protected by the fhallownefs of their ports, and the frength of the country within. As pirates, they have greater natural advantages than thofe of Barbary, who, being compelled to roam far from their coafts, have expenfive outfets; here the prizes come to their: own doors; and the cruifers may lie fecure in port, until the prey is difcovered.

The

## [ 35 ]

The Vingoria Rocks in lat. $15^{\circ} 52^{\prime} 30^{\prime \prime}$ Capt. Huddart took the longitude of, next to Goa, and made it $73^{\circ} 16^{\prime} 30^{\prime \prime}$. There rocks lie about 6 or 7 miles off fhore, of which we know but few particulars, farther than that it is poffeffed by a piratical tribe named Malwaans. The principal ports hereabouts are Melundy or Sunderdoo, a fortified ifland about 10 miles to the NE by N of Vingorla Rocks, and reduced by Commodore James in 1765 : alfo Rairee, Vingorla, and Newtya: which laft I cannot help thinking, is the Nitrias of Pliny, near which the pirates cruifed for the Roman mips.

A Dutch MS. chart affifted me in drawing the coaft between Melundy and Antigherrya, an extent of about 70 G . miles. This chart was procured by Sir Jofeph Banks for Mr. Dalrymple: and the tract comprifed within it, contains the ports of Dewgur, Tamanah, Rajapour, Rampa, Antigherrya, and alfo Gheriah, late the capital and principal port of Angria. This place was found by Capt. Huddart to be in lon. $73^{\circ} 8^{\prime}$; and its latitude is $16^{\circ} 37^{\prime}$. Between Antigherrya and Bombay, are the ports and illands of Zivagee, Dabul, Severndroog, Fort ViAtoria (or Bancoote) Sufferdam, Danda-Rajapour, Choule and Coolabba. At Victoria, the longitude was found to be $72^{\circ} 54^{\prime}$ : latitude $17^{\circ} 59^{\prime}$. The latitudes alone of feveral of thefe places, helped me to fettle their pofitions, as the coaft is nearly meridional ; but I hardly expect to be free from miftakes, in fixing fuch a number of places, within fo confined a fpace; and with fo few aids.

Bombay, the principal port and fettlement of the Englifh in this quarter, is fituated in lat. $18^{\circ} 5^{\circ}$, longitude by Mr. Howe's obfer-. vation $17^{\circ} 383^{\prime}$ I have-placed it in $17^{\circ} 40^{\prime}$, or 2 minutes farther to the eaft, which was occafioned originally by a miftake, and which would have coft too much time to rectify, had I attempted it. Bombay is a fmall ifland, fcarcely more than 7 miles in length, and very narrow, containing a very ftrong and capacious fortrefs, a large city, and a dock-yard, and marine arfenal. It was ceded to the

Englih in 1662, by the Portuguefe, as part of the dower of the Queen of Charles II. On the NE it is reparated by a narrow ftrait, from Salfette, a fine ifland of about 15 miles fquare, and an acquifition from the Marattas in 1773. Bombay, Salfette, and the neighbouring fhores of the Continent, form a large found, in which are feveral other illands, particularly Caranjah and Elephanta, the latter famous for its fubterraneous temple, and both of them acquifitions from the Marattas.

Salfette alfo has its fubterraneous temples, cut out of the live rock : all of which appear to be the monuments of a fuperfition anterior to that of the Hindoos*.

Baffeen, a city and fortrefs of note, is fituated on the point of the Continent oppofite to the north end of Salfette. This place fell into the hands of the Englifh, after a fmart fiege in 1780 , but was reftored to the Marattas, together with all the other conquefts made on that fide of India, at the peace of ${ }_{178} 3$, Salfette and the fmall iflands excepted. Baffeen is fituated in lat. $19^{\circ} 19^{\prime}$, and under the fame meridian as Bombay, as appears by the maps of that inland and Salfette.

From Baffen to Surat, the furveyor with General Goddard's army, drew a meafured line (as I am informed) and the refult gave 9,5 G. miles of eafting, or $10^{\prime}$ of longitude, for the difference between Baffeen and Surat ; by which the latter fhould be in lon. $72^{\circ} 50^{\prime}$. The difference of latitude N from Baffeen, was found to be $52^{\prime}$, which added to $19^{\circ} 19^{\prime}$, gives $21^{\circ} 11^{\prime}$ for that of Sutat. It is placed in $21^{\circ} 10^{\prime} 30^{\prime \prime}$.

It is a great misfortune to geography that no one obfervation of longitude Chould have been taken, on the weft of Bombay: by which default, we are precluded from correcting an extent of 7 degrees of longitude, along a coaft that winds in fuch a variety of

[^60]
## [ 33 ]

directions, and whofe geography is compofed of materials of fo: mifcellaneous a kind, that it can hardly be expected we fhould fteer clear of error in the conftruction of it. The pofition of Surat is indeed checked by the meafured line of General Goddard's march from Burhanpour; where Mr. Smith had an obfervation of the longitude. And we have alfo a meafured line profeffedly taken with bearings on hore, as far as Amedabad. But compaffes often differ; and the variation is, as often neglected.

Mr. Smith's longitude of Burhanpour is $76^{\circ} 22^{\prime \prime}$, (but I have taken it in my map at $7.6^{\circ} 19^{\prime}$, the reafon of which I fhall fhew in its proper place) and it is taken notice of now, only with a view to fhew how far Surat, as it is placed here, agrees with the obfervation made on the eaft of it.

By the furvey of Goddard's march from Burhanpour to Surat the difference of longitude between the two places appears to be $3^{\circ} 30^{\prime} 45^{\prime \prime}$, which taken from $76^{\circ} 22^{\prime}$, leaves $72^{\circ} 51^{\prime} 15^{\prime \prime}$ for the longitude of Surat.' I have before obferved, that its longitude deduced from Bombay is $72^{\circ} 5^{\prime}$ : but having taken Burhanpour at $76^{\circ} 19^{\prime}$, Surat will be in $72^{\circ} 4^{\prime} 15^{\prime \prime}$, and that is the longitude I have adopted for it; altering at the fame time Goddard's difference of longitude from Baffeen, to $8^{\prime} 15^{\prime \prime}$, inftead of $10^{\prime}$.. And as Mr. Howe's longitude of Bombay was altered from. $72^{\circ} 33^{8^{\prime}}$ to $72^{\circ} 40^{\circ}$; it appears that Surat fands as it would do by Mr. Howe's original. obfervation, and with Goddard's original difference, of longitude.

The materials under different authorities, for the form of the coaft between Baffeen, and Surat, do by no means accord together; nor have I the means of determining which to prefer. From Baffeen to Arnaul, a fortified illand, commanding the entrance of the Angafsyah, or Mandavee river, I take from General Goddard's march, the only authority I can find. From Arnaul to Nonfary, or, Noffary, a few miles hort of Surat river, there is a chart by Lieut. Ringrofe; and alfo a chart from St. John's Point; to Surat river by Lieut. Skynner : by which means, we have about 50 miles
of the fpace contained in Skynner's chart, included alfo in Ringrofe's; and an apportunity is given of comparing their bearings and diftances, as well as Goddard's, which includes nearly the fame fpace. Here, to our utter aftonihment, we find two charts, profeffedly taken by authority, differ in degrees in bearing in an extent of 60 miles! for fo much more eaftwardly from the north, does Mr. Skynner make the bearing of Surat from Omergong, than Goddard's map does. As to the comparifon between Ringrofe and Skynner's charts, from St. John's Point to Noffary, Ringrofe makes the bearing $\mathrm{N} 2^{\circ} \mathrm{W}$, and Skynner $\mathrm{N} 10^{\circ}$ E. Goddard's route coming clofe to the fea in the neighbourhood of St. John's, fhews, if we may rely on his map, that the truth lay between Ringrofe and Skynner; but that Ringrofe came the neareft to it.

Having taken Goddard's line for the general bearing, I have adapted the other charts to it, in the beft manner I could ; preferving all their particulars, in which they do not differ fo much as in generals. Such excellent furveying marks as Tarrapour and Valentine's Peaks, and Poneira Caftle, \&c. offer, might eafily afford data for a feries of triangles; and of courfe, for a general furvey of this coaft, in fkilful hands: and take away from us the reproach of remaining ignorant of the true courfes between two of our principal factories, Bombay and Surat. St. John's Point does not appear to project far from the general line of the coaft, either by Goddard's or Ringrofe's accounts, though defcribed in that manner in all former charts. The fhallownef's of the water near it, has probably kept navigators at too great a diftance to be informed of the truth. I apprehend that the hill called Segwah, in General Goddard's route, is what is called Valentine's Peak by navigators.

From Surat to Annedrbad, through the city of Broach, there is a route of General Goddard's profeffed to be meafured, and taken mathematically. We had previoully maps or furveys of the country between Surat, and the river Myhie, extending inland to Brodera, Dubhoi, and Zinnore, on the Nerbudda; but none of them went

## [. 35 ]

beyond the Myhie. The following is the comparion between the bearings and diftances of the different maps as far as they go.

> From Surat to Brodera, by Goddard N $18^{\circ} 55^{\circ} \mathrm{E} 69,95$ G.miles. Turner $\mathrm{N}_{20} 0^{\circ} \quad 5 \mathrm{E}$ 68, 4 Himming $\mathrm{N}_{1} 828$ E 68,85

Medium N. 19. 24 E 69,07
The differences here, are not great, confidering how much, compaffes and meafures often differ among themfelves. The medium of the 3 accounts differs fo little, in any refpect, from Goddard's, that we need not hefitate to adopt the relt of his line to Amedabad, which is fomething more than 50 miles to the north-weftward of Brodera. The moft remarkable difference in this quarter, is between Mr. Skynner's and others bearings and diftances between: Surat and Cambay.

$$
\begin{array}{llll}
\text { Mr. Skynner's is } & - & \mathrm{N} 22^{\circ} \mathrm{W} \quad 83,2 & \mathrm{G} . \text { miles. } \\
\text { Mr. Taylor's } & - & \mathrm{N} 9^{\circ} 5^{\prime} \mathrm{W} 67,7 \\
\text { Mr. Himming's } & - & \mathrm{N} 10 & 30 \mathrm{~W} 68,3
\end{array}
$$

And it is remarkable that the deviation here, is from the north, towards the weft; on the former occafion, it was from the fouth, towards the weft. As. Taylor's, Himming's, and Goddard's, agree fo nearly between Surat and Brodera, one cannot help giving the preference to their lines; or at leaft to the medium of both, between Surat and Cambays which is placed in lat, $23^{\circ} 16^{\prime} 45^{\prime \prime}$, lon. $72^{\circ} 32^{\prime} 45^{\prime \prime}$,

Having altered the bearing of the eaft fide of the gulf of Cambay, it became neceflary, in order to preferye a proper width to the gulf, to give the weft fide a direction more oblique to the meridian, thanappears in the original. At the fame time, as it appeared but reafonable that Groapnaught Point, fhould preferve the parallel of latiE 2 tude:

## $\left[\begin{array}{lll} & 3 & ]\end{array}\right.$

tude affigned it, in the original ; the length of the weftern coaft, muft neceffarily be augmented, which it is, by 3 miles. The width of the gulf, in the original, from Swalley to Groapnaught, is $52 \frac{1}{2} \mathrm{G}$. miles. I have allowed it $48 \frac{1}{2}$ only.

It may be obferved however that both D'Anville and D'Apres give even a more oblique direction to this coaft than I have done; at the fame time, that they give nearly the fame direction to the eaftern coaft, that Mr . Skynner does; and by this means, bring the head of the gulf, almoft to a point. D'Anville places Cambay $33^{\prime}$ of longitude weft of Bombay, and D'Apres $25^{\prime}$. I have allowed only $7^{\prime} 15^{\prime \prime}$. And Groapnaught Point, placed as above defcribed, is in lon. $7 x^{\circ} 42^{\prime} 30^{\prime \prime}$; which is $4^{\prime} 30^{\prime \prime}$ more eaftwardly, than it would have been, had Mr. Skynner been followed throughout. It is unpleafant to reflect that one is left in a ftate of uncertainty on a matter of confiderable importance; for fuch, the true bearing of the oppofite coafts of a deep and dangerous gulf, muft be regarded : and here we find a whole point in difpute.

From Groapnaught Point, to Diu Head, I have followed Mr. Skynner's original bearing and diftance; which gives $i^{\circ} 50^{\prime} 15^{\prime \prime}$ difference of longitude weft ; placing the weftmoft part of the Point, in lon. $69^{\circ} 52^{\prime} 15^{\prime \prime}$. The latitude is $20^{\circ} 43^{\prime}$.

- From:Diu Point to Cape Monze, beyond the mouth of the Indus, or Sinde river, the bearing and diftance is taken from a medium of three charts furnilhed by Mr. Dalrymple, and appears to be $\mathrm{N}_{41^{\circ}}$ ${ }^{20} \mathrm{~W}^{\prime}$ ' and the diftance, corrected by the latitudes of Point Diu, and Cape Monze, the latter taken at $25^{\circ} 5^{\prime}$, gives $3^{\circ} 5^{\prime \prime}$ difference of longitude' ; placing Cape Monze in $65^{\circ} 54^{\prime}$. M. D'Anville places this Cape near a degree more to the eaftward $;$ and makes the longitude between it and Bombay $4^{\circ} 57^{\prime}$, inftead of $6^{\circ} 44^{\prime}$, as given in my map: and this makes a great alteration in the figure of the c aft between Surat and the mouth of the Sinde, or Indus: the peninfula of Guzerat being much larger than was formerly fuppofed,


## [ 37 ]

the gulf of Sinde (or Cutch) much fmaller; and the Delta of the Indus projecting into the fea, inftead of teceding from it.

The feveral charts of the weftern coaft of the peninfula of Guzerat, and of the coart of Sinide, differ in a variety of particulars; and would make a minute difcuflion of them, too tedious, even for this Memoir; and befides, nothing appears in either of them, to claim a preference. In the general bearing above given, the three charts differed no more, among themfelves, than $2^{\circ} 15^{\prime}$, in bearing ; but the charts of the mouth of the Sinde and the gulph of Cutch, differed fo much that Mr. Dalrymple thought proper to publifh: them all feparately, in order that every perfon might be enabled to judge for himfelf, On collating the names of the different mouths of the Sinde, one finds great contradictions; and it is very difficult to identify them in the feveral charts. The flatnefs and want of variety in the appearance of the coaft, added to the fand-banks which keep navigators at a diftance, and prevent their difcriminating any minute objects that may occur, occafion there miftakes. The tombs alone appear to be the marks for the coaft. The latitude of Ritchel I have taken at $24^{\circ} 21^{\prime}$; and that of Caranchy or Crotchey, at $25^{\circ}$.

All the particulars of the weftern coaft of Guzerat, and the mouth of the Sinde, are copied from the abovementioned MS. and printed charts of Mr. Dalrymple's : and confequently the whole coaft from St. Johr's Point to Cape Monze, is defcribed from new materials.
${ }^{T}$ now return to Balafore.
'rom Balafore; eaftward to Chittigong; the diftance has beeqn determined by the inland furvey; and the figure of the coafts, and inlets by 'Capt. Ritchie's fea furvey.: The difference of longitude between the towns of Balafore and Chittigong (or Inlamabad) is $4^{\circ} 53^{\prime}$ eaft; and, it is worthy of remark, that the diftance by Capt, 'Ritchie's' marine furvey, agreed: with the meafurement on Hore, to within two miles and a half.

## $\left[\begin{array}{ll} \\ 3\end{array}\right]$

The charts as late as the year 1752 , reprefented the difference of longitude between thefe two places, to be only $3^{\circ} 4^{\prime} 8^{\prime}$; that is, $1^{6} 5^{\prime}$ lefs than the truth. And this diminution of the longitude, while the difference of latitude continued right, gave the fea coalt between the mouths of the Ganges, a direction of two points, or $22^{\frac{1}{2}}$ degrees more northwardly than the truth ; which doubtlefs occafioned the lofs of many hips, who trufted to the information.

From Illamabad, in longitude $91^{\circ} 55^{\prime}$, latitude $22^{\circ} \cdot 20^{\prime}$, the coalts of Aracan and Pegu take a S SE courfe to Cape Negrais, the extreme point of Pegu to the fouth-wert; the latitude of which is under 16 degrees, and diftance from Iflamabad about 420 G. miles. The outline of this whole coaft has been traced by Capt. Ritchie, under the fame direction, and in the fame manner, as the coafts on the weft fide of the bay. He made the difference of longitude $2^{\circ} 32^{\prime}$ eaft from Inamabad; placing Cape Negrais in $94^{\circ} 27^{\prime *}$. Mr. Dalrymple, who has taken uncommon pains to afcertain the bearing of this coaft, from journals, and a variety of 1 ketches and remarks, makes the difference of longitude $2^{\circ} 34^{\prime}$, or only $2^{\prime}$ different from Mr. Ritchie. The refult of this laborious enquiry, corrected by a nicely difcriminating judgment, corroborates, in the ftrongeft manner, Capt. Ritchie's calculation; and affords a degree of fatisfaction next to that of an actual obfervation.

I mean to have it underfood that Capt. Ritchie's chart of this coaf, is to be taken only as a general outline, being imperfect as a. coafting chatt. Many particulars on this coaft are taken from Mr. Dalrymple's. collection,., both printed and MS: : particularly, the: river of Aracan, the eaft file of Cheduba, and the paffage between it and the main; and a variety of particulars on the coaft of Ava. Some of the names of places were alfo mifconceived by Capt: Ritchie.

[^61]
## [ 39 ]

Capt. Ritchie's latitude of Cape Negrais, or Pagoda Point, is more fouthwardly than it is commonly taken at, by 10 minutes; which I cannot account for, as his obfervations of latitude are generally exact. . I have placed this Cape (by which I mean the fouth extremity of the coart of Ava) in $15^{\circ} 57^{\prime}$, by the medium of 6 different accounts, varying from $15^{\circ} 5^{\prime}$, to $16^{\circ} 4^{\prime}$. Capt. Ritchie's was $15^{\circ} 5^{\prime} 2^{\prime} 0^{\prime \prime}$.

At this point, my materials for afcertaining the intermediate longitudes of places on the eaftern fide of the bay, fail me: and I have been-under the neceffity, in a great meafure, of fubflituting judgment for fact, between Cape Negrais and the next place of obfervation, Mergui : which place, as it is given by M. D'Apres in his new Neptune-Orientale, is in $9^{8^{\circ}} 20^{\prime}$ eaft longitude, or $3^{\circ} 53^{\prime}$ eaft from Cape Negrais. M. D'Anville allows 4 degrees; which comes within 7 minutes of mine; but although we agree nearly in the aggregate, we differ widely in point of particulars.

The MS. charts that I have confulted, make the difference of longitude in queftion, $4^{\circ} 3 a^{\prime}$ on a mediam; which is: $37^{\prime}$ more than I make it. And M. D'Apres makes it $4^{\circ} 19^{\prime}$.

The difagreement in particulars between M. M'Anville's account and mine, arifes in the part between Cape Negrais; anid the coaft of Martaban. It happens that this coaft lies in' direction sa far from meridional, and at the fame time the tides and currents of the feveral mouths of the Ava river, do fo difturb and falfify the fhip"s reckonings, that the true diftance"can never be afcertained that way, in the ordinary courfe of navigation. Plarss of the Perfaim and Syrian rivers, as high up as the cities of thofe names refpectively, have been already publifhed in Mr. Datrymple's collection's and, fortunately, I have been able to obtain tracings of the continuations of thofe rivers (which are the two extreme branches of the Ava siseri) to the place where they feparate from the main river, at about 150 G. miles from the fea. The bearings of the two branches interfect each other at an angle of about 60 degrees; and, there-

## [ 40 ]

fore, by the help of the latitude, may be ufed, in correcting the length of the coaft between Negrais and Syrian. The Perfaim, or Negrais branch; was tráced by that accurate obferver; Capt: George Baker, in his way to Ava in 1755. I have not been able to learn by whom the Syrian branch was traced; but by the orthography of the words in the map, the author appears to have been a Dutchman.

The refult of thefe bearings, corrected by the latitude, as fet forth in the Syrian map, gives difference of longitude from Negrais Point, to the mouth of the Syrian river, $2^{\circ} 21^{\prime}$ eaft; which is about $10^{\prime}$ lefs than M. D'Apres makes it, and $21^{\prime}$ lefs. than M. D'Anville. Some of the MS. charts make the difference fill more.

The mouths of the Ava river, which form an affemblage of low illands, like thofe of the Ganges, are defcribed from feveral MS. charts of Mr. Dalrymple's collated with M. D'Apres' new chart.

From the mouth of the Syrian river to the coaft of Martaban, in. latitude $15^{\circ} \mathrm{I}$ have copied from the new chart of M. D'Apres, publifhed a very fhort time before his death. The figure of the coaft is quite new.

Between the aforefaid latitude and Tavai Point, our charts are very imperfect; but generally agree in: giving the coaft a direction. of fouth, a very little eaftwardly.

From Tavai Point to Mergui, the coaft is taken from a MS: chart compiled by the late Mr. Howe.

Mergui is placed, as $\mathbf{I}$ have faid before, according to M. D'Apres' obfervation: that is, in longitude $98^{\circ} 20^{\prime} ;$ latitude $12^{\circ} 9^{\prime}$.

All the remainder of the coaft, to Junkfeilon; and the whole: Mergui Archipelago, is from M. D'Apres.

I NEXT proceed to the chain of illands that extend from Cape Negrais to Sumatra; and are known by the names of the Preparis, Cocos, Andaman, and Nicobar iflands.

Capt. Ritchie, after leaving Negrais, proceeded agreeably to his infructions, to defcribe the fituation and extent of the illands that compofe this chain.

None of them are more than 84 G . miles diffant from each other $;$ fo that he needed never to be more than 42 miles from land: and that but once during the voyage; that is to fay, between the Little Andaman and the Nicobar illands. In other places, the diftance between the lands is commonly much lefs: fo that the meridional direction of the courfe, and other circumftances, render this line of much ufe in correcting the longitudes, not only of the illands themfelves, but of Sumatra alfo; and, had it been continued as was intended, to Acheen, would have anfwered the purpofe completely.

Paffing the Preparis and Cocos illands, Capt. Ritchie proceeded. to Narcondam, to fix its pofition : then back again to Cocos; down the eaft fide of the Great Andaman, (which he found to be almoft a degree of latitude longer than was before fuppofed) then up the weft fide of it, almoft to the latitude of $12^{\circ}$ : when finding the attempt to circumnavigate the illand, might prove fatal to the remainder of his work, he proceeded fouthward; defcribing the- extent, figure and pofitions of the Little Andaman and the Nicobars, till he came to the fouth point of the great (or fouthmoft) Nicobar. Here the wind fuddenly changed to the fouth, and prevented him from determining the refpective pofitions of the foutliern Nicobar and Acheen:- which is the more mortifying, as one day's fair wind would have enabled him-to accomplifh it.

The refult of this line of bearing is; that the fouth end of the Great Nicobar, is in longitude $94^{\circ} 23^{\prime} 30^{\prime \prime}$; that is, only 3 ' $30^{\prime \prime}$ weft from Cape Negrais.

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## [ 42 ]

The pofition of Acheen Head, or King's Point (the N W point of Sumatra); has hitherto been deduced from its bearing and diftance from Malacca, the neareft place of obfervation; and its longitude according to this deduction, is $95^{\circ} 30^{\prime}$ according to M. D'Apres. Now the bearing of Acheen from Malacca, being in a direction of; more than 60 degrees from the meridian, and the diftance 450 G. miles; little reliance could be placed on the refult of it, if it did not happen that the refpective pofitions of the fouthern Ni cobar, and of Pouloo Ronde (an illand near Acheen) the one deduced from Negrais Point, and the other from Malacca, agreed nearly with their reputed bearing and diftance from each othet. For, of two MS. charts which I have examined, the one makes $I^{\circ} 1^{\prime}$, the other $1^{0} 2^{\prime}$ difference of longitude between them; and there being laid down apparently without any attempt to fupport a fyftem, may be fuppofed to be agreeable to experiment. The bearings and diftances in thefe MS. charts are

$$
\text { In one } \mathrm{S} 56^{\circ} \mathrm{E}-7^{2} \mathrm{G} \text {. miles. }
$$

And in the other S 56 E-75
And according to the deduced longitudes abovementioned, the bearing and diftance is $\mathrm{S}_{56} \mathrm{E}-76$

So that there cannot be any great error in.the longitude of Acheen, as laid down in M. D'Apres', and in my map, if this fort of coincidence can be reckoned a proof of accuracy : a difference of a few miles, in the diftance of 8 degrees, being much lefs than could be expected in fuch a feries of deductions. M. D'Apres makes the bearing and diftance between the fouth Nicobar and Pouloo Ronde $S 57^{\circ} 30^{\prime} \mathrm{E} 97$. G. miles ; or difference of longitude $1^{\circ} 22^{\prime}$, that is, $22^{\prime}$ more than the MS. charts. It mult be obferved, that he reckons the fouth end of this Nicobar, 9 miles farther to the north than the truth; occafioned by his making the ifland fo much too little in extent: for the north end is in its true latitude. Had the fouth point of the ifland been in its true latitude, the bearing of Pouloo Ronde would have been more eaftwardly, and the diftance

## [ 43 ]

only 93 , inftead of 97 : and if, on the contrary, he has enlarged his diftance on the original bearing, to make it anfwer to the latitude, the original diftance could have been only 85 miles.

I have faid before that Capt. Ritchie went no higher up the weft fide of the Great Andaman, than about the latitude of $12^{\circ}$. The remainder of that coaft, as well as the paffage through the iflands at the north end of it, is from a MS. chart lent me by Mr. Dal-' rymple; and which carries with it the greateft appearance of truth, on a comparifon of the fouth and fouth-weft parts of the Great Andaman in this chart, with the fame parts in the chart of Capt. Ritchie.

Barren Ifland, and the rock on the eaft of Duncan's Paffage, are from the remarks of Capt. Juftice in 177 r .

## ISLAND of CEYLON.

IT happens that the ordinary tracks of Britifh hips, to and from Ceylon, and the coaft of Coromandel, are not calculated for determining the relative pofitions of Point Pedro and Point Calymere, the approximating points of Ceylon and the continent of India Hence it is, that we are fo ill informed, not only of their true fituations with refpect to each other, but alfo with refpect to the parallel of latitude under which Point Pedro is fituated.

By my obfervations, Point Calymere (the fouthern extreme of Coromandel) lies in $10^{\circ} 20^{\circ}$ latitude, and by inference from Madras, in longitude $72^{\circ} 54^{\prime} 30^{\prime \prime}$. M. D'Apres places it 6 minutes more: northwardly; and D"Anville 7 further fouth: The latitude of Point Pedro, is alfo varioully reprefented by the above geographers: I have taken it at $99^{\circ} \quad 2^{\circ}$.

$$
\text { G. } 2 \quad \operatorname{In}
$$

## [ 44 ]

In M. D'Apres I find the bearing and diftance from Point Calyw mere to Point Pedro, to be - $37^{\circ} \mathrm{E} 41$ G. miles. In D'Anville - $\quad \mathrm{S}_{39} \mathrm{E} \quad 3^{8}$ In a MS. chart, no name - $\mathrm{S}_{46^{\circ}} 30^{\prime} \mathrm{E} 40$
I had an opportunity in 1764 , of determining the pofition of Cow Inland from Tondi, nery nearly: I made it so G. miles weft of Point Calymere, and 39 eaft of Tondi. Between Cow Inand and Point Pedro, Van Keulen reckons $41 \frac{3}{2}$, and D'Apres and D'Anville, 42 miles, of eafting. This will place Point Pedro $3^{\frac{1}{2}}$ eaft of Point Calymere; or in longitude $80^{\circ} 27^{\prime}$, and in bearing from Point Calymere E $43^{\circ}{ }^{2} 0^{\prime} \mathrm{S} ; 42 \frac{1}{2} \mathrm{G}$. miles diftant. I have placed it in this fituation accordingly; as thinking it not liable to any great objection.

The figure of the illand of Ceylon is varioully reprefented by different geographers. Van Keulen makes it too narrow, in the fwelling part: that is, between Batacola and Columbo; as is pretty evident from the longitudes fhewn by the time-keepers of fome of the commanders of the Eaft India Chips, and others. D'Anville and D'Apres in their maps of the ifland, agree much better with thefe obfervations.

Between the meridians of Calitoor and the eaft fide of Ceylon in lat. $7^{\circ} 40^{\prime}$, Van Keulen reckons the. difference of longitude

| only | - | - | $1^{\circ}$ | $4^{\prime}$ |
| :--- | :--- | :--- | :--- | :--- |
| M. D'Anville | - | - | 2 | 1 |
| M. D'Apres | - | - | 2 | 8 |
| And by the time-keepers it is | 2 | 12 |  |  |

However, until a regular feries of obfervations by time-keepers are made by the fame perfon, all tound the ifland, we muft defpair of feeing the true figure of it, unlefs its coafts were furveyed. The cafual obfervations which we are in poffeffion of, from different hands, will only.affift us in fixing certain points of it ; which being done, the general figure of the ifland muft be collected in the beft manner it can be done, from the charts exifting.

## [ 45 ]

The following are the obfervations of longitude taken on the routh fide of Ceylon.


Dundrahead by Mr. Topping's obrervation (worked to Pondicherry in lon. $80^{\circ}$ ) is in lon. $80^{\circ} 39^{\prime}$ : I reckon Point de Galle $28^{\prime}$ weft from Dundrahead, therefore it ghould be by this account in $80^{\circ}$ i $1^{\prime}$.

Mr. Topping obferved the longitude of the Great Baflas alfo; fo did Capt. Dundas: but as we are not well informed concerning the exact difference of meridians between them, and they being at leaft. $\mathrm{I}^{\circ}$. $22^{\prime}$ diftant, nothing in thefe obfervations will apply to Point de Galle.
There is certainly too much difcordance between the three longitudes of Point de Galle given above; the medium of which is $80^{\circ} 8^{\prime} 30^{\prime \prime}$. As Anjenga and Cape Comorin were placed $3^{\prime}$ farther to the eaftwatd, than Capt، Huddart's obfervation warranted, in order ta accommodate the differences between the two calculations, Point de Galle thould be reckoned in $80^{\circ} 1^{\prime} 30^{\prime \prime}$. Mr. Dalrymple's .time-keeper gave the difference of longitude between Anjenga and Point 'de Galle. $3^{\circ} 29^{\prime} 30^{\prime \prime \prime}$, which added to $76^{\circ} 40^{\prime \prime}$ (fee page 19) gives $80^{\circ} 9^{\prime \prime} 30^{\prime \prime}$.

If we confider the refpective pofitions of Point Pedro and Point de Galle; by: the different geographers, we fhall have the following yrefult : 1

[^62]
## [ 46 ]

Van Keulen places Point de Galle weft
M. D'Apres - - 10
M. D'Anville - - 3

Medium of the three $\quad 8^{\prime} 55^{\prime \prime}$ or $9^{\prime}$
And the longitude of Point Pedro being taken at $80^{\circ} 27^{\prime}$, Point de Galle by this rule will be in $80^{\circ} 1^{\prime}$.

On an occafion like this, where we are not likely to come exactly at the truth, fince no one can pretend to fay, whether the longitude of Point de Galle be $80^{\circ} 4^{\prime} 30^{\prime \prime}$ or $89^{\circ} \ddagger 8^{\prime}$; I thought it better to enfure a certain good, at the hazard of a fmall miftake, than to facrifice that advantage, by adhering to a refult, which in itfelf was. problematical. In other words, $I$ judged it better ta preferve the general form of the illand, and confequently the refpective pofitions. of the north and fouth points of it, as given by D'Apres; and which appear to mè to agree beft with the refult of the obfervations. of longitude, taken on different fides of it; than ta change thoferelative pofitions, which muft have been done, had Capt. Huddart's. obfervation at Point de Galle been adopted. I have therefore placed Point de Galle $10^{\prime}$ weft of Point Pedtro (according to. D'Apres) ; that is in lon. $80^{\circ} 17^{\prime}$. Had I adhered to the obfervations, in refpect of Cape Comorin, it would bave been $80^{\circ} 11^{\prime \prime} 30^{\prime \prime}$. The medium of all the obfervations and deductions, is about $80^{\circ} 14^{\prime} 30^{\prime \prime}$. The obfervations differ among themfelves. 14'. $30^{\prime \prime \prime}$. The latitude of this Point is 6 degrees; and of Dundrahead, the fouthmoft point. of the whole illand $5^{9} 51^{\prime}$.

The obfervations at Dundrahead, were, by Mr. Topping $80^{\circ} 39^{\prime}$, and by Capt. Huddart $80^{\circ} 23^{\prime}$. The Great Baffas, by Mr. Topping $81^{\circ} 41^{\prime}$; by Capt. Dundas $81^{\circ} 3^{\circ} 0^{\prime}$. The variation in thefe longitudes, fhew that a feries of them by the fame perfon, and the fame time-keeper, is by much the moft defireable.

## 1473

The longitudes on the eaft fide of Ceylon, by 3 different gentle men ; (viz.) Capt. Cumming, Capt. Weft, and Mr. Topping, do not difagree fo. much as thofe on the fouth fide of the ifland. They are thefe :


Together with M. D"Aprres' dimenfions of the illand, (in the fouthern parts; patticularly) I have adopted his detail of the coaft from Columbo to Vendelos Bay. From Vendelos Bay to Point Pedro, the coart in Vin Keulen appears to be too nearly meridional, and his latitudes too much fouthwardly. Again, on the weft fide, from Columbo to Manar, I followed D'Apres' bearing, which is more north-eaftwâardly than Vàn Keulen's. Indeed it could not be otherwife, than that both the eaft and weit coafts muft have a greater degree of obliquity from the meridian, than Van Keulen reprefents: becaufe he allows too little breadth to the fouth part of the illand. In fhort, the general form of the ifland is D'Apres: but the particulars àre collated with Van Keulen's and D'Anville's maps:

The diftance from Mentole Point, on Ceylon, to Point Ramen on the continent I take to be lefs by 1 I $\frac{1}{2}$ G. miles, than Major Stevens fuppofed it to be, in his chart; nor can it be otherwife, to reconcile-it to my pofition of Cow Illand.

The Maldive and Laccadive Illands are copied from M. D'Apres; fave that the pofition of the northmof Maldive Inland (called by the French the beat of the Ihlands) is placed according to Mr. Topping's obfervations of tatitude and longitude in $1785 . \mathrm{He}$ made the latitule of it $7^{\circ} 5^{\circ} \%$ and the lodn. $73^{\circ} 4^{\prime}$; and wher oppofite to it on the north, he counted 32 inlands; the furtheft bearing S.E by E.

SECT-

## [ $4^{8}$ ]

## SECTION II.

The furveyed TraEZ on the fide of Bengal, or that occupied by the Courfe of the Ganges, and its principal Branches, as far weff as the City of Agra.

THIS extenfive tract, which comprizes the foubahs of Bengal, Bahar, Allahabad, and Oude ; a large portion of Agra and Delhi, and a fmall part of Oriffa, is bounded on the eaft, by Affam, and the dominions of Ava; on the fouth-eaft, by the gulf, or bay of Bengal ; on the fouth-weft by an imaginary line drawn from the port of Balafore in Oriffa, to the city of Narwah; on the weft by another fuch line drawn from Narwah, through the city of Agra to Hurdwar, the place where the Ganges firft enters the plains of Hindooftan; and on the north, by the firft ridge of mountains towards Bootan. It is in length from the city of Agra, to the eartern confines of Bengal, upwards of 900 Britih miles; and in breadth from 360 to 240 .

With refpect to the particulars of this furvey, which was executed between the years 1763 and 1777 , it is unneceffary to fay more than that the diftances were meafured, and that they accorded with the obfervations of latitude and longitude: with the former minutely, and with the latter fo nearly, that it was unneceflary to make any correction.

Agra, by Claud Boudier's obfervation, is in - $78^{\circ} 29^{\circ}$
Calcutta, by the medium of four obfervations $\quad 88 \quad 28$
$\begin{array}{ccccc}\text { Difference of longitude by obfervation } & - & 9 & 5.9 \\ \text { By furvey } & - & - & 5^{8}\end{array}$
And Calpyon the river Jumnah, ftands in the furvey in lon. $80^{\circ}$
And by the Revd. Mr. Smith's obfervations

Agra, then, appears to be the moft weftern point determined by the furvey; and ferves as a. common point of union between the furveys on the eaft; and the routes furnifhed by various MS. maps, and itineraries, on the north, fouth, and weft. By means of the furvey alfo, a number of points are afcertained, which ferve to fet off cutfory furveys" of roads both to the weft and fouth : fuch as Hurdwar'and Ramgaut, on the north of Agra : and Gohiud, Calpy, Chatterpour, Rewan, Burwa, and Balafore on the fouth.

As this tract contains the fite of the famous city of Palibothra (or Palimbothra) as well as thofe of Canoge (or Kinnoge) and Gour, it may not be amifs to take fome notice of them : as alfa of fome of leffer note, fuch as Punduah, Tanda, Satgong, (or Satagong) and Sonergong : all of which, (Palibothra excepted): aré mehtioned either in the Ayin Acbaree. or in Ferifhta.

Pliny is the only one among the ancients. (as far as I know) that affigns a particular fpot for the fite of Palibothra; the reft only fpeaking generally of its fituation, and as it appears by a difcuffion of particulars, contradicting one another. All are agreed that it was fituated on the right bank of the Ganges (that is, intra Gangem) and at the confluence of a large river with it. This river was named Erranoboas according to Arrian (who had his intelligence from Megafthenes's journal) and was of the third degree of magnitude among the Indian rivers; and inferior to none but the Ganges and Indus. I cannot apply the namé Erranoboas to any particular river. : Pliny certainly fays that the Fomanes (Jumnah) entered the Ganges by Palibothra, between Metbora and Clijobara*; but it is equally true, that in:another place, he mentions the conflux of the Ganges and Jomanes, and in the very next article fays that Pali, bothra is fituated 425 miles below that very point of conflux. Strabo does not give the name of the adjunct river.

Palibothra, was the capital of the Prafii, by the account of Megarthenes, who refided there; and was of very great dimenfions,

[^63]being 80 ftadia in length and 15 broad. If we reckon thefe meafures to produce 10 miles in length, and near two in width *, which for a European city, compactly built, would be reckoned enormous; yet it does not exceed the dimenfions of fome of the capital cities of the Indian foubahs or vice-royalties. The ruins of Gour in Bengal, are more extenfive; that of ancient Delhi much more fo. The plans of the Indian cities contain a vaft proportion of gardens and refervoirs of water; and the houfes of the common people confift of one floor only: of courfe, fewer people can be accommodated in the fame compafs of ground, as in an European city; and this may account for the enormous dimenfions of Afiatic cities.

As Pliny's Indian itinerary (in Book VI.) enumerates the particulars of the whole diftance between the Indus and the mouth of the Ganges; and particularizes the fite of Palibothra; it could hardly be daubted that fome very large city ftood in the pofition affigned to it: but I had always a doubt of its being the capital of the Prafii $\uparrow$ vifited by Megafthenes. Late enquiries made on the fpot, havs, however, brought out this very interefting difcovery, that a very large city, which anciently ftood on or very near the fite of Patna, was named Patelpoot-her (or Pataliputra, according to Sir William Jones) and that the river Soane, whofe confluence with the Ganges is now at Moneah, 22 miles above Patna, once joined it under the walls of Patelpoot-her. This name agrees fo nearly with Palibothra, and the intelligence altogether furnifhes fuch pofitive kind of proof; that my former conjectures refpecting Canoge, muft all fall to the ground; notwithftanding that Canoge was unqueftionably the capital of a large kingdom from very early times.

I confider the above information as too clear and poditive to require any proofs from ancient authors; and therefore the following

[^64]
## [ 51 j

examination of Pliny's itinerary, is intended rather to Thew his great accuracy in geographical fubjects, than as a proof of the above pofition; although it may ferve that purpofe alfo. To ufe the words of a celebrated author, "Pliny's natural hiftory is one "s of the greateft monuments of univerfal knowledge, and unwearied "application, now extant in the world *." That part of the itinerary, applicable to my purpore, is as follows:

From Taxila or Tapila, on the Indus (probably near the fite of Attock) + to the river Hydafpes (the modern Chelum) 120 Roman miles.
To the Hyphafis (Beyab)
To the Hefudrus, probably the Setlege river
To the Jomanes (fumna)
To the Ganges:
To Rhodopa
To Colinapaxa (a city)
To miles.
To the conflux $\ddagger$ of the Jomanes (Jumna),
and Ganges -
To Palibothra
To the mouth of the Ganges

It muft firft be obferved, of this itinerary, that it furnifhes no means of comparing the robole diffance between the Indus and the: mouth of the Ganges, as thewn here, with that on the map; becaufe the fecond article, namely, the diftance from the Hydafpes tothe Hyphafis, is obvioully wrong, even if the text (which is very. obfcure) ' is to be taken at 390 : for it cannot be more than 220 of Pliny's milest, unlefs the furveyor of Alexander's marches threw:

[^65]H 2

## [ 52 ]

into the account, the circlitous route to the city of Sangala, .8e after the Catheri or Cathei. So that the account, as far as it regards the wobole diftance, is vitiated; and we mult therefore have recourfe to parts. Taking therefore for granted, that the Beyah river is meant by the Hyphafis (or rather Hypafis) as I hope to prove fatisfactorily in my obfervations on Alexander's march; and meafuring on the map, along the line of the great road from the Panjab country to the mouth of the Ganges, the diftance will be about 1140 G . miles: and as the itinerary in queftion gives the length of the fame interval at 2022 Roman miles, the proportion of one of Pliny's miles to a geographic mile, will be as 56 to 100 , in horizontal diftance; or about $\frac{7}{20}$ of a Britifh mile in road diftance. This is certainly too. fhort for the Roman mile of 1000 paces*; but the queftion in the prefent cafe, is not the actual diftance, but the proportions of the intermediate parts of the road. The conflux of the Ganges and Jumna, on the map, is 990 of Pliny's miles from the Beyah, and 1032 above the mouth of the Ganges: and the itinerary makes the length of the, firft interval 9.59 , the other 1063 ; that is, Pliny's account places the conflux too far down by $3^{1}$ of his miles, or about ${ }_{17}$ G. miles. Nor is this difference at all to be regarded in the general queftion : for our ideas of the diftance were much wider of the truth, 20 years ago.

Palibothra, he places 425 miles, or fo many parts in 1063 , of the diftance from the conflux of the Jumna to the mouth of the Ganges : and this is the point we are to attend to. Patna indeed, is only 345 of Pliny's miles below the prefent conflux; and this difference of 80 of Pliny's, or about 44 G . miles, however confiderable it may appear to thofe who expect nice coincidences in fuch matters as thefe; does not, in my idea, leffen the general authority of the itinerary : becaufe if we admit only what is literally proved,

[^66]Palibothra muft fill have been fituated within 44 miles, of Patna. And as ;the people there have a tradition that Patna ftands on, or near, the fite of Patelpoot-her, it rather proves to me either that there is an error crept into the copies of the itinerary; which notwithhtanding; proves in generals as much as is required; or that the point of conflux of the Jumna with the Ganges, has undergone a change. For although the point of conflux is not found in the very pofition in which it ought to be by the itinerary, yet Patna is nearer tọ the pofition affigned to Palibothra. It may appear to fome, a violent way of reconciling difagreements, but it is no new thing for the rivers of India to change their courfe and place of confluence. I have in another place* taken occafion to obferve that the Cofa river changed its place of confluence with the Ganges, which is now 45 miles higher up, than it was. The Burrampooter has varied its courfe ftill more. And to come nearer to the fite of Patna, the change in the conflux of the Soane, juft now remarked., It would be unneceeffary to enter fo far into a difcuffion of there differences, had not Pliny affured us that the diftances were meafured; and that by,order of Seleucus Nicator.

We may obferve that Arrian does not mention the name Gomanes in his book, although he does that of Sonus. And if we had no other authority than that paffage in Pliny, which exprefsly fays that the Jomanes, a river which, paffes by Metbora (probably Matura) runs into the Ganges-by Palibothra, we muft have fuppofed that this city was feated at the conflux of the two rivers. But the itinerary fays that Palibothra was 425 miles below this conflux. Pliny muit therefore have meant another river, different from the Jomanes.

Strabo gives the diftance of Palibothra above the mouth of the Ganges at 6000 ftadia; and though we cannot fix the exaet length of the ftade, we can collect enough to underfitand that 6000 ftades

[^67]
## [ 54 ]

laid off from the mouth of the Ganges would not reach far, if at all, beyond Patna*. Nor muft we forget the paffage of Arrian (in Indicis) in which Palibothra, the chief city of the Indians upon the Ganges, is faid to lie towards the moutbs of that river. But we ought not to omit, on the other hand, that Arrian quotes from Eratorthenes, the diftance of Palibothra from the weftern extreme of India, which is faid to be 10,000 ftades, only: and that Ptolemy gives its latitude at $27^{\circ}$; both which particulars apply better to Canoge than to Patna. It is poffible that both places may have been occafionally ufed as capitals of the Prafii, as we have known both Agra and Delhi to have been of Hindooftan in general, during. the two laft centuries.

Pliny's Palibothra, however, is clearly Patna: and it is probable that Strabo meant the fame place, by, the diftance from the mouth of the Ganges.

Canoge $\dagger$, the ruins of which are at prefent of great extent, was, in an early part of the chrifian æra, the capital of Hindooftan; or rather, of the principal kingdom along the Ganges. It is now reduced to the fize of a middling town. It is fituated on the right bank of the Ganges, near the place where the Calini river (or Callynuddi) joins it; and is poffibly the place meant by Plinyo for Calinipaxa. It is faid to have been built more than a 1000. years before out atá: and is mentioned in Ferifhta $\ddagger$ as the capital of all Hindooftan, under the predecefor of Phoor, or Porus, who fought againft Alexander. In point of extent and magnificence, Canoge anfwers perfectly to the defcription given of Palibothra; and in fome refpects to the local pofition of it given by Ptolemy and Eratofthenes, did not the above authorities affign it in. a pofitive manner to Patna. The Indian hiftories are full of the accounts of its grandeur and populoufnefs.. In, the fixth century it was faid.

[^68]
## [ 55 ]

to contain 30,000 hhops, in which betelnut was , fold (which the Indians, almoft univerfally, chew, as fome Europeans do tobacco). In A. D. 1018, it was feized op, by the Gaznian Emperors: at which time, it gave its name to the kingdom, of which it was the capital.

Gour, called alfo Lucknouti, the ancient capital of Bengal, and fuppofed to be the Gangia regia of Ptolemy, ftood on the left bank of the Ganges, about 25 miles below Rajemal *. It was the capital of Bengal $73^{\circ}$ years before Chrift $\dagger$, and was repaired and beautified by Acbar $\$$, who gave it the name of Jennateabad; which name, a part of the circar in which it was fituated, fill bears. According to Ferifhta's account, the unwholefomenefs of its air, occafioned it to be deferted foon after §; and the feat of government was removed to Tanda, or Tanrah, a few miles higher up the river.

No part of the fite of ancient Gour is nearer to the prefent bank of the Ganges than four miles and a half; and fome parts of it, which were originally wafhed by that river, are now 12 miles from it. However, a fmall ftream that communicates with the Ganges, now runs by its weft fide, and is navigable during the rainy feafon. On the eaft fide, and in fame places within two miles, it has the Mabanada river; which is always navigable, and communicates alfo with the Ganges.

Taking the extent of the ruins of Gour at the mont seafonable calculation, it is not lefs than 1.5 miles in length (extending along the old bank of the Ganges) and from 2 to 3 in breadth. Several yillages fland on part of its fite: the remainder is either covered with thick forefts, the habitatiops of tygers and, other beaatts of prey; or become arable land, whofe foil is chiefly compofed of brick-duft. The principal ruins-are a morque lined with black marble, elaborately wrought; and two gates of the citadel, which are Atrikingly

[^69]
## [ $5^{6}$ ]

grand and lofty. Thefe fabricks and fome few others, appear' to owe their duration to the nature of their'materials, ' which are lefs marketable, and more difficult to feparate, than thofe of the ordinary brick buildings; which have' been, 'and continue to be, an' article of merchandize; and are tranfported to Moorfhedabad, Mauldah, and other places, for the purpofe of building. Thefe bricks are of the moft folid texture of any I dever faw : 'and have preferved the charpnefs of their 'edges, and finoothnefs of their' furfaces, through a feries of dges. The fituation of Gour was' highly convenient for the capital of Bengal and Bahat; as 'united under one government : being nearly centrical with'refpect to the populous parts of thofe provinces; and near the junction'of the principal rivers that compofe that extraordinary inland navigation, for which thofe provinces are famed: and moreover, fecured by the Ganges and other rivers, on the only quarter from which Bengal. has any caufe for apprchenfiont.

Tandah, or '「anrah, (called fometimes Chaivafpour'Tanda, from the original name of the diftrict in which it was fituated) was for a fhort time in the reign of Shere Shaw, in about i540, the capital of Bengal, and became the eftablifhed capital under Acbar in about 1580 . It is fituated very near' to the fite 'of Gour, on the road leading from it to Rajemal. There is little remaining of this place; fave the rampart; nor do we know' for certain whièn it was deferted. In 16 59 , it was the capital of Bengal; when that foubah was reduced umder Aurungzebe : and Rajemal, Dacci;' and Moorfheda'bad, appear to have fucceffively become the capital, after Tanda:

Pundua, or Purruah, mentioned as a royal refidence' in Bengal, in the year $1353^{*}$, is about 7 miles to the north of Mauldah,- and zo from the neareft part of Gour. $\sim$ Many of its ruins yet remain's particularly the Addeenah mofque, and the pavement of a very long ftreet, which lies in the line of the road leading from Mauldah to Dinagepour.

## [ 57 ]

Satgong, or Satagong, now an inconfiderable village on a fmall creek of the Hoogly river, about 4 miles to the north-welt of Hoogly, was, in 1566, and probably later, a large trading city, in which the European traders had their factories in Bengal. At that time Satgong river was capable of bearing fmall veffels; and, I furpect, that its then courfe, after pafling Satgong, was by way of Adaumpour, Omptah, and Tamlook; and that the river called the old Ganges, was a part of its courfe, and received that name, while the circumftance of the change was frefh in the memory of the people. The appearance of the country between Satgong and Tamlook, countenances fuch an opinion.

Sonergong, or Sunnergaum, was a large city, and the provincial capital of the eaftern divifion of Bengal, before Dacca was built; but it is now dwindled to a village. It is fituated on one of the branches of the Burrampooter, about 13 miles fouth-eaft from DacCa ; and was famous for a manufacture of fine cotton cloths.

In fome ancient maps, and books of travels, we meet with a city named Bengalla; but no traces of fuch a place now exift. It is defcribed as being near the eaftern mouth of the Ganges: and I conceive that the fite of it has been carried away by the river: as in my remembrance a vaft tract of land has difappeared thereabouts. Bengallah, appears to have been in exiftence during the early part of the laft century.

It does not fall within the compafs of my defign to defcribe all the principal cities of Hindooftan, which alone would require a large volume; but it may not be amifs to point out their general pofitions, and the relation in which they ftand to the feveral provinces or ftates, in which they are fituated. Moft of the capital cities are already defcribed as they were in the laft century, in the books of travels of Thevenot, Bernier, Tavernier, P. de la Valle, \&cc. which are in every body's hands. Moft of thefe cities, have, I believe, very confiderably declined fince that time; owing to the almoft continual wars and revolutions, that have taken place, fince
the death of Aurengzebe; and which were fufficient to defolate any country that did not produce almoft fpontaneouly; and of courfe, where the deficiency of population is quickly replaced.

Within the tract difcuffed in the prefent fection, the principar cities are, Calcutta, MoorMhedabad, Patna, Dacca, Coflimbazar $x_{x}$ Mauldah, and Hoogly, within the Bengal provinces: Benares, within the diftrict of the fame name, under the Britifl fovereignty : and Lucknow, Fyzabad, Qude, Jionpour, Allahabad, Bereilly; and Corah, fubject to the Nabob of Oude, our Ally: : and Agra, late in the poffefion of Nudjuff Cawn. Generally fpeaking, the defrription of one Indian city, is a defcription of all; they being all built on one plan, with exceeding narrow, confined, and crooked ftreets; with an incredible number of refervoirs and ponds, and a great many gardens, interfperfed. A few of the ftreets are paved with brick. The houfes are varioully built: fome of brick, others with mud, and a ftill greater proportion with bamboos and mats: and thefe different kinds of fabricks ftanding intermixed with each other, form a motley appearance: thofe of the latter kinds are invatiably of one ftory, and covered with thatch. Thofe of brick; feldom exceed two floors, and have flat, terraced roofs. The two former claffes far outnumber the laft, which are often fo thinly fcattered, that fires, which often happen, do not, fometimes, meet with the obftruction of a brick houre through a whole ftreet.

Calcutta, is in part, an exception to this rule of building; for there, the quarter inhabited by the Englifh, is compofed entirely of brick buildings, many of which have more the appearance of palaces than of private houfes: but the remainder of the city, and by much the greateft paft, is built as I have defcribed the cities in general to be. Within thefe 20 or 25 years, Calcutta has been wonderfully improved both in appearance, and in the falubrity of its air: for the Atreets have been properly drained, and the ponds filled $u p$; thereby removing a, vaft furface of ftagnant water, the exhalations from which were particularly hurtful. Calcutta is well

## [ 59 ]

known to be the emporium of Bengal, and the feat of the Governor General of India, It is a very extenfive and populous city, being fuppofed at prefent to contain at leaft 500,000 inhabitants. Its local fituation is not fortunate; for it has fome extenfive muddy lakes, and a valt foreft, clofe to it. It is remarkable, that the Englith have been more inattentive than other European nations, to the natural advantages of fituation, in their foreign fettlements. Calcutta-is fituated' on the wettern arm of the Ganges, at about 100 miles from the fea; and the river is navigable up to the town, for the largeft hips that vifit India. It is a modern city, having rifen on the fite of the village of Govindpour, about 90 years ago. It has a citadel, fuperior in every point, as it regards flrength, and correctnefs of defign, to any fortrefs in India: but on too extenfive a fcale to anfwer the ufeful purpofe intended, that of holding a poft in cafe of extremity ${ }_{3}$ fince the number of troops required for a proper garrifon for $\mathfrak{i t}$; could keep the field. It was begun immediately after the victory at Plaffey, which infured to the Britifh, an unlimited influence in Bergal: and the intention of Clive was to render it as permanent as poffible, by fecuring a tenable poft at all times. Clive, however, had no forefight of the vaft expence attending it, which perhaps may have been equal to two millions fterling.

Hoogly is a mall, but ancient city on the fame river as Calcutta, though on the oppofite fide; and about 26 miles above it. In the time of the Mohamedan government, it was the Bunder or Port of the weftern arm of the Ganges; where the cuftoms or duties on merchardife, were collected. The French, Dutch, Danes, and Portuguefe, have each of them a town and factory on this part of the river, and between Hoogly and Calcutta; and all within the extent of 10 miles, along the river. The French fettlement of Chandernagore, and the Dutch one of Chinfura, are both very neat and pretty large towns; and each of them on a better fite than Calcutta.

## [ 60 ]

MoorShedabad, fituated alfo on the, weftern arm of the Ganges which is there very low in the dry feafon, is about 120 miles above Calcutta. It was the capital of the Bengal provinces until the eftablifhment of the Britifh power : and even long after, it was the feat of the Collector general of the revenues; being a more centrical fituation than Calcutta. It is very large, but ill built; and in its plan fo very irregular, that it is difficult to eftimate the quantity of ground it ftands on. It is a modern city, and does not contain any magnificent buildings, either public or private: nor was it ever fortified except by an occafional rampart thrown up round it, on the Mahratta invafion in $1742^{*}$. This city is now decaying, efpecially fince the removal of the Board of Revenue to Calcutta, in 1771.

Coffimbazar is a fmall city, nearly adjacent to Moorhedabad, and was at all times the place of refidence of the different European factors; this being the centre of their trade.

Mauldah is a pretty neat city, not far removed from the north bank of the Ganges, and on a river that communicates with it. It arofe out of the ruins of Gour, which are in its neighbourhood. In point of general fituation, it is about 70 miles to the north of Moorfhedabad. This, as well as Coffimbazar, is a place of trade, and in particular produces much filk

Rajemal lies on the weft bank of the Ganges nearly in the parallel of Mauldah, and about 20 miles from it; at the foot of the chain of hills which projects into the river, at Siclygully and Terriagully. It is in a ruinous ftate, although the refidence of the Viceroy not I 30 years ago; and has hardly the population of an ordinary market town, at prefent. Its fituation is romantic, but not pleafant : for in Hindooftan, the hills and eminences being always covered with wood, that beautiful fwelling of the ground, which is fo juftly admired in European landfcapes, is loft; and the fancy is

[^70]prefented
prefented at beft with nothing beyond a wild fcene: which can only be relifhed by being contrafted with foft and beautiful ones, M. D'Anville confidered Rajemal as being feated at the head of the Delta of the Ganges : but it is more than 30 miles above it.

Dacca is fituated in the eartern quarter of Bengal, and beyond the principal ftream of the Ganges, although a very capital branch of it runs under it. Few fituations are better calculated for an inland emporium of trade, than this; as the Dacca river communicates with all the other inland navigations; and that not by a circuitous, but by a direct communication: as may be feen by the plan of its environs, in the Bengal Atlas. It fucceeded Sonergong, as the provincial capital of this quarter; and is the third city of Bergal, in point of extent and population. It has a vaft trade in muflins; and manufactures the moft delicate ones, among thofe that are fo much fought after in Europe: and the cotton is produced within the province. Dacca has in its turn been the capital of Bengal: and that within the prefent century. There are the remains of a very ftrong fortrefs in it; and within thefe few years there was near it, a cannon of extraordinary weight and dimenfions* : but it has fince fallen into the river, together with the bank on which it refted.

Dacca is fituated about 100 miles above the mouth of the Ganges, and 180 by the road from Calcutta. The country round it lying low, and being always covered with verdure during the dry months,

\footnotetext{

- As it may gratify the curiofity of fome of my readers, I have here inferted the dimenfions and weight of this gun. I took the meafures very carefully throughout, and calculated each part feparately. It was made of hammered iron; it being an immenfe tube formed of 14 bars, with rings of 2 or 3 inches wide driven over them, and hammered down into a fmooth furface; fo that its appearance was equal to that of the beft executed piece of brafs,ordnance, although its proportions were faulty.


The gun contained 234,413 cubic inches of wrought iron: and confequently weighed 64,814 pounds avoirdupoize ; or about the weight of eleven 32 . pounders. Weight of an iron thot for the gun 465 pounds.

## [ 62 ]

it.is not fubject to fuch violent heats as Moorhedabad, Patna, and other places.
Patna is the chief city of Bahar, and is a very extenfive and populous city, built along the fouthern bank of the Ganges, about 400 miles from Calcutta, and 500 from the mouth of the river. Having been often the feat of war, it is fortified in the Indian manner with a wall and a fmall citadel. It is a place of very confiderable trade. Moft of the faltpetre imported by the Eaft India Company, is manufactured within the province of Bahar. It is a very ancient city; and probably its modern namo may be derived from Pataliputra, or Patelpoot-her; which we have fuppofed above to be the ancient Palibothra.

Benares is the chief city of the diftrict commonly known by that name (and which confifts of the circars of Benares ${ }_{2}$ Jionpours, Chunar, and Gazypour) but is more celebrated as the ancient feat of Braminical learning, than on any other account; although it be a fine city, and very rich and populous, and the mont compactly built of any. It is built along the north bank of the Ganges, and is diftant from Calcutta, by the road, about 460 miles. Its ancient name was Kafi: but there are no notices concerning it, in tho works of the ancient geographers. I think if it had exifted during the time of the Syrian Ambafladors, Pliny would have noticed it, as he has done Methora (Matura) and Clifobara, which lay near the Jumna river.

Allahabad is feated at the point of confluence of the two great rivers Ganges and Jumna, and fucceeded to Piyaug. Acbar founded the prefent city, which he intended as a place of arms, as its fituation is very important both as it refpects the navigation of the two rivers, and the country of the Doab, behind it. Allahabad is about 820 miles above the mouth of the Ganges, and $5 j 0$ by land from Calcutta. It belongs to the Nabob of Oude, but its fortifications will hardly refift the battering of a field piece.

Lucknow is the prefent capital of Oude, having fuperfeded the late capital Fyzabad, on the occafion of the Rohilla and other conquefts; which left it rather in a corner of the kingdom, as it is now conflituted, and in that corner the fartheft removed from the fcene of bufinefs. It is. a very ancient city, and moderately extenfive: but after the fhort account given above of the nature of the ordinary buildings, a city may very fuddenly be augmented on its becoming a royal refidence: and Fyzabad of courfe may have declined. A fmall river, named the Goomty, runs under Lucknow 2 and communicates with the Ganges ; but this laft river is at leaft 43 miles to the $S W$ of Lucknow. With refpect to Calcutta; it is diftant by the neareft road, 650 miles; and about 280 from Delhi. All is one valt plain from Lucknow to the mouth of the Ganges.

Fyzabad lies on the river Gogra, a very large river from Thibet, and is fituated about 80 miles to the eaftward of Lucknow, and 560 from Calcutta. It is a very large city, and nearly adjoining to it, is the very ancient city of Oude or Ajudiah. Fyzabad was the capital of the Nabob of Oude, till within thefe few years; but it was an inconvenient fituation, evei before the Rohilla conqueft.

Jionpour is a fmall city on the Goomty river, about 40 miles to the N W of Benares, and in the road from that city to Fyzabad.

Corah, or Corah-Jehenabad is a fmall city in the Doab or country between the two rivers Ganges and Jumnah. Both this city and Jionpour, are within the Nabob of Oude's dominions.

Bereilly is the capital of Rohilcund, which was added to the dominions of Oude, in the year 1774. It is but a fmall city and fituated about half way between Lucknow and Delhi.

The city of Agra *, as I have faid before, is fituated at the weftern extremity of the tract under difcuffion; and on the fouth bank of the Jumna river, which is very feldom fordable. This

## [ 64 ]

city appears to have been during the late century, and in the beginning of the prefent, the moft Splendid of all the Indian cities; and at this time exhibits the moft magnificent ruins. About the year 1566, the Emperor Acbar, liking its fituation, made it his capital, and gave his name to it: fince which, it is often named Acbarabad. It was then a fmall fortified town; but it foon fprung up to an extenfive well built city, regularly fortified according to the Indian method, and with a fine citadel of red free-ftone. Perhaps it has feldom happened, that a city of fuch great extent and magnificence has declined fo rapidly. If Ptolemy, by Agara, meant Agra, it is certainly a place of great antiquity; but he has not placed Agara in the fituation where we fhould look for Agra. Biana or Baniana feems to have immediately preceded it, as the capital of the province now called Agra, and which was originally included in the kingdom of Canoge.

## [ 65 ]

## SECTIONIIT

The Triact.occupied, by tbe Courfe of the River Inpus and its principall Brancbes s'reitb the ädjacent Cotintries on the Soutb and Eaft, as far as the Cities of Agra, and Agemere; : and the: River Puddar.
$T$ HIS part compretends in generat the foutaihs or provinces of Lahore, Moultan, and Sindy; "with the northern parts of Agitimere, and the weffern parts of Agra and Delihi and is about 7 oo B . miles in Tength from NE to SW ; and from $55^{\circ}$ to $35^{\circ}$ in widthi. It is boünded on the eafl by Mount Sewalic, and by an limagiiiary line drawn from Hurdwar, to Agra; on the fouth by the 'great road leading from Agra to Agimere, and by the river Puddar; on the weit by the Arabian fea; and Perfiaz anda' on the nortit by Cabul and "Calhmere:

- Dellit, "the nominal capitar of Hindooftan at prefent, and the actual capital during the 'greateld part of' the time fince the Mo Mamedan conqueff, has itts poiftion determined by obfervations of latitude and longitude; $;$ which obfervations accord both with the maps, and with the popular 'eftimation of its diffanice, from the neareft pointstin the furveged tract, mentionned in the laf reation.
"Wee fiftrt hear of 'Dechiti," at the capital of Hindooftan, about the year 12 oop: It is reeported tà haye been founded by Delu*, about


[^71]K:
Deblet

## [ 66 ]

Debly. Although a more extenfive and populous city than Agra, it was not fo well built. Shah Jehan, grandfon of Acbar ant father of Aurengzebe, made this city his refidence, and directed it to be called Shahjehanabad; and by this kind of vanity, it happens, that mort of the Indian cities have a plurality of names: which occafrons great confufion, when it becomes neceffary to trace any event to a high period of antiquity.

Delhi, which is now fituated on the right, or western bank of the Jumna, anciently food on the oppofite bank. It is difficult to afcertain the true measure of extent of this city, which was said to contain, during the latter part of the lat century, two millions of inhabitants. It is certain, that the account given by Bernier, who had good opportunities of being informed, and who deferves the greateft credit for veracity, does not juftify fo high a.calculation of its inhabitants, His account was indeed written in 1663 , only four years after the acceffion of Aurengzebe : and it is well known that under his reign, both the empire and capital were greatly augmented. Bernier, I fay, eftimated the circumference of Delhi, at three leagues only, reckoning what was within the fortifications; befides which, he defcribes feveral fuburbs, but altogether, no extraordinary extent for a capital city in India. He defcribes Agra as being confiderably larger. After the plunders and maflacres that it has been subject to, fince the decline and downfall of the Mogul empire, we may expect it to be reduced very low : and accordingly, it is Spoken of by late travellers as a city of moderate extent; and even for an Indian city, very $1 l l$ built.

Claud Boudier found the latitude of Delhi to be $28^{\circ} 37^{\prime}$; and its longitude $77^{\circ} 40^{\circ}$. A MS. map communicated by Mr . Haftings, and which includes forme principal roads in the Dooab, between Furruckabad, Matura, Anopefheer, and Delhi; gives 51 G. miles of welting from Anoperheer, the nearest point in the furvey to Delhi ; and 16 of northing: and this agrees perfectly with the observation of longitude, and comes within one minute of the latirude. Delhi is also 40 computed coffes from Ramgaut, another

## [ 67 ]

point in the furvey; but this would place it 4 miles further to the eaft than the obferyation. It is placed according to the obfervation, and the diftance from Anopecheer. Beyond Delhi, weftwards, there are no points determined mathematically, by which the length and direction of the route can be afcertained ; except the computed diftances between places; and fome latitudes and longitudes, taken with little precifion, if we may judge by a comparifon of fome of the obfervations from the fame catalogue, with thofe taken by Eupeans. For inftance, the latitude of Jionpour and Burhanpour are from 21 to 25 miles too far north, in the Ayin Acbaree; Oude, 35 too far north; and Delhi, 22 too far fouth. We have therefore little reafon to fuppofe, that any of the others are much nearer the truth; nor is there any rule to guefs on which fide the error lies. The longitudes are ftill more vague; as for inftance:

|  | By teA. A. | By the Map. | Difiterece. |
| :---: | :---: | :---: | :---: |
| The difference of longitude between Delhi and Oude is | $3^{\circ} .28^{\prime}$ | $4^{\circ} 4^{\prime}$ |  |
| Delhi and Jionpour - - | 428 | 513 | - |

Here the medium of the difference is 10 minutes too little, in each degree.

## And again:


In there places, although the longitudes in the map are not determined with precifion, we may fill perceive that the Ayin Acbaree is not exach. From fuch kind of materials, nothing very accurate can be expected: and therefore I have never had recourfe to them. but in a very few cafes, where every other fpecies of information has failed.

K 2
The
$\cdots$ The conftraction of the geography of the tract Tpoken of in this feetion, 'turns chiefy ton'eight primary fations, or poihts; and' which with be difcoufted in ordet: they are', Lahore, 'Sirhind; Moultan, Aitock, Toúlomba;', Batnir, Jummoo, and Bullaufpouí

The firft point beyond Delhi that I have any kind of yata for fixing the pofition of, is Latior', 3 capial city in the Panjab ${ }^{*}$, and formerly a royal refidence. 'I have feveral itineraries and metroforindums of the road hetween the two places; 'but fome ate' defeetive's through omifions, and others too obfcure to be underftiod or foll 4 lowed. Tavernier, for inflance,' omits a whole fage of $\frac{1}{} \xi^{\prime}$ coffes; between Furridabad and Sultanpour; which' added to His otiginal number 19i, make 206 coffes. 'John Stecl in his itineríry (16i4) reckots 'only $\mathbf{~} 8 \mathrm{~g}$ : : but though 'I cannot 'tatee any bmiffions in it,' the account is confurted and obfcure; and therefore I have 'given it up. A map of the Panjab, obligingly communicated by Colonel John Murtay, Comminfary General to the army in Bengal ngives fhe diffancerat 20 ' coffes, or 293 G : miles.

| Tavernier's account corrected | - | - | 206 |  |
| :--- | :--- | :--- | :--- | :--- |
| Thevenot's | - | - | - | - |
| 200 |  |  |  |  |
| Murray's | - | - | - | - |
| 205 |  |  |  |  |

The medium of which is $203 \frac{2}{5}$; or, at 42 coffes to a degree, 291 G. miles. I have allowed 290, and taken its, latitude at $31^{\circ}$; fa that its longitude will be $72^{\circ} 47^{\prime}$, or $4^{\circ} 53^{\prime}$ weft of Delhi. The Ayin Acbaree makes the longitude $5^{\circ}{ }^{1} 6^{\prime}$, or $29^{\prime}$ more. Its latitude is varioufly reprefented: by the Ayin Acbaree $31^{\circ 0} 50^{\circ \prime}$; by ${ }^{\top}$ Thevenot, the fame; in an, Indian table $31^{\circ}$; by a MS. itinerary $\dagger$ (dated 168.2 ) $30^{\circ} \cdot 30^{\circ}$; and by Col. Murray ${ }^{\prime \prime}$ map $30^{\circ} 15^{\prime}$.

[^72]Lahore

## [ 69: ]

Lahore is a very important point in this confruction, as it regulates the pofitions of all the places between Delhi and the Indus; and therefore we have reafon to regret that we have no better authority for fixing it.
Lahore is a place of high antiquity, and was the refidence of the firf Mahomedan conquerors of' Hindooftan, before they had eftablined themfelves in the central parts of the country. It owed its modern improvements, however, to Humaioon, the father of Acbar, twho made it his refidence during a part of his troublefome reign. . Thevendt fays that, including the fuburbs, it was 3 leagues in length at that period: ands when he fatwit, about the year 1665 the city:itfelf was above a leagué in "extent. ${ }^{1}$ Jehānguire, fon of Acbar, allowed the Portuguefe to build: a church theres and fome of its furniture remained at the time of Thevenot's vifit:

The Rauke :(the ancient Hydraotes) on which it is fituated; is a noble rivet ; and by its navigable courfe', has ai communication with the Indus, and all its banchès. The province, of which Lahore is the capital, is oftrier named Panjab, than Lahore - however, Panjab being applied to a natural divifion of country, is applicable alfo, to part of Moultan. It is very extenfive, and rematkably fertile; affording, in addition to all the neceflaries of life, wine, fugats, and cotton twool; the lant of whicl flipplied the-manufattories of the province.: There are alfo' in the trat between the 'Indus and Chelum, (or Behut) falt mines!, wonderfully productive; and afs fording fragments of rock falt, "hard eniough to be formed into veffels; \&c: Goldi (according to the Ayin Acbaree) was found in the channels bf its tivers; "and the fame is related of thofe of Kémaoon, which proceed from the fame ridge of mountains. "Ice is brought from the nothern mountains, !'to Lidiore, : and fold there aill the year. The famous avenue of fhady trees, fo much spoken' ${ }^{\circ}$ df, "by' the'early Indian travellèrs, began at Lahoré, and exterdedi to Agra, dear:5do. Engllih' miles :watore is now the capital of the Seiks,"
a new power, whofe name, even as a fect, was hardly known, until the rapid decline of the Mogul's empire, in the prefent century.

Sirhind is a city of great antiquity, and lies about midway between Delhi and Lahore. Tavernier reckons it 105 coffes from Delhi ; and Steel, 90. I have placed it in its proportion of the whole diftance between Delhi and Lahore, which is 103 coffes, or about 147 G. miles. Col. Murray's map gives' 108 coffes. Not having the latitude of Sirhind, and the line on which its parallel depends being near 300 miles in length, much muft be left to chance, as to its accuracy. It happens, however, that no obftacles prefent themfelves between Delhi and Lahore, to give any confiderable elbow or bend, to any part of the road (fee page 6); which is therefore, generally fpeaking, very ftraight; and only making a fmall bend northwards, in the neighbourhood of the Jumna river. Sirhind ftands in the map, in lat. $29^{\circ} 55^{\prime}$, lon. $75^{\circ} 15^{\prime}$.

I find by Condamine's travels in Italy, that the art of weaving: filk was brought back to Conftantinople in the fixteenth century, by the monks who returned from Sirhind (or Serinde according to him). For although the art was brought into weftern Europe, under the Roman Emperors, it had again been loft during the confufions that attended the fubverfion of the weftern empire.

It is worthy of remark, alfo, that Procopius takes notice, that filk was brought from Serinda, a country in India, in the time of Juftinian (in the fixth century). The reader is apprized, that filk, together with the Latin name of it , is underftood to have been brought from Seres or Serica (a country of upper Afia, bordering on the N W of the Chinefe wall). This was Pliny's idea: how juft, I know not. The Ayin Acbaree takes no notice of any manufactures of filk at Sirhind: it only calls it a famous. city (in the fixteenth century).

Between Delhi and Sirhind are very extenfive plains, within which are fituated the towns of Panniput, and Carnawl, famous, for great battles, both in ancient and modern times. The reafon

## [ 71 ]

of it; is obviouly, the nature of the country; between it and Delhi; for it is a valt plain, fituated at the mouth of a pals; for fuch the country immediately on the weft of Delhi may be confidered to be, Thut up by the mountainous and clofe country of Mewat and Agimere on the one hand, and by the Jumna river on the other: and whether Delhi, Agra, or Canoge, was the capital, this was the road to it from Tartary and Perfia, the original countries of the conquerors of Hindooftan. . The courfe of the Jumna, above Delhi, is determined in the map by the direction of the road to Sirhind; Kungipara, near, thât river, being placed in reference to Carnawl; from 'whence the river bends (according to the MS. maps) towards the NE'to Sehauranpour and Nen. Mr. Forfter, who croffed it in his way from Loldong to Jummoo, eftimated the diftance between the Ganges and Jumina at about 40 coffes, in a northwefterly direction. The place of the fource of the Jumna, we are ignorant of; buit it would appear to be remote, even from the place where he croffed it within the mountains; for he found it a large river.

The upper part of the Doab*, or tract of land between the Ganges and Jumna rivers, has its geography from feveral MS. maps; and a few of 'the' pofitions are from Sherefeddin's hiftory of Tamerlane, tranlated by M. de la Croix.

- Between Carnawl and Sirhind, are found in thefe MS. maps, three ftreams or rivers, croffing the great road. Two of them are the Caggar (or Kenker) and the Surfooty (or Serefwatty) and the third has no name in the maps. The firft is taken notice of in the Ayin Acbaree, as one of the leffer Atreams in the foubah of Dehbi, and as paffing on the welt of Tannafar, a celebrated place of Hindoo worfhip. The fecond pafies between Umballa and Sirhind; and the third between the swo other's. It is probable, from circumftances, that there may be otherss, although deemed too infignificant


## [ 72 ]

to inerit notice. All thefe ftreams run to the fouth, or fouth-wef; and probably mix either with the Indus, on Puddar: though I formerly fuppofed them to run to the S E inta the Jumna. Ihad alfo, with M. D'Anville, fuppofed the: Caggar ta be the: Hefudruts of Pliny, fituated half way between the Hypbafis and Fomanes s. but having now difcovered the Beyah to be the river meant by the ancient Hyphafis, there can be not difficulty in pronouncing the Setlege or Suttuluz, to be the Hefudrus, as it anfwers in: point of proportional diftance.

I cannot find what river is meant by.the Jidger, often, mentioned by Ferifhta, unlefs it be a branch of the Caggar;.i which river, as well as the Surfooty, has its fource in the Sewalic mountains, between Delhi and Sirhind; taking its courfe by Semanah and Sunnam. The Surfooty, we learn by the MS. maps, after paffing by Tannafar, Surfa or Surfutti, \&zc. joins the Caggar.

Near to Tannafar and the lake Kodrkhet, places of Hindoo worlhip, is the fite of the ancient city of Huftnapour; and of the war of the Mahabarut (an epifode of which has been lately tranflated from the original Sanfcrit, by Mr. Wilkins) fo that this ground, which is not far from Carnawl and Panniput, has been the feene of war in all ages; poetically, as well as.hiftorically. The countries between Delhi, and the Panjab, being) fcantily fupplied with water, the Emperor Ferofe III. undertook the noble ds well as ufeful talk of fupplying it better, and at the fame time meant to apply the water fo, furnifhed to the purpofes of navigation. Daw, (Vol. ift. p. $3^{2} 7$ ) tranilates. Ferinhta thus: "In. the yearr 13.55. Ferofe " marched' to. Debalpours, where hel mader a.canal 100 miles in " length; from the Suttuluz to the Jidger. In the following year, " between the hills of Mendouhiand; Sirmore, he cuta channel from ".the Jumna, which he divided-into feven ftreams; one of which " he brought to Hafli, and froms: thence to Beraicen, where he built "a a frong caftle, calling it by his own name. He drew foon after, "a canal from the Caggar. paffing by the walls of Sirfutti, and
ex joined it to the river of Kera; upon which he built a city, named " after him, Ferofeabad. This city he watered with another canal " from the Jumna. Thefe public works were of prodigious advantage " to the adjacent countries, by fupplying them with water for their " lands, and with a commodious water-carriage from place to place." We lcarn alfo from the Ayin Acbatee, (Vol. II. p. 107 Englifh tranlation) that Ferofe founded the city of Hiffar, (called alfo HiffarFeroozeh) and dug a canal from the Jumna to it. And we find, moreover, that the canal from the Jumna at Kungiparah, to Delhi, was the work of Ferofe: and is probably one of the feven channels mentioned by Ferifhta. I apprehend then, that Hiffar, or Hiffar-Feroozeh, of the Ayin Acbaree, is the fame with the $\mathrm{Fe}-$ rofabad of Ferifhta. But poflibly, Ferofe might only embellifh and increafe the fortifications of Hiffar, and then give his name to it; a practice very common in Hindooftan, to the utter confufion of hiftoric records, and no lefs injuftice to the original founders. The town of Surfutti, by the authority of the MS. maps and other circumftances, I place on the river of that name between Tannafar and Kythil (or Kuteil) ; and Haffi or Hanfi, on the weft or S W of Kythil. Hiffar, or Ferofeabad, will occupy a place fill further to the SW ; and in this pofition, will be about 75 coffes from Delhi, in a weft, or weft-northwardly direction; and about 100 miles. from the Setlege or Suttuluz, at the neareft part of Debalpour, from whence the canal was faid to be drawn. The rivulet of Kerah, I cannot trace, any more than the Jidger: but I think it will appear as clear to the reader, as to myfelf, when the text, and the different pofitions in the map, are confidered, that thefe different canals had for their immediate object, the junction of the Setlege and Jumna rivers; and remotely, that of the Indus and Ganges; although they do not allow us to comprehend the whole fcope of Ferofe's plan of inland navigation. By a light infpection of the map, it will appear that this project would, if the ground admitted of its being fuccefsfully put into execution, be one of the greateft under-

## [ 74 ]

takings of the kind that ever was projected; that of cutting througfs the ifthmus of Suez, only excepted. We chould then have feen two capital rivers, which traverfe a large part of the continent of Afia; which enter the fea at 1500 B . miles afunder; and which Atretch out their arms as it were, to meet each other; united by art, fo as to form an uninterrupted inland navigation from Cabul to Affam! I take it for granted that this canal was never completed, otherwife we fhould have heard more of it, as we have of the canals leading from the Jumna. The diftance between the navigable parts of the Jumna and Setlege, is not 120 B. miles, direct.

Again, (in page 329 of Dow's ift volume) it is faid that Ferofe turned the courfe of a large rivulet which fell into the Setlege, from Hirdar in the province of Sirhind, into the Selima, a fmaller rivulet that ran fouthwards towards Sunnam (a place 14 G. miles $\mathrm{S} W$ of Semanah). Improvements of this kind, occur fo feldom in the hiftory of Hindooftan, where barbarous conquefts and maffacres, are the principal fubject, that they are dwelt on with pleafure, whenever they appear : and we have;only to regret on the prefent occafion, that the defcription of them is fo obfcure;

Semanah (or Sammanah) has its diftance given from Panniput, at $5^{2}$ coffes, in Sherefeddin; but its diftance from Sirhind is inferred from the line of Tamerlane's march from Batnir to Panniput. I had placed it $43^{\frac{1}{2}} \mathrm{G}$. miles in a $S$ by $\mathrm{E} \frac{7}{2} \mathrm{E}$ direction from Sirhind: and find it in Col. Murray's map nearly the fame diftance ( 44 miles) but on a $S$ by W bearing. It is included in the circar of Sirhind : and the circar of Hiffar, lies immediately to the fouth of it. On the weft and S W of Hiffar and Semanah, our knowledge, both geographical and political, is very much confined. Timur's (or Tamerlane's) route from Batnir, the courfe of the Caggar river, and the road from Agimere to Jeffelmere, is all that we have towards filling up fo large a void. The firft is from Sherefeddin; the others from Mr. Haftings's, and Col. Popham's MS. maps.

## [ 75 ]

The common boundaries of Agimere, Delhi, and Moultan, we have no means of afcertaining: nor is the Ayin Acbaree particular enough on this fubject, to lend any affiftance towards it.

Mewat, or the hilly tract lying on the weft of the'Jumna, between the parallels of Agra and Delhi, as well as the northern and eaftern parts of Agimere, which are mountainous alfo, have their geography much improved by the MṢ. maps communicated by Mr. Haftings, and Col. Popham. There is little to be faid on the fubject of the conftruction of thefe parts. Agimere, which is the primary point that determines the parallel and fcale of the weftern parts, will be difcuffed in the next fection, to which it properly belongs: the pofitions on the north and eaft of it, are taken chiefly from the MSS. juft mentioned.

Jaepour or Jaynagur, the capital of one of the Rajpoot Princes in the eaftern quarter of Agimere, has its longitude given by Claud Boudier, at $76^{\circ} 9^{\prime}$, or $2^{\circ} 19^{\prime}$ weft from the city of Agra. All the MS. maps that I have confulted, place it very differently : and, I find, I cannot allow a greater difference than $\mathrm{I}^{\circ} 55^{\prime}$, without rejecting the fcales of all the MS. maps; which, as they are formed from the difference of latitude, would be abfurd. Perhaps the numbers in Claud Boudier's table, are not right: M. D'Anville has them at $76^{\circ} 5^{\prime}$ in the Eclairciffemens, which is fill wider from probability.

It appears by M. D'Anville, that the Rajah of Jaepour (by name Jeffing) had erected two obfervatories, one in his newly built capital of Jaepour (which is about a league from Umbeer or Ambeer, the ancient capital) the other in one of the fuburbs of Delhi. Father Claud Boudier, at the Rajah's requeft vifited the former of thefe obfervatories about the year 1732 : and I think it probable that we are indebted to the Rajah's affiftance for fome others of the obfervations made by Claud Boudier; particularly thofe at Agra and Delhi. The latitude of Jaepour is $26^{\circ} 5^{\prime}$; and M. D'Anville
in his Antiquite de L'Inde reckons it 50 leagues from Delhi, which accords well with my idea of the diftance between them.

The MS. maps which I have fo repeatedly mentioned as being communicated by Mr. Haftings and Col. Popham, together with others formerly in the poffeffion of Col. Muir, and fince his death*, obligingly communicated by my friend Mr. Benlley, of the Eaft India Direction, are corrected in bearing and fcale by the primary points of Agra, Delhi, and Agimere ; but only a very trifling alteration was required. It may be obferved, in refpect of the new matter contained in thefe communications, that a great number of places appear, that were familiar to us, as well in the hiftory of former times, as in the account of recent tranfactions; but which we could not, heretofore, refer even to any general fituation in a map. Still however, much is wanting, to render in any degree perfect, the geography of the tract in queftion, both as to mathematical exactnefs, and to relative defcription : in particular the latitudes and longitudes of Lahore, Sirhind, Attock, Moultan, Batnir, Agimere, Cafhmere, Jummoo, Sehaurunpour, \&c.; together with the intermediate roads and particulars of the face of the country, and the courfe of the river Indus. Until thefe are procured, we muft be content to remain in ignorance concerning many curious particulars of Indian geography; and fatisfy ourfelves with having the fituations of places that are the moft interefing, either from having been the fubjects of hiftory, or as being connected with the politics of the prefent times.

The next place in point of confequence to the conftruction of this part of the map, as it regulates many of the northern pofitions, is Attock, a city and fortrefs on the eaft bank of the Indus, and built by Acbar in the year 158 I . We fhall have occafion to fpeak on the fubject of its hiftorical importance, hereafter. The pofition

[^73]
## [ 77 ]

of this place, geographically, can only be regulated by the apparent bearings from Lahore and Moultan, in a Perfian map of the Panjab, together with the diffances collected from the different accounts in the fame map; in itineraries; and in the Ayin Acbaree. The latter gives for the breadth of the Panjab, from Ludhana to Attock, reckoning from river to river, on the line of the roads between them 185 coffes: and as two of thefe roads make a confiderable angle with each other, I allow the diftance on a ftraight line to be only 180 cofles; or 259 G. miles. Some accounts that I have feen of the number of coffes, are too much exaggerated, to be depended on, or noticed; and I rely on the Ayin Acbaree, in preference to them. The MS. map communicated by Col. Murray, gives 18 I coffes; or $260 \frac{1}{2}$ G. miles, for the whole diftance: but although it comes fo very near to my calculation in the general account, it differs in the meafure of each particular Doabah, or fpace, between two adjoining rivers. Attock is placed accordingly, 259 G. miles from Ludhana, on the bearing from Lahore, as nearly as it could be collected from the Perfian map: and thefe data give its latitude at $32^{\circ} 27^{\prime *}$; lon. $70^{\circ} 3^{6^{\prime}}$. Col. Murray's map places it in lat. $32^{\circ} 25^{\prime}$.

Moultan, fuppofed, with great appearance of reafon, to be the modern capital of the country, which was defigned by the hiftorians of Alexander, under the name of Malli, is 90 coffes from Lahore (fouth-weftward) according to the Perfian map; 120 according to Thevenot's account ; and 110 in Col. Murray's map. The Ayin Acbaree takes no notice of the diftance between them; but gives the latitude and longitude of both. The latitude is alfo given by Thevenot, and by the Miffionary's itinerary; and when allowance is made for the latter, in the fame proportion as it differed from the true latitude at Agra, the three obfervations differ among themfelves 22 minutes. That is, the Ayin Acbaree gives $29^{\circ} 5^{\prime}$, Thevenot $29^{\circ} 40^{\prime}$, and the itinerary $29^{\circ} 32^{\prime}$, which with the addi-

[^74]tion of $30^{\prime}$ (fee note, page 68) gives $30^{\circ} 2^{\prime}$. I have placed it in $29^{\circ} 5^{2^{\prime}}$; which, on the aforefaid diftance of 90 coffes from Lahore, gives $70^{\circ} 40^{\prime}$ for its longitude; or $7^{\circ}$ weft from Delhi. The Ayin Acbaree makes it $7^{\circ} 3^{\prime}$ : which agrees very nearly with the 90 coffes in the Perfian map. This diftance alfo accords with the bearings in the fame map; where Moultan ftands $S$ a very little $E$ from Attock, and about $60^{\circ}$ to the weftward of S from Lahore. And Col. Murray's map has nearly the fame bearings. Thefe three primary points of Lahore, Attock, and Moultan, vaguely as they may appear to be afcertained, are the foundation on which the fcale, and relative parts of the whole Panjab country depend.

Thevenot defcribes Moultan as a city of fmall extent for the capital of a viceroyalty, but ftrongly fortified, and having a Hindoo pagoda of great celebrity. The Ayin Acbaree reprefents it, as one of the moft ancient cities of Hindooftan. It has, or had, a great manufacture of cotton cloths; the province itfelf producing the cotton; as well as fugar, opium, galls, brimftone, \&c. Thevenot defcribes the river that led to Moultan, as being partly choaked up, or fpoiled, in its channel, in his time (about 1665) and this had greatly leffened its trade. He alfo takes notice of a particular fect of Hindoos there, called Catry; and fays, that this is their proper country. In another plate, he explains the Catry tribe, to mean Rajpoots, of warriors; that is, the Kuttry tribe, properly. We fhall take notice hereafter, that thefe Catries were the Catberi of Diodorus, and the Catbei of Arrian; with whom Alexander warred, on the borders of the Malli. Moultan belongs now to the Seiks, though the poffeffion of it, as well as Lahore, has been often difputed by the Abdalli.

I have not extended the large map of India further to the north, than Attock and Jummoo, becaufe it would have added confiderably to the width of it, without furnifhing any fubject, particularly interefting to modern enquiries: and the materials are no of a quality or quantity proper to correct the geography of that part, on an extended fcale. I have therefore added a map on a fmaller fcale,

[^75]
## [ 79 ]

in which the tract between the Panjab, Bochara, \&cc. is defcribed; and a feparate account of it will be given in the courfe of the Memoir.

The river called by Europeans Indus, and by the natives generally Sinde* (or Sindeh) is formed of about 10 principal flreams which defend from the Perfian and Tartarian mountains, on the north-eaft, and north-weft. The Ayin Acbaree defcribes its fource as being in Calhgur and Cahmmere; by which it appears that the people of Hindooftan confider the north-eaft branch as the true Sinde $\dagger$. From the city of Attock, in about lat. $32^{\circ} 27^{\prime}$ downwards to Moultan, or to the conflux of the Jenaub, or Chunaub, it is commonly named the river of Attock, which in the Hindooftan language, imports forbidden : probably from the circumftance of its being the original boundary of Hindooftan on the north-weft; and which it was unlawful for the fubjects of Hindooftan to pafs over, without fpecial permiffion $\ddagger$. Below the city of Moultan, it is often named Soor, or Shoor, until it divides itfelf into a number of channels near Tatta; where the principal branch takes the name of Mehran. The river, however, when fpoken of generally, is called Sinde, although particular parts of it are known by different names. The courfe of the Indus below Moultan; has its particulars from. M. D'Anville; but the general direction of its courfe; is confiderably more to the weft, than he defcribes it. This is occafioned by my placing its emboucbure fo much farther weft than ufual, in refpect of Bombay (fee page36) while the pofition of Moultan remains nearly as it formerly was. I obferve that moft of the old maps of India give the Indus much the fame courfe as I have done.

[^76]
## [ 80 ]

The Miffionary's itinerary beforementioned, gives the names of many places, and fome latitudes, on the Indus. It places the fortrefs and city of Bhakor, which the Ayin Acbaree fays, is the ancient Manfurah (though D'Anville fays the contrary) in latitude $27^{\circ} 12^{\prime}$; Tatta in $24^{\circ} 20^{\prime}$; and Bunder Lawry (called alfo Bunder Laheri) in $24^{\circ} 10^{\prime}$. All thefe, I take to be from 20 to 30 minutes too far fouth.

Moultan is about the fame diftance from the fea, as Allahabad; that is, about 800 B . miles by the courfe of the river; and our author was 21 days in dropping down with the, ftream, in the months of October and November: when the ftrength of the land floods were abated.

The boundaries of the provinces of Moultan and Sindy on the weft, extend a confiderable way beyond the bank of the river; that is to fay, from 50 to 100 miles. The country is in general flat and open from Moultan to the fea; and the province of Tatta itfelf (the Patale or Patala of Alexander) is faid to refemble Bengal, not only in the flatnefs of its furface, richnefs of foil, and periodical inundations; but alfo in the food of its inhabitants, which is chiefly rice and fifh. The fite of the ancient capital, Braminabad, is near Tatta; and, in the time of Acbar, fome confiderable ruins of it were remaining : particularly the fort, which is faid to have had an aftonifhing number of baftions to it. Tatta is made fynonymous to Daibul, in the Perfian tables (which were obligingly lent me by Sir William Jones, and are thofe mentioned in his preface to Nadir Shah) where it is placed in $24^{\circ} 10^{\prime}$. The itinerary fays $24^{\circ} 20^{\prime}$, and D'Anville $24^{\circ} 40^{\prime}$. I have placed it according to its reputed diftance from the mouth of the Sinde, which brings it to $24^{\circ} 45^{\prime *}$.

The country known by the name of Panjab, or that watered by the five eaftern branches of the Indus, has been very little known to

[^77]
## [ 81 ]

us in modern times, either geographically, or politically. However, it deferves notice, if only on the fcore of ancient hiftory; being the fcene of Alexander's lant campaign, and the ne plus ultra of his conquefts. Here fome new matter offers; having before me, a map of this country drawn by a native, and preferved in the archives of government in Hindooftan. The names were obligingly tranllated from the Perian, by the late Major Davy, at the requeft of Sir Robert Barker. The tract, of which this map ferves as a ground work, is a fquare of about 250 B . miles; and includes the whole foubah of Lahore, and a great part of Moultan proper. The points of Lahore, Attock, and Sirhind (the fixing of which, I have before given an account of) determine the fcale of the map; the intermediate diftances from place to place in it, being given in writing, and not by a fcale.

I confider this MS. as a valuable acquifition; for it not only conveys a diftinct idea of the courfes and names of the five rivers, which we never had before: but, with the aid of the Ayin Acbaree, fets us right as to the identity of the rivers croffed by Alexamder, during his famous expedition into India; of which more will be faid hereafter.

Befides the places found in this map, I have inferted others, from the authority of the Ayin Acbaree; feveral from implied fituations in Ferifhta; others from Sherefeddin's hiftory of Timur*; (particularly his march from Toulomba to Adjodin and Batnir) and others from various MSS. in my poffeffion. The divifion of the country, is entirely from the Ayin Acbaree.

The town of Adjodin, often mentioned by Ferihta, and Sherefeddin, is recognized in the MS. map, by the circumftance of its containing the tomb of Sheik Furrid, which was vifited by Timur. In the map it is called Paukputton; but it perfectly anfwers to the

[^78]
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profition of Adjodin, as defaribed by the above authors; and is $a$ point, or the fixing of which a great many others depend,

The next tivet to the eaft of the Sinde, or Attocks and the weftmont of the five rivers; is, in modern language, called Behut, or Chelum; whofe general courfe is nearly parallel to that of the Attock $k_{1}$ but its bulk is lefs. This is the famous Hydarpes of Alexander, and faid by the Ayin Acbaree to be, anciently, ealled :Bedufta. It runs through Cafhmere, ' and was fuppored by M. D'Anville :(though erroneoully) to join the Sinde at Attock. Tavernier feems to have led M. D'Anville into this miftake; which hastinally been the occafion. of his mifplacing, and of courfe mifnaming, all the other fopr rivers. The fact is, that the river which runs by Cabul, and bears the name of Attock, joins the Sinde on the weft fide, and in front of the city of Attock. We are obliged to Mr. George Forter for clearing up this miftake. He travelled that way in 1783 .

The fecond riyer is the Jenaub, or Chunaub; and is the Acefines * of Alexander. The third is the Rhuvee, or Hydraotes + of Alexander; on the fouth bank of which, ftands the city of Lahore. Thefe three rivers fucceffively unite with each other at fome diftance above Moultan; and form aftream equal to the Indus itfelf, at.the place of confluence; which is about :2o miles on the weft of Moultan; and .50 'kelow the mouth of the Rauvee. It is remarkable, that the Jenaub communicates its name to the confluent Atreams in thefe titimes ${ }^{j}$ as it did in Alexander's time, under the name of Acefines. Its rapidity and bulk are particularly remarked by the hiftorians of Alexander and of Timur.' The fourth river is the Beyah, anciently called Beypa/ba, ind is' the :Hypbafis or $H u$ phafis of Alexander; being , the next in fuccefflon to the Hydraotes or modern Rauvee; and thefifth is the Setleger Suttuluz, or Sutluj.

[^79]
## [ 83 ]

This laft river, about midway between its fource and the Indus, receives the Beyah: after which, they do not mix their waters with the other rivers of the Panjab, but join the Indus in a feparate ftreatn, a great way to the fouth of Moultan; while the other three rivers pafs. in a collective ftream on the north of Moultan, and clofe under it. . Ptolemy names the laft river of the Panjab (going eaftward) the Zariadrus; Pliny, the Hefudrus. Arrian has the name of Saringes among his Panjab rivers; and fays that it joins the Hyphafis (or Beyah). The Ayin Acbaree fays that its ancient name was Shetooder; from whence we may eafily trace Setluj, or Suttulaz. Before it is joined by the Beyah, it is a very confiderable river, and is navigable 200 miles. About 24 miles below the conflux, a feparation again takes place *, and four different ftreams are formed ; the northmoft, and mott confiderable of which, recovers the name of Beyah; and is a deep and rapid river. The others are named Herari, Dond, and Noorney: and near Moultan, they unite again, and bear the name of Setlege, until both the fubftance and name are loft in the Indus, about 8o: miles, or three days failing + , by the courfe of the river, below the mouth of the Jenaub. It is owing to the feparation that takes place, after the firft confluence of the Beyah and Setlege, I apprehend, that fo. many names are glven to the latier, by modern; as well as ancient authors: which names; applied by the natives, to their- refpective branches; have, by Europeans, or others;' who were ighoxant of the circumftances, been fuppofed to belong to one principal river only. The. Perfian map of Panjab, and 'Sherefeddin's hiftary of Timur, take notice of pnly one branch, befides the Beyah (whence one would eohclude there were only two principal ones) and this. fecond river is named Dena: poffibly the fame meant in the Ayin. Acbaree, by the Dond.

- Ayin Acbaree. + Mifionary's itinerary.

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## [ 84 ]

Although we have the dimenfions the Panjab country, in a tolerably fatisfactory manner, from NW to S E, both in the aggregate, and in particulars; yet we have not the means of determining its breadth from north to fouth; or rather, from Lahore to the Setlege. The firl junction of the Beyah and Setlege, is ftated by the Perfian map, at 63 coffes below Ludhana; but we are left to guefs the crofs diftance from Lahore, unlefs what is faid in the fame map, be true, that it is only 18 coffes from Lahore to Kuffoor, and alfo that Kuffoor is on the banks of the Setlege : but this is highly improbable from other circumftances; in particular, that the fame Perfian map allows a greater fpace between the Rauvee and Setlege, than between the Rauvee and Jenaub. Col. Murray's map places Kuffoor on the Beyah, and not within 25 coffes of the Setlege. The marches of Timur acrofs the lower parts of the Panjab, afford but a faint light to guide us, fuch as day's marches; and thofe in an oblique direction.

The authorities on which I have founded the geography of the Panjab, after fixing the primary points already difcuffed, are the following:

The Perfian map furnifhes a general idea of the courfes of the rivers, and thefe ferve as a kind of ground-work, or firft ideas. It alfo furnifhes fome pofitive diftances, and the Ayin Acbarce many others : and the march of Timur, and the Miffionary's itinerary, furnifh fome proportional, or comparative ones. Toulomba, or Tulmabini, which is confidered as a primary fation or point, is a fortrefs on the fouth bank of the Rauvee, 35 coffes * above, or to the ENE of Moultan; or 5 days out of 8, of the voyage from Lahore to Moultan $\dagger$ : and the general direction of the river, is nearly ftraight, in the Perfian map. By thefe helps we have a point fettled, in refpect of Lahore and Moultan: and from it, Timur's route may be traced acrofs the Panjab, both ways:

[^80]
## [ 85 ]

that is, back, towards the Indus, the way he came; and onward, by the route of Batnir and Delhi. According to Sherefeddin's. manner of writing, one could hardly be certain, whether Toulomba was on the fide of the Rauvee, or the Jenaub. Ferifhta has placed it on the latter, erroneoully; for the miffionary came down the Rauvee, and paffed by it ; moreover giving its latitude at $15^{\prime}$ north of Moultan : though it is probably $25^{\prime}$. Timur made one day's march, from the conflux of the Chelum and Jenaub to this place; and as he did not bring the army with him, but left them crofling the river, it may be inferred that the march was not a fhort one; and therefore I allow 14 coffes for it, in a SSE direction: that being the pofition of Toulomba from the conflux, by the above conftruction. A fortrefs, not named, ftood on the weft fide of the conflux ; and juft below it, Timur threw a bridge acrofs. Before Timur arrived at this place, he had marched according to Sherefeddin, 5 or 6 days along the sveftern bank of the Chelum, aftef he had taken the fortrefs of Sheabedin Mobarick, in an illand of that river. This is all that we are told of the particulars, of his march, from the Indus, to Toulomba. The Indus he croffed, (I take it for granted) at, or very near, the place where Attock now ftands (for it was built, more than a century and half after, by Acbar) as he came by way of Nagaz and Banow. Sherefeddin relates that he croffed the Indus, at the place where Gelali or Gelaleddin (King of Chararm) did, when he fled from Gengis Cawn; and this I think may be afcertained to be the fame place*. The hiftory of Gengis + gives no fatisfaction on this head, but reprefents Gelali as chufing the moft difficult part of the river for the

[^81]rear of the field of battle, to preclude all hopes of flight, from his army: and this (if true, for Gelali himfelf fwam acrofs) by no means contradicts my opimion; becaufe, in the neighbourhbod of Attock, there muft be many difficult places, Attock itfelf being on the only practicable part thereabouts.

But to return to Timur. After he had croffed the Indus over a bridge of boats *, we learn that the chiefs of the mountain of Jehud or Joud came to make their fubmiffions to him, as Ambifares, King of the fane country, did to Alexander, about $173^{\circ}$ years before. The Jehud mountains, are thofe which extend from Attock, eaftward to Bember; and are a part of the territory of the mountaineers, fometimes, defigned under the name of Gickers, Gehkers, or Kakares.

Timur's firft object after croffing the Indus, being to effect a junction with his grandfon Peer Mahmud's army, which was then befieging Moultan, he directed his courfe that way, inftead of taking the common road to Delhi, by Rotas and Lahore. The neighbourhood of a navigable river, being a defireable object to an army marching through a dry fterile country, he puhed for the neareft part of the Behut, or Chelum river (the Hydafpes of Alexander) where he attacked and took the fortrefs and ifland of Sheabadin. After this, he marched as has been faid before, along the Chelum, and croffed that river, and the Jenaub, below their conflux ; and went from thence to Toulomba, which we have juft left. This is a confiderable town, and a pafs of confequence on the Rauvee river ; and often occurs in Ferifhta's hiftory of Hindooftan. It was in the neighbourhood of this pláce, thàt Alexànder made war on the Malli, or people of ancient Moultan; as will be taken notice of, in its place. Timur faid here 6 days, and then proceeded with the whole army acrofs the Baree Doabah 中 to Shawnawaz (or

[^82]
## [ 87 ]

Shanavas) a large and populous town near the north bank of the Beyah, after its feparation from the Setlege. Here he found more grain than his army could confume; whence we may: infer the fertility of the country, which is low and flat $\boldsymbol{l}_{\boldsymbol{y}}$ and fubject to periodical inundations like Bengal. :Sherefeddin deefc̣ribes at this place a deep lake, fortified round with a wall, and defended by 2000 men; :(This reminds one frongly of fomething fimilar at Sangala, .which Alexander attacked, before:he reaqhed the :Hyphafis; onily, the hill, which was fortified round with :carriages, is wanting). Shawnawaz is about 95 B. miles from Lahores ${ }_{3}$ and Sangala was only 3 days march from the place where the Hydraptes, (Rauvee) was croffed, fuppofing it to!be at the place where :Lehore ftands.

It was fomething more than a days march from'Toulomba to Jengian, a town on the fouth bank of the Begah, oppgite tops. and not far from"'Ghawnawaz. As Timur's army was $\}$ days in paffing this river, fome in barks, and others by fyvinming, it' nay be reckoned a confiderable river, itts diftance ffrom Moultan . is.given at 40 coffes *: and I have allowed 13 coffes for its diftancee from Toulomba, in a fouth-eaft direction, as theirediftances from Moultan, indicate. ...

At Jengian, Timur faid 4 days, and was joined by Peer Mahr mud, who had by thisitime, taken Moultan. Timur's nextiftation is Jehaul, two days march from Jengian, on the toad to Delhis and here he feparated from his grand army, which he directed to proceed by Debalpour, and to rendezvous at Semanah, a town 80
 horfe to :Batnis or Battenize t, a iftrong fortrefs about:zol coffes from Jehaul, and far to the right of the Dethi road a being beyond the defert which Atretches along the fouth fide of theis Setlege: He was led to this place, from refentment, at its giving protection

[^83]to the people of Debalpour, who had maffacred a garrifon of Peer Mahmud's: and poffibly the great reputation it had for frength, might be one inducement to undertake the fiege of it; as Aornos, in like manner invited Alexander.

Timur, after leaving Jehaul, proceeded the firt day to Adjodin, (of which we have fpoken before) a town included in one of the large illands formed by the branches of the Setlege: and this being 3 days march from Jengian, I eflimate the diftance from it at $3^{\circ}$ coffes, or 43 G. miles. As the Delhi and Batnir roads, feparated at Jehaul, Adjodin may probably lie SE from it : and the whole courfe from Jengian may be taken at E S E.

At Adjodin, Timur vifited, and fpent fome time in devotion, at the tomb of Sheik Furrid (fee page 81) and then fet forward for Batnir; which is ftated by Sherefeddin at 60 coffes from Adjodin. This may be reckoned $8{ }_{j \frac{1}{2}}$ G. miles : and the diftance from Batnir to Semanah, appears to be 8 days march, in which he was fometimes delayed by his military operations; yet having a light army, it may be fuppofed that he marched 85 coffes in the 8 days*. And from Semanah to Panniput, the number of coffes are given at $52 \dagger$; fo that the whole number 137 , from Batnir, may be ftated at $193 \frac{1}{2}$ G. miles: fomething being deducted for the defert nature of the country, in the Batnir province.

If therefore 60 cofles, or $85^{\frac{3}{2}}$ G. miles, be laid off from Adjodin to Batnir, and $193^{\frac{1}{2}}$ from Panniput; the interfection will place Batnir in lat. $28^{\circ} 39^{\prime}$, lon. $73^{\circ} 20^{\prime}$; and it will bear about SSE $\frac{1}{2} \mathrm{E}$ from Adjodin.

On the fouth-eaft of Adjodin, a few coffes, Timur croffed the river Dena; which I take to be one of the four branches of the Setlege, (poffibly the Dond) and perhaps the only principal one among them, except the Beyah, already noticed.

[^84]
## [ 89; ]

It muft not be omitted that Timur croffed an extenfive defert in his way to Batnir : I mention this particular to hew that Alexander was not mifinformed, when he was told that there was a defert beyond the Hyphafis *. After taking anddeftroying Batnir, which employed only a few days $\dagger$, he marched on the 3 oth of November, taking nearly the ftraight road to Semanah; where he joined his grand army on the 8th of December 1398 .

His march from Semanah to Delhi, about 88 coffes, appears to have taken up 12 days; whence we may collect, that the common marches of his grand army, were about $7 \frac{1}{2}$ coffes each day; or about 14 or 15 Britifh miles, by the road.

On his return, he made an excurfion to the north-eaft into the Doab, took the city of Merat, or Mevat, (called Mirte by de la Croix) 30 coffes from Delhi, and advanced to the Ganges, near the place where it iffues out of the Sirinagur mountains. Toglocpour. and the ftraits of Cupele, two places of victory on the eaftern bank of the Ganges, cannot now be recognifed: but from Sherefeddin's account of the march, they cannot be far from Loldong; where the Britifh army completed their campaign in 1774 r 1100 Britifh miles from Calcuttat.

From the banks of the Ganges, he proceeded to the north-weft, along the foot of the Sewalic mountains, by Meliapour, Jallindar, and Jummoo, to the frontiers of Cahmere: and from Cafhmere, acrofs the mountainous and defert country of the Kakares § or Gehkers, to the Indus, which he crofled at the fame place as before, and in the fame manner ; andi returned to Samarcand by way of Bánou, Nagaz, Kermudge, Cabul, Bacalan, and Termed.

[^85]
## $190^{\circ} I$

I have purfued Timur's marches, although beyond the limits of the prefent fection; in order that the thread of it might not be broken. I now return to the Panjab.

The bearing and diftance of Jummoo from Lahore, and that of Bullaufpour from Ludhana; determine the breadth of the Panjab country, north-eaftward. Jummoo is given in the Perfian map at 50 coffes from Lahore, north-eafterly; and this I have followed, as the beft authority. Col. Murray's map gives 54 coffes, nearly north ; but this bearing is difproved by Mr. Forfter's obfervations : fort Cafhmere lies about N by W, 97 coffes from Jummoo, and is 135 coffes from the bank of the Indus ${ }^{*}, 20$ miles above Attock; which the interval would not allow, if Cafhmere lay to the weft of the meridian of Lahore.

Bullaufpour, a fort on the Setlege, within the mountains, I have only the authority of the Perfian map, and fome vague MSS. for: and it is placed in the map 70 G . miles NE from Ludhana. Col. Murray's map gives the diftance at 79 miles, in the fame direction. The Perfian map fills up the fpace pretty amply, between the Lahore road and the mountains from whence we fuppofe the Panjab rivers to fpring: and had Mr. Fortter's journal from the. Ganges to Jummoo, through the mountains, been left in England, this part might have been rendered more perfect; for he entered the mountains at Loldong, crofied the Gainges and Jumna rivers within the hills, and then went by Bullaúfpour to Jummoo.

By the aid of the Perfian map, and other MS. maps, (particularly the one furnified by Col. Murray) I have been enabled to give the road from Vizierabad to Yehungfaul; through the Retchna Doabah, with many other pofitions in and about the Panjab. The road from Jummoo to: Beroudge, \&c. is from Sherefeddin. Debalpour is known to be on the great road from Delhi to Moultan: and the divifions of the country in the Ayin Acbaree point out its fituation,

## [ 91 ]

to be far down the Setlege, in the Jallindar Doabah. The few particulars that occur on the weft of the Indus are all from D'Anville, except the pofition of Pifhour, which is placed according to Mr . Forfter's obfervations.

Between the Indus, Agimere, Moultan, and the Puddar river, is an extenfive defert, in which is fituated the fort of Ammercot, or Omircout, the birth place of Acbar, and the retreat of Khodaiar *. I think it improbable that ever we fhall have any geographical knowledge of the inland parts, between the Puddar and Indus, more than the very vague information contained in the Indian hiftories. The river Puddar, from the length of its courfe, promifes " to be navigable; and, probably, it is more from the want of ufeful products on its banks, than from the.fhallownefs of its channel, that it has continued fo long unexplored by Europeans.

The geography of the Panjab country, as being, comparatively, of little confideration in a map of fuch extent, has been detailed much beyond its feeming importance. The reafon is, that we are not likely, as far as I can judge, for a great length of time, if ever, to be poffeffed of any better materials than thofe I have exhibited; indifferent as they may be, in many inftances: and therefore I confider it as the finibing froke to the whole matter for fome time to come. And if apy good materials do caft up, fuch as the latitudes and longitudes of fome principal points, or fome meafured routes, I thall, I flatter myfelf, have prepared the ground for the erection of a fabric of a better conftruction. Upon a reconfideration of the queflion concerning the length of the Panjab from Ludhana to Attock, I think formething might be added to the prefent dimenfions, perhaps 4 or 5 miles: but it is a matter of fmall importance, where all the diftances are eftimated. The Panjab country being. the frontier province towards Tartary, and the northern parts of Perfia, from whence have fprung the conquerors of Hindooftan in

[^86]
## [ 92 ]

every age, Alexander alone excepted; it follows, that their route to the interior parts of the country, muft have led through it. Of all thefe conquerors, as far as I can learn, the routes of Alexander, Timur (or Tamerlane) and Nadir Shah, are the only ones that have their particulars on record *. Timur's route I have already given; as it was interwover fo clofely with the geographical confruction; and towards which it furnifhed a confiderable proportion of materials. And Nadir Shah's route was the ordinary one, by Attock and Lahore; and, I apprehend, he returned the fame way; fo that it furnifhes no matter for this work.

The particulars of the marches of the late Acmet Abdalla, (King of Candahar) during his frequent vifits to Delhi, in the prefent age, have not come to my knowledge. Alexander's route then, is the only one that remains to be difcuffed; and although laft in point of order, here ; is confidered as the firft as it refpects hiftory, and the gratification of popular curiofity.

I take it for granted, that Alexander croffed the Indus + at or near the place where the city of Attock now ftands; becaule firft, it appears to have been in all ages, the pafs on the Indus, leading from the countries of Cabul and Candahar into India: and this is ftrongly indicated by the circumftance of Acbar's building the fortrefs of Attock, to command it. Mr. Frafer, in his hiftory of Nadir Shah, fays, "there is but one place where an army can "conveniently be tranfported, the ftream being fo rapid in moft " parts. There is a caftle commanding that paffage, called the caftle of Attock." Attock then, muft ftand on or near the fite of the Taxila $\ddagger$ of Alexander. And fecondly, as foon as Alexander

[^87]had croffed over to the eaft fide, Ambilares, King of the Indian mountaineers (the Gehkers or Kakares) fent ambaffadors with prefents to him. The Prince of the fame country made his fubmiffions to Tamerlane, and in the fame place, in 1398, (fee page 80). From Taxila, as his intention appears to have been to penetrate by the Thorteft way to the Ganges, he would proceed by the ordinary road to that part of the bank of the Hydarpes (Behut or Chelum) where the fortrefs of Rotas now ftands; and here he put into execution his fratagem for croffing the river, while the oppofite thore was poffefled by Porus. After crofling the Acefines (Jenaub) and Hydraotes (Rauvee) which latter he may be fuppofed to crofs near the place where Labore now ftands, he appears to be drawn out of the direct route towards the Ganges, to attack the city of Sangala, moft probably lying between Lahore and Moultan; but we are left in uncertainty as to its pofition, by Alexander's hiftorians, otherwife than by circumftances, and detached facts. The name Sangala, occurs only in Arrian: and is faid to have been a city of great Arength and importanee, in the country of the Cathei. Diodorus Siculus calls the fame people Catheri, or Katberi; and thefé may very eafily be recognized under the name of Catry, in Thevenot; that is to fay, the Kuttry tribe, or Rajpoots. Thevenot fpeaking of the people of Moultan, fays, "there is a tribe of Gentiles (i. e. Gentoos or 'c Hindoos) here, called Catry, or Rajpoots: and this is properly. " their country, from whence they fpread over all the Indies." Diodorus Siculus marks them by the cuftom of their women burning themfelves alive, on the funeral piles of their humands; which is indeed a cuftom among them, as well as fome other Hindoo tribes, at.this day. Now we find by Arrian, that the Cathei were confederated with the Malli and Oxydraca; that is, the people of Mpultan and Outch, and which lay to the fouth-weft of the place where Alexander' might be fuppofed to crofs the Hydraotes (or Rauvee) in his way into India. (That the Malli were the people of the prefent Moultan, we can have no doubt, if we attend

## [ 94 ]

to the voyage of Alexander down the Hydafpes, hereafter). I find no difficulty therefore, in determining the pofition of Sangala to be to the S W of Lahore. As to the diftance, Alexander reached it the third day after croffing the Hydraotes; and we cannot allow lefs than 48 road miles, for thefe 3 marches; or 36 G . miles in horizontal diftance. Had Alexander's route been S E towards the Ganges, the above diftance would have brought him within 6 miles of the Hyphafis (the modern Beyah) and Arrian fays not a word about that river, until Alexander had returned to Sangala from the purfuit of the fugitives, and again fet forward on his march. No idea is given either in Arrian, Diodorus, or Quintus Curtius, of the diftance between Sangala* and the Hyphafis; but it may be collected by Arrian's manner of dpeaking, that they were not near each other. Diodorus places the kingdoms of Sophites and of Phigeus between the Catheri and the Hyphafis; whence we may infer a confiderable fpace between them. If I am right in my conjecture concerning the pofition of Sangala, the Hyphafis (Beyah) muft be about 40 miles from it, eaftward; and let Sangala be where it will, the river Beyah anfwers to the Hyphafis or Hypafis (called anciently by the natives, Beypafha) and Alexander's altars may probably have been erected between Aurungabad and the conflux of the Beyah and Setlege, at Firofepour; Pliny fays on the further, or eaftern fide of the river. One cannot help regretting the extreme brevity of this part of Arrian's narration, with refpect to the detail of Alexander's marches, between Sangala and the Hyphafis, and back again to the Hydafpes; which is difpatched too rapidly for a geographer to profit by. Diodorus and Curtius are not more explicit; nor indeed, if they had, are they to be much depended on, in this refpect, for they have confounded the Hydafpes (Chelum) with the Acefines (Jenaub) in their account of Alexander's voyage. But, I think, whoever takes the trouble to compare Arrian's ac-

[^88]count, both of the land marches, and the voyage down the rivers, with the geography of the Panjab; will find the ancient Hydafpes; in the modern Chelum, the firft river beyond the Indus; and fuc- ${ }^{-1}$ ceffively, the Acefines in the Jenaub or Chunaub; the Hydraotes in the Rauvee; and the Hyphafis, in the Beyah : though I will not contend for the exact pofition of the altars, whether they might be above the conflux of the Beyah, or below it : only the ancient name Beypafsa, appears more likely to have been the origin of the Greek Hyphafis, Hypafis or Huphafis; than Sbetooder, which was the ancient name of the Setlege.

There is a flat contradiction between Arrian and Diodorus (and Curtius who follows the latter) regarding the quality of the country on the eaft of the Hyphafis; the former defcribing it as a flourining and well inhabited country; the latter fay there is an extenfive defert between it and the Ganges. Arrian's account fuits the upperd part of the river, and Diodorus's, the lower part ; for there is'certainly a defert, as has been before obferved, between the Panjab and Batnir.

We are left to fuppofe that Alexander, after the determination of his army to proceed no further, returned to the Hydarpes, by the route he came, bating the ground he loft in marching after the Catheri : and finding his cities of Nicæ and Bücephalia completed; and a fleet, or part of one, built out of the timber procured from the neighbouring mountains, named by them Emodus and Himaus or Imaus, he proceeded down the Hydafpes with his fleet; while the greater:part of the army marched by land.
Here it may be proper to obferve, that Arrian does not fay from whence the timber came, but leaves us to fuppofe that it came from the forefts neareft to the river, and enough is known of the nature of the country, to convince us that the forefts bordering on the foot of the Calhmirian hills were very near to the river Hydafpes. The mountains Emodus and Imaus indeed, were at a very great diftance, and could be only in fight to the NE; fince they are a
continuation of the great ridge called Hindo-Ko; or the Indian Caucafus; and which are near the head of the Indus, and run through the heart of Thibet. I fufpect Emodus and Imaus to be different readings of the fame name; and Imaus or Himaus, we have every reafonable proof of being derived from the Sanfcrit word Himmaleh, fignifying fnowy. That vaft ridge bears the fame name at prefent ; and Pliny knew the circumftance well *.

To return to Alexander. He failed from his firt place of embarkation in the Hydafpes, about the middle of November N.S. 327 years before Chrift, (according to Uher) having of courfe, been in the field the whole rainy feafon; for he croffed the Indus in May. In five days, the fleet arrived at the conflux of the Hydafpes and Acefines (Chelum and Jenaub) the identity of which, is moft pointedly marked, by the nature of the banks: for thefe large rivers, pent up within ftrait rocky beds, form a rapid and troubled fream at their confluence; and this appearance difmayed the whole fleet, and proved fatal to fome of the large fhips. A fimilar defcription of this confluence is given in Sherefeddin's life of Timur, tho croffed a little below it in 1398 nearly at the fame feafon, over a bridge of boats. At this place, Philip, who had led a divifion of the army along the banks of the Acefines, (whofe courfe is not far from that of the Hydafpes, and gradually approaches it, until they meet) here joined the grand army, and was ferried over the Acefines. We may obferve from this, and from Craterus and Hepheftion being detached with the other two divifions along the oppofite banks of the Hydafpes, that Alexander might be faid almoft to fweep the whole country. He now approached the confines of the Malli, and fet out on his firft expedition with a detachment, againft the people of the country, to prevent their giving affiftance to that nation; but the particulars of his march are not recorded. He returned again to the fleet and army at the conflux of the Hydafpes;

[^89]and from thence difpatched the fleet to the next place of rendezvous, at the conflux of the Hydraotes (Rauvee) with the Acefines (Jenaub); for fo the confluent ftreams of the Hydafpes and Acefines were named, the Acefines being the largeft; and as the Hydafpes is faid to be 20 ftades in width the whole way, the other muft have been an immenfe river. The army was divided into four divifions, three of which marched at a confiderable diftance from each other, along or near the courfe of the river; the fourth, Alexander took the command of himfelf, and marched inland from the river, to attack the Malli on that fide; -in order to drive the fugitives towards the forks of the rivers, where they might be intercepted by fome of the other divifions. The line of direction of his march mult have been fouth or fouth-eaftward. On the fecond morning he took a ftrong city, and Perdiccas, another; and after a fecond long night march, arrived at the Hydraotes (Rauvee) : perhaps, we may allow for the day, and two night marches, 40 road miles; or 30 G . miles of horizontal diftance *. He fell in with the river at fome confiderable diftance above the conflux (the appointed rendezvous for the fleet) as appears by what followed: and after croffing it, took two other towns $\dagger$, and then proceeded to the capital city of the Malli; after difpatching Pithon back to the river fide, to intercept the fugitives. This capital of the Malli, mult not be mittaken for the modern Moultan; which is at leaft 40 miles by land, below the conflux of the Hydraotes; or two days vayage for a boat going with the fream $\ddagger$ : but the ancient capital in queftion, was above the conflux, and near the Hydraotes (Rauvee) by the garrifon's leaving it, and retiring to the oppofite (north) fide of the river. Alexander recroffes the river, after them, but finding

[^90]
## [ 98 ]

them too ftrong to be attacked with the party he brought with him, and waiting for a reinforcement, the enemy had time to retire into another fortified city, not far off. This namelefs city, is the place where Alexander was wounded, and in fuch imminent danger; and not in the capital of the Malliz nor among the Oxydracre (Outch) which is on the oppofite fide of the Acefines (Jenaub) and near its confluence with the Indus. Indeed Arrian is particular in pointing out this error [of Diodorus]. As to the diftance of this city above the conflux, we may collect that it could not be very far, both by reafon of the quick communication between Alexander, and the camp and fleet; and by the ground he had marched over, after leaving the firft conflux. I am inclined to place it about 10 G . miles above the conflux (of the Jenaub and Rauvee) and a few miles from the north bank of the latter; and the capital of the Malli on the oppofite fide, and not far from the river bank; fo that they will be fomewhat below the prefent town of Toulomba, a famous pafs on the Rauvee, between Lahore and Moultan.

When Alexander was fufficiently recovered from the effects of his wound, he was embarked on the Hydraotes, and carried down the fream, to his fleet, which appears to have been brought into the Hydraotes; for we learn that he paffed the conflux after he joined the fleet ${ }^{*}$.

We learn alfo, from the fame author, that the Acefines preferves its name until it is loft in the Indus, although it receives the Hy dafpes and Hydraotes: the hiftorian of Timur, in like manner, gives the name of Jenaub to the confluent waters of the Chelum and Jenaub: this alone, however, does not prove that it was the largeft river; for we have many examples, in modern geography, at leaft, where the adjunct river, though the fmallen, gives its name to the confluent waters. It is worthy of remark, that Arrian, as it appears, not knowing what became of the Hyphafis (Beyah)

## [ 99 ]

does not fay that Alexander faw the mouth of it, as he did thofe of the Acefines and Hydraotes; but only informs us that it fell into the Acefines. And indeed, the truth is, that thefe rivers under the modern names of Beyah and Setlege, do not join the Jenaub; but after uniting their ftreams; fall into the Indus, a great way farther down. It is certain that the courfes of rivers, even of the largeft, do alter fo much, in time, that what Arrian fays, might have been the cafe; but there is no neceflity for fuppofing it.

Arrian, as well as Sherefeddin, informs us that the lower part of the Panjab towards Moultan, is flat and marrhy, and inundated [like Bengal] by the periodical rains, which fall between the months of May and October. As a proof of it, Alexander was once obliged to break up his camp, on the Acefines (Jenaub) and retire to the higher grounds.

From the conflux of the Acefines with the Indus, we accompany Alexander fucceffively to the territories of the Sogdi, Muficani, Oxycani, Sindomanni, and Patalans. The Oxydrace, who had fubmitted by their ambaffadors, were left unmolefted. Bhakor anfwers neareft to the pofition and defcription of the country of the Muficani, which was next to the Sogdi, and the moft powerful on that part of the Indus: and the Oxycani, the next in order, to. Hajycan ; a circar, or divifion of Sindy. In Sindomanni, we may recognife the country of Sindy ; or that thro' which the river Sinde flows, in the lower part of its courfe: and Pattala, has ever been referred to the Delta of the Indus. But fo vaft a change of names, or rather fo vaft a change in the manner of writing them *, forbids the building of any hypothefes ${ }_{2}$ on the fimilarity of ancient and

[^91]modern names of places; except in cafes, where the locality is equally evident.
Having now conducted Alexander acrofs the Panjab, and down the Indus, to the head of its delta, it may not be amifs to obferve, that the fate of the country through which he paffed, was very different from what we fhould have conceived, who have been in the habit of confidering Hindooftan, as being governed by-one monarch; or even as divided into feveral large kingdoms. In the Panjab country, in an extent lefs than is comprifed within one of the foubahs, or grand divifions of the Mogul Empire, we find no lefs than feven nations; and along the lower parts of the Indus, many more. Even in the Panjab, where Alexander warred a whole campaign and part of another, there was nothing of that kind of concert appeared, which muft have taken place between the governors of provinces, had they been under one head : but in general, each aeting feparately, for himfelf. The Malli, Catheri, and Oxydracx, we are told, leagued together for their mutual defence; and this proves that they were feparate governments. It is curious, that the fame caure that facilitated Alexander's conquefts in India, fhould alfo have given them the degree of celebrity that has ever accompanied them; that is to fay, their fubdivifion into a number of fmall ftates: and urdinary readers, either not regarding, or not comprehending their extent and confequence, have confidered them as kingdoms. The conqueft of the Panjab and Sindy, would, with fuch an army *, be no very great matter in our times, although united : and yet this conqueft is confidered as a brilliant part of Alexander's hiftory: the truth is, the romantic traveller is blended with the adventurous foldier; and the feelings of the reader, are oftner applied to, than his judgment.

But although the weftern part of Hindooftan was in this State, there exifted beyond, or rather towards the Ganges, a powerful

[^92]king-
kingdom, as appears by the ftate Megafthenes found it in, when he refided in quality of ambaflador from Seleucus Nicator, not many years after, at Palibothra, the capital of the Prafii *. The Prafians probably owed to the difcontents that prevailed in Alexander's army, their efcape from a foreign conqueft, at that period.

Alexander arrived at Pattala about the middle of Auguft (Before Chrift 326 years) and after he had made proper arrangements for the fafety. and conveniency of his fleet and army; and had viewed alfo the two principal mouths of the Indus, in which he experienced fome degree of furprife, if not of terror, from the bore, or fudden influx of the tide $\dagger$; he departed by land for Sufa, leaving Nearchus with the fleet to follow, as foon as the etefian winds $\ddagger$ thould ceafe. He had been more than 9 months in failing down the Hydafpes, and Indus. He croffed the Hydarpes about the fummer folltice in the preceding year, and of courfe had been in the field, or in fome kind of warfare, during two rainy feafons: we are told however, by the author of the Ayin Acbaree, that but little rain falls in the lower parts of Moultan; that is, the part bordering on the Indus. Nearchus failed about the middle of October§ with the NE monfoon; conducting, according to Drv Gillies, in his elegant hiftory of Greece, "the fir $\neq$ European flect which navigated the Indian feas." By the journal of this.voyage, publifhed by Arrian, it appears that the fleet failed out of the weftern branch, by the diftance between the mouth of the Indus and the river Arabius, which was only rooo ftadia; for Arrian gives the breadth of the Delta at 1800 ftadia, along the fea coaft $\|$. Arrian takes notice that when Nearchus ftood out to fea, on the coaft of India, he found either-no fhadow at noon; or elfe the fhadow,

[^93]
## [ 102 ]

if any, was projected fouthward. This, however, could not poffibly happen, becaufe Alexander did not arrive till after the fummer folltice, nor till Auguft. And yet Arrian took this from Nearchus's journal : but whoever examines the geography of it, will find that he could never be within a degree of the tropic, allowing him to have failed at a reafonable dittance from the fhore.

It may appear extraordinary that Alexander fhould, in the courfe of a few months, prepare fo vaft a fleet for his voyage down the Indus; efpecially as it is faid to be the work of his army. But the truth is, that the Panjab country, like that of Bengal, is full of navigable rivers; which, communicating with the Indus, form an uninterrupted navigation from Cafhmere to Tatta: and, no doubt, abounded with boats and veffels ready conftructed to the conqueror's hands. That he built fome veffels of war, and others of certain defcriptions that might be wanted, I entertain no doubt; but tranfport and provifion veffels, I doubt not, were to be collected to any number. There were about $8 a$ triremes; and the whole number of embarkations were near 2000. I think it probable, too, that the veffels in which Nearchus performed his coafting voyage to the gulf of Perfia, were found in the Indus. Veffels of $180^{\circ}$ tons burthen are fometimes ufed in the Ganges; and thofe of 100 not unfrequently.

> Account of the Map of the Countries, lying betzeen the River Indus, and the Caspian Sea.

HAVING fo often had occafion to mention the countries of Perfia and Tartary, contiguous to the north-weft parts of India; it will be for the reader's convenience to have a fmall map of thofe parts, inferted in this work; by which the relative pofitions of the



#### Abstract

frontier provinces of both countries, will be heiwn, and the heads of the Indus, Ganges, and Oxus, brought into one point of view. It will alfo ferve to convey an idea of the route purfued by Mr. Forfter*, from the banks of the Ganges, to the Cafpian fea; and which has never been trayelled by any European in modern times; at leart no account of it is to be found on public record.

The pofitions of Jummoo, Attock, Behnbur (or Bember) and Pifhour, are given in the large map of India; therefore, I fhall begin with an account of thofe of Cahmere, Cabul and Candahar.

From Jummoo, Mr. Forfter travelled to the capital city of Cahhmere, which he reckons 97 coffes by the road; and the general


[^94]
## [ 104 ]

bearing, at N by W. The laft 19 coffes of the way, were by water, following the courfe of the Chelum or Behut river (he writes it (alum) which, with its feveral branches, traverfes the valley of Cafhmere, and takes nearly a wefterly direction, in this place. This being the cafe, only $7^{8}$ coffes are to be reckoned in a northwardly direction, from Jummoo to Inlamabad, the place of embarkation: and as the hilly (not to fay mountainous) nature of the country requires at leaft 45 coffes to make a degree, the pofition of the capital of Calhmere may be reckoned 117 G . miles N by W from Jummoo: or in lat. $33^{\circ} 49^{\prime}$, lon. $73^{\circ} 11^{\prime}$. The Perfian tables give its latitude at $35^{\circ}$ : but not only the diftance from Jummoo, but its bearing from Pifhour, plainly demonftrates that it ought not to be higher than $33^{\circ} 49^{\prime}$, or at moft $34^{\circ}$; provided Lahore be in $31^{\circ}$. The capital of Cafhmere has the fame name as. the province, according to Mr. Forfter, and M. Bernier : but the Ayin Acbaree, at an earlier period, names it Sirinagur. It is a large city, and built on the fides of the river Chelum, which has a remarkable finooth current throughout the whole valley, according to Mr . Forfter) and this proves the remarkable flatnefs of the country; as the body of water is very large.

The valley or country of Cafhmere, is celebrated throughout upper Afia for its romantic beauties, for the fertility of its foil, and for the temperature of its atmofphere. All thefe particulars may be accounted for, when it is confidered, that it is an elevated and extenfive valley, furrounded by fteep mountains, that tower above the regions of, fnow; and that its foil is compofed of the mud depofited by a capital river, which originally formed its waters into a lake, that covered the whole valley; until it opened itfelf a paffage through the mountains, and left this fertilized valley, an ample field to human induftry, and to the accommodation of a happy race: for fuch the ancient inhabitants of Cafhmere, undoubtedly were.

## [ 105 ]

Although this account has no living teffimony to fupport it, yet hiftory and tradition, and what is yet ftronger, appearances; have impreffed a conviction of its truth on the minds of all thofe who have vifited the fcene, and contemplated the different parts of it. Different authors vary in their accounts of the extent of the valley. The Ayin Acbaree reckons Caflomere 120 coffes long, and from 10 to 15 broad; but I imagine that fome other diftricts under its government, are included. Bernier, who accompanied Aurengzebe thither, in 1664 , faysit is 30 leagues long, and 10 or 12 broad.. And Mr. Forfter, who I dare fay was accurate in his enquiries and obfervations, fays it is $8 a$ miles long, and 40 in. breadth; and of an oval form.

The author of the Ayin. Acbaree dwells, with rapture on the Beauties of Cafhmere; whence we may conclude that it was afavourite fubject with his mafter Acbar, who had vifited it three times, before Abul Fazil wrote. Other Emperors of Hindooftan: vifited it alfo; and feemed to forget the cares of government, during their refidence in the bappy valley. It appears that the periodical rains, which almoft deluge the reft of. India, are Shut out. of Cafhmere by the height of the mountains; fo that only light fhowers fall. there: thefe however, are in abundance enough to feed fome thoufands of cafcades, which are precipitated into the valley, from. every part of the ftupendous and romantic bulwark that encircles it. The foil is the richeft that can be conceived; and its productions thofe of the temperate zone. A vaft number of freams and rivers from all quarters of the valley; bring theit tribute to the Chelum, the parent of the foil; which is-a large navigable river, and in which we recognife the famous Hydafpes of Alexander, who croffed it about 100 miles below the valley. Many fmall lakes are fpread over the furface, and fome of them contain floating illands. In a word, the fcenery is beautifully picturefque; and a part of the romantic circle of mountains; makes up a portion of'every landfcape: The pardonable fuperfition of the fequeftered inhabitants, has mul-
tiplied the places of worfitip of Mahadeo, of Befchan, and of. Brama. All Cafhmere is holy land; and miraculous fountains abound. One dreadful evil they are conftantly fubject to, namely, earthquakes; and to guard againt their moft terrible effects, all the houfes are built of wood; of which there is no want.

Among other curious manufactures, with which Calhmere abounds, is that of the Chawls; which are diftributed over all the weftern and fouthern Afia. We learn from M. Volney, that they even make a part of the drefs of the Egyptian Mamlouks : and at prefent (as if to exhibit the moft friking contraft in the claffes of wearers) they are worn by the Englih ladies. There remains nodoubt, but that the delicate wool of which they are made, is theproduce of a fpecies of goat, either of that country, or of the adjoining one of Thibet. Notwithftanding the prefent extenfive, demand for thawls, the manufacture is declined to one fourth of the former quantity; which may be eafily referred to the decline of the Perfian and Hindooftanic empires. Here are bred a fpecies. of fheep, called Hundoo, which like thofe of Peru, are employed in earrying burthens. The annual publick revenue of Calhmere, in: the time of Aurengzebe, appears to have been only about 35,0001 . From what has been faid above, it was, no doubt, a favoured. province.

The Cafhmirians have a language of their own, faid to be antefior to the Sanfrrit. And it would appear that they had alfo a religion of their own, different from that of the Hindoos. Abul Fazil fays, " the moft refpectable people of this country, are the Reyihees, " who although they do not fuffer themfelves to be fettered by tradi"t tions, are doubtlefs true wormippers of God." Nothing can exceed the liberality of mind both of Abul Fazil, and of his mafter, the great Acbar: but the former appears to have caught fome of the enthufiafm of the valley, by his deferiptions of fome of the holy placesinitit. Ta fum up the account of Calhmere, in the words of the: fame author, "It is a garden in perpetual fpring."

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So far am I from doubting the tradition refpecting the exiftence of the Iake that covered Cafhmere; that appearances alone would ferve to convince me, without either the tradition, or the hiftory. It it a mere natural effect; and fuch I apprehend muft be the economy of nature, in every cafe where the waters of a river are inclofed in any part of their courfe, by elevated lands. The firft corifequence of this foppage, is, of courfe, the converfion of the inclofed lands, into a lake: and if this happens near the fountairs of the river, and the ground is folid; it is likely to remain a lake for evert; the river not having force enough in its infant ftate to work itfelf a paffage through the mountains. Hence it is that more lakes are found: near the fources of rivers, than in the lower partsif eneir courfe. If the river be inclofed after it has gained a great acceffion of water, and of courfe, flrength, it will indeed at firft form a lake as before; but in time, the place at which it rums over, will be gradually fretted away, as in the cafe of the Chelum abovementioned. The Euphrates, in like manner, opens ittelf a paffage through Mount Taurus; and the Ganges through Mount Imaus: and even though the bafe of the mountain be of the firmeft texture, it will give way to the inceffant friction, through a courfe of ages: for we know not but that it may have been an operation of fome thoufand years. In the cafe of the Ganges, which paffes turaugi Mount Imaus, it may be fuppofed that the lower frata were fofter than the upper; for the upper ftill remain, ta a vaft height. In that of the Chelum, the lake appears to have exifted long enough to depofit a vaft depth of foil, before it difperfed. The Calhmirian hiftory names the lake Sutty-sirr : and adds, that Kufhup led a colony-of Bramins to inhabit the valley, after thewaters had fubfidedt Caflimere is the frontier province of Hindooftan, towards Tartary and Thibet: it having little Thibet or the north, and great Thibet on the eaft; and Cafligur orr the $\mathrm{N} W$.

From Cafhmere, Mr: Forfter went by a very circuitous route, to Cabul; the barbarous fate of the people who inhabit the flores

## [ 108 ]

of the Indus towards its fource, making this precaution neceffary. The countries in queftion are thofe of Pehkely or Puckely, Sowhad, and Bijore, the fcene of Alexander's warfare on the weft of the Indus; all of which were fubjected to regular authority during the long and vigorous reign of Acbar. We are told by the Ayin Acbaree, that feveral of the ftreams that form the head of the Indus, yeild gold dut: and this accounts for the circumftance of the Indian tribute being paid in gold to Darius Hyftafpes; according to Herodotus (Book III.). The fum indeed feems too great, in proportion to what other provinces paid: but as the gold of the river Pactolus has been exhaufted; fo may that of the Kifhengonga, in Puckley, be diminifhed. Pehkely, I take to be the Patlya of Herodotus, Book IV. (as well as the Peucelaotis of Arrian) from whence Scylax fet out to explore the courfe of the Indus, under the orders of the fame Darius: for it lies towards the upper part of the navigable courfe of that river.
The firft part of Mr. Forter's route from Cafhmere, was down the courfe of the Chelum, or Behut, which has a fouth or SS W courfe, from the capital of Cafhmere, for about 14 cofies; at which point he difembarked, and fruck to the weftward, towards Muzifferabad; the capital town of a chief, who fyles himfelf Sultan of a diftrict of the fame name, bordering on the fouth-weft of Cafhmere. This capital is reckoned 71 coffes from Cafhmere city, in a W by S direction. The country being, mountainous from the confines of Cafhmere, together with the obliquity of the courfe of the river; not more than 73 or 74 G . miles can be allowed on this courfe. The frontier of Cafhmere was paffed at $15^{\frac{1}{2}}$ coffes from the landing place, on the bank of the Chelum.

At Bazaar, 64 coffes in a $S$ Wr by $S$ direction from Muzifferabad, Mr. Forfter croffed the Indus. This place is about 20 miles to the N N E of Attock, and, together with Jummoo, ferves to correct the pofition of Cafhmere, in refpect of Attock and Lahore. I have allowed the 64 coffes to produce 80 G . miles; and it accords, as

## [ 109 ]

nearly as fuch a rough kind of computation, can be expected to do. The greateft part of the way from Muzifferabad, was mountainous, and the country fubject to petty Princes of the Patan race. Mr. Forter entered the country of Timur Shah Abdalla, at Hyderbungee, a town about 8 miles to the eaft of the Indus.

The Indus (or Sinde) was croffed by Mr. Forfter, the 10 th of July. He remaks, that no rain had then fallen in that neighbourhood: but we know that the periodical rains muft have commenced in the northern mountains, near three months before, and of courfe muft have fivelled the river very confiderably; for Mr. Forfter judged the breadth of the ftream to be three quarters of a mile. It was alfo very rapid, and turbulent, although not agitated by any wind. He obferved alfo, that the water was extremely cold, and that a great deal of black fand was fufpended in it. Nil-ab, or the blue river, is a name fometimes applied to the Indus: poffibly from the fancied colour of its waters, when mixed with this fand. The Ganges and Burrampooter rivers, on the contrary, when fwoln, are of a pale yellow, lightly tinged with red; being then faturated with mud. I doubt not but that the Indus affumes the fame colour, after the rains have fallen into the level countries, and wafhed a portion of the foil into the river.

I cannot find out where the fprings of this celebrated river, are. Unqueftionably, they are far more remote than the fides of the mountains, which feparate Hindooftan- from Tartary; and where both the ancient and modern Europeans have agreed to place them: for as thefe mountains are not in a higher parallel than $35^{\circ}$, at moft; the Indus could have no more than 150 G. miles to run (reckoning in a ftrait line) before it reached the place where Mr. Forfter croffed it: and we have no example of any river having acquired fuch a volume of water, in fo early a part of its courfe, as this fuppofition would make it. All the Panjab rivers; and mof of the weftern rivers; that is, thofe of Candahar and Cabul, fall in below this point. The Ayin Acbaree fays, " the Sind, accord-

## [ 110 ]

" ing to fome, rifes between CaChmere and Cafhgur, while-other " place its fource in Khatai." By Khatai, is frictly meant China; but the term is likewife extended to Tartary, and other adjacent countries; of which Cafhgur may be one. This country commences on the north and north-eaft of Cafhmere, and extends northward to the fortieth degree of latitude; and eaftward to the chain of mountains, which, in the idea of the ancients, feparated: the two Scythias: in effect, it was that branch of Mount Imaus that extended in a direction nearly from north to fouth, and terminated on the eaftern branch of the fame mountains, near the heads of the Ganges, The Indus may then poffibly fpring from the weft fide of this ridge of Inaus; and this would allow a length of courfe, equal to what the Ganges, takes, before it enters Hindooftan. A great part of the fpace allotted by the maps to Cafhgur, is known to be a fandy defert: it is poffible that the black fand feen in the river by Mr. Forfter, is rolled down by the torrents, from that defert. I cannot help obferving that on the eaft fide of the northern Imaus, the name Cbate appears as the name of a nation *; as that of Cafia does in the pofition affigned to the modern city of Cafhgur. Khatai, as I have faid before, is applied rather in a lax fenfe by the people of Hindooftan. Cheen, or Maha-Cheen, is their proper name for the empire of China; as Sin/e appears to have been among the Romans. Khatai anfwers better to Taptary; and its. difa. ferent members, fuch as Thibet, \&c.. Probably Khatai, and Scythia have the fame derivation; as they appear to have been applied in certain inftances, to the fame tracts of country.

Pifhour or Peiflore, is the next place, of note that lay in Mr. Forfter's route. It is a confiderable city, and is fituated on the great road leading from Attock to Cabul; being 25 coffes from Attock, and 29 in a. $W$ by $S$ direction from Bazaar; whence its latitude fands in the map at $32^{\circ} 44^{\prime}$; and lon. $69^{\circ} 54^{\prime}$. From this,

## [ 111 ]

place to Cabul, Mr. Forfter reckons go coffes; Col. Popham's MS. 108; and Tavernier 100. I have preferred Mr. Fortter's account of the diftance; but have altered his bearing to N N W, which accords beft with other circumftances : and allowing 45 coffes to a degree, Cabul, by this account, will be in lat. $34^{\circ} 3^{6}$; lon. $68^{\circ} 58^{\prime}$. By the Perfian tables, its latitude is $3+^{\circ} 30^{\prime}$; and its lon. $4^{\circ} 4^{\prime} 2^{\prime}$ weft from Lahore: but the conftruction allows only $3^{\circ} 47^{\prime}$. Thefe bearings, taken in a great meafure, at a venture, together with the computed diftances on each ; can only be admitted in geographical determinations, where there are no fixed points at the extremity of the feries, through the neceflity of the cafe: however, they may be eftimated, as at leaft equal in point of authority, to the Perfian tables of longitudes, in which Cabul is placed $104^{\circ} 40^{\prime}$ to the eaft of the Fortunate Iflands.

The city of Cabul, the prefent capital of Timur Shah, King of Candahar, is fituated near the foot of the Indian Caucafus, or Hindoo-Ko; and not far from the rource of the Attock river, which paffes very near, or under it. Its fituation is fpoken of in terms of japture by the Indian hiforians; it being no lef's romantic, than pleafant: enjoying a delightful air, and having within its reach, the fruits and other products both of the temperate, and the torrid zone. In a political light, it is confidered as the gate of India towards Tartary: as Candahar holds the fame place, with relpect to Perfia.
. The Ayin Acbaree is very full, in its defcription of the province of Cabul; as well as thofe of Candałiar and Calhmere. Cabul has an extent given to it, of 150 coffes from the Indus (at Attock city, probably) to Hindoo- $\mathrm{Ko}_{3}$ and 100 , from the river Chaghanferai, the eaftern boundary, to Charbagh. There meafures may be taken at 200 G. miles, by 134 ; and appear confifterit.

The province of Cabul appears; by every account, to be a country highly diverfified: being made up of mountains, covered with eternal fnows; hills of moderate height, and eafy afcent ; rich plains
plains, and fately forefts; and thefe enlivened by innumerable ftreams of water. It produces every article neceffary to human life, together with the moft delicate fruits and flowers. It is fometimes named Zabuliftan, from Zabul, one of the names of Ghizni : which was the ancient capital of this country, and of which, Candahar was then reckoned a part. The mountains of Hindoo, or Hindoo-Ko, feparate Cabul from Balk and Badackfhan; and are precifely the ridge defigned by the ancients, under the name of the Caucafus of India : and the proximity of this ridge to Cabul, occafions the moft rapid changes in the temperature of the atmofphere. The Ayin Acbaree, from whence moft of thefe particulars are collected, takes particular notice of the Attock river, which takes its courfe from north to fouth (nearly) and fertilizes the lands of Cabul and Ghizni.
.Cabul, as well as Candahar, together with fome diftricts on the eaft of the Indus, are comprifed within the extenfive dominions of Timur Shah Abdalla; which extend weftward to the neighbourhood of the city of Terhiih; including generally Cabul, Candahar, Peihore, Ghizni, Gaur, Seiftan (or Sigiftan) and Korafan. This tract is not lefs than $65^{\circ} \mathrm{B}$. miles in length, from eaft to weft : but although we know not what the extent may be, breadthwife; yet there is little reafon to fuppofe, that it bears any proportion to the length. It does not differ much from the tract comprifed within the ancient kingdom of Ghizni. Timur Shah's Indian fubjects are chiefly Afghans; the reft, Perfians and Tartars of almoft every denomination. His government is faid to be mild and equitable; with fome degree of relaxation as to military difcipline. This, in a government purely military, forbodes diffolution.

The pofition of Candahar is fill more indeterminate, than that of Cabul; as being placed with a reference to the latter, and in the parallel affigned by the Perfian tables; which is $33^{\circ}$, or a degree and half to the fouthward of Cabul. Its longitude cannot be collected from the Ayin Acbaree, becaufe there is a miftake in the

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figures: it giving'a higher number of degrees than for Cabul; reckoning from the Fortunate Iflands. Mr. Forfter eftimates the bearing of Ghizni (or Gazna) from Cabul, at S or S by W ; and the difance $20 \frac{\pi}{2}$ farfangs, or $\overline{4} \overline{1}$ coffes: and from Ghizni to Candahar S W, ro3 coffes.' Thefe give' a genetal bearing of $\mathrm{S}_{3} 3 \mathrm{~W},{ }^{1} 37$ coffes. Col. Popham's MS. gives 122 coffes between Cabul and Candahar, in direct diftance ; and Tavernier ito. There appears a wide difference in thefe accounts: Mr. Forfter's bearing from Ghizni, is unqueftionably too much foutherly, as is proved by the difference of latitude; therefore the diftance arifing from his compound courfe, is to be placed out of the queftion. 'And Col. Popham's MS. fays that the coffes are to be reckoned at a mile and half (Britifh, we may conclude) and then the 122 coffes, produce only 96 Hindooftanny coffes; and thefe, at 42 to a degree, will give 138 G. miles. I have accordingly placed Candaliar 138 miles from Cabul, and in lat. $33^{\circ}$, lon. $67^{\circ} 5^{\prime}$ : which is D'Anville's pofition of it, in his map of Afia. Ifr my map, it ftands $5^{\circ} 42^{\prime}$ weft of Lahore; or $1^{\circ} 55^{n}$ weft of Cabul. The eafferh geographers, according to M. D'Anville, allow 2 degrees between them.
Candahar, while the Perfian and Mogul empires were feverally. undivided, was the frontier city and fortrefs of Hindooftan towards Perfia; and was efteemed the key of the weftern provincés of the katter; and not unfrequently changed mafters. The Ayin Acbaree, elaffes, as belonging to Candahar, feveral'provinces on the weft of it, and which unequivocally belong to Perfia: but as the limits of the empire varied with the prowefs and abilities of the different. Emperors, it may be concluded that Acbar extended thein to the utmoft: I believe there are no doubts entertained concerning the ancient name of Candahar: which is allowed to be the Paropamifan Alexandria; from whence Alexander, directed his march northward; into Bactria and Sogdiana, that is', the modern countries of Balk, Biacharia, and Samarcand: and returned again to it, previous to hiss. Indian expedition'.

## [ 144$]$

The pofition of Ghizni, the ancient capital of the kingdom of the fame name, is totally different from what M. D'Anville fuppofed. He has placed it in the $\mathbb{N} W$ extreme of Cabul : but Mr. Forfer found it in the very heart of that province. Geography is, indeed, very bare of particulars through the whole tract between Cafhmere and Candahar : although Mr, Forfer has contributed fa much towards the improyement of it. He has flewn that Cafhmere ftands nearly a whale degree to the north of the pofition affigned it, in our beft maps: has taught us to diftinguif certain branches of the Indus, which before, were either confounded together, or mifnamed. In particular, we learn from him, that the river which paffes by the city of Cabul, is named the Attock; and joins the Indus in front of the city of, Attack : and although the fmalleft river of the two (for it is not more than 100 yards wide, though deep) yet communicates its name to the other, during a confiderable portion of its courfe.

Although this was the part of India, the firft known to Europeans, yet at this day, we:know lefs of if, than of moft other parts; nor ought it to excite furprife ; for the moderns have vifited India, on a very different errand than what the ancients did : ours being purely pn the fcore of maritime trade, until the downfal of the Mogul empire, opened the way to the acquifition of territory : and that in the oppofite conner of the empire, I have availed myfelf of the laboriqus refearches of the celebrated D'Anville, to introduce feveral places, whofe names he has identified on the authqrity of a Turkih geographer, whofe works $I$ am unacquainted with ${ }_{4}$ From M. R'Anville's works alif, I have copied the pafition of the northern mountains, which feparate India from the Tartarian provinces, as well as thofe provinces themfelves; having, as I faid before, extended the map to Samarcand and Cafligur, in order ta Thew the relative pofitions of the places fituated near the common frontiers of Perfia India, and Tartary. Thofe who wih for more particular information, may confult his map of Afia publifhed in

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.775: as alfo his Ecfairciffemens*, which accompanied that, and the map of India; the firft fection of which is particularly curioús, and applies directy' to this fubject. "His"Aritiquite "Geograpbique de E'Erde, deferves attention likéewife: though 'I'confefs I cạnnot follow Arriah in his detail of Alexander's marches, in the 'countries bordering on the weft of the Indus $s_{2}$ for want of fuch unequivocal marks, as are to be found on the eart filde of that river, in the courfes and conifluences of the Panjab rivers. "Howevert,' by' the ait of the Ayin Acbarce, feveraf pofitions in the march of Alexander may be afcertained; as the fecond volume of that work, under the heads of Cafimere and Cabul, gives the names, dimenfions, and relative pofitions, of the fubdivifionts of thofe countries. I think f can clearly petceive that Alexander never went fọ fat "to the not th' as the city of Cabul ; and that although his route is generally reprefented as very circuitous, and even traverfing the country from one extreme to the othery yee I apprehend, thaton the contrary, it was tolerably ftraight, from Alexandra" (dr Canidahir) to the Undus, near Peutcelaotis, or Pehkely. Let us endeavourt to trace his route generally:

Leaving Alexandria, he came to the river Cophenest $\dot{t}^{3}$ which, by circumitances, ought to be the fiver that funts tinder the city of Nagaz: and the moderrr name of which, "Mi, "Anville has. found to be Cow, in the Turkift gedytapher above foken of. It is unfortunate, that neither Mr. Forfter's "journal, nor Col, Popham's MS: give the particulars of idry of the rivers on the road between. Cabul and Catidatiar: the llatter indéed; notes no lefs than five ftreams that crofs it: but leaves uns in uncertainty as to their buik names, and future courfe. In Alexanderts arrangement of bounn daries, the river Cophenes was the eaftern limit of the ppovince of Paropamifus; of which'Alexandtia, or Candahar, was regatded as

[^95]
## $\left[\begin{array}{ll}116\end{array}\right]$

the capital: and I think it anfwers to the Nagaz river in this refpect; and ftill more in the diftance marched by Alexander, in the interval between this river and the Indus. From the Cophenes river, Hepheftion and Perdiccas, with a Arong detachment, were fent into the country of Peucelaotis (according to Arrian ; Peucolaitis, according to Strabo) near the Indus, where they were to make ready for ferrying the army over. . This country, in name and fituation agrees with the modern Pebkely or Puckley, lying on the north of Attock; and Hepheftion's ftay there muft have been very confiderable, previous to Alexander's.arrival: as on occafion of the revolt of the Prince of the country, the fiege of his capital took up $3^{\circ}$. days. Alexander himfelf, marched from the banks of the Cophenes againf the A/pii, Thyrai, and Arafaci; nations, whofe. fituations, and modern names, I am utterly ignorant of ; but con-. clude that they were inferior divifions of the modern Cabul, and fituated on the north-eaft of Candahar; for, not to mention that Allexander would hardly purfue the fame route as Hepheftion did; which was to the eaft; he afterwards failed down the fream of the Indus, to the place where the bridge was built: and every circumftance ferves to prove that his expedition was to the NE. In his way' to the Afpii, he, croffed two rivers, the Chop and. Euafpla; and defeating the Afpians in a pitched battle, paffed through the territories of the Gurai; and croffed the river of the fame name, with much difficulty, by reafon of the depth and rapidity of its fleam," and the nature of its bottom; which was compofed of round flippery flones. He was at this time, on his way to the; country of the AJacerti, or AJucani; and this is a point, at which I Thall paufe, to endeavour to afcertain its pofition, from the nature of the circumftances relating to it. The river Gureus, then, appears to have been the moit confiderable one that occurred fince Atexander paffed the Cophenes: it was deep, but yet fordable; for had his army croffed it in boats, they would either have been ignorant of the nature of its bottom; or knowing it, they could
$\left[\begin{array}{lll}1.17\end{array}\right]$
not have regarded it as an obftacle, The defcription fuits the Attock river, which running under Cabul, paffes, on the eaft of the territory of Ghizni (Ghuzneen, in the Ayin Acbaree) and joins the Sinde or Indus, in front of the city of Attock. The Gurai, therefore, anfwer to the Ghiznians; and their river to that of Attock. It is very difficult to judge of the length of Alexander's march from the Cophenes to the Gureus; but;poffibly it might be 70 or 80 road miles.

The country of Affacani; appears to border on the eaft of the Gureus, and anfwers to Ilfa-kyl, a territory fituated on the foutheaft of the city of Cabul *, and between that and Bijore. Maffaga, the capital, being taken by affault, Alexander fummoned Bazira, which we may conclude to be the territory adjoining to the Affacani; and here the modern diftrict of Bijore prefents itfelf in a pofition that anfwers moft unequivocally to that of Bazira; and the fimilarity of the names is no lefs ftriking. Bijore is a fmall province bordering on the north of Pighour (or Peihore) which is fynonimous with Beckram + , and is confined by the rivers Indus and Attock. Its-dimenfions are not more than 50 miles by 20 , full of mountains and wilds, and inhabited by a favage and turbulent race. Its pofition becomes interefting, as it contains the famous mountain of Aornus, the taking of which was one of the moft brilliant ex-ploits of Alexander, in thefe parts. The Ayin Acbaree gives no intimation of its containing any fuch remarkable mountain: but defcribes it generally aṣ a very ftrong country, and as having faftneffes, into which the inhabitants occafionally retreat. According to the abọve particulars of the fituation of Bijore; and the account. of Alexander's proceedings after he left Aornus, I conclude that this celebrated mountain lies about 55 G. miles northward, or, N NE, from Pifhour, and 85 from Cabul. . Arrian defcribes its bafe to be 18 or 20 miles in circuit; of vaft elevation, and ac-

[^96]ceflible

## [in ]

ceffible only by one narrow path, cat out in the rock. On the fummit was a great extent of arable and pafture land; with rprings of water; fo that a garrifon of yooo men might fubifft, without any extraneous aid. We may fuppofe it to be fomewhat fimilar to Gwalior*; or Rotas Gur in Bahar. The Indus does not pafs near Aornus; becaufe the diftrict of, Sowhad proper, lies between the Indus and Bijore, according to the Ayin Acbaree.
M. D'Anville in his Eclaircifemens, and. Antiquite de L'Inde, informs us that the Sieur Otter, in his account of the return of Nadir Shah, in ${ }^{7} 7,39$, (a work I have never been able to meet with) defribes a remarkable mountain of the name of Renas, on the eaft of the Attock river, and near the banks of the Suvat: and indeed,' in the pofition, in which we might expect to find Aornus. The river Suvat, probably means that of Sowbad; a province bordering, as we have faid before, on the weft of the Indus: and I hould fufpect that the Indus itfelf is intended by the river Suvat:' M, D'Anville's reafoning, to prove that Renas and Aornus are meant for the fame word, is very carious: and I beg leave to refer the reader to page 17 of the Antiquite' de L'Inde, where he will find it in the author's own words.

It appears that Alexander, after the taking of Bazira, and before he befieged Aornus (notwithftanding its proximity to the former) proceeded to the Indus, where he took poffeffion bf the city and fortrefs of Peucelaotis, and feveral fmall towns on, or' near, that river: and as Hepheftion and Perdiccas make their appearance here, I conclude this to be the city fpoken of before, as furtaining a fiege' of 30 days; which period might poffibly expire about the time of Alexander's arrival : and the furrender might have been a confequence of it.

We have before fuppofed the country of Peucelaotis to be the: modern Pehkely :' and the fortrefs and city in quention," was proba-:

[^97]
## [19] ]

bly the capital of it. . The Ayin Acharee defcribes the province thus : it is fituated on the weft (or rather $\$ \mathrm{~W}$ ) of Calhmere; with the country of Gehker to the fouth; Attack to the weft (or S W). Sowhad, which includes Bijare, on the $\mathrm{NW}_{\text {; }}$ and Kenore on the north:: its rivers are the Behut, Sinde (or Indus) and Kifhengongas and its dimenfions 66 B . miles by 47. The two circumftances of the Indus and Kifhengonga paffing through it; and its bordering on the dittriet of Attock (or Attock-Benaris) point out its general pquition very clearly. Mr. Forfter thews us that the Attock diftrict extends 27 or 30 miles to the N N E of the city of that name: and it may pofibly go fomewhat farther northwards though probably not much. Here then we place the fouthern limit of Pehkedy, about 35 miles above the city of Attock, and extend it to the NNE, along the hores of the Indus; though much more of it lies.on the eaft of that river, than on the weft. The Kifhengong7 being the common boundary of Pehkely and Cafhmere, proves that. Pehkely has its greateft extent from NE to $\mathrm{S} W$ : and $\mathrm{Mr}^{2}$; Forter, who avoided the Pehkely diftrict, and did not fee the Kifhengonga, mult have been to the eaft of if; in his joutney from Calhmere to Pinhour. A light infpection of the map, at page' 102; will convey a clearer idea of the relative pofitions of the feveral provinces jun mentioned, than any written defcription: and to that, I Ohall beg leave, to refer the reader.

If I. undetfand the matter right, Alexander. left the rock Aornus behind him, as I faid before, when he proceeded to Peucelastis, to receive itss furrender: , and afterwards marched back again (that is, to the N or NW ) to invert the rock; takipg the city of Einbolima; which food nearyit, in his way. And after the taking of;Aornus, he made a, fecond expedition into, the country of the Aflacani, Atill tracing back pis fteps to the northward. His errand among the Affacani-(Iffa-kyl) this fecond time, wis toiget poffeffion of frone elephants, which werg raid toi be fent thithera to prevent theirlfals ling.jnto his hands. : It wapdgubtlefs min pbject to hime, to be prot vided

## [ 120 ]

vided with a fufficient number of elephants, in order to oppore, with a profpect of fuccefs, thofe of his enemies, when he Thould arrive on the eaft fide of the Indus. And although Alexander might, from his fuperior knowledge of difcipline, defpife the attacks of thofe animals, as every accomplifhed general in every age has done; yet from an equal degree of knowledge of the human mind, he might conclude that his foldiers in general would feel themfelves poffeffed of more confidence, when, in addition to their ordinary means of attack, they could alfo employ that, which appeared the moft formidable in the hands of their enemies. The elephants were at laft found, in the paftures near the Indus, and fent off by land to the grand army; which we may fuppore to be on their march, towards the bridge. He in the mean time, poffibly tired of marching; or for the fake of novelty, wihhing to embark on the Indus; caufed trees to be felled, with which having conftructed boats (according to Arrian) he failed down the flream to the bridge. Poffibly he made fome rafts, which might be fully equal to his wants; but it is difficult to conceive, by thofe who are acquainted with the nature of conftructing any kind of boats, that he either waited to build them ; or that he carried with him the requifites for their equipment, on fo fudden an emergency.

I have before (page 92) fuppofed Attock to be the place where Alexander croffed the Indus: and over and above the reafons there affigned for it, I will now add another : which is, that after he came to the bridge, (which was compleated before his arrival) he made an excurfion by land, into the country adjacent to the weftern bank of the Indus, to view the city of Nyfa (fuppofed by D'Anville to be Nagaz, the Nagara, or Dyonyfopolis of Ptolemy) and he is then faid to have entered the country, that lay between the two rivers, Cophenes and Indus. We have before taken it for 'granted that the Cophenes is the river that runs by Nagaz, and falls into the Indus about 30 miles below the city of Attock; and as the river Attock joins the Indus in front of the city of that name, it is clear
that until he came oppofite to that city, he could not be between the Cophenes and Indus. And if it be faid that the Attock river, was the Cophenes, he had all along been between the Cophenes and the Indus; and Arrian's words could have no meaning. But it is probable on every account that Attock was the croffing place: there the mountainous country from the north-eaft terminates, and the plains of the Panjab begin; a circumftance highly favourable to his future plan of penetrating into India, and no lefs fo to the conftruction of his bridge ; which was no eafy matter to accomplif, acrofs a river fo wide and fo rapid as the Indus; but which was lefs difficult in a level country than in a mountainous one. The bridge was undoubtedly made of boats, as Tamerlane's was, in. 1398 ; but 'Tamerlane croffed at a feafon when the river, was. (comparatively). low; Alexander, after it was confiderably fwoln, with the periodical rains.

By Alexander's fending off Hepheftion from the Cophenes, to provide the means of paffing the Indus in the country of Peuce-laotis- (Pehkely) it would appear that he had an intention of croffing; it higher up than he afterwards did: and it was natural enough, before he had learnt from Hepheftion that the fituation was in every refpect, unfavourable.

It is unlikely that Alexander, fo far from vifiting Cahmere, as: fome have thought, ever had heard any diftinct account of it; otherwife fome of the writers of his, life, would furely have taken. notice of fo extraordinary a country : nay, I conclude, according. to my idea of Alexander's character, that he would certainly have. vifited it, when he returned to: the Hydafpes, to embark for the Indus: and was, in fome degree at leifure; if a man who is eternally preparing work for himfelf, can be faid to have any.

As M. D'Anville's account of Alexander's progrefs in the Antiquité de L'Inde, fuppofes. that the Behit, or Chelum (he calls it. Genave) the wefternmoft of the Panjab rivers, was the Indus of Alexander; it is neceffary to obferve, that M. D'Anville's opinion.
was formed on the fuppofed certainty of that Monarch's having. only, four rivers between him and the country, of the Prafii, when: he had croffed, the Indus. That learned, geographer had not: the true geography of the Panjab, before him : and, in fact, Alexander: had all the five rivers of the Panjab, to crofs, after he arrived on the. eaft fide of the river, which he fuppofed to be, and was, in reality. the Indus.

I return from this long digreffion concerning Aiexander, to the account of the modern geography of the tract in queftion. I am. convinced that the more our knowledge of the partiçular geography. of the countries, on both fides of the upper parts of the Indus, increafes; the clearer will be our ideas. of Alexander's marches. The commentaries of the Emperor Baber, quoted in the Ayin Acbaree, may be a fruitful fource of information $;$, as they treat particularly of the province of Cabul.

Between Candahar and Mefchid-Sirr, on the fouth coaft of the Cafpian fea, Mr. Forfter's route lay in a pretty ftrait line through Herat, Terfhirh, and Buftan (Biftam in D'Anville) and this circumftance is favourable to the defign of ufing his fcale of computed farfangs, through that fpace. He eftimates this meafure roundly at $\mathbf{2}$ coffes; or about' 4 Britifh miles. His whole number of farfangs between Candahar and Mefchid is 280*, and the diftance according to M. D'Anville, (the beft authority I know) is is $5^{\circ}$ of longitude, wanting $12^{\prime}$, which with the difference of latitude between $33^{\circ}$ and $37^{\circ}$, gives $77^{2}$ G. miles. 'The farfang then, pro-

[^98]
## [ 123 ]

duces 2,757 G. miles of horizontal diftance; or allowing for the inflexions of the road 3,71 , or near $3^{\frac{3}{7}}$ Britifh miles; not very wide of Mr. Forfter's eftimation: for 2 Hindooftanny coffes may be taken at 3,8 B. miles. According to this proportion, about $21 \frac{3}{7}$ farfangs, will make a degree of a great circle. M. D'Anville's fcale of Parafangas in his Euphrates and Tigris, are at the rate of $2^{\frac{1}{2}}$ to a degree. With the above fcale, I have compared fome of the intermediate places, in M. D'Anville's map of Afia, and find that Herat, the capital city of Korafan, is too far to the weft by $1^{\circ} 37^{\prime}$ of longitude; and Terhifh (or Terfhiz) by $15^{\prime}$, in refpect of the Cafpian fea. Thefe pofitions I have ventured to alter: for it is probable that M. D'Anville might not have been poffeffed of an itinerary, fo accurate as Mr. Forfter's. Between Candahar and Gimmock, Mr. Forfter eftimates the bearing, at W and W by N : and the fhort diftance between the latter, and Herat, N. No reafon is affigned for the fudden change of courfe. From Herat to Buftan, W by N , and the remainder of the way, $\mathrm{W}, \mathrm{W}$ by N , and NW . All thefe bearings are tolerably accurate.

This gentleman furniffies us with new ideas refpecting the bearing of the chain of mountains, that is commonly fuppofed to penetrate Afia from weft to eaft, under various names: or tather, he brings us back to the ideas left us by the ancients. It is unqueftionable, that the Greeds and Romans knew more of the particular geography of Perfia, than the modern Europeans do: although the parts that are known to us, may be arranged with more geometrical precifion. This chain or ridge, which rifes in leffer Afia, and
 and from thence deviating to the $S$ E, fhuts up the fouth coart of the Cafpian fea; was continued by Ptolemy, under the names of Coronus, Saripbi, and Päropàmijuis: diviaining Hýcania ànd Tápuri, from Parthia; Margiana from Aria; and Bactria from the province of Parópatnifus (or, accoơding to iñodérn g gēograp̆hy̆, dividing $-{ }^{-}$Mazánderan, or Taberiftan, from Comis; Dahiftan from Korafan s.
and Balk from Seiftan, or Sigittan) and finally was made to join that vaft ridge, which under the name of Indian Caucafils, divided India from Bafria; and afterwards took the names of Imous and Emodus; feparating India from Scythia. It is not known to the moderns, what courfe this chain takes, after it leaves the neighbourhood of the Cafpian fea : or whether it does in reality join the Indian Caucafus : but the probability of it is ftrong, although it is not after the manner M. D'Anville fuppofed ; for he gives it an ESE direction from the Cafpian, and makes it pafs on the fouth of Herat. But had this been the cafe, Mr. Forfter muft have croffed it in his way from Candahar; inftead of which, he croffed no mountains until he came within 90 miles of the Carpian fea; fo that he left the continuation of the Indian Caucafus, if fuch there be, on his right; or to the northward; and I really believe that the ridge does exift, under the form defrribed by Ptolemy : for the rivers croffed by Mr. Forfter, had all a foutherly courfe ; proving that the high land lay to the north, although out of fight : therefore the connexion between the Cafpian mountains, and the Indian Caucafus, mult be by the north of Korafan. As for the ridge that Mr. Forfter croffed near the Cafpian fea, it had a north and fouth direction, and anfwers to the mountains Mafdoramus of Ptolemy, which thut up the eaftern fide of Partbia proper, which lay on the S E of the Carpian. The modern name of this ridge is Kana-boody; and Mr. Forfter remarks that the elevation of it is far greater on the weft, than on the eaft : fo that the lands of Korafan, are in general, more elevated than thofe towards Ifpahan. The Kanahoody mountains are thofe which M. D'Anville has extended to Herat and Cabul; but we find their courfe to be quite different; but how far they extend to the fouth or S E is ftill a queftion.

I confefs it was a matter of furprife to me that there fhould be no mountains between the province of Cabul and Terhinh, in the route paffed by Mr. Forfter : he defcribes nothing but feattering hills, where the maps ufually reprefent lofty chains of mountains. Through-

## [ 125 ]

Throughout his whole route from Candahar to the Calpian fea, he crofled no ftream that was too deep to be forded, although the journey lafted from the beginning of Auguft, to the latter end of January.

I have introduced Alexander's march after Beffius, \&cc. in order to render the map more compleat. We may trace the ancient Tapuri, in Taberiftan; Dabe, in Dahitan; Aracbofia, in Arokhage ; and Aria, in Herat, or Harat. Cau-cafus, and Paro-pamifus, the names of ridges of mountains on the N W of India, derive part of their names from Ko and Pabar, words which fignify mountains and hills in the Indian languages. Of Imaus, we have fooken before, in page 96. Probably, the name of the Caucafus of Georgia, had the fame derivation, as that of India.

I hall clofe the account of this fmall map, with an obfervation or two, refpecting fome geographical mifconceptions which I have obferved to prevail, even among forme of the learned. The firt is, that the modern Bucharia (or Bocharia) is the fame with the ancient Bactria. This is fo far from being the cafe, that Bucharia is fituated beyond the river anciently called the Oxus, or the modern Jihon : and is the country anciently named Sogdiana; from Sogd, the valley: that is, the beautiful valley, in which Samarcand (anciently Maracanda) is fituated. Bactria; or Bactriana, on the contrary, lay on the foutb of the Oxus; and comprehended the prefent provinces of Balk and Gaur; and probably part of Korafan. Maver-ul-nere, is alfo applied to the country beyond the Jihon; and between the lower parts of the courfes of that river, and the Sirr, or ancient Iaxartes: Mavel-ul-nere fignifying tbe cuuntry beyond the river; or Tranfoxiana.

The other mifconception refpects ancient Partbia. Very inaccurate ideas prevail concerning the local pofition of that country. Thofe whofe knowledge of it is collected chiefly from its wars with the Romanis, conceive Parthia to be only the countries bordering on the Euphrates and-Tigris ; as their boundaries, on the extenfion of their em ${ }^{2}$

## [ 126 ]

pires, met thofe of the Romans. Strabo has either been miftaken in this point, or has not fully expreffed himfelf, where he defcribes the Parthians who defeated Craffus, as the defcendants of thofe Carduchians, who gave fo much trouble to Xenophon, during the celebrated retreat of the Greeks. It is probable, or at leaft poffible, that the Parthians might have had in their army at that time, fome detachments from among thofe hardy mountaineers; as the Carduchi were then numbered among their fubjects : but the bulk of the Parthian army, came from Perfia, their proper country. Whoever confiders the flight fubjection in which the Carduchians were held, even during the vigorous reigns of the firft Perfian Emperors, will not expect that the Parthians had many recruits from that quarter. The hiftory of the Parthian geography is briefly this : Parthia proper, was a fmall province, very near to the fouth-eaft extreme of the Cafpian fea; which territory, after the divifion of Alexander's empire, fell to the fhare of the Seleucidæ, Kings of Syria, and of the eaft, about 300 years before our æra. About 50 years after, Parthia rebelled; and together with Hyrcania, and other adjoining provinces, became an independant fate, under Arfaces. As the empire of the Seleucida grew weaker, the Parthians extended their country weftward; and the fine province of Media (now Irak-Ajami) fell to them : and within a century after the foundation of their ftate, it had fwallowed up all the countries. from the Indus to the Euphrates, Bactria included: and this province had thrown off the yoke of the Seleucidæ, long before Parthia. The Parthian conquefts in Armenia, about 70 years before Chrif, brought them acquainted with the Romans; whofe conquefts met theirs, both in that country and in Syria. The Parthians, together with their conquefts, had advanced their capital weftwards; and had eftablifhed it on the Tigris at Seleucia, or rather Ctefiphon (near the prefent Bagdad) before their wars with the Romans commenced. The particulars of their firft wars with the Roman people, which continued about 65 years, are too well known to be repeated, here,
had this been a proper place for it; fuch as the expeditions of Pompey, and Anthony; and the defeat of Craffus. On occafion of this laft event, the Parthians extended their conquefts further weftward, but were 'afterwards compelled to retire : and they generally loft ground $\mathrm{m}_{2}$ Armenia and Mefopotamia; during the time of the Roman Emperors. Trajan penetrated to their capital; and fatisfied his curiofity by embarking on the Indian fea. The moderation of Adrian reftored the aricient boundary of the Euphrates In A. D. ${ }^{2452}$ Perfis, or Perfia proper, which had hitherto ranked as a province of Parthia, gained the afcendency; and under Ärtaxerxes, putan. end to the dynafty of the Arfacidx, and reftored the ancient name of Perfia to the empire; after that of Parthia' had exifted about 480 years. So that, in fact, the Parthian empire, confidered generally, was the Perfian, under another name.

## SECTION IV.

> The Tract fittated between the Kistnah River, and the Countries traverfed by the Courfes of the Ganges and. Indus, and their principal Branches: that is to Say, the middle Parts of Inidia.

THIS very extenfive tract is bounded on the north-eaft by the foubahs of Bengal, Bahar, Allahabad, and Agra; on the N W by the courfe of the river Puddar; on the eaft and weft by the fea; and on the fouth by the river Kiftnah or Krifhnah : and comprehends in general the foubahs of Guzerat, Malwa, Berar, Oriffa, Candeifh, Amednagur (or Dowlatabad) Vifiapour (or Bejapour) and Golconda. It is about 800 Britifh miles in length from NW to SE; and 600 wide: and has in and about it, many points. that are determined either by cœeleftial obfervations; or inferred from fuch points, by the help of furveys or good charts.

The fundamental points on which the conftruction and fcale of this part depend, are as follows:

On the north and north-eaft, Agra, as determined by obfervations and furvey (page 48); and Calpy, Chatterpour, Rewah, Burwah, and Balafore, inferred from meafured lines drawn from other places of obfervation. On the eaft, Cattack, as determined by Col. Pearfe, (page i1). On the fouth, Mafulipatam, as determined by Col. Pearfe, and Capt. Ritchie (page 12). On the weft, Bombay, by the obfervations of the Hon. Mr. Howe (page 31) and Surat,

## [ 129 ]

Surat, Cambay, and Diu Point, inferred from charts and furveys (page 33). And in the interior parts, Narwah, Sirong, Bopaul, Huffingabad, Burhanpour, Poonah, Amedabad, by Mr. Smith's obfervations, and General Goddard's march: Nagpour, Ruttunpour, and Gurrah, by Mr. Ewart's obfervations and furveys : and Aurungabad, Hydrabad, Sumbulpour, Agimere, and Areg (near Vifiapour) by mifcellaneous materials. I fhall proceed firft, to give the authotities by which thefe primary fations or points, were determined ; and afterwards fhew how the intermediate parts were filled up, in detail. The conftruction of the fea coafts, on both fides of this tract, has' been already difcuffed, in fection I: and I fhall begin my account of the conftruction of the inland parts, with Mr. Smith's and General Goddard's lines acrofs the continents, from Calpy to Bombay, , and Surat.

The Rev. $\cdot$ Mr. Smith fet out from. Calpy with CoI...Upton. in 1776, on an embaffy to the Mahratta Court at Poonah; and fell into the great toad from Delhi and Agra to the Deccan, at the city of Narwah:; which is fituated on the river Sindeh, near the entrance of a famous. pafs, that leads through the chain of mountains, that divide Malwa from Agra. From Narwah, he proceeded to:Sirong, a city of Malwa, fubject to Madadjee Sindia: and from thence to Burhanpour, the capital of Candeifh; and at one period; of the Deccan alfo. $\because$. It is yet a flourihing city; and is fituated in the midft of a delightful country. In his way to this place from Sirong, he croffed the famous river Nerbuddah; formerly the reputed boundary of the Deccan, to the north. From Burhanpour, he: went to Poonah, the capital of the weftern Mahratta empire, croffing the heads of the Godavery and Beemah rivers in his way: and from Poonah to Bombay. During all this route, he took obfervations of latitude and longitude, as often as opportanity offered; which was not unfrequently: and with thefe, together with theintermediate bearings of the road, he conftructed a map, which is no lefs valuable on the fcore of its general accuracy, and extenfive

## [ 130 ]

information; than curious, by the novelty of its fubject. We had then for the firf time, a geographical line, on which we could depend, drawn acrofs the continent of India, through the principal points between Agra and Poosah; and which, by eftablifhing fo many interefting pofitions, has enabled us to correct feveral routes, which, without it, would have remained very indeterminate. Narwah, for inftance, corrects the bearing and diftance of the road between it, and Agra; Sirong, the road to Ougein, and Mundu; and Burhanpour, the pofition of Aurungabad; and the bearing of the roads to Surat, Hydrabad, and Nagpour.

General Goddard's celebrated march from C̣alpy to Surat, touches on the route of Mr. Smith, at Calpy, Sirong, Bopaul, Hurdah, and Burhanpour : and the map of it, which remained in the General's poffeffion at the time of his death, was faid to be drawn from the materials furnifhed by the field engineers; who meafured the diftances, and took the bearings of the road, the whole way. On a comparifon of the difference of longitude thewn by this map, with that refulting from Mr. Smith's abfervations, the difference was $6^{\prime} 35^{\prime \prime}$; the meafured line giving fo much more than the obfervations.
$\left.\begin{array}{l}\text { General Goddard's map gave the miles of wefting, } \\ \text { between Calpy and Sirong 109 } \frac{1}{\ddagger} \text {, or difference } \\ \text { of longitude - }\end{array}\right\} 2^{\circ} 0^{\prime} 15^{\prime \prime}$ And from Sirong to Burhanpour $96 \frac{1}{4}$, miles of weft- $\}$ ing, or difference of longitude

$3 \quad 44 \quad 35$


And

And in the interval between Calpy and Sirong, about 2 degrees, the meafurement exceeded the difference of longitude by obfervation 4 minutes; fo that the meafured line exceeded the diftance by obfervation, proportionally through each interval.

Now it remains to be obferved, that Calpy, on the fouth bank of the Jumna river, the laft point in the furvey, that way, and the firft in Mr. Smith's route ; flands in my map, in lat. $26^{\circ} 7^{\prime} 15^{\prime \prime}$, and in lon. $80^{\circ} 4^{\prime}$; while Mr. Smith reckons it in $80^{\circ}$. Again, on the weft fide of India, I have taken Bombay at $72^{\circ} 40^{\prime}$ (fee page 31) and Mr. Smith places it in $72^{\circ} 45^{\prime}$ : fo that, in fact, he is $4^{\prime}$ to the weft of my account at Calpy; and $5^{\prime}$ to the eaft of it at Bombay: his whole difference of longitude between Calpy and Bombay, being $9^{\prime}$ lefs than what I have taken it at. And again, it has been obferved that Mr. Smith reckons $6^{\prime} 35^{\prime \prime}$ lefs between Calpy and Burhanpour, than Goddard's meafured route gives. It is certain that obfervations of longitude, taken in the ordinary way, cannot be expected to correct frall errors in diftance, fo well as meafured lines; and therefore it is no impeachment of the general ${ }^{\prime}$ utility of Mr. Smith's obfervations, that I have ventured to deviate from them, in fixing the pofitions of fome places in the road' acrofs the continent.

Narwah, or Narwha, is the firft point that I hall notice in Mr. Smith's map, from Calpy. He places this city and fortrefs in lat. $25^{\circ} 40^{\prime}$; lon. $78^{\circ} 17^{\prime}$; his difference of longitude from Calpy; being $1^{\circ} 43^{\prime}$. Mr. Cameron, who furveyed the roads and country between Etayah and Sirong, reckons $1^{\sigma} 3^{\prime}$ difference of latitude, and 57 miles of wefting, or $\mathrm{r}^{0} 4^{\prime}$ difference of longitude from: Etayah to Narwah. Now, Etayah being by the furvey in $26^{\circ} 43^{\circ}$ $40^{\prime \prime}$ lat. ; and $79^{\circ} 17^{\prime}$ lon.; the latitude of Sirong comess out perfectly right, but the longitude is $4^{4}$ to the weft of Mr. Smith's: account; or $7^{\circ}{ }^{\circ} 3^{\prime \prime}$. I cannot, however, determine with what degree of exactnefs, this furvey was made'; and I have placed Narwah in $79^{\circ} 17^{\prime}$.

Sirong (called alfo Seronge) by Mr. Smith's obfervations, is in lon. $78^{\circ} 4^{\prime}$; and as General Goddard's map makes it $2^{\circ}$ of longitude weft from Calpy (which is in $80^{\circ} 4^{\prime}$ by the above account) they, both agree in this point, although they differ in the quantity of wefting between the two meridians of Calpy and Sirong: for Mr. Smith's difference of longitude is only $1^{\circ} 56^{\prime}$; and the meafured line exceeds it by 4 minutes. The latitude of Sirong is $24^{\circ} 4^{\prime} 40^{\prime \prime}$. It is proper to obferve, that General Goddard's route croffed Mr. Smith's about 6 miles to the SE of the latter place; but the furvey was clofed to it.

Between Calpy and Sirong, General Goddard's route paffed through Chatterpour, a city in the weftern quarter of Bundelcund (or Bundela). This place was formerly vifited, and its pofition determined by menfuration, from Rewah; by Capt. Carter. He placed it in lat. $24^{\circ} 58^{\prime} 30^{\prime \prime}$; lon. $79^{\circ} 56^{\prime} 30^{\prime \prime}$. General Goddard's route reprefents it as being half a minute in latitude more to the north, that is in $24^{\circ} 59^{\prime}$; and $3^{\prime} 30^{\prime \prime}$ more wefterly in refpect of Calpy. As it was fixed by a meafured line drawn weftward from Rewah, its longitude ought to be better determined by it, than by a meridional line drawn from Calpy; and accordingly, I have not altered its pofition.

Bopaltol is the next place where the roads meet; Mr. Smith's longitude of it is $77^{\circ} 48^{\prime}$, and lat. $23^{\circ} 13^{\prime} .30^{\prime \prime}$. General Goddard's map gives $3^{2}$ G. miles, or $35^{\prime} \mathrm{L} 5^{\prime \prime}$ of longitude, from Sirong; making Bopal in $77^{\circ} 28^{\prime} 45^{\prime \prime}$. I have placed it in $7.7^{\circ} 28^{\prime}$ lon.; and $23^{\circ} 14^{\prime}$ latitude. It appears unaccountable that there fhould be no lefs than $19^{\prime}$ difference, between Goddard's account and Mr. Smith's, in the longitude of Bopaul. I copied the longitude, as it ftands above, from Mr. Smith's map.

Hurdah, on the fouth of the Nerbuddah river, is the next point of junction of the two routes. This, Mr. Smith places in $77^{\circ} 21^{\prime}$. $15^{\prime \prime}$; and by Goddard's line, it comes out $\mathrm{I}^{\prime} 33^{\prime \prime}$ more to the weft; or $77^{\circ} 19^{\prime} 45^{\prime \prime}$. It will be recollected, that as General Goddard

## [ 533 ]

at fetting out, was $4^{\prime}$; to the caftward of Mr. Smith's account (at Calpy) Hurdah will be $5^{\prime} 30^{\prime \prime}$, on the whole, more, to the weftward, than Mr. Smith's difference of longitude from Calpy, would give.

Between Bopal and Hurdah, General Goddard's route makes a large elbow, or angle, to the fouth-eaft, to Huffingabad Gaut, on the fouth bank of the Nerbuddah river; and on the frontiers of Nagpour, the eaftern divifion of the Mahratta empire : thus eftablifhing a moft ufefnl primary point or ftation, in a quarter where it was the moft wanted. Huffingabad is placed in lat. $22^{\circ} 42^{\prime} 30^{\prime \prime}$, lon. $777^{\circ} 54^{\prime}$; ; and about 140 G . miles to the NW of Nagpour city.

The two routes run often into, and acrofs each other, between Hurdah and Burhanpour. The latter, as is faid before, is by Mr. Smith's oblervation, in lon. $76^{\circ} 22^{\prime}$; and in lat. $21^{\circ} 19^{\prime}$ : and by Goddard's meafurement, which gives $3^{\circ} .44^{\prime} 35^{\prime \prime}$ from Calpy; in lon. $76^{\circ} 19^{\prime} 25^{\prime \prime}$; which, rejecting the feconds, is the longitude I have adopted for it ; not altogether on the evidence of the meafured diftances themfelves, but becaufe they agree with the whole difference of longitude arifing from the obfervations adopted in the map, between Calpy and Bombay. (fee page 130).

Burhanpour is a very fine city, and was one of the earlieft conquefts made in the Deccan. In Acbar's divifion of the empire, it ranks as the capital city of the foubah of Candeilh. It is now in the hands of the Poonah, or weftern Marattas. About 20 miles to the NE of $\mathrm{it}_{\text {, }}$ is a very ftrong fortrefs named Afeer or Afeergur.

The final feparation of the two routes, is at Burhanpour, from whence Goddärd went weftward to Surat ; and Smith, fouth-weftward, to Poonah. The meafure of the road to Surat gives $3^{\circ}$ $30^{\prime} 45^{\prime \prime}$ difference of longitude; which taken from $76^{\circ} 19^{\prime}$, leaves. $72^{\circ} 4^{\prime} 15^{\prime \prime}$ for the longitude, of Surat; which I have adopted. This fubject has been already difcuffed, in the firft fection (page 32) where it is obferved, that the different authorities between

Bombay and Surat, gave $10^{\prime}$ difference of longitude between them; by which (as Bombay is taken at $72^{\circ} 4^{\circ}$ ) Surat would be in - - - $72^{\circ} 50^{\prime} 00^{\prime \prime}$ $\left.\begin{array}{l}\text { If Mr. Smith's obfervations at Burhanpour was a- } \\ \text { dopted } 72^{\circ} 22^{\prime} \text {, then it would be in }\end{array}\right\} \begin{array}{llll}72 & 15\end{array}$ If his longitude of Bombay, $72^{\circ} 45^{\prime}$, then - 725500 $\left.\begin{array}{llllll}\text { If } \mathrm{Mr} \text {. Howe's } \\ \text { ance of } 8^{\prime} & 15^{\prime \prime} \text { inftead of } 10^{\prime 2} \text { difference of lon. }\end{array}\right\} \begin{array}{llll}72 & 48 & 15\end{array}$

The laft point in Mr. Smith's route, is Poonah, and the longitude given for that, is $74^{\circ}$; or $1^{\circ} 15^{\prime}$ eaft of Bombay. But as I have taken Bombay at $72^{\circ} 40^{\prime}$, Poonah, to preferve its proportional diftance, fhould be in $73^{\circ} 55^{\prime}$; which I have accordingly placed it in ; fo that it ftands in refpect of Burhanpour only 2 minutes farther to the weftward, than Mr. Smith places it. Its latitude is $18^{\circ} \cdot 30^{\prime}$. Between Burhanpour and Poonah, Mr. Smith's map eftablifhes fome ufeful points, from which other routes may be laid off; fuch as Nufferabad, Chandor, Unkei-Tenki, Bahbelgong, and Nimderrah Gaut.

Poonah is the capital of the weftern Mahratta empire, and is fituated about $3^{\circ}$ miles on the eaft of the Gauts; 100 road miles from Bombay; and about 75 from the neareft fea coaft. It is meanly built, and not large; and lies quite open and defencelefs. Pooroonder, a fortrefs on a mountain, about 18 miles to the ESE of Poonah, is the place of refuge in cafe of invafion: there the archives of government are depofited ; and there I believe the principal officers ufually refide. Whenever an invafion has happened, the Mahrattas never thought Poonah a place worthy of defence; and have accordingly deftroyed it with their own hands. In a ftate that can conveniently exift without a great capital, no doubt but that great advantages are gained, in war, by a releafe from fuch an incumbrance. An overgrown capital, full of rich inhabitants, and a kind of general depofitory of wealth, however pleafant it may be, as it refpects polihed fociety, and the elegancies of life; yet from

## [ 235 ]

the greatnefs of its extent, and other circumftances, incapable of defence; muft be confidered as a great political evil in a flate: it is like a fortrefs that expofes its weakeft part to the enemy, and points his attacks: and to purfue the allegory, there may be fome danger of the garrifon's facrificing the intereft of the empire at large, in order to preferve their own property, in the hour of affault. The Scythians, who were not chained to the foil, could never be conquered: and thofe who have no large capitals, fand in the next degree of fecarity ; all other circumftances taken into the cafe. If the queftion be confidered, as it concerns morals, the objections are yet fronger: for the larger the capital, the greater will be the proportion of the population that is corrupted.

Amedabad, the capital of Guzerat, was the extreme point of General Goddard's marches to the northward, in the province of Guzerat. In the firft fection, a comparifon was made between the fcale and bearing of the map of General Goddard's marches in Guzerat, and thofe of the furveys taken between Surat and the Myhie river; and it was found to agree fo well, that the line between Brodera and Amedabad might be very fafely adopted. The bearing was $\mathrm{N}_{3} 6^{\circ} \mathrm{W}$; and the diftance $53,2 \mathrm{G}$. miles; giving for the pofition of Amedabad, $22^{\circ} 58^{\prime} 30^{\prime \prime}$ lat.; and $72^{\circ} 37^{\prime}$ lon.; or $3^{\prime}$ weft of Bombay. By M. Thevenot's account, the latitude is $23^{\circ}$ and fome odd minutes: and $23^{\circ}$ by the Ayin Acbaree.

Amedabad is a very confiderable city, and fucceeded Mahmoon dabad, as capital of Guzerat. It is one of the beft fortified cities of Hindooftan; and made a good defence when taken by General Goddard in 1780. On the peace of 1783 , it was reftored to its former poffeffors, the Poonah Mahrattas. Travellers have dwelt much on the beauty, and convenient fituation of this city, which is in a level country and on the banks of a fmall mavigable river, named Sabermatty; and which, together with other confluent - ftreams, falls into the head of the gulf of Cambay, neat to the city of that name. Cambay, is indeed, the port of Amedabad, and is
diftant
diftant from it about 56 road miles. It is a large city, and appears to be the Camanes of Ptolemy ; although the gulf, which is now denominated from Cambay, had then its name from Barygaza, or the modern Baroach.
Aurungabad is a point of confiderable importance to the conftruction of the weftern part of the tract in queftion; and although we have neither its latitude, longitude, nor diftance accurately meafured from any one point ; yet the fort of coincidence that arifes between a number of eftimated routes, from 6 different places, in oppofite directions, round it, imprefs a certain conviction of its being placed nearly in its true pofition. It will be neceffary to particularize the principal of thefe routes. One of them regulates alfo the pofitions of Hydrabad, Beder, and Mahur; and is that of M. Buffy from Mafulipatam. The copy from whence I have collected my ideas on the fubject, is that included in the late Mr. Montrefor's map of the fouthern part of India. As his map goes no farther weft than Aurungabad, we may conclude that he has not altered the original bearing and diftance, with a view to reconcile its fituation to any other place to the north or weft.

Mafulipatam is already placed in the map, in lat. $16^{\circ} 8^{\prime} 30^{\prime \prime}$, lon. $81^{\circ} 12^{\prime}$, on the authorities of Col. Pearfe and Capt. Ritchie (fee page 12). This is a city and port of trade, near the mouth of the Kiftna river ; and appears to be fituated within the diftrict named Mefolia, by Ptolemy. Between this place and Bezoara (or Buzwara) a fort on the north fide of the Kiftna river, M. Buffy's route allows only 36 G. miles; but as there is exitting a map of Major Stevens's, which fixes the: faid diffance'tat 40,7 G. miles, I have adopted it; and allowed .M. Buify's authorities to commence only at that point. Bezoara, fo placed, is in lat. $16^{\circ} 33^{\prime}$; and lon. $80^{\circ} 39^{\prime}$. Then from Bezoara to Aurungabad, the bearing is given at $W 35^{\circ} 10^{\prime} \mathrm{N}, 323 \mathrm{G}$. miles ; producing $3^{\circ} 6^{\prime}$ difference of latitude; and 264 of wefting ; or difference of longitude (in lat. ' $8^{\circ}$ ) $4^{\circ} 3^{8^{\prime}}$. This would place Aurungabad in lat. $19^{\circ} 39^{\prime} \times$ lon. $76^{\circ} 1^{\prime}$. Buffy's

Buffy's (or rather Montrefor's) whole diftance from Mafulipatam to Aurungabad, was 359.

Let us now examine what data we have to check this long line of M. Buffy's, from the fide of Surat, Poonah, and Burhanpour. The pofition of Surat has been juft accounted for: and Noopour, a city on the road from Surat to Burhanpour, is by Goddard's route $59^{\prime}$ of longitude to the eaft of Surat; or in lon. $73^{\circ} 47^{\prime} 15^{\prime \prime}$. And from this place to Aurungabad, Tavernier reckons 105 coffes; which, at 42 to a degree, is 150 G . miles of horizontal diftance. Notw, Noopour, Aurungabad, and Bezoara, lie as nearly as poffible, in a-right line, whofe extreme length, is 475 G. miles. Tavernier's 150 , added to Buffy's 323 , make up 473; or the whole fpace, within 2 miles. But from the nature of a march of an army in a warm climate, great part of which, is often made in the night, it muft neceffarily require correction; in the bearing at leaft, and probably in the diftance too. Nor can the 105 coffes of Tavernier, be expected to be even fo correct as the march : it is therefore a matter of furprife that only fo fmall a difference fhould have arifen. It fhould be remembered that 4,3 miles were added to M. Buffy's original diflance, between Mafulipatam and Bezoara; fo that the whole original error was 6,3 ; if we do not refer a thare of it to Tavernier's eftimated diftance. It is proved in another inftance by Major Gardner, in Peach's march from Ellore towards Warangole, that M. Buffy's geographer has given too little diftance. This is probably an error of the compiler, not of the furveyor; it being an error of a different kind from what might have been expected in the ordinary way of meafuring diftances with a perambulator *.

The latitude of Aurungabad is inferred from its diftance from Burhanpour given by Golam Mohamed + at 66 coffes; and as the

[^99]
## [ $13^{8}$ ]

bearing is not far from meridional, we may ftate the difference of latitude at $1^{\circ} 34^{\prime}$; which taken from $21^{\circ} 19^{\prime \prime}$, the latitude of Bur, hanpour, leaves $19^{\circ} 45^{\prime}$, for that of Aurungabad *. Now, M. Buffy's line, gives only $19^{\circ} 39^{\prime}$; which is $6^{\prime}$ too far fouthwardly, by this account. If $19^{\circ} 45^{\prime}$ be adopted, fome further addition muft be made to the line of diftance from Bezoaras but it is toa trifing a matter to require difcuftion. In effect, the longitude of Aurungabad by thefe data, will be $76^{\circ} 2^{\prime} 30^{\prime \prime} ;$ lat. $19^{\circ} 45^{\circ}$.

Two more lines of diftance are given, from Nimderrah Gaut and Bahbelgong; two points in Mr. Smith's route, on the weft and S W of Aurungabad. Nimderrah is in lat. $19^{\circ} 12^{\prime} 45^{\prime \prime}$, lon. $74^{\circ}$ $54^{\prime} 30^{\prime \prime}$ : and Bahbelgong in lat. $20^{\circ} 45^{\prime}$, lon. $74^{\circ} 55^{\prime \prime} 30^{\prime \prime}$. M. Anquetil du Perron furnimes thefe diftances. That from Nimderrah to Aurungabad, he reckons 32 coffes; and that from Bahbelgong $34^{3}$. Now, as the diftance between Poonah and Nimderrah, is known, it furnihes a fcale for the reft of his route. He makes this diftance $34^{\frac{2}{2}}$ coffes; but it is clear that he reckoned by fome other flandard than the common cofs (poffibly he reckons leagues and coffes the fame, as we thall have occafion to remark in his route from Goa to Poonah) for the diftance being 69,7 G. miles of horizontal diftance between Poonah and Nimderrah, it chould rather be $48 \frac{1}{2}$ coffes, than $34 \frac{1}{\frac{1}{2}}$. However, taking his diftance for a fcale, whatever the denomination may be, the diftance between Nimderrah and Aurungabad, will be $64,7 \mathrm{G}$, miles; and that from Bahbelgong, 70,2 . And the medium of thefe accounts give alfo, $76^{\circ} 2^{\prime} 30^{\prime \prime}$ for the longitude of Aurungabad.

There is yet another line of diftance. to Aurungabad, and that is from Nagpour; whofe pofition is afcertained with precifion. Two accounts of the eftimated diftance between them, collected by Lieut. Ewart, are, 162, and 165 coffes: the medium of which, $163 \frac{1}{2}$, at

[^100]42 coffes to a degree, is 233 G. miles of horizontal diftance. This would place Aurungabad, admitting its latitude to be $19^{\circ} 45^{\prime}$, in $75^{\circ} 53^{\prime} 30^{\prime \prime}$ or $9^{\prime}$ to the weft of the other accounts. The refult of the fhort diftances, are doubtlefs to be preferred to that of the long ones; and I infert this laft only to fhew the extremes of the different accounts.
Laftly, if the diftances from the 4 neareft points are taken; that is from Noopour 150 G. miles; Burhanpour 95 ; Nimderrah 64,7 ; and Bahbelgong 70,2 : the medium of the interfections of thefe, will be in lat. $19^{\circ} 44^{\prime}$, lon. $76^{\circ}$.
Although I have taken the latitude at $19^{\circ} 45^{\prime}$, as the diftance from Burhanpour is fo nearly meridional : yet the interfections of the other diftances, point to its being in a lower latitude, by 4 or 5 minutes : in which cafe, its pofition would alfo be fomewhat more wefterly.

Upon the whole, $I$ have placed Aumungabad in lat. $19^{\circ} 45^{\prime}$. Iom $76^{\circ} 2^{\prime \prime} 30^{\prime \prime}$; and by what has been faid, it cannot be much out. of. its true place:. but as it is a point of great importance in the geography of this part of India, it required particular difcuffion; being the centre of feveral roads; and the bearing of that long line,' between. it and Hydrabad, Beder, Calbérga, \&cc. depending on it.

Aurungabad is but a modern city; owing its rife from a finall: town, to the capital of the province of Dowlatabad, to Aurungzebe; from whom alfo, it had its name. After the Deccan became a province, of the Mogul empire, it was reckoned the provincial, capital; and continued to be fo, after the Nizams became independant of Delhi; and until the encroachments of the Poonah Mahrattas, of late years, made it an uncomfortable refidence to the Nizam. When the Deccan was firft invaded by the Patan Emperors of Delhi, Deogire was the capital of the province of Dowlatabad, and was fituated near the fortrefs of the fame name; which is built on a mountain about 4 or 5 cofles to the NW of Aurungabad; and is deemed impregnable by the people of the country.

The
$[140]$
The Emperor Mahomed, in the $14^{\text {th }}$ century, made an attempt to eflablifh the capital of his Empire, at Deogire ; and to that end almoft ruined Delhi, in order to drive the inhabitants to his new capital, about 750 miles from their ancient habitations. This fcheme, however, did not fucceed: and was if poffible the more abfurd, as at that time, but a fmall progrefs had been made towards the conqueft of the Deccan.

The pagodas of Elora are in the neighbourhood of Dowlatabad, moft of which are cut out of the natural rock. M. Thevenot, who particularly defcribes them, fays, that for two leagues together, nothing is to be feen but pagodas, in which there are fome thoufands of figures. He does not, however, greatly commend the fculpture of them: and, I apprehend, they are of early Hindoo origin. We muft remember that Deogire, which food in this neighbourhood, was the greateft and richeft principality in the Deccan; and that the fame of its riches, incited Alla to attack it, in 1293: and thefe elaborate monuments of fuperftition, were probably the offspring of that abundant wealth, under a government, purely Hindoo.
M. Buffy's line inclndes within it, the pofitions of Hydrabad, Golconda and Beder. When the line is corrected as above, to Aurungabad, Hydrabad will be found in lat. $17^{\circ} 24^{\prime}$; which I conceive to be too far to the northward, confidering its reputed diftance from Nagpour and Cuddapah. M. D'Anville too (in his Eclairciffemens) fays that the latitude of Hydrabad is $17^{\circ} 12^{\prime}$. How he came by his information, I know not; but I believe it to be nearly right: and this is the parallel it is generally placed in. A third circumftance tending to confirm this opinion, is, that the map of Col. Peach's march from Ellore to Warangole (in 1767) in which the diftances were meafured, and the angles of pofition taken by Major Gardner, places the latter only 37 G. miles from the pofition in which Hydrabad ftands by M. Buffy's line. It can hardly be deemed an impeachment of the general truth of a line
of 360 G . miles, meafured after an army, that a pofition, in or near that line, fhould be 10 or 12 miles out of the fuppofed line of direction. It is conformable to my idea of the diftances of Nagpour, Cuddapah, and Warangole, that Hydrabad should be in $17^{\circ}$ $12^{\prime}$, rather than in $17^{\circ} 24^{\prime}$; and I have accordingly followed M. D'Anville : giving the lines between it and Aurungabad on the one fide, and Condapilly on the other, a new direction accordingly.

Although by proportioning M. Buffy's march from Bezoara, Hydrabad is placed in $78^{\circ} 51^{\prime}$ longitude; or only 114 G . miles from Bezoara, yet the different reports of the diftance between thefe places, is much greater than the conftruction allows. For 114 miles will produce only $87 \frac{1}{2}$ coffes, according to the proportion of 46 to a degree (which is the refult of the calculation made on the road between Aurungabad and Mafulipatam; page 4) whereas, one aecount from General Jofeph Smith, flates the number of coffes at 98 ; and another from a native at io3. Again, Col. Upton reckoned $118 \frac{1}{2}$ coffes between Hydrabad and Ellore, which the conftruction allows to be only $13^{8} \mathrm{G}$. miles; or $105^{\frac{3}{4}}$ coffes according to the fame proportion of 46 to a degree. So that I have either miftaken the longitude of Hydrabad, which is improbable, all circumftances confidered; or the cofs is even fmaller than I have fuppofed. Or, the road leading through a hilly and woody country, is more crooked than ordinary*: and the journals remark its being very woody, and thinly inhabited, between Condapilly and Hydrabad. Until we have the latitude and longitude of Hydrabad, or fome place very near it, we cannot be fatisfied with its prefent pofition ; for M. Buffy's line is too long, to be exact, without the aids of latitude to check it. The reputed diftance between it and Nagpour, 169 coffes, agrees perfectly with its corrected parallel of $17^{\circ} 12^{\prime}$.

[^101]
## [ 142 ]

Hydrabad or Bagnagur, is the prefent capital of the Nizams of the Deccan; who fince the difmemberment of their empire, have left Aurungabad, the ancient capital; which is not only in a corner of their dominions, but in that corner which lies near their hereditary enemy, the Poonah Mahrattas; and which is alfo the leaft defenfible. About 5 or 6 miles to the W N W of Hydrabad, and joined to it by a wall of communication, is the celebrated fortrefs of Golconda * occupying the fummit of a hill of a conical form, and deemed impregnable. When Aurungzebe conquered the kingdom of Golconda, in 1687 , this fortrefs was taken poffeflion of by treachery.

The next primary point or fation, and one of the moft important, as being the fartheft removed from any other given point, in the whole conftruction, is Nagpour; the capital of the eaftern divifion of the Mahratta empire, and nearly in the centre of India. This laft confideration, and the number of roads iffuing from it to the circumjacent cities, moft of which roads had their diftances given by computation only, made the determination of this point a grand defideratum in Indian geography. Mr. Haftings therefore, with that regard to ufeful fcience and improvements of every kind, which has ever diftinguilhed his character, directed a furvey to be made of the roads leading to it from the weftern frontier of Bahar; and allo: from the fide of Allahabad. This was executed in 1782 and 1783 , by Lieut. Ewart, under the direction of Col. Call, the Surveyor. General. The refult of this expedition was perfectly fatisfactory. He began his meafured line at Chittra or Chetra in Bahar, placed. in $85^{\circ}$ of longitude, and in lat. $24^{\circ} 12^{\prime}$, in my map of Bengal and. Bahar; and his difference of longitude from thence to Nagpour, in lat. $21^{\circ} 8^{\prime} 30^{\prime \prime}$, was $5^{\circ} 1^{\prime \prime}$ weft: by which Nagpour would be in $79^{\circ} 44^{\prime}$. And from Nagpour back to Benares, in lon. $83^{\circ} 13^{\prime}$, in the fame map, he made $\cdot 3^{\circ} 25^{\prime} 10^{\prime \prime}$, difference of longitude, eaft;

[^102]
## [ 143 ]

which placed Nagpour in lon. $79^{\circ} 47^{\prime} 50^{\prime \prime}$; or $3^{\prime} 50^{\prime \prime}$ only, different from the other account $;$ and this I fufpect to arife partly from the error of his needle. If we clofe the account back again to Chittra, the place he fet out from, he made only 4 minutes differerice, in the diftance out and home: and the road diftance, was 600 B. miles from Chittra to Nagpour, only.

Taking the medium of the two accounts, the longitude of Nagpour will be $79^{\circ} 45^{\prime} 55^{\prime \prime}$, or $79^{\circ} 46^{\prime}$. The obfervations for determining the longitude at this place, by Lieut. Ewart, 'do not accord with the above account, by a confiderable number of minutes: therefore I have not inferted them here, in expectation that they may be compared with correfponding ones, taken at places whofe fituations are already afcertained.

As Mr. Ewart's route to Nagpour, was by way of Burwah, Surgoojah, and Ruttunpour: and from thence to Banares, by Gurry, the capital of Mundella, he afcertained the pofitions of thore places, fatisfactorily; and by that means added to the number of primary ftations. The latitudes were conftantly taken, in order to corred the route, in detail. Nor did his work end here: for his enquiries at Nagpour, furnifh a number of eftimated or compated routes from that capital to Burhanpour, Ellichpour, Aurungabad, Neermul, Mahar, Chanda, \&x. that is, in every direction, except the S E; whence we may infer the ftate of that tract to be wild, uncultivated, and little frequented. And it appears by his intellifence, that the way to Cattack is unfafe in any direction farther fouth than Sumbulpour.

Nagpour, the capital of Moodajee Boonllah, the chief of the eartern Mahratta ftate, is a city of modern date; and though very extenfive and populous, is meanly built, and is open and defencelefs, fave only by a fmall citadel, and that of little ftrength. The city is faid, by Golam Mohamed, to be twice as large as Patna; but Mr. Ewart's account makes it but of a moderate fize. Moodajee's principal fortrefs, the depofitory of his treafures and valuables, is

## [ 144 ]

Gyalgur, called alfo. Gawile, fituated on a fteep mountain, about 103 G. miles to the $W$ by $N$ of Nagpour. Each of the native Princes in India, has a depofitary of this kind, and commonly at a diftance from his place of refidence: the unfettled ftate of the country making it neceffary. The country round Nagpour is fertile and well cultivated, interfperfed with hills of a moderate height : but the general appearance of the country at large, and particularly between Nagpour and Bahar, is that of a foreft, thinly fet with villages and towns. It is the weftern and northern parts of Moodajee's country, that produce the largeft part of his revenue ; together with the Cbout, or proportion of the revenues of Ellichpour, \&cc. held by the Nizam.

Ruttunpour is a city lying in the road from Bahar to Nagpour, and is the capital, and refidence of Bambajee, who holds the government of the eaftern part of the Nagpour territories, under his brother Moodagee. This place, alfo, has its pofition fixed veryaccurately by Mr. Ewart, in lat. $22^{\circ} 16^{\prime}$, lon. $82^{\circ} 3^{6^{\prime}}$. This is a primary fation of great ufe, as it regulates all the pofitions between Cattack and Gurry-Mundella; between Bahar and Nagpour. As its corrected pofition differs only 3 miles from the former eftimated one, collected from Col. Camac's obfervations and enquiries; it ferves as an additional proof, how much may be effected by a careful examination and regifter of the eftimated diftances on the roads: and this mode of improving the geography of India, may be adopted, when all others fail. An intelligent perfon fhould be employed in collecting fuch fort of information, as Mr. Ewart collected at Nagpour; from the principal cities in the leaft known parts of Hindooftan ; at the fame time determining the pofition of fuch cities, by cœeleftial obfervations; by which means a number of fixed points *would be eftablifhed, from whence the computed diftances might at once be laid off, and corrected. More could be done in this way in a thort time, towards completing the geography, than moft
people can eafily conceive : and, I flatter myfelf, it will be foon adopted.

Agimere, Ajmére, or Azmere, is the primary point on which the geography of the N.W part of the tract in queftion, refts; and is determined by the eftimated diftances from Agra and Burhanpour. An itinerary kept by John Steel, reckons 119 coffes between Agra and Agimere : and Tavernier, who left Agimere to the north, in his way from Amedabad, reckoned 100 coffes from Banderfandry to Agra; and Banderfandry being 14 from Agimere, by Steel's account, we may take 114 for the whole diftance, from Agra to Agimere. A map of Malwa and its neighbourhood, communicated by Mr. Benlley, places Agimere 180 G. miles to the weft of Gwalior; and another map communicated by Mr. Haftings, gives the fame diftance. By the conftruction, founded on Mr. Steel's 119 coffes from Agra, and which produce $172^{\frac{1}{2}}$ G. miles, Agimere is found to be $10 \frac{1}{2}$ miles Chort of the diftance from Gwalior, in the above maps.

The parallel of Agimere is determined by Sir Thomas Roe's computation of the diftance from Burhanpour to Agimere, through Mundu and Cheitore; and that is 222 coffes, or 318 G , miles: and the interfection of the two diftances from Burhanpour and Agra, happens in lat. $26^{\circ} 35^{\prime}$, lon. $75^{\circ} 20^{\prime}$. 'This is the pofition of Agimere in the map: no great accuracy, however; with refpect to its parallel, can be expected, where the authority is nothing more than a fingle line of diftance, and that a very long one. The Ayin Acbaree is totally filent concerning its latitude and longitude. Col. Call, in a map of his, communicated by Mr. Haftings, places it in the parallel I have affigned to it; and allows it to be diftant from Burhanpour, 307 G. miles, and $192 \frac{1}{2}$ from Agra; on what authority, I know not. Thevenot gives its latitude at $26 \frac{10}{2}$.

Agimere was the capital of the foubah of the fame name, in Acbar's divifion of the empire, and is probably the Gagafmira of Ptolemy. It is built at the foot of a very high mountain; on the
top of which, is a fortrefs of very great ftrength. - It is about 230 miles by the road, from Agra, and yet the famous Emperor Acbar, made a pilgrimage on foot, to the tomb of a faint, there; to implore the divine bleffing on his family, which at that time confifted only of daughters; but after this pilgrimage, he had three fons added to it. Jehanguire, his fon and fucceffor, occafionally kept his Court here; and this occafioned the vifits of Sir Thomas Roe to this place; as well as to Cheitore, and Mundu, which lay in his way to it, from Surat.

Ougein can hardly be regarded as a primary ftation, as it effects the pofition of one place only; that is, Mundu. Col. Camac's tables place it 50 coffes from Bopaltol, a point in Smith's and Goddard's routes; and 89 from Pawangur, which is 14 coffes to the E N E of Brodera, in Guzerat. A Perfian book of toutes, obligingly communicated by Capt. Kirkpatrick, gives 108 coffes between Ougein and Brodera; or 5 more than Camac's account. This, together with fome other routes from the Perfian book, was traniflated for me, by Mr. David Anderfon, whofe fervices on the memorable occafion of negociating the Mahratta peace, in 1782 and 1783, claim the united acknowledgments of Great Britain, and Hindooftan. If we take the diftance on the map;, between Bopal and Brodera, through Ougein (which occafions a confiderable bend in the line) it will be found to be 251 G. miles: and the computation of coffes being 158 , the proportion will be about $3^{8}$ to a degree; which is nearly the fcale adopted for Malwa, in page 5. Having laid off 50 coffes for the diftance of Ougein from Bopal, weftward, by this fcale; the parallel of Ougein is then obtained by its reputed diftance from Mundu: concerning whofe pofition, we Have only the following information:

Sir Thomas Roe paffed it in his way from Burhanpour to Cheitore and Agimere, in 1615; and reckened it 66 coffes from the former, or $94^{:} \mathrm{G}$. miles. For the direction of this line of diftance; which appears to be about N by W , we have nothing more than

## [ 147 ]

the general bearing and diftance of Mundu from Ougein to guide us: the general longitude of Ougein, which alone concerns this part of the queftion, being obtained by means of the lines of dif, tance from Bopal and Brodera. D'Anville gives the bearing line of Mundu from Ougein ${ }_{2}$ at S S W ${ }_{2}$ diftance $31 \frac{1}{2}$ G. miles; and a MS. map of Col. Muir's has it $\mathrm{S}_{\frac{1}{2}} \mathrm{~W}_{3} 6$. I have made the bearing $S$ by W , and the diftance 36 miles; whence the refult will be, that Mundu is in lat. $22^{\circ} 5^{\prime}$, lon. $75^{\circ} 47^{\prime}$. Col. Muir's map places it in $23^{\circ} 18^{\prime}$, and M. D'Anville's in $23^{\circ} 10^{\prime}$; but this is owing to his taking Burhanpour at too high a latitude, by 30 minutes.

The 50 coffes, or 86 G . miles, being laid off from Bopal, weftward; and 36 miles northward from Mundu, give the pofition of Ougein in lat. $23^{\circ} 26^{\prime}$, lon. $75^{\circ} 5^{\prime \prime}$. The Ayin Acbaree takes no notice either of the latitudes or longitudes of Ougein or Mundu; although fuch ancient and famous cities. Col. Muir's map has the latitude of Ougein at $23^{\circ} 56^{\prime}$, or $30^{\prime}$ to the northward of the affumed pofition of it, in the map. And D'Anville places it in $23^{9} 39^{2}$.

The cities of Ougein and Mundu are both of great antiquity. The former appears evidently both as to name and pofition, in Ptolemy, under the name of Ozene. When the Ayin Acbaree was written, about 200 years ago, Mundu, (or Mundoo) was the capital of Malwa, and is defcribed as a prodigious city, of 12 coffes, or 22 miles in circuit; and containing many monuments of ancient magnificence: but when it was vifited by Sir Thomas Roe, in 1615, it was then fallen much to decay. It occupied the top of a very large and high mountain: few cities were ever placed in a bolder fituation.

Ougein is the prefent capital of Madajee Sindia; who, with Tuckajee Holkar, poffeffes the principal part of Malwa. Holkar's capital is at Indore or Endore, a modern city, which is faid to lie about 15 coffes from Ougein, weftwards. This is a part of Hin*

## [ 148 ]

dooftan, concerning which, we are but dightly informed; and Sindia wifhed to keep us in ignorance : for it is faid, he expreffed a difapprobation of the brigade from Guzerat, taking its route through Ougein, in its way to the Bengal provinces: fo that the detachment returned, nearly by the fame road as it went, as far as Sirong.

Having now difcuffed the manner of eftablifhing the primary flations, or thofe principal points, on which the general confruction of the geography of the tract under confideration, depends; I mall proceed to give the detail of the manner, in which the intermediate fpaces were filled up : but fo great a variety of matter offers, that I hardly know where to begin; nor is it a point of much confequence: however, to preferve as much regularity as the fubject is capable of, I fhall begin on the weftern fide, near Bombay; then go round by the north and eaft; and finifh in the fouth.

The road from Bombay to Poonah is taken from a MS. map, made during the unfortunate campaign of 1778-9: collated with Mr. Smith's, and General Goddard's. And all the particulars on the weft of the Gauts, between Bombayy and Surat, are alfo taken from General Goddard's map.

The road from Poonah to Nuffergur (or Nufferatpour) and round to Soangur, was defrribed by Meffieurs Farmer and Stewart, during the time they remained as hoftages in the Mahratta camp; and the particulars were obligingly communicated to me by Mr. Farmer. His map afcertains the fituations of Cafferbarry and Coondabarry Gauts; and, in particular, that of the city of Amednagur, once the capital of the foubah of the fame name; but now better known by that of Dowlatabad. This city, which was the refidence of the Emperor Aurengzebe, during his conquet of the Deccan and Carnatic, has generally been placed 50 miles to the fouth-eart of its true pofition.

The road from Nimderrah Gaut to Aurungabad, and back to Bahbelgong, and thence by Chandor and Saler-Mouler, to Noo-

## [ 149 ]

pour; is from M. Anquetil du Perron. Chandor occurs in Mr. Smith's route; as well as Unkei-Tenki, which we meet with in Tavernier, and helps us to join the routes together.

The fouth-eaft part of Guzerat is from a furvey taken by order of the Bombay Government, collated with General Goddard's marches; and eftablifhes among other points, that of Brodera, a principal fortrefs and town, in the north-eaft part of the tract lying between the rivers Tapty and Myhie: through which the great road leads from Surat to Ougein. Brodera lies in lat. $22^{\circ} 15^{\prime} 30^{\prime \prime \prime}$, lon. $73^{\circ} 11^{\prime}$. The Ayin Acbaree reports that there was an avenue of mango trees, extending the whole way from Brodera to the city of Puttan; which may be 130 miles. The road to Amedabad, is entirely from General Goddard : and the country round about it, as well as the peninfula of Guzerat, owe their prefent appearance, to a MS. map of Governor Hornby's, communicated by Mr. Dalrymple. This map contains much new matter: and the Ayin Acbaree affifts in difcriminating the valuable parts of it. In it is found the fite of Mahmoodabad; in its turn, the capital of Guzerat, and founded by Sultan Mahmood in the inth century. The Ayin Acbaree defcribes the walls of it, as including a vaft extent of ground;' and fpeaks of it rather as an exifting city, than as a place in ruins. . This wasin the latter.part of the 16 th century. Juna-' gur or Chunagur, a city and fortrefs in the heart of the peninfula, and a fubject of Ferifhta's hiftory, is likewife found in this map: but Nehlwarrah, one of the ancient capitals of Guzerat, and alfo the fubject of the fame hiftory; I cannat trace out by name, either in this map, or in the Ayin Acbarees I find however, in 'the latter, fome notices refpecting a large city in ruins; and whofe fituation agrees with my ideas of that of. Nehlwarah. . It is in the peninfula, at the foot of the mountains: of Sironj; and the part of Gogo was dependent on it : whence I conclude:by; the lights afforded by hif-: tory, and by its latitude, given by Nafir-Uddin and Ulegbeg; at $22^{\circ}$, that it lies about 30 road miles NW of Gogo.

## $\left[\begin{array}{lll}{[50}\end{array}\right]$

Many other pofitions are pointed out, or illuftrated, by this map; which, I am informed, is, the production of a native of Guzerat. After this account of its author, one might have refted fatisfied with its containing a great variety of particulars, although not arranged in geographical order: but it is remarkable, that it gives the form of Guzerat with more accuracy, than moft of the European maps can boaft.

It does not however, clear up the ambiguity that has long exifted, concerning the lower part of the courfe of the Puddar river: nor am I yet informed whether that river difcharges itfelf -into the head of the gulf of Cutch, by one channel; or whether it forms feveral channels, and difcharges itfelf through the many openings that prefent themfelves, between the head of the gulf of Cutch, and the Indus. One thing only, we are certain of by means of this map; and that is, that one large river (or branch of a river) falls into the head of the gulf of Cutch; and that it appears to be the fame river that has its fource in the S W part of Agimere, and which is named, by Europeans, the Puddar. The river that opens into the head of the gulf of Cutch, is named in the MS. map, Butlafs; taking its courfe by Sirowy, Palhanpour, and Radunpour (or Radimpour). The Ayin Acbaree does not enumerate among the rivers of Guzerat, or Agimere, either the Puddar, or Butlafs. It is more extraordinary that the Puddar Chould not be taken notice of, as the Ayin Acbatee defcribes an extenfive tract of low fenny land, on the weft of Amedabad, and which was periodically overflowed by the mouth of a river; when that very river is what we name the Puddar. 'It is certain that the name occurs only in D'Anville.: Tavernier takes no notice of it, in his route from Amedabad to Agra, although he muft have crofied it. Poflibly the word Puddar, may be no more than arr appellative; or may be the fame as buddar, or budda, in Soane-budda and Ner-budda:: and the proper name of the river, Butlafs,', might have been omitted.

## [ 15 F ]

The peninfula of Guzerat is about 200 miles in length, and 140 wide, formed by the Arabian fea (called by the Afiatics, the fea of Omman) and the gulfs of Cambay and Cutch; both of which penetrate far within the continent, as the dimenfions of the peninfula hew. By the numetous fubdivifions of this tratt, and more by the fum of its revenue, in the Ayin Acbaree, we are led to confider it as of very great importance, in the opinions of the Moguls. Surat too, that great emporium, fituated in its vicinity, had its fhare in raifing the value of the natural products of it, among which, cotton is the flaple article. Being a frontier province, as it refpects the accefs by fea, Guzerat contains a greater mixture of races, and a.greater variety of religions, than any other province. The Ayin Acbared fays, "s From the liberality of his Majefty's (Acbar's) " difpofition, evèry fect exercifes its particular mode of worhip, ${ }^{\text {st }}$ without tholeftation." What a happy change fince Mahmood, in the rith century; whofe principal delight was the deftruction of Hindoo temples! The famous pagoda of Sumnaut, which was deftroyed by Mahmood, ftood within the peninfula; of which we have been fpeaking; and its particular fite is pointed out by circumftances, in the Ayin Acbaree, and Ferifhta. For the former fays, "P Puttan on the rea fhore, is alfo called Puttan Sumnaut.": And the latter, "it was fituated upon the shore of the ocean, and ". is at this time ta be feen in the diftrits of the frarbour of Deo " (Diu) under the dominion of the idolaters of Europe." This plainly refers to Diu, in the hands of the Portuguefe: and the town of Puttan is about 30 miles on the N W of Diu; and on the fea hore:

Although the gulfs of Cambay and Cutch penetrate fo deeply within the land, yet fo far from rendering the fee fmoother, or the navigation fafer, they occafion fuch high and tapid tides, and are fo thickly fown with fand banks, that few places are more dangerous. The Bore, which means' the fleod'tide rufhing 'in' fuddenly; and forming a body of water; èlevated many, feet àbove the com

## [ 152 ]

mon furface of the fea; and of courfe levelling every obftacle that oppofes it ; rages here with great violence: covering in an inftant the fand banks, which before appeared dry and firm. I have ac-, counted for the terror with which Alexander's followers were ftruck, at the mouth of the Indus, from this dreadful phenomenon. (See the Introduction).

Capt. Jofeph Price, had the misfortune to be carried up to the head of the gulf of Cutch, by pirates, who, captured his Mhip, after a moft gallant and obftinate defence, of two days; but was afterwards treated with great refpect and tendernefs, and permitted to depart by land, for Bombay. He accordingly traverfed the Ifthmus, to Gogo; and reports that the country in that track, is generally flat ; having only a few eminences, and thofe fortified. The foil is dry and fandy ${ }_{2}$ as is common to Guzerat in general; for, as the author of the Ayin Acbaree fays, the rain there, does not occafion mud. This may be inferred from the nick-name of Gberdabad, or duft-town, beftowed on Amedabad, by Shah Jehan.

The road from Amedabad to Agimere, by Meerta, is chiefly, from a map conftructed by Col. Call, and communicated by Mr. Haftings. To this I have added Tavernier's particulars of the road, as he travelled this way from Amedabad to Agra. I know not from whence Col. Call had his particulars, but they appear to be perfectly new. Tavernier's diftance is enormous, according to the fcale of the cofs; but it is to be confidered, that the road is very circuitous, and no lefs mountainous; fo that no rule can well be applied, for reducing the road diftance, to a ftraight line.

The pofitions of Agimere, Jaepour, and Ougein, have been already difcuffed, as well as the places fituated in the line of Mr. Smith's route. The face included between thefe points, and which is chiefly fituated in the foubah of Agimere, has undergone a very confiderable improvement in its geography, fince the publication of my laft map; by the contributions of Mr. Haftings, Mr, Benfley, and Col. Popham. I know not who the authors of the

## [ 153 ]

feveral maps in queftion were; they have, however, my acknowledgments for the affiftance I have received from them: and II grieve to reflect, that fome of the perfonages who furnifhed the moft interefting matter towards the improvement of this work, have not lived to be witnefies of the fuccefs of their labours. The tract in queftion, includes among others, the provinces of Cheitore and Oudipour, fubject to the Rana or chief Prince among the Rajpoots; and the antiquity of whofe houfe may be gathered, by the name Rbannce appearing in Ptolemy, nearly in its proper pofition, as à province. The province of Agimere in general has ever been the country of Rajpoots; that is, the warrior tribe among the Hindoos, and which are noticed in Arrian, and Diodorus: and Cheitore or Oudipour (which I confider as fynonimous) is, I believe, reckoned the firft among the Rajpoot ftates. The whole confifts generally of high mountains divided by narrow vallies; or of plains, environed by mountains; acceffible only by narrow paffes and defiles: in effect, one of the ftrongeft countries in the world; yet having a fufficient extent of arable land: of dimenfions equal to the fupport of a numerous population; and bleffed with a mild climate; being between the 24 th and 28th degrees of latitude: in fhort, a country likely to remain for-ever in the hands of its prefent pofferfors; and to prove the afylum of the Hindoo religion and cuftoms. Notwithftanding the attacks that have been made on it, by the Gaznavide, Pattan, and Mogni Emperors, it has never been more than nominally reduced. Some of their fortreffes, with which the country abounds, were indeed taken; but the spirits of in'dependent nations, do not reside' in fortresses; for are they to be' conquered with them. Accordingly, every war made on there people, even by Aurungzebe, ended in a compromife, or defeat, on the fide of the affailants.

Cheitore was the capital of the Rana in the days of his greatnefs. It was a fortrefs and city of great extent; fituated on a mountain; but has been in ruins fince the time:of Aurungzebe in $168{ }^{\circ} 5$ and

## [ 154 ]

had once before experienced a like fate from the hands of Acbar, in 1567. The pofition of this place is inferred from the account of Sir Thomas Roe, who made it 105 cofles from Mundu, and 5 I from Agimere. From this I have been led to place it in lat. $25^{\circ} 21^{\prime}$, lon. $74^{\circ} 56^{\prime}$. The different MS. maps, give its pofition more to the weff; and indeed, one of them, fo far as to throw it near the great road from Amedabad to Meerta. The caufe of this, is a miftake in the difference of longitude betwieen Agra and Guzerat, which has been reckoned too much in thefe MSS. Cheitore, placed as above, is only about 181 G. miles on the weft of Narwah: Mr. Haftings's MS. map, gives this diftance at 196; Col. Popham's at 195; Col. Muir's at 193; and a map of Malwa 231. All but the laft, affign it the fame parallel as Narwah : while my conftruction places it 19 minutes more fouthwardly: the map of Malwa; alone places it $18^{\prime}$ fouth of Narwah. Mr. Haftings's copy agrees with the conftruction, in making it bear about SS W from Agimere; but fhortens the diftance about 6 coffes.

Rantampour, a very celebrated fortrefs in the Indian hiftories, is fituated in the eaftern quatter of Agimere, and has its pofition from the fame MSS.: and in the SE quarter of the fame foubah, many other noted fortreffes and refidencies of Rajahs, are extracted from the fame MSS.; affifted by Col. Camac's tables of routes: fuch as. Kotta, Boondi, Gańdhar, Thora, Suifopour, Sandri, Mandelguf, \&c. And in Marwar, or the north divifion of Agimere, Nagore, Bicaneer, Catchwana, Didwanah, Samber, \&c. \&cc. The upper part of the courfes of the Chumbul, Sinde, and Sepra rivers, appear now, for the firft time, in fome fort of detail; though it muft belong, e'er the geography of parts fo temote from our eftablihments and influence, can be in any degree correct: and the reader will pardon his being reminded, that the geography we are treating of, includes an extent equal to one half of Europe.

The Ayin Acbaree has furnimed fome new ideas refpecting the: divifion of the foubah of Agimere. It confifted at that time of
three grand diviions, Marwar, Meywar, and Hadowty (or Nagore); and thefe contained 7 circars or fubdivifions, Agimere, Chied tore, Rantampour, Joudypour, Sirowy, Nagore, and Beykaneer (or Bicaneer). Marwar, as including the circar and fortrefs of Agimere, has grown almoft fynonimous with Agimere, in common acceptation. The extent of this province as given by the fame book, is 168 coffes, or about $3^{20}$ B. miles, from eaft to weft; and 150 coffes, or 285 B. miles, from N to S : and its extent on the map, juftifies this account. Such is the province of the Rajpoots: the grain cultivated there is chiefly of the dry kind; and from the indulgence granted to this tribe throughout India, namely, that of feeding on goat's flefh, we may infer, that the cuftom originated in this mountainous country. The taxes amounted (in the time of Acbar) to no more than a feventh, or eighth, of the produce of the harvef.

We come next to the Gohud and Narwah provinces, between the Chumbul and Sinde rivers. . Much of this tract was defribed by Mr. Cameron, in a map communicated by the late Col. Camac: but even a province equal to one of the largeft Englif counties, is loft in fuch a map, as the one undey confideration. Beyond this, on the eaft and foutheaft, to the Betwah river ${ }_{1}$ is filled up chiefly with Col. Camac's information. Between that river, and the Nerbudda, the Perfian book of routes (fee page 146) furnifhes the road between Callinger and Bilfah, and becomes interefting by its leading through Sagur (the Sayeda, of Ptolemy) a capital fortrefs and town, fituated on a branch of the Cane river, about 55 G. miles to the eaftward of Billah. This route was alfo tranflated by Mr. Anderfon. It gives only 78 coffes between Pannah (or Purnah, the famous diamond mine of Bundelcund, and fuppofed to be the Panafa of Ptolemy) which, I fhould apprehend, was a miftake; as the diftance on a fraight line, is $16{ }_{5}$ G. miles. Sagur, however, being flated at 26 coffes from Bilfah, a known point, does not allow of being far mifplaced, by an error in the fcale.

## [ 156 ]

Billah is placed by a route of Col. Camac's, leading from Sirong to Bopal; and being confined by thefe points on two fides, and by the routes of Goddard and Smith, on the others; it cannot be far out of its place. Bilfah, which is almoft in the heart of India, affords tobacco of the moft delicate kind, throughout that whole region ; and which is diftributed accordingly*.

Chanderee, and other places along the courfe of the Betwah, are either from Col. Camac's routes, or Col. Muir's map. Chanderee is a very ancient city, and within the province of Malwa. The Ayin Acbaree fays, " there are 14,000 ftone houfes in it." It is now, like moft of the ancient cities of Hindooftan, fallen into decay; but is fill the refidence of a principal Rajah. The routes in the central parts of Malwa, are from Col. Muir's map: Hindia, is from Tavernier, fuppofing it was meant by Andi. It is aftonifhing how he could fo far miftake the coufe of the Nerbudda at that city, as to fuppofe it ran into the Ganges.

A Hindoo map of Bundela or Bundelcund, including generally the tract between the Betwah and Soane rivers, and from the -Ganges to the Nerbudda; was obligingly communicated by Mr. Boughton Roufe, who alfo tranlated the names in it; from the Perfian. This map points out feveral places that I had not heard of before, and affilts in fixing many others of which I had been partially infqrmed.

The country between Mirzapour and the heads of the Soane and Nerbudda, was explored by Major William Bruce, who fo eminently diftinguifhed himfelf at the efcalade of Gwalior in $1780 \boldsymbol{t}_{\text {. }}$

[^103]
# 157 <br> During his expedition, he verified a fact which had been long doubted, though frenuoully infifted on by the natives; (viz.) that the Soane and Nerbudda rivers had their common fource from :a pond, or lake, on the fouthern confines of the Allahabad province. Thefe rivers do literally flow from the fame, lake; making, con- 

perpendicular in every part; for where it was not naturally 6 , it has been fcarped away : and the height from the plain bellow, is from 200 to 300 feet. The rampart conforms to the edge of the precipice all round; and the only entrance to it, is by fteps running op the fide of the rock, defended on the fide next the country by a wall and bations, and farther guarded by 7 one gateways at certain diftances from each other. The area within is full of noble buildings, refervoirs of water, wells, and cultivated land; fo that it is really a little diftrict in itfelf, At the N. W. foot of the mountain, is the town, pretty large, and well built; the houles all of tone. To have belieged this place, would have been vain; for nothing but a furprize or blockade could have carried it.

A tribe of banditti from the diftrict of Gohud had been accultomed to nob about this town, and once in the dead of night had climbed up the rock, and got into the fort. This intelligente they had communicated to the Rana, who often thought of availing himfelf of it, but was fearful of undertaking an enterprize of fuch moment with his own troops.

At length, he informed Colonel Popham of it, who fent a party of the robbers to conduft fome of his own fpies to the fpot. They accordingly climbed up in the night, and found that the guards generally went to Heep after their rounds. Popham now ordered. ladders to be made, but with fo much fecrefy, that until the aight of the furprize, a few Officers only knew it. On the 3 d of Auguit, 1780 , in the evening, a party was ordered to be in readinefs to march under the command of Major Bruce; and Popham put himfelf at the head of $z$ battalions which were immediately to follow the ftorming party. To prevent as much as pofible, any noife in. approaching or afcending the rock, a kind of thoes of woollen eloth were made for the fepoys, and ftuffed with cotton. At 11 o'clock, the whole detachment marched from the camp at Reypour, 8 miles from Gwalior, through umfrequented paths, and reached it a little before daybreak. Juft as Bruce arrived at the foot of the rock, he fave the lights which accompanied the rounds, moving along the rampart, and heard the centinels cough (the mode of fignifying that All is well; in an Indian camp, or garrifon) which might have damped the fpirit of many men; but ferved only to infpire him with more confidence; as the moment for action, that is, the interval betweer the paffing of the rounds, was nowi afcertained. Accordingly, when the lighty were gone, the wooden.ladders were placed againft the rock, and one of the robbers firl mounted, and returned with' an accounte that the guard was retired to fleep. Lieutenant Cameron, the engineer, next mounted, and tied a rope ladder to the battlements of the wall; this kind of ladder being the-only one adapted to the purpofe of fcaling the wall in a body (the wooden ones only ferving to afcend from crag to cragof the rock, and to affift in fixing the rope fadder.) When all was ready, Major Bruce, with 20 fepoy grenadiers, afcended without being difcovered, and squatted down under, the parapet; but before a reinforcement arrived; three of the party had fo little recollection as to fire on fome of the garrifon who happened to be lying alleep near them. This had nearly ruined the whole plan : the garrifon were, of courfe alarmed; and ran in great numbers towards the place; but ignorant of the ftrength of, the affailants (as the men. fired on had been killed outright) they fuffered themelves to be ftopped by the warm fire kept up by the fmall party of grenadiers, until Colonel Popham"hima felf with a confiderable reinforcement came to their aid. The garnifon then retreated to the inner buildings, and difcharged, a few rockets, but foon afterwards, retreated precipitately through the gate ; while the principal Officers, thus deferted, affembled together in one houfe, and hang out a. white flag, Popham fent an Officer to give them affuranoes of quarter and protection; and thus, in the fpace of two hours, this important and aftonifhing fortrefs was completely in our poffefion. We had only 20 men wounded, and none killed: On the fide of the enemy, Bapogee, the Mahratta governor was killed, and moft of the principal Officers, were wounded."
jointly with the Ganges, an illand of the fouthern part of Hindoon ftan : and flowing in oppofite directions 1500 miles. The courfe of the Nerbudda river is afcertained, only in certain points where it happens to be croffed by any of the great roads here defcribed: excepting only in the neighbourhood of Broach. All the interme. diate parts are drawn from report. It is reprefented to be as wide at Huffingabad Gaut, as the Jumna is at Calpy :- but fordable in moft places, during the dry feafon.

We learn from Mr. Ewart that the Soane is named Soane-budda, by the people who live near the upper part of its courfe; as its fifter river is named Ner-budda. The upper part of the courfe of the Soane is drawn in the fame manner as the Nerbudda is defcribed to be; and the fortrefs of Bandoo-gur, near it, is from the inform mation of Mr. Ewart.

The data for the pofitions of Nagpour and Ruttunpour, ara _already given in page 142 and 144, in the difcuffion of the primary ftations. Many roads lead from each of there places; but two only were meafured: one from Chittra in Bahar, through Ruttunpour, to Nagpour; the other from Nagpour, through Gurrah, to, Rewah and Mirzapour, on the Ganges. The firf, by determining feveral points, fuch as Surgoojah, Dongong, Kyragur, \&c. enabled me to correct fome of Col. Camac's eftimated routes; and the latter, befides giving the pofition of Gurrah, the capital of Gurry-Mundella; affifted in fettling Mundella, and Deogur: The eftimated routes from Nagpour, were to Ellichpour, Burhanpour, Narnalla, Gawile (or Gyalgur) Aurungabad, Jaffierabad, Mahur, Notchengong, Neermull, Chanda, and Manickdurg ; all collected by Mr: Ewart. All thefe proved very fatisfactory; as they correfponded with the diftances of the feveral intervals: and Nagpour being determined with the precifion requifite for a general map, there is little doubt but that all the places between Bengal and Bombay, are placed within a few miles of their refpective pofitions: that is, ad, mịting
mitting the longitude of Bombay to be right, in refpect of Calcutta.

Befides the routes colletted by Mr. Ewart, Mr. Watherfone obligingly communicated his route from Hullingabad Gaut, on the Nerbudda, to Nagpour. He was fent thither on bufinefs of the highert political importance, by General Goddard; whofe army was then encamped on the banks of the Nerbudda, in the courfe of its celebrated march acrofs the continent *. His journey pointed out, among other particulars, the fource of the Tapty (or Surat river) whofe fpring is more remote than we had an idea of. It rifes at Maltoy, a town fituated 42 coffes to the NW of Nagpour: fo that its coufe, is full two thirds of the length of that of the Nerbudda. The diftance between Huffingabad and Nagpour, is 100 coffes.

- Ellichpour is a fine city, and was anciently the chief city of Berat proper; by which I mean to diftinguilh the province known in the Ayin Acbaree by that name: for our modern acceptation of Berar, includes the whole country between Dowlalabad and Oriffa; the eaftern patt of which, was neither reduced by Acbar, nor even known, in particulars, to the author of the Ayin Acbaree. At piefent, Ellichpour is the capital of a large province or diftrict, fubject to the Nizam; but paying a chout, or nominal fourth part of its revenues, to Nagpour.

Deogur, or Deogire $\dagger$, was anciently a capital city, and the refidence of the Rajah of Goondwaneh; or, as he is called in the Ayin

[^104]Acbaree, the Goond Rajah; the Nerbudda being then the fouthern limit of Hindooftan. This province appears to be one of the mott elevated in Hindooftan, feeing that the rivers Tapty; Bain, and Nerbadda, defcend from it: Malwa, is unequivocally the higheft; for there, the rivers defcend in every direction.

Golam Mohamed's routes, being added to thofe collected by Mr. Ewart, contribute much towards the improvement of the map, in the interval between the meafured lines by Mr. Ewart': and before we were favoured with that gentleman's moft valuable materials (which entirely fuperfede the former, as far as they go) Golam Mohamed's contributed largely towards the geography of the country round Nagpour *. Thefe we owed to the late Col. Camac, who to his praife, employed a part of his leifure time, during his command on the weftern frontier of Bahar, in enquiries concerning the fate of politics, government, geography, and nature of the countries included in the abovementioned trict: the geography of which, had till then, been very little known to us.

Sumbulpour or Semilpour, is determined by its reputed diftance from Ruttunpour, and from 4 different points'in the Bengal furvey; from routes collected by Col. Camac. Unluckily, I had placed Sumbulpour in the map, as it now ftands, before I had feen Mr. Ewart's papers; by which it appears to be 10 or 11 miles to the fouth-weft of its true pofition; being in $21^{\circ} 25^{\prime}$ lat., and $83^{\circ} \cdot 40^{\prime}$ lon.; when it ought to be in $21^{\circ} 34^{\prime} 30^{\prime \prime}$, and $83^{\circ} 46^{\prime} 30^{\prime \prime}$. Had. this new pofition been eftablifhed on the fame principle as Nagpour and Ruttunpour ; that.is, mathematically ; I hould not have fcrupled to erafe a large portion of the map, to gain fo defirable an advantage : but as it yet refts on computed diftances, I am content to point out the error in this manner.

[^105]
## [ 361 ]

The diftance of Sumbulpour from Ruttunpour, which is hardly affected by the new matter, is by one account 53 coffes; and by another 56 : the medium, $54^{\frac{1}{2}}$ coffes, or $7^{8} \mathrm{G}$. miles, is the diftance adopted.


All thefe places being nearly in one line of direction from SumBulpour, admit of a medium being fruck between them: and this. medium appears to be $66 \frac{1}{2}$ from Raidy,, or 95 G. miles. The interfection of thefe lines of diftances, from Ruttunpour and Raidy, is nearly at. right angles; and they meet as is faid above, in lat. $21^{\circ} 34^{\prime} 3 a^{\prime \prime}$, lon. $83^{\circ} 4^{\prime} 30^{\prime \prime}$. This pofition falls out 142 G . miles from Cattack; and Mr. Motte, who traced this road, toge-gether with the courfe of the Mahanada in 1766 , made the diftance 229: he-alfo reckoned $51^{\prime}$ difference of latitude, and it appears to be $64^{\frac{1}{2}}$.

The lower.road from Nagpour to Sumbulpour, through Raipour; is from Golam Mohamed; and the upper, by Dumdah and Soorangur, is Mr. Thomas's; communicated by Mr. Ewart. The lower route, which is checked, laterally, by the diftance of Raipour from. Ruttunpour; points out alfo the courfe and navigable part of the Mahanuddy, or Mahapada river. Arung is the furtheft point: to which it is navigable, from the fea. The upper road croffes the river, near the conflux of the Hutfoo river, which is alfo navigable, to Dungong. By the deviation of the road between Nagpour and. Soonpour, from the true line of direction towards Cattack, it may. be inferred that the country on the fouth of it, is either defert, or in a ftate of anarchy. We are however, not well informed on this. point, but have every reafon to fuppofe it; and the rather, as Mr.

Thomas.

## [ 162 ]

Thomas mentions Dewancole near Soonpour, as a retreat of banditti.

Soorangur, where the roads divide to Sumbulpour, and Soonpour, is the burial place of the late Mr. Eliott ; who died on his way from Calcutta to Nagpour, in October 1778. At that crifis, when the fate of the Britifh empire in India, hung fufpended by a flender thread, this gentleman was fent by Mr. Haftings, on an embaffy to the Court of Nagpour, which at that time, might be faid to hold the balance of power; in Hindooftan. Zeal for the public good, prompted him to undertake a fervice of great perfonal danger ; and which eventually occafioned his death. Mr. Haftings caufed a monument to be erected to his memory, on the fpot: and alfo commemorated his early genius and attainments, and no lefs early death, in fome lines, which make part of an imitation of an ode of Horace *. Soorangur is about 270 road miles thort of Nagpour, and 470 from Calcutta; and lies out of the direct road.

I obferved above, that Sumbulpour is mifplaced; and this occafioned an error in all the places between Ruttunpour and Cattack. For the diftance between Soorangur and Soonpour is too fmall; and between the latter and Cattack, too great; the Mahanada not making fo deep a winding or elbow, between Boad and Sumbulpour, as Mr. Motte defcribed, and as is reprefented in the map. Golam Mohamed reckoned only 137 coffes between Nagpour and Sumbulpour: but the conftruction will not allow of lefs than 157; which is a miftake not eafily to be accounted for.

Boad, a fort near the Mahanada, is faid by Col. Camac to be 40 coffes only, from Gumfoar, in the Ganjam diftrict: by conftruction

[^106]
## [ 163 ]

it is 46 ; which difference is probably occafioned by the miftake in the pofition of Sumbulpour. On the weft of Boad, and near the Mahanuddy river, Mr. Thomas paffed a town of the name of Beiragur; which I take to be the place noted in the Ayin Acbaree, as having a diamond mine in its neighbourhood. There is indeed, a mine of more modern date, in the vicinity of Sumbulpour; but this whole quarter muft from very early times have been famous for producing diamonds. Ptolemy's Adamas river anfiwers perfectly to the Mahanuddy : and the diftrict Sabarce, on its banks, is faid to abound in diamonds. Although this geographer's map of India, is fo exceedingly faulty, in the general form of the whole tract; yet feveral parts of it, are defcriptive. When we perceive the head of the river juft mentioned, placed among the Bundela hills, and Arcot thruft up into the middle of India; we ought to reflect, that Ptolemy's ideas were collected from the people who failed along the coaft, and who defcribed what they had feen and heard, without regard to what lay beyond it : and moreover, made ufe of too wide a fcale; as commonly happens when the fphere of knowledge is confined, and the geographer works ad libitum, from the coaft, towards the interior of an unknown continent. Whoever confults Ptolemy's map of India, chould carry thefe ideas in his mind : that the conftruction of it is founded on three lines; one of which, is that of the whole coaft, from the gulf of Cambay, round to the Ganges; a fecond, the courfe of the Indus, and the gulfs of. Cutch and Cambay; and the third, the common road from the Panjab to the mouths of the Ganges. The objects within thefe lines, have a relative dependance on each line refpectively; and are invariably: placed at too great a diftance within them: it therefore happens, that an object which fhould have occupied a place near one of the lines, is thruft towards the middle of the map; and this being a general cafe, aplaces on oppofite fides of India, are crouded together, as Arcot.and Sagur (Sagbeda) are. At the fame time the central parts are wholly omitted; as being, in reality, unknown. Some
may treat with ridicule, what I have faid on the fore of Ptolemy 1 but a work which has travelled down to us from the fecond century of our ara, muft have poffeffed fomething worthy to recommend $i_{t}$, and to keep it alive : and, at leaft merits an explanation.

Mr. Motte's route along the Mahanuddy, was defcribed from computed diftances, and bearings by a compafs. He alfo took the latitude of Sumbulpour, in a rough manner, and made it nearly the fame as that of Balafore; that is, about 21 degrees and a half, The mouths of this river, which form an affemblage of low woody inlands, like the Ganges, and many other rivers, have never been traced, but are defcribed from report only. At the mouth of the principal channel, near Falfe Point, is a fortified ifland, named Cajung, or Codjung.

This brings us into the neighbourhood of the Chilka lake, which bounds the circars (or northern circars) on the north. This lake feems the effect of the breach of the fea, over a flat, fandy hore, whofe elevation was fomething above the level of the country within. Pulicat lake appears to have the fame origin. Both of them communicate with the fea, by a very narrow but deep opening; and are Shallow within. The Chilka lake is about 40 miles in length from $N E$ to $S W$; and in moft places 12 or 15 wide; with a narrow flip of fandy ground, between it and the fea. It has many'inhabited iflands in it. On the NW it is bounded by a ridge of mountains; a continuation of that, which extends from the Mahanuddy to the Godavery river; and thuts up the circars towards the Continent. The Chilka, therefore, forms a pafs on each fide of it, towards the Cattack province. It is defcribed from the obfervations of Mr. Cotsford, and of Capt. Campbell: though poffibly the extent of it may be fomewhat more than is given; towards the porth. It affords an agreeable diverfity of objects: mountains, illands, and forefts; and an extended furface of water, with boats and fmall veffels failing on it. To thofe who fail at

## [ 16.5 ]

me diftance from the coaft, it has the appearance of a deep bay; the flip of land not being vifible.

The famous pagoda of Jagarnaut, lies a few miles to the eaftward of this lake, and clofe on the fea thore. It is a fhapelefs mafs of building : and no otherwife remarkable, than as one of the firt objects of Hindoo veneration; and as an excellent fea mark, on a coaft which is perfectly flat, and exhibits a continued fameners; and that in a quarter, where a difcriminating object becomes of the higheft importance to navigators. It has no claim to great antiquity: and I am led to fuppofe that it fucceeded the temple of Sumnaut in Guzerat; which was deftroyed by Mahmood in the asth century. Poffibly the remote fituation, and the nature of the country near it, shut up by mountains and deep rivers, might recommend the fpot, where Jagarnaut is fituated: for we find Oriffa was not an early conqueft.

The circars are defcribed from various authotities. The conftruction of the fea coaft has already been difcuffed in the firft fection. Our poffeffions in this quarter, extend no where more than 50 B. miles inland; and in fome places, not more than 20; between the Chilka lake, and the Godavery river: and between this river and the Kiftna, about 70 or 75 . So that the circars form a Iip of territory, bounded on one fide by the fea; and on the other, generally, by a ridge of mountains, that runs nearly parallel to $i t$; Col, Pearfe's line, runs entirely through this tract; and may be confidered as the foundation, on which a fuperftrufture has been raifed, by the labours of many different people.' The diftrict round Ganjam, known by the name of Itchapour, and which is one of the divifions of the Cicacole country; is drawn from Mr. Cotsford's very elegant map. The Tickly diftrict, adjoining to it, on, the fouth, is chiefly from Lieut. Cridland's furveys; and extends to Cicacole town (the Cocala of Ptolemy). From Cicacole, to Vifagapatam, including the country to the foot of the mountains, is taken from an old MS. map of Mr, Dalrymple's : and from thence
thence to Rajamundry, is taken from a map of Col. Forde's marches, collated with Montrefor's large map, at the Eaft India Houre. It is all along to be underftood that Col. Pearfe's line (corrected as in page 10) forms the fcale of the parts in queftion. The remaining part of the circars ; that is, between the Godavery and Kiftna rivers, is chiefly taken from a map of that country, publifhed by Mr. Dalrymple; the ground-work of which is compofed of the late Major Stevens's materials. The routes to Joypour and Badrachillum, are on the authority of Mr. Claud Ruffell; and the pofition of the latter place, which is very near to the Godavery, accords with Mr. Montrefor's idea, as expreffed in his large map.

The Godavery river, or Gonga Godowry, (fometimes called the Gang in Ferihta's hiftory) was, till very lately, confidered as the fame with the Cattack river, or Mahanuddy. As we had no authority, that I can find, for fuppofing it, the opinion muft have been taken up, on a fuppofition that there was no opening between the mouths of the Kifna and Mahanuldy (or Cattack river) of magnitude fufficient for fuch a river as the Gonga. It could not be for the want of face fufficient for the Cattack river to accumulate in; independent of the Gonga; for the diftance is as great from the mouth of the Cattack river to the Berar mountains; as from the mouth of the Godavery to the Baglana mountains. The truth is, that no juft account of thefe rivers, any more than of the Burrampooter, had then reached any European geographer. - Succeeding enquiries and difcoveries have made it certain, that the Godavery is the river that runs under Rajamundry, and falls into the fea between Coringa and Narfapour; and that the Cattack river rifes in the Ruttunpour country. But the recent difcovery (to Europeans) of the Bain Gonga, whofe courfe is directly acrofs the fuppofed courfe of the Gonga, (the name given to this compound river, whofe head was the Godavery, and tail the Mahanuddy) clears up at once the ambiguity; if any there could be fuppofed to remain, after the difcuffion of the fubject in the memoir of the map of 1782 . The

Goda-

## [ 167 ]

Godavery has its fource about go miles to the N.E of Bombay; and in the upper part of its courfe, at leaft, is efteemed a facred river by the Hindoos: that is, ablutions performed in its fream, have a religious efficacy fuperior to thofe performed in ordinary freams. The Beemah is fuppofed to have fimilar virtues: nor are facred rivers by any means uncommon, in other parts of India. The Godavery, after traverfing the Dowlatabad foubah, and the country of Tellingana, from weft to eaft, turns to the fouth-eaft; and receiving the Bain Gonga, about 90 miles above the fea, befides many fmaller rivers, feparates into two principal channels at Rajamundry ; and thofe fubdividing again, form altogether feveral tide harbours, for vefféls of moderate burthen. Ingeram, Coringa, Yanam, Bandarmalanka, and Narfapour, are among the places fituated at the mouth of this river ; which appears to be the moft confiderable one, between the Ganges and Cape Comorin. Extenfive forefts of teek trees border on its banks, within the mountains; and fupply hip timber for the ufe of the ports abovementioned: and the manner of launching the hips in thofe ports, being very fingular, I have fubjoined an account of it in a note *. The Godavery was triced about 70 miles above its mouth; the reft of its courfe is defcribed only from report; fave only at the conflux of the Bain river, and in places where different roads crofs it; un-

[^107]
## [ 168 [

til we arrive at the part where M. Bufly's marches have defcribed it, in common with other particulars.

The courfe of the Bain Gonga (or Bain river) as I have juft obferved, is quite a new acquifition to Geography; and we are indebted to the late Col. Camac, for it. This river, which has a courfe of near 400 miles, was not known to us, even by report, till very lately. It rifes near the fouthern bank of the Nerbudda, and runs fouthward through the heart of Berar; and afterwards mixes with the Godavery, within the hills that bound our northern circars. This circumftance confutes at once the idea of the Godavery being a continuation of the Cattack river. I cannot find how far up the Bain Gonga is navigable; but it is mentioned as a very large river, in the early part of its courfe; and is probably equal in bulk to the Godavery, when it joins it.

There yet remains in the map, between the known parts of Berar, Golconda, Oriffa, and the circars, a void fpace of near 300 miles in length, and 2.50 in breadth; nor is it likely ever to be filled up, unlefs a very great change takes place in the ftate of Europeanpolitics in India: for we appear not to have penetrated beyond thefirtt ridge of mountains $s_{x}$ till very lately; when the difcovery of the black pepper plant was made, in the diftricts of Kamipa.

Beyond the great ridge of mountains (which may be 60 or 70 miles inland) and towards Berar, is a very extenfive tract of woody and mountainous country, with which the adjacent countries appear to have but little, if any, communication. We may fairly fuppofe that to be a country void of the goods in general efteem among mankind, that does not tempt either their avarice, or ambition. Although furrounded by people who are in a high degree of civilization, and who abound in ufeful manufactures, we are told that the few fpecimens of thefe miferable people who have appeared in the circars, ufe no covering but a wifp of ftraw. We know not, with any degree of certainty, how far this wild country extends within the great ridge of mountains, between the parallels of $17^{\circ}$
and $20^{\circ}$ : but the firf civilized people that we hear of beyond them, are the Berar Mahrattas., I think it probable that it may extend 150 miles, or more. However, a party of Berar Mahrattas found their way through this country; and the Bobilee hills, in 1754, (Orme vol. I. page 373 ) at an opening called Salloregaut, in the Cicacole circar. Our ignorance refpecting this tract may well be accounted for, by its lying out of the line of communication between our fettlements; and by its never having been the feat of any war, in which the Europeans have taken part. I fufpect, however, that the tract in queftion, is either too defert, or too favage to be eafily or ufefully explored:

Between the Godavery and Kifna rivers, and on the north-eaft of Hydrabad, was the ancient country of Tellingana (or Tilling) of which Warangole (the Arinkill, of Ferifhta) was the capital. The fite of this capital is ftill evident, by means of the old ramparts; which is amazingly extenfive. A modern fortrefs is conffructed within it; and is-in the poffeffion of the Nizam. Col. Peach marched by way of Ellore and Combamet, to this place, during the war of 1767 ; and the road was furveyed by Lieutenant, now Major Gardner. His horizontal diftance from Ellore to Warangole was 134 G. miles: and the bearing, W:33 $\mathrm{N}^{*}$.. A note accompanying Major Stevens's copy of this route; fays, that the latitude of Warangole is $17^{\circ} 57^{\prime}$ : and this bearing and diftance accords with it. I am ignorant of the exact relative pofitions of Warangole and Hydrabad: Montrefor's map makes the diftance between them 45 G. miles. My conftruction makes it 47 , and the bearing of Warangole from Hydrabad NE by N: Montrefor's bearing of Warangole from Ellore, is very faulty; and it is remarkable, that though there are feveral plans of this road, moft of them differ widely; both in bearing and diftance. Major Gardner's. I: apprehends, may be depended on.

[^108]
## [ 170 ]

The places round Warangole, are taken from a MS. map of Mr. Dalrymple's. Byarem, Culloor, Damapetta, \&c. are all from MSS. belonging to the fame gentleman.

The road from Hydrabad to Nagpour, was communicated by Mr. John Holland. The diftance is ftated at 169 coffes; which agrees remarkably well with the interval on the map: and, as Nagpour is a fixed pofition, we may infer, that Hydrabad ought to be rather in $17^{\circ} 12^{\prime}$ than $17^{\circ} 24^{\prime}$ (fee page 140). The two places bear nearly N and S from each other; and the whole diftance, of courfe, is difference of latitude. A place named Indelavoy or Endelavoy (Indelvai, in Tavernier, and Thevenot) appears in this route, between the Godavery and Hydrabad: and Thevenot's route from Aurungabad to Hydrabad, falling in there, determines the direction of both roads; and alfo the pofitions of Indour, and Sitanagur; the latter being a famous pagoda in that part. Neermul, a city of note, belonging to the Nizam, alfo rifes in this route; and is about 10 G. miles from the north fide of the Godavery, and about ${ }_{1} 2$ from Nagpour. Mr. Ewart alfo collected fome routes between Nagpour, Neermul, and Hydrabad: and à route by way of Chanda, appears in Mr. Orme's hiftorical fragments of the Mogul empire. As one of Mr. Ewart's routes gives the pofition of this Chanda, (a confiderable city belonging to Nagpour, and about 70 G . miles to the fouth of it) we are enabled to lay down this road; which was marched over; by M. Bufly.

Another principal branch of the Godavery, is the Manzorah; a confiderable river which rifes, in the country of Amednagur, and after a circuitous courfe by Beder, joins the main river below Nander.

Many interefting pofitions arife in the marches of M. Buffy, between Hydrabad and Aurungabad, by the two roads of Beder, and Nander; and no lefs' in the march from Aurungabad to Sanore. Beder is. a fortified city; about 80 road miles to the N W of Hy drabad; and was in former times the capital of a confiderable kingdom.

## [ 171 ]

The road from Beder to Burhanpour, through Patris and Jaffierabad, is from M. Thevenot. It affifts in determining the pofition of Jaffierabad, a principal town on the N E of Aurungabad. The road from "Nander to Nagpour, through Mahur, is partly from M. Buffy, and partly from Mr. Ewàrt; by whofe account Mahur is 78 coffes, but by conftruction about $87, \mathrm{SW}$ from Nagpour.

The road from Poonali to Beder, is taken from the journal of the late Col. Upton ; who returned from his embaffy, by the route of $\mathrm{Hy}-$ drabad, and the circars, to Bengal. His journal has much merit, as being full and defcriptive of the countries he paffed through; as well as of their refpective boundaries: but he was unlucky in eftimating his courfe; and it happens that we have no crofs line to correct it.

The road from Aurungabad to Sanore-Bancapour, is taken from the map of M. Buffy's marches: and Sanore was the extreme point of his campaigns, that way. See Orme vol. I. p. 425. I could only take the bearing and diftance, as I found them in the map: and it is a great defect, that in fo confiderable an extent, there mould be no obfervation of latitude; that we know of. By the data, Sanore is placed in lat. $15^{\circ} 39^{\prime}$, lon. $75^{\circ} 44^{\prime}$; or about 117 G. miles E by N from Goa. There is nothing to check this pofition, from the Malabar fides not even the number of computed coffes from Goa. However, let the matter ftand as it may, with refpect to the mathematical exactnefs of the queftion ; had it not been for thefe marches of M. Buffy (the only monument remaining to the French nation, of their former fhort-lived influence and power in the Deccan) the geography of thefe parts, would have been extremely imperfect: but as they extend through more than 4 degrees of latitude, and more than 5 of longitude; they occupy not only the principal part of the Deccan, but by fixing the pofitions of fo many capital places, and interfecting the courfes of fo many rivers, tend to clear up many other pofitions.


#### Abstract

$\left[\begin{array}{ll}172\end{array}\right]$


Vifiapour (or properly Bejapour) is not fo well afcertained as might be wifhed. Mandefloe, who travelled the roads himfelf, fays, that it is 80 leagues from Dabul, on the coaft of Malabar ; and 84 from Goa; which, if meant of French leagues of 3000 paces, with an allowance of one in feven for windings, will give 142 G. miles from Dabul, and 149 from Goa : making Bejapour in lat. $17^{\circ} 26^{\prime} 30^{\prime \prime}$, lon. $75^{\circ} 19^{\prime}$. P. du Val, who formed a map of Mandefloe's routes (a copy of which is in the Britifh Mufeum) and probably had lights, befides what are furnikhed by the travels, to guide him; makes the diftance between Dabul and Bejapour, greater than between Bejapour and Goa. And this I think likely to be the cafe, though contrary to what is faid in the travels.

Tavernier reckons 85 coffes from Goa to Bejapour (or rather perhaps from Bicholim, the landing place on the continent) or 8 days journey: which 8 days, thould be about 144 G. miles on a ftraight line; and agrees with what is faid above. He fays alfo, that from Bejapour to Golconda, the diftance is 9 days journey, or 100 coffes more : but this account muft be exceedingly vague; becaufe Goa and Golconda are near 230 coffes afunder, by the directeft route; and Bejapour lies more than 40 coffes out of the line. Fryer reckons Bejapour 10 days journey from Carwar, or about 180 G . miles. Cæfar Frederick agrees with Tavernier in making it 8 days journey from Goa.

The Lettres Edifiantes make the latitude of Bejapour $17^{\circ} 30^{\circ}$. I have placed it in lat. $17^{\circ} 26^{\prime} 30^{\prime \prime \prime}$, lon. $75^{\circ} 19^{\prime}$; that is, 149 G . miles from Goa; 142.from Dabul; 171 from Carwar; and 203 from Golconda. At the fame time, I think it probable, that it may not be within 20 miles of its true pofition. The particulars of the roads leading to it from Dabul and Goa, are from P. du Val's map. Bejapour is a confiderable city, and was once the capital of a large kingdom of the fame name. It is now in the hands of the Poonah Mahrattas.

The .travels of M. Anquetil du Perron from Goa to Poonah, have furnifhed fome ufeful matter towards filling up a part, that has long remained almoft a perfect void, in the maps of India. His route croffes that of Mandefloe, defcribed by P. du Val, at a place named Areek or Areg, a few miles from the north bank of the Kiftna, and on the road between Dabul and Vifiapour ; and thus, fortunately, enables us to join his route with Mandelloe's, with fome degree of certainty. M. Anquetil fpeaks of coffes and leagues, as fynonimous terms; and reckons $40 \frac{1}{2}$ of thefe from Vaddal, at the weftern foot of the Gauts, and about 12 coffes (or leagues) SE or ESE from Goa, to Areg: and $5^{\frac{1}{2}}$ more from Areg to Poonah. Now the diftance from Vaddal to Areg, cannot be fuppofed lefs than 100 G . miles of horizontal diftance; and from Areg to Poonah nearly the fame : fo that one can hardly tell how to denominate his itinerary meafure; which is about 2 G . miles and a fixth in horizontal meafure. On the road from Poonah to Nimderra (in page $13^{8}$ ) we have obferved the fame deviation from the ftandard of the itinerary meafures of the country; for on that road, his coffes turn out exactly 2 G. miles each, on a ftraight line. It fhould be a rule for every traveller to ufe, not only the meafures, but the denomination of the country he paffes through; for then we are likely to poffers a better fcale; than his judgment can furnifh us with. This will be underftood to apply to computed diftances only. I have proportioned M. Anquetil's diftances, as well as I could, confiftently with the fuppofed fituation of Areg, in refpect of Vifiapour; which latter place, was the primary fation in this cafe.

His route from Goa to the Kiftna, is fo far on the ordinary road to Vifiapour, by the Ponda Gaut. The, route from the croffing place of the Kiftna to Poonah, gives a general idea of the upper part of the courfe of that river; and alfo points out nearly the fituation of Sattarah, the capital of the Mahratta ftate, during the time of the Rajahs of Sevagee's line. This place appears, by the propor: tioned

## [ 174 ]

tioned diftance of M. Anquetil's route, to be about $3^{8} \mathrm{G}$. miles (horizontally) nearly S by E from Poonah. A native of this place informed me that Sattarah was reputed to be 30 coffes (or about 43 G. miles) S E of Poonah. I have no doubt but that M. Anquetil's route may be relied on, for the diftance. It is to Mr. Orme's hiftotical fragments before-mentioned, that I am indebted for the knowledge that M. Anquetil's book contained any fuch matter. I lament exceedingly that he had not a compais with him, with which he might have taken the bearing of the road between Goa and Aurungabad: for in a quarter where geography is fo bare of materials, that every notice of the kind is received with avidity, that gentleman had a fair opportunity of diftinguihing himfelf in this way; as he may be faid literally to have trod a new path.

The notes to Mr. Orme's hiftorical fragments afford fome notices and fuggeftions, that have been of fervice to this work. The general fituation of Pannela, fo much celebrated in the hiftory of Sevagee, is placed conformable to his fuggeftion, in the fame book. I have alfo followed him, in fuppofing the Atoni of P. du Val, to be Huttany, once an Englinh factory in the heart of Vifiapour. Hubely, another factory, is faid by Fryer to be 6 days journey from Carwar : and by his manner of expreffion, I infer it to be fituated on the road to Vifiapour. It is in the fame place that Fryer fays, that Vifiapour is io days journey from Carwar.

Naldorouk, Malkar, Sakkar, Kandjoly, and other places in the Deccan, are alfo from Mr. Orme's book; which points out the fource of the Kiftna river to be on the N W of Sattarah; and it cannot be far from it, as the Gauts, or Indian Appenine, lie fo clofe to Sattarah; and the Kiftna is known to fpring from the eaft fide of that ridge.

Raolconda, a famous diamond mine, is placed in Mr. Montrefor's map, about $1_{5}$ G. miles to the weft of Ralicotte, and 12 from the north bank of the Kifna; but I know not on what authority

Tavernier, who vifited Raolconda, gives its diftance from Golconda at 17 gos, of 4 French leagues each. Tavernier mentions his croffing a river that formed the common boundary of Golconda and Vifiapour, about 4 gos, or more, before he came to Raolconda. This river can be no other than the Beema, which, to this day, forms the eaftern boundary of Vifiapour; and paffes about 80 or 82 G. miles to the weft of Golconda, croffing the road from it to Ralicotte: and if we reckon the 82 miles, 13 gos; that is, forming a fcale from the diftance between Golconda and the river Beemah ; each gos will be 6,3 G. miles in horizontal diftance (or nearer 33 than 4 French leagues) and Raolconda will be placed about 25 G . miles on the weft of the Beemah; or in, eaft of Ralicotte.

If we take the gos at 4 French leagues, without regarding the proportion arifing from the above calculation, it will bring Raolconda very near the fituation affigned it by Montrefor. But I have neverthelefs adopted the former, thinking it, on the whole, the moft confiftent.

Cæfar Frederick fays that the mines (Raolconda) are fix days journeys from Bifnagur : but this will apply equally to either of the above pofitions.

The general courfe of the Kifna river from the fea to Bezoara, is chiefly taken from Major Stevens's maps, communicated by Mr. Dalrymple. From thence, to Timerycotta is from Montrefor, collated with Capt. Davis's fketch of Guntoor, 8xc. and a French MS. map. From that place to the conflux of the Tungebadra, it is drawn only from report, and in the form it is ufually done, in the maps that include its courfe. From the mouth of the Tunge-' badra to Gutigui, or Catigui, its courfe is drawn in a French copy of M. Bufly's marches; and I have corrected it in two places by General Jofeph Smith's journal. Above Gutigui, its courfe is marked in certain places, by the roads that crofs it ; particularly thofe travelled by M. Anquetildu Perron: but upon the whole, nothing more than its mere general courfe is known; except within

70 miles of the fea. General Jofeph Smith remarks, that the Kiftna was fordable both above and below the conflux of the Beemah river, in the month of March: and that a few miles below the mouth of the Beemah, its bed was 600 yards wide, and exhibited an uncommon appearance, from the number and diverfity of the rocks in it.

The Kiftna and Godavery rivers, however remote at their fountains, approach within 80 miles of each other, in the lower parts of their courfe; and form an extenfive tract of country, compofed of rich vegetable mould, fuch as is ufually found at the mouths of large rivers. Here we behold, on a fmaller fcale, the fame economy that is obfervable in the agency of the Nile and Ganges, in forming the deltas of Egypt and Bengal; by means of the finer particles of earth, that are fwept down by thofe vaft rivers, and their branches, in a courfe of more than 2000 miles. Thofe who have been on the fpot, and reafon from analogy, in this cafe, will readily fuppofe that the whole, or the greateft part of the tract, included between Samulcotta and Pettapolly (about 150 miles in length along the fea fhore, and from 40 to 50 .wide) is in reality, a gift of the two rivers, Godavery and Kifna. The fame appearances indeed, may be obferved at the mouths of the Cattack and Tanjore rivers; but the two rivers in queftion, by draining a much greater extent of country (that is, from the 15 th to. the 21 ift degree of latitude) have collected materials for a.greater quantity of new land. Within this new formed land, and about midway between the Godavery and Kiftna, the foil forms a hollow fpace; which in its loweft part, is a lake at all feafons; and in all the other parts, an extenfive inundation, during the feafon of the periodical rains; being then a lake of 40 or 50 miles in extent.: This is called the Colair lake; and its origin may be referred to the fame caufe, as that which produces the lakes and moraffes of the Egyptian and Bengal deltas : which is, that the depofition of mud by the two sivers (or the two branches of one river) at the time when
they overflow, is greateft near the banks: for the farther the inundation flows from the margin of the river, the more of its earthy particles will be depofited in its way; and the lefs will remain for the diftant parts ; which therefore cannot be filled up to the level of the ground, neareft the bank of the river: and thus the ground awill acquire the form of an inclined plane, from each riyer bank towards the interior part of the country, where a hollow fpace will be left: but it may be expected that when the rivers have raifed their banks, and the adjacent country, to the greateft poffible height, which is that of the periodical flood (and the ground can be raifed no higher) the fubfequent inundations will find their way into the:hollow fpace, from the lower part of the river; and will gradually fill up with mud, the part of the lake that lies towards the fource of it: and as the new land continues to encroach upon the fea, the lake will travel downwards in the fame proportion. For the natural courfe of things, is, that when the new lands that are thefurtheft removed from the fea, are raifed as high as the agency of the waters will admit, that portion of the mud that cannot be depofited above, is carried lower down to raife other lands; or tolay the foundation of new land, further out ; and thus the regular declivity of the channel is preferved. All lands fubject to inundations, muff continue to rife; becaufe the water of the inundation depofits, at leaft, fome portion of the earthy particles fufpended in it = but there muft be a certain' point of elevation, beyond which no delta or river bank; can rife; for each fucceffive point in the courfe of a river, muft be lower than the preceding one. As tothe Nile, its banks will admit of being raifed, throughout the whole Said, as well as lower Egypt; the catariets being fo much elevated above the lower part of the river: and Egypt alfo differs. inianother particular, from India, in that no rain falls there towafh away the light parts of the foil into the river, before the inundation : whereas, the heavy rains of Bengal, previous to the inundation, mult reduce the level of the elevated grounds; and

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contribute partly towards filling up the hollows; and no fmall prom portion of what is depolited in one feafon, will-be carried lower down, or into the fea. So that the progrefs of raifing the lands, muft have been more rapid in Egypt than in any of the moifter regions.

It appears to me that the gentlemen who have lately reafoned fa ingeniounly on the increafe of the delta of the Nile, have omitted a circumftance of confiderable moment, as it refpects the length of the periods required to form given quantities of new land in; or to elevate the old to a certain degree. We never fail to remark on a furvey of the naked fummits of mountains, that the rain has in a courfe of ages, wafhed away the earth that covered them: or in other words, that there is a progreflive motion of the finer particles of earth, from the mountains, towards the vallies. Admitting this to be true, and that the fores of fine carth are not inexhauftible; the longer the rivers continue to run, the lefs quantity of earth they mult carry away with them : and therefore, the increafe of the deltas, and other alluvions of capital rivers, muft have been more rapid in early periods of the world's age, than now. -

After this long digrefiion, it would be unpardonable in me to omit an account of a plan propofed by my ingenious friend Mr. John Sulivan : which was, to open a communication at all feafons, between the Colair lake and its parent rivers, with a view to the improvement of the adjacent lands (which form a part of the Circars) and of the inland navigation, It appears that an imperfect channel already exifts, between the lake and the Godavery river; as well as the traces of an unfinibhed one, towards the Kiftna : and which this gentleman, with great appearance of probability, imputes to a like defign having been formed by the natives, in early times. This fcheme, which appears to be practicable on eafy terms, has never been adopted: the propofal was made early in 1779: and for the particulars, I hall refer to the tract itfelf, which alfo contains much information op other fubjects.

## [ 179 ]

To return to the fubject of the Memoir. The Beemah river is known ta be a principal branch of the Kiftna, coming from the NW , and joining it. near Edghir. It rifes in the mountains, on the north of Poonah, probably not far from the fources of the Godavery; and paffes within $3^{\circ}$ miles of the eaft fide of Poonah, where it is named Beworah, as well as Beemah ; and is alfo efteemed a facred river. General Smith crofled this river, when accompanying the Nizam from Hydrabad towards Myfore, in 1766; about 10 miles above its junction with the Kiftna, where it was fordable.

The Vifiapour river is a branch of the Beemah, and is named. Mandouah, by Mandefloe.

The mountains named the Gauts, Gattes, or Indian Appenine, and which extend from Cape Comorin to the Tapty, or Surat river; occupy, of courfe, a part of the tract, whofe conftruction is difcuffed in this. fection:' but I fhall referve a general account of the Ģauts, for the next fection; which treats of the peninfula in general, and of the Gauts, as included in it. This celebrated ridge does not terminate in a point or promantory, when it approaches the Tapty; but departing from its meridional courfe, bends. eaftward, in a wavy line, parallel to the river; and is afterwards lofs among the hills, in the neighbourhood of Burhanpour. In. its courfe along the Tapty, it forms feveral paffes, or defcents, (that: is, Gauts, according to the original import of the word, which. means a landing place) towards that river; whence the country into which the paffes defcend, was originally named Candeifh, or the low country. It would appear, that the ridge abates of its. great height, after paffing the parallel of Baffeen, northward; for Mr. Farmer, in his way from Poonah towards Naderbar, obferved: that the paffes. had all a defcent northward; forming as it were, a feries of fteps, until he landed in Candeifh. He was then a. hoftage with Madajee Sindia; who at that time led the grand Mahratta army into Guzerat, againft General Goddard.

## [ 180 ]

The country inclofed by this bend of the Gatus, is named Baglana, or Bocklana; and extends the whole way from the Taptyi river to Poonah. It is mountainous, of courfe; and contains in it, many ftrong fortreffes. Among thefe, were Rairee:and Jeneahgur, the ftrong holds of Sevagee, in the laft century : but I cannot trace out their pofitions. It is furprifing, confidering how long' the Englifh have had fettlements at Bombay and Surat, that there fhould be no map, or other record, defcriptive of the geography 'of Baglana; or of any part of the tract between Bombay and Aurungabad. The routes of M. Anquetil du Perron, and of Mr. Farmer, together with Mr. Smith's line, have defcribed the roads leading from Poonah to Noopour, and Buthanpour : but all on the weft of thefe lines, is a blank, for an extent of 100 miles in width, and 150 in length : even the pofition of Naffick-Trimuck, a cele-brated place of Hindoo worfhip; on the NE of Baffeen, is not well known ; and M. Anquetil du Perron's account of its pofition, in refpect of fome points in his route from Poonah to-Surat, is not. fatisfactory. It is fituated near the fpring's of the Godavery; and they muft be on the eaft fide of the Gauts, and nearly on a parallel with Bahbelgong.

Some genetal information refpecting the fituation of the Teek forefts, and of the extent of the Britim conquefts in 1780 and 1781 , along the weftern foot of the Gauts, between Baffeen and Surat, was obligingly communicated by Mr. Hunter of the Eaft India Direction; and by Mr. Holmes. The Teek forefts, from whence the marine yard at Bombay is furnifhed with that excellent fpecies. of thip timber, lie along the weftern fide of the Gaut mountains, and other contiguous ridges of hills, on the north, and north-eaft of Baffeen : the numerous rivulets that defcend from them, affording water carriage for the timber. I cannot clofe this account without remarking the unpardonable negligence we are guilty of, in delaying to build Teek chips of war for the ufe of the Indian feas. They might be freighted home, without the ceremony of regular

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equipment, as to mafts, fails and furniture ; which might be calculated juft to anfwer the purpofe of the home paffage, at the beft feafon: and crews could be provided in India. The letter fubjoined in a note, and which was written with the beft intentions, 9 or 10 years ago, will explain the circumftances of the cafe ${ }^{*}$. Teek hips of 40 years old and upwards, are no uncommon objects in the Indian feas : while an European built hip is ruined there, in 5 years. The fhips built at Bombay are the beft, both in point of workmanhhip and materials, of any that are conftructed in India: and although, $4^{\text {th }}$ rates only are mentioned in the letter, there is no. doubt but that 3 d rates may be conftructed ; as there is a choice of timber. The Spaniards build capital hips in their foreign: fettjements. The Eaft India Company have a Teek Mip on her fourth voyage, at prefent; which thip has wintered in England: there-; fore any objection founded on the effects of froft, on the Teek timber, is done away.

[^109]Auguft 20, 1778.

## [ 282 ]

## SECTIONV.

## The Countries contained in that Part of the Peninsula, lying on the South of the Kistna River.

THIS tract, which in extent is not a fifth part larger than the Bengal provinces; yet, by its political divifions, by the talents and ambition of its Princes, and moreover, by their being ftimulated by the different European powers; whofe mercantile views led them thither; it has futuiifhed of late years, more matter for fpeculation and hiftory, than phrhaps, all the reft of the Mogul empire put together *. But although it has been the theatre of repeated wars between the Eurofeans, and the natives, as well as between the Europeans themfelves; yet fo ample a fupply of geographical matter has not been fupplied, as by the wars and negociations in the north. The geography of fome of the weftern parts of the peninfula, are as little known to us, as that of the central parts. of Hindooftan.

[^110]The figure of this tract is a triangle, of which the courfe of the Kiftna river forms the bafe, and the coarts of Coromandel and Malabar, the fides. Its extent from the Kitna to Cape Comorin, which forms the apex of the triangle, is about 600 Britifh miles; and its breadth, in the widert part, is about 550.

The conftruction of the fea coants, has been already defcribed in the firf fection 3 and that of the courfe of the Kitna river, in the latter part of the fourth.

Madras, or Fort St. George, as has been obferved (in page ${ }_{13}$ ) lies in lat. $13^{\circ} 5^{\prime}$, lon. $80^{\circ} 25^{\prime}$; and clofe on the margin of the fea. It is the principal fettlement of the Britifh Eaft India Company, on the caft fide of the peninfula; and is a fortrefs of very great frength, including within it a regular, well built city. But as it was impoffible to fortify and garrifon, in an effectual manner, a city of fuch extent as the political and commercial confequence of Madras, muft give birth to; there is a fecond city, \{eparated from Madras, by the breadth of a proper efplanade onlys, and although near four miles in circuit, is fortified in fuch a manner, as to prevent a furprife from the enemy's horfe; an evil to which every open town in the Carnatic, is fubject; from the drynefs and evennefs of the country. Madras was fettled by the Englifh about the year 1640, and was hardly defenfible, until the deftruction of Fort St. David in 1758 , pointed out the neceflity of it. It is now perhaps, one of the beft fortreffes in the poffeffion of the Britilh nation: and although not of fo regular a defign as Fort William, yet from the greater facility of relieving it by fea; and the natural advantages of ground, which leaves the enemy lefs choice iin the manner of conducting his attacks; it may on the whole be deemed at leaft equal to it.

Madras, in common with all the other European fettlements, on. this coaft, has no port for hipping; the coaft forming nearly a. Atraight line : and it is alfo incommoded with a high and dan-:

## [ 184 ]

gerons furf* or wave, that breaks upon it ; and induces the neceffity of ufing the boats of the country, to land in. Thefe are of a fingular conftruction; being formed without ribs, or keel; with flat bottoms, and having their planks fewed together : iron being totally excluded throughout the whole fabrick. By this confruction, they are rendered flexible enough to elude the effects of the violent fhocks which they receive, by the darhing of the waves, or furf, on the beach : and which either overfets, or breaks to pieces, a boat of European confruction. No port for large veffels occurs between Trinkamaly and the Ganges: that,is, in an extent of 15 degrees ; fo that the comparative proximity of the former, to Ma dras and Pondicherry, renders it a capital object, both to the Eng $\downarrow$. lih and French.

The Company's lands (or Jaghire $\dagger$ ) extend from Madras to the Pullicate lake, northward; and to Alemparvé, fouthwards : and weftward, beyond Conjeveram : that is, about. 108.B. miles along fhore, and 47 inland; in the wideft part. This whole tract hath had a regular furvey: and Mr . Pringle, who furveyed the marches of the army under Sir Eyre Coote, during the late war, has afcertained fome interefting geographical pofitions, beyond it ; and by this means extended very confiderably, the dimenfions of what may be called the furveyed tract: fo that we are enabled, with a little adventitious help, to fill up with tolerable accuracy, all the country between the parallel of Pullicate northward, and Cuddalore, fouthward; bounded on' the weft, or inland fide, by a line drawn from Cuddalore through Arnee, Velore, and Chittoor; and eaftward by the fea. The whole of this tract is a triangular face of 106 G . miles in length, by 70 wide. By means alfo of Mr. Pringle's bearings and meafured routes,

[^111]
## [185]

the pofitions of Portonovo, Sautgud, and Amboor are obtained; which laft may bea confidered as the weftmoft point determined with accuracy, any where to the north of Tritchinopoly: and Amboor is only one'fourth 'of the' 'whole' diftance acrofs the peninfula. I cannot find that the road to Colar, was meafured, during the campaign of 1767.

Arcot is found to be nearer to Madras than was before fuppofed. I have fixed it by a feries of triangles; by means' of Wandiwath, Naynaveram, and Sholingur hills'; and a bafé, furnifhed by the Jaghire map; at 56,6 G. miles, in horizontal diftance, from Madras; and about $13^{\prime}$; $30^{\prime \prime}$ fouth of its parallel; whence, its latitude will be $12^{\circ} 5^{\prime} \mathrm{I}^{\prime} 30^{\prime \prime}$, lon. $79^{\circ} 28^{\prime} 15^{\prime \prime}$. I do not know that its obferved latitude is recorded anty where. 'Mr. Pringle's map makes its diftance from Madras $57,9^{\prime}$; and M. D' Anville $\dot{5} 8,2$ in his MS. of pofitions : and another French MS. map, 59, i.

Arcot is reckoned the capital of the Carriatic; and muft be a place of great antiquity; by its being taken nötice of by Ptolemy, as the capital of the Sora; or Sord-mandalum; from whence corruptly Choro-mandel. It is a pretty large city, and its citadel is efteemed a place of fome flrength, for an Indian fortrefs. The defence which it made under. Cinve, in 1751 , eftablifhed the military fame of that illuftrious nobleman ; whofe foibles expofed him to the -attacks of enemies, who were better qualified to obferve his defects, than to imitate him in the higher parts of his character: to which pofterity will do ample juftice, when it is placed beyơnd the reach of the envy of cotemporaries: and when his foibles will be as little remembered, as the malice of his enemies.

The pofition of Velore, is from Mr. Pringle's diftance, corrected by the bearing of Sholangur hill. In his map of Coote's campaigns, he has given too much diftance between Arcot and Velore: for it is 17 B. miles in the map, and only 15 by the road, in the tables. Alfo, between Conjeveram and Arcot, the road diftance exceeds the B b

## [ 186 ]

horizontal diftance, by three-fourths of a mile only $y$ in $26 \frac{x}{2}$ miles. There, I apprehend; are miftakes, occafioned by hafte.

Velore is a poft of great impartance; commanding the great road; leading into the Carnatic $c_{n}$ from the valley of Vaniambaddy; and the directeft route from the Myfore country. It confifi's of three ftrong forts, on as many hills : and is juftly deemed impregnable to an Indian army. It is faid to have been originally fortified by the Mahrattas, more than 200 years ago. Among other acts of generalhip exhibited by Sir Eye: Coote, during the late war ; the relief of this place, in the face of Hyder's whole army, may bereckoned a;capital one. It is about ga miles to the weftward of Madras.

Faliconda, had its bearing taken from Velote, and the diftance between them, was meafited. Amboor is determined by the diftance from Paliconda, and the bearing of Coulargur ; which latter is determined by bearings. from Velore and Arcot. 'The diftances are obtained by means of Mr: Pringle's table of roads, with allowance for winding. Laftly'. Sautgud. is placed by angles taker atAmboor and Velore.

There, together with Col, Pearre's line; along the eaftern coait of the peninfula; and thofe: before taken notice of in the fouthern provinces (in fection F.) are all the meafured lines that occur in thefe parts : together with one, and only one, oblervation of latitude; that is, at, Chinna-Balabaram, about the middle betweenthe two feas. This being the cafe, it will follow, that the various materials of which the geography of the tract in quertion is compofed, can be no othetwife arranged; thaniby eftablifhing as primary Aations, fuch places as we have the beft data for ; and which have the greateft number of pofitions'dependanton them: and this being done, to adaptethe matter to the refpective intervals; between thefe primary ftatipns; which intervals muft of courfe deternine the fcales and bearing; lines; of the fexeral. MS. maps, of which the materials are compofed.

I thall attempt only to give an account of the manner of determining the principal of thefe ftations, or points of connexion; and that for the ufe of future geographers. To defcribe the whole, would lead me into unneceffary prolixity. The primary points which it became neceffary to defcribe ${ }_{8}$ in the account of the fea coaft, were chiefly from actual meafurement; as Tritchinopoly, Tanjore, Madura, Palicaudcherry: and I may now add, Coimbettore and Carroor; which are placed by meafurement alfo. Arcot and Amboor, I have juft mentioned; and Poliput and Chittoor, are the only remaining ones, that are eftablified by furvey:

Of thofe that remain to be determined, by tirefome difcuffion, and comparifon; and in fome cafes by mere judgment, founded perhaps, on doubtful teftimony; are Bangalore, Trinomalee, Darampoury, Dalmacherry, Gooty, Calaftri, Sami-Iffuram, 'Innaconda, Combans, Adoni, and Timeryeotta. And of thofe furnifhed by Col. Pearfe's march, are Nellore, Ongole, and Siccacillum.

Bangalore, as the firft mentioned, is alfo the moft important; as being in the centre of the peninfula, and having routes paffing throught it, in cuery direction. It is in itfelf, a place of great political importance, being a fortrefs of ftrength; and from fituation, the bulwark of the Myfore country, towards. Arcot. A variety of MS. maps of the country lying on the weft of the Carnatic, and between it, and Seringapatam, have appeared: moft of them, I believe, the offspring of the war of $1767-8$, with Hyder Ally. One of a much later date; communicated. by Mr. John Sulivan, contains the whole peninfula; fouth of the parallel of $15^{\circ}$; and is particularly valuable; on account of its having many routes and fituations in Myfore, and Bednore ; as well as in Tanjore and Madura. By its comprehenfive nature, it furnifhes an:opportunity of proportioning the refpective diftances between Amboor; Bangalore, Seringapatam, Mangalore; and Bednore ; as thefe places all appear in the fame map, together with the routes from one to the other. It would require whole Sheets to give an analyfis of this, and the reft of the MSS. which.

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have been confulted on this fubject, and therefore, I Ghall only fate generally, that by the medium of the diftance from Amboor to Bangalore, in 4 maps, it comes out to be $73,6 \mathrm{G}$. miles; (the variations between them, was 6 miles) and its parallel, according to the fame method of proceeding, was $4^{\prime} 10^{\prime \prime}$ fouth of Madras, or $13^{\circ}$ $0^{\prime} 5^{\prime \prime}$. To this may be added, that Chinna-Balabaram; is by the medium of the fame 4 maps, $23^{\prime} 40^{\prime \prime}$ to the north of the parallel of Bangalore: and the latitude of the former, which is fortunately preferved in the Lettres Edifantes, being $13^{\circ} 23^{\prime}$, confirms the general accuracy of the former refult: this being only $1^{\prime} 10^{\prime \prime}$ different from it; or $12^{\circ} 59^{\prime} 20^{\prime \prime}$. Laftly, the interval on Mr. Sulivan's map, between Bangalore and Bednore, is 176 G . miles; and in mine, when Bangalore is placed, as above ( 73,6 from Amboor; and in lat. $3^{\circ}$ ) 172,5 . And again, the diftance between Bangalore and Mangalore in Mr. Sulivan's map, is 176,5 ; and in mine, $169 \frac{1}{7}$ : that is, $7^{\frac{1}{7}}$ different in one cafe, and $3_{\frac{2}{2}}$ in the other. And. this difference is to be accounted for, by our giving a different degree of width to the peninfula: Mr. Sulivan's map making it $15^{\prime} 15^{\prime \prime}$ wider than mine does, in the parallel we are fpeaking of. I have placed Bangalore in lat. $13^{\circ}$, and lon. $77^{\circ} 37^{\prime} 10^{\prime \prime}$, according to the above data: and this capital point, or prinary flation, being fixed with fo much fuccefs, both in latitude and longitude, gives fome degree of confidence to all the pofitions round it : fot almoft every pofition between Col. Kelly's line on the fouth, and the Tungebadra river on the north; has, in its confruction, a reference to Bangalore, It is the common point of union, in the centre of the peninfula, as Coimbettore is in the S W, and Tritchinopoly in the S E.

Before I proceed to the detail of the remaining primary ftations, in the peninfula, I fhall obferve at once, that all the roads and pofitions of principal places in the Myfore and Bednore countries, on the weft of Bangalore; and between Roydroog and the parallel of TTellicherry; were furnifhed by the faid map of Mr. Sulivan's: and

## [ 889 ]

of which, I believe, there is no other copy in Europe. Chitteldroog, Shevagunga, Bankypour, Chennyroypatam, Ananpour, and many others, are quite new; and Sera, Sirripy, Roydroog, Rettingery, and Cenapatam; appear much mote conififent in their pofitions, than heretofore: and although we cannot expect that either the pofitive, or relative diftances, hould be perfectly exact, yet I have every reafon to think that they are not far from the truth; and that at all events, the prefent map affords the beft materials that can be procured in this country.

Seringapatam is placed nearly in the pofition it occupies in Mr. Sulivan's map, in refpect both to Bangalore and Mangalore. Its parallè is very uncertain, as there is no good line of diftance, to check it, either from the north; or fouth. Mr.'Sulivan's map places it 99 G . miles to the northward of Coimbettore; and Mr. Montrefor's 87,4 . As $I$ have adhered more to the account of its relative pofition, in refpect of Bangalore; it ftands in the map, only 91 from Coimbettore: Befides, a MS. Itinerary gives its diftance from Sera, at 3 days journey, or 54 G. miles horizontal diftance; which is perfectly confiftent with the 91 miles from Coimbettore. It is placed in lat. $12^{\circ} 31^{\prime} 45^{\prime \prime}$, lon. $77^{\prime} 6^{\circ} 46^{\prime} 45^{\prime \prime}$ *.

Sir George Staunton's journey acrofs the 'peninfula; from Madras to Mangalore, in. $178_{3}$, as one of the commiffioners for negociating a treaty of peace with Tippoo Sultan, furnifhed a lift of flages, and the eftimated: bearings and diffances between them, the whole way. Thefe, Sir George moft obligingly communicated to me, together with his mifcellaneous obférvations and reflections as he went along; and which, being written on the fpot, and difpatched as opportunities offered, may be allowed to exhibit a faithful pic-

[^112]ture of the mind that dictated them : and they afford a proof that a long journey in which many things occurred that ufually excite difguft, difappointment, and chagrin (not to mention fatigues and want of comforts); may be performed, not only without difturbing the tranquillity of the traveller; but in fuch a ftate of mind; as to leave him a fufficient portion of good humour, to enable him to amufe others.

The commifions were conducted by a very circuitous route, as well as impeded in their journey: for after. proceeding on the great road from Anicul towards Seringapatam, in a W S W direction, to Malavilly, within about 12 miles of Seringapatam; they were carried to the N , and N W , fo as to leave the latter place, at leaft 25 miles to the fouthward of them. As far as thefe eftimated bearings and diftances enable me to judge, the pofitions of Anicul and Seringapatam, in the map, are too far to the weft, by feveral miles, in refpect of Caveripatam; the laft point eftablifhed in this route, with any degree of certainty. But the route is unfortunately, too crooked, to admit of its being applied as a corrective, in fmall errors of diftance.

Seringapatam is the capital of Myfore, the dominions of Tippoo Sultan; and it is fituated in an illand of the Cauvery river, about 290 or 300 miles from. Madras.. It has little in it worthy of attention. Myfore, a town and fortified poft, and as I underftand, the ancient capital; lies about 8 miles, to the fouthward of Seringapatam. Mr. William Townfend, of the Eaft India Company's civil fervice, who travelled from Onore to Bednore, and Seringapatam, was in days in travelling between the two latter places; which, however, cannot be more than 180 or 190 miles afunder. He reprefents the whole country he travelled through, as being open and fruitful : nor did he meet with any mountains between the Gauts and Seringapatam.

Darempoury, Caveripatam, Kiftnagheri, and Changamah, are obtained by means of a map of the valley of Vaniambaddy (or the

## [ 191 ]

Barra-maul *) which map includes in general all the fortreffes contained within the tract ufually known by that name. This map is in Mr. Dalrymple's collection, and has much the appearance of general accuracy; the number of forts placed on rocky eminences, in and about it, affording an eafy means of determining the relative pofitions, by triangles. The contents of this map are joined on to Amboor, a primary fation; and I made no alteration whatever, in its fcale or compals. Darempoury, the extreme point in this map, to the S W , being thus obtained, flands more fouthwardly in refpect of Arcot, than moft other maps reprefent it : that is, the interval between Darempoury and Carroor, is lefs than is commonly reckoned ; and that between Darempoury and Colar, lefs.

Cudapanattam and Vahiambaddy, were fet from Amboor rock, and their diffances taken from the MS. maps. The roads and places between Cudapanattam and Bangalore; as. well as thore between this laft place and Condour; and alfo between Bangalore and Darempoury; are taken from the 4 MS. maps, from whence I have inferred the pofition of Bangalore: and F.confider the places within this tract, to be afcertained with much more precifion, than thofe on the fouth of. Darempoury; and between it and Carroor, and Coimbettore: it being à more confined.fpace, and alfo müch oftener trayerfed, during the war of 17.67 . But to recount the particulars, would be both tedious, and ufelefs: as the account would contain nothing more than a comparifon of bearings and diftances, and the mode of correcting, and working them up, into their prefent form : the labour of which, althoughicompreffed within the compafs of a few inches, would fcarcely be conceived; or believed. Although moft, or all, of the roads that appear in the map, between Darampoury, Attore, Carroor, and Coimbettore, have been marched over,

[^113]
## [ 192 ]

either by Britifh armies, or their detachments, at different times; yet feldom having a furveyor with them, or by the want of inftruments, or leifure, or both; little has been done for geography, more than barely informing us that fuch roads and places exift. So that the whole country beyond the firft ridge of hills from Arcot, and fouth of the Barra-maul, can be bat vaguely defcribed : no one point, as I before obferved, having been mathematically determined, on the north of Carroor and Coimbettore: and was it not for the obfervation of latitude at Chinna-Balabaram, the pofition of Bangalore, and all the places dependant on it, would be involved in uncertainty.

The road from Seringapatam to Calicut, is from Col. Humberftone's report : and that from Calicut to Damicatta, is from Jefferies's old map. Of that from Seringapatam to Coimbettore, I have feen feveral copies; among which there are variations both in the fcales, and in the names. Col. Wood went from the Barra-maul to Damicotta, Sattimungulum, and Coimbettore, in the courfe of his campaign in 1767: but I know not on what authority the road from Damicotta to Myfore, is defcribed.

The determination of the pofitions in that part of the fouthern Carnatic, beyond the extent of Mr . Pringle's meafured lines, was what interefted me particularly: as from its vicinity to a principal fettlement, and the fcene of mach warfare, it may be expected to be a fubject of public curiofity. But even here, any more than on the farthet fide of the mountains, accuracy was not to be attained: for no pofition was determined mathematically, in the line between Tritchinopoly and Velore : nor even a fingle line meafured from the fea to the hills, to determine the breadth of the Carnatic: noreven a feries :of triangles, although fuch a fucceffion of tempting marks occur, throughout this whole fpace. The only particular that prefented itfelf, in the fhape of actual meafurement, was Mr. Pringle's route from Tritchinopoly to Velore : but this was without bearings, fave from the top of Tiagar hill, about midway

## [ 193 ]

between: and which, from the greatnefs of the diftance, could take in only a part of the line; that is, from Volconda to Tritiomaly.

Changamah, as has been faid before, is placed by the map of the Barra-maul, from the weft: and as Trinomaly in the Carnatic, is not only very near it, but alfo an eligible primary fation, it appeared that if there was any tolerable authority for Trinomaly, the operation of fixing it, would at the fame time verify Changamah, in refpect to the eaftern coaft: which confidering the foundation on which it refted, appeared necefliry.

Trinomaly hill, which is vifible more than 40 G. miles, was found by trigonometrical procefs (that is, by an angle of interfection of 20 degrees, from the hills of Wandiwah and Carumpaucum) to be 40 G . miles from the former, in the direction of W . $28^{\circ} \mathrm{S}$. I fhould not have been entirely fatisfied with this refult, had not the pofition thus pointed out, agreed nearly with the apparent fituation of Trinomaly, in refpect of Changamah. This is indeed given by Mr. Sulivan's map, at E $10 \mathrm{~N}, 13 \mathrm{G}$. miles; while the bearing of Collifpauk from Changamah is. $\mathrm{NE} 20,7$; and that of Trinomaly from Collifpauk, S. $7 \mathrm{~W}, 12,6 \mathrm{G}$. miles. Now, as Mr. Pringle meafured that fide of the triangle betweenTrinomaly and Collifpauk, and found it only $11 \frac{1}{2}$ G. miles (or 15 , B. miles in road difance) the fide between Changamah and Trinomaly, ought to be only. $1 \mathrm{a}_{4}^{\frac{3}{2}}$ : and this I have adopted, with a fmall correction; as Mr. Pringle's bearing was S 12 W , inftead of $\mathrm{S}_{7} \mathrm{~W}$, as in Mr. Sulivan's map. Sir George Staunton, who travelled along, that fide of the triangle,, between Collifpauk and Changamah, eftimates the road diftance at 19 . B. miles; which by this conftruction, ought to be 23 at leaft.

Trinomaly, thus adjufted, is 52 G. miles, on a bearing of about W N W, from Pondicherry (the neareft point on the coaft). M. D.Anville thought it no more than 48 ; and another French MS. map, which contains the fouthern Carnatic and which has afforded.

## [ 194 ]

me much afliftance, only 43 G. miles: but the more modern maps, come nearer to my idea; Werfebe reckoning the difance 55 , and Mr. Sulivan's map about 50 . This fation determines the breadth of the fouthern Carnatic; and alfo all the pofitions between Tritchinopoly and Velore. It will follow, alfo, that Tiagar, from whence the bearings of Volconda and Trinomaly were taken; as well as Volconda itfelf; mult have an immediate dependence on Trinomaly. The pofition of Volconda, in refpect of Tritchinopoly, would have been a defireable thing, in order to find how it agreed with the pofition deduced from'Trinomaly; but this I could get no good authority for: and Mr. Pringle's bearing ought to have more weight, than mere opinions. I have given the different accounts in a note, but without admitting them as authority *. M. D'Anville's, however, agrees with mine. Baron Werfebe's route, obligingly communicated by the Hon. Col. Cathcart, (his Majefty's Quarter-mafter General in India) did not appear until the map was engraved. If Werfebe is right, I muft have miftaken the pofition of Volconda; and placed it 7 miles NW by W of its true pofition. But Mr. Dalrymple, alfo, took the angles on Tiagar hill, and made the angle of Trinomalee and Volconda, the fame as Mr. Pringle did, to 3 minutes of a degree.

Gingee is placed 30 , and $32 \frac{1}{2}$ G. miles from Pondicherry in 2 French MS. maps; and $36 \frac{\pi}{2}$ in Werfebe's: one might expect that the French knew its pofition well. I have placed it 33 from Pondicherry; and 23 from Trinomaly.

The reft of the pofitions in the fouth Carnatic, as well as the courfes of the rivers, and direction of the firft ridge of hills, are taken chiefly from the 3 MS. maps beforementioned (viz.) D'Anville's, the old French MS. map; and Werfebe's: and fome few

[^114]particulars are from an engraved French map of 1771; whofe principal merit is confined to the fouthern part of the Carnatic.

Carnatic-Gur, and Doby-Gur, two fortreffes of note, in the ridge of hills on the weft of Arnee, have never been taken notice of, in any former map. The latter is determined, as to diftance from Velore, by a meafured route of Mr. Pringle's: and the former had its bearing taken at Velore, and is known to bear about N by $\mathrm{W}, 3$ miles diftant, from the latter: of courfe, two fides and an angle are given; and the two places mutually affift in determining each others pofition.

The Coleroone and Cauvery rivers, with their branches, below Caroor, are taken from the maps of Werfebe and Kelly; collated with the old French map. Werfebe's map of Tanjore, contains. more particulars than any other that I have feen; efpecially in the northern part. And for the fouthern parts, I had fome affiftance from the map of Mr. Sulivan.

More particulars appear in the Marawar and Madura countries, than in any former map that has been publifhed. After the great roads fpecified in the difcuffion of Kelly's map, \&xc. moft of the new matter is from Mr. Dalrymple's collection; and the reft fromWerfebe and Sulivan. The almoft incredible number of forts and fortreffes of various kinds in the Carnatic, occafion a greater number of interefting pofitions within the fame fpace, than in moft other countries. Villages, and even towns, in open countries, are but of a day, compared with fortreffes; efpecially when they derive any portion of ftrength from their fituation; a very common cafe, here. Public monuments, too, the unequivocal mark of civilization and opulence, are more common here, than in the northern parts of India.

Madura and Tinevelly are chiefly from Col. Call's old map, with many additions from Kelly and Werfebe. The valley of Ootampaliam, inclofed between the branches of the Gauts, is a very recent acquifition to geography. Nor is this the only new matter af-

## [ 196 ]

forded us by Col. Fullarton's march (during the late war) into the fouthern provinces; the geography of which now wears an entire new face. The intention of this expedition was, to open a communication between the two coafts of Coromandel and Malabar; and at the fame time to deprive Hyder Ally of the ufe of the valuable province of Coimbettore: and, if neceffary, to open a ready way into that of Myfore. We learn from him, what will appear a new fact to moft readers, that of there being a break in the continuity of the ridge of mbuntains named the Gauts, oppofite to Paniany. Governor Hornby it feems was apprifed of this circumftance; and probably it was formerly known in Europe, though now forgotten. This break is about 16 miles wide, and appears to border on what D'Anville calls Annamally, or the elephant mountains; and is occupied chiefly by a foreft of timber trees, which has the fort of Annamally on the eaft, and Palicaudcherry on the weft. The valley or opening extends 14 or 15 miles, between the termination of the northern Gauts, and the commencement of the fouthern ones; before it opens finally into the low country on the Malabar coaft. It is well known that hips which navigate the Malabar coaft, during the N E monfoon, commonly experience a ftronger gale in the neighbourhood of Paniany, than elfewhere ; and I am of opinion that this opening in the Gauts, is a very fufficient caufe for fuch an effect. I have been told alfo, that the lower part of the Coimbettore country, partakes of the rainy, or S W monfooh, of the Malabar coaft: which may certainly be referred to the fame caufe.

The river of Paniany takes its courfe from the Coimbettore country, through this opening; and is faid to be navigable in the rainy feafon, for fmall boats, to the foot of the Gauts; which is a circumftance worthy of being known, and which I was ignorant of, until I read the life of Hyder Ally, publimed in France, in 1784. This circumftance, together with the inundated fate of the country at that, feafon, may ferve to fhew, that the country.

## [ 197 ]

weft of the Gauts, has no great declivity, in a courfe of near 60 miles.
'The Paniany river, as well as that of Daraporum, has its fource, from an elevated plain, of about 60 miles in extent; and which fretches itfelf acrofs the eaftern mouth of the gap or valley, before fpoken of. This plain rifes fuddenly from the level of the furrounding country, like a vaft terrace; and the foreft bounds it on the weft. There are examples of the fame kind of elevated plains in Bengal; and in the Bundela country, fouth of the Ganges, near Soohagee Gaut.

The common boundaries of the Carnatic, and of Myfore, are tolerably well afcertained in the fouthern provinces*; and an approximation towards the truth, is made, in thofe of the Marawars and Tanjore ; but on the north of the Cauvery, I believe the boundaries are very ill defined, even by the governing powers themfelves; except in particular places.

On the weft of the Gauts, and between thofe mountains and the lakes of Cochin and Travancore, there is nothing new. Tho country is chiefly one vaft foreft: and of courfe, fcarcely inhabited, or known, as to particulars.

Terriore, or Tarriore, a fort poffeffed by a Rajah of fome note, on the north fide of the Cauvery, and at the foot of the firft ridge of hills; has its pofition from the authority of the MS. maps abovementioned. They differ, in giving its diftance from Tritchinoly, from $22 \frac{1}{2}$ to $25^{\frac{3}{4}}$ G. miles: and from Ootatore, from 16 to 17 n. $^{2}$.

Attore, a confiderable port on the weft of Tiagar, I found fome difficulty in placing, from the difcordancy of the different accounts: and indeed, the whole tract beyond the firft ridge of mountains beyond the Carnatic, is very vaguely defcribed, both in point of par-

[^115]ticulars, and of geometrical exactnefs. With refpect to Attore, which is the centre of feveral roads defcribed in the map, I have placed it chiefly on the authority of Mr. Sulivan's map; as it correfponds with the bearing of the mouth of the pafs, from Tiagar; as reported by Mr. Pringle. That bearing was $\mathrm{W}_{13} 3^{\circ} 11^{\prime} \mathrm{S}$; and in Mr. Sulivan's map, it fands $\mathrm{N}_{3} 8 \mathrm{~W}$, diftant $28 \frac{1}{7} \mathrm{G}$. miles from Volconda. It is placed in the map $\mathrm{N}_{39} \mathrm{~W}, 28 \frac{1}{2}$ miles : $32 \frac{1}{2}$ from Darampoury ; and 34 from Salem *.

A route of Baron Werfebe's, from Tritchinopoly to 'Tiagar; communicated by my friend Col. Cathcart, came to hand after the map was engraved ; and therefore too late to enable me to correa Ootatore; whofe pofition, by that gentleman's account, is more northwardly, in refpect of Tritchinopoly, than I have placed it. The route in queftion was not meafured, but it being very ftraight, there could be no difficulty in afcertaining the true bearing of it.

The principal fettlements and commercial factories of the Europeans, in the peninfula, are all fituated along the coaft of the fouth Carnatic ; or, as it is ufually termed, the coaft of Coromandel. Madras we have already fpoken of: the Englifh poffers alfo the fortrefs and city of Negapatam, fituated on the coaft of Tanjore; and taken from the Dutch in the late war. It is a neat city, and a place of confiderable trade: but more valuable from its local pofition.

Pondicherry is the principal fettlement of the French in the Indian feas. Its general pofition has been difcufled in page 13; and with refpect to Madras, it lies to the fouth, diftant 100 road miles; and at the mouth of the Gingee river. It was firft fettled by the French in 1674 ; and was then included in the Rajahip of Gingee, fubject to the King of Narfinga. Previous to the war of 1756 ,

[^116]
## [ 199 ]

Pondicherty was, perhaps, the fineft city in India. It extended along the fea coaft about a mile and quarter, and was about three quarters of a mile in breadth : was well built, and contained many public buildings; and à citadel, then the beft of its kind in India, but of too contracted dimenfions. This fine city was firft taken by the Englifh, in $17^{61}$; and was immediately razed to the ground, in retaliation of M. Lally's conduct towards the fortifications and buildings of Fort St. David, in 1758. This proceeding of M. Lally, was agreeable to a fyftem adopted by the French Eaft India Company, in Europe: and which had its foundation in commercial jealoufy *. However, the confequent deftruction of the French fettlement of Chandernagore, might have glutted our revenge for the lofs of Fort St. David: and we fhould have been content with difmantling Pondicherry. The French have alfo factories at Cuddalore, and at Carrical : the former within fight of Pondicherry ; the latter in the Tanjore country. Cuddalore is naturally a very ffrong fituation; and would have been the moft commodious, perhaps, for the chief Britifh fettlement; fince the fecurity of Tanjore, and the conveniency of fupplies from it, muft ever be a capital object. Befides, as the S W monfoon is the feafon of naval warfare, Pondicherry has the advantage of being to windward of Madras; and the French, at the fame inftant, accomplinh the'double purpore of keeping to windward, and of protecting their capital fettlement: and receive affiftance from it in 'return. The Britifh fleet, in order to watch the enemy, retires 100 miles from their principal fettlement; and receives only a precarious affiftance from the fhore: that is, from Cuddalore, or its neighbourhood, theit ufual flation.

The Dutch poffefs on this coaf the towns of Pullicate, Sadras, and Portonovo; each of which has a fmall fort to protect it, againft the confequences of any defultory irruption, or the quarrel's of petty

[^117]Chiefs :

Chiefs: but which could make no ftand againt a regular army. The Danes have alfo a fettlement of the fame kind, at Tranquebar, within the confines of Tanjore.

For an account of the cities of Tritchinopoly, Tanjore, Madura, and the ftupendous pagodas of Seringham, \&c. I fhall refer the reader to Mr. Orme's elegant and faithful hiftory of the military tranfactions of the Britifh nation in Hindooftan.

When we turn to the north of the parallel of Madras, the fubject appears to be more barren of matter, of every kind, than in the fouth : and among the little that does appear, there is a fill fmaller proportion of actual furvey. The Jaghire map, and the marches furveyed by Mr. Pringle, do not extend far to the north of Madras. There is indeed, Col. Pearfe's line of march, northward: but this furnifhes only an outline; for it never deviates far from the coaft. The matter before us, is confined chiefly to the eaftern half of the peninfula; and the farther we recede from the coaft the more fcanty are the materials, and the lefs to be depended on.

The authorities for the courfe of the Kiftna river, which bounds on the north, the tract which is the fubject of this fection, will be found at the end of the fourth fection : and I fhall now proceed to give an account of the authorities on which the remaining primaty ftations, between the parallel of Madras, and the Kiftna, are founded.

On Dalmacherry and Gooty, depend the whole courfe of the Pennar river, from its fource to Cuddapa; together with all its branches, and the different pofitions near them; fuch as Cuddap?, Tripetty, Chandeghere (or Kandeghere) and Calaftri.

There is a diverfity of opinion concerning the pofition of Dalmacherry, as there muft ever be, when the diftance and bearing of a place, have not been mathematically afcertained. A curious. MS. communicated by my friend General Caillaud, entitled, "An account of the Pafjes between the parallels of Udegbery and Sautgud," and from which I have received great affiftance, has the diftances
in computed miles froin one pafs to another, and oftentimes from fome diftant capital place'alfo'; but without bearings. This MS. gives the diftance of Dalmacherry, at 75 Britifh miles of road diftanct, or about $5^{5} \mathrm{G}$. miles of horizontal diftance, from Arcot. Mohtrefor's map gives 64, and Mr. Sulivan's 61立. Montrefor, alfo, places it $47^{\frac{1}{2}}$, in a N NE direction from Cudapanattum; and Mr. Sulivan 47. I have placed it $56 \frac{1}{2}$ from Arcot, in a N N W direction; which makes the interval between it, and Cudapanattum, $46^{\frac{2}{2}}$; and its latitude is $13^{\circ} 43^{\prime} 30^{\prime \prime}$. There are three important paffes leading from this place, into the Myfore and Cuddapah countries : and here it was that Doaft Ally, the Nabob of Arcot, was furprifed and defeated by the Mahrattas, in $174^{\circ} \mathrm{O}$.

Gooty or Gutti, is a ftrong fortrefs on a hill, beyond the rivel Pennar*, and towards Adoni; and formerly the feat of government of Morari Row; a Mahratta Prince. This place, together with the courfe of the Pennar, is 'found in Montrefor's map; which contains more particulars in this part of it, than any other map $I$ have feen. But $\mathfrak{a}$ difficuity arofe in adjufting the pofition of Gooty, in my map; becaufe the diftance between Dalmacherry and ChinnaBalabaram is much lefs in it (13 miles) than in Montrefor's; and Gooty appears to be alcertained by two lines, drawn from thofe, places: fo that either the bearings, or the diftances, muft be rejected. I thought it the fafeft way to adhere to the diftances: is it is probable they might hate more weight, than the bearings had, with Mr. Montrefor, who adjufted this circuitous route, between Arcot and the head of the Pennar. His feale gives 112,2 G. miles, on a bearing of $\mathrm{N}_{3} \mathrm{E}$; from Chinna-Balabatam to Gooty; and $118,5, \mathrm{~N} 43^{\circ} 45^{\circ} \mathrm{W}$, from Dalmacherry to the fame place. The interfection of the bearings (which make an angle of about $40^{\circ}$ ) would place Gooty in lat. $14^{\circ} 5^{\prime}$ : and that of the diftances, in

[^118]Dd $\quad 15^{\circ}$
$15^{\circ} \mathrm{I} 5^{\prime}$; and nearly in the meridian of Chinna-Balabaram. I have preferred the latter, for the reafon abovementioned.

The inferior branches of the Pennar are taken from D'Anville's map of $175^{2}$ : but Tademeri, Anantpour, \&c, are from the Univerfal Hiftory. Gandicotta, on the fouth bank of the Pennar, is remarkable both as a ftrong fortrefs, and for having a diamond mine near it : a particular account of it, will be found in Tavernier. Penuconda a confiderable place near the Pennar river, is faid to be 20 leagues NE of Sirpy, and 20 NNW of Chinna-Balabaram. This account, alfo, is in the Modern Univerfal Hiftory. Cæfar Frederick mentions it as the retreat of the King of Bifnagar (or Narfinga) 8 days journey from Bifnagar.

The Pennar river, after fpringing from the neighbourhood of the Balabarams, runs directly northward, until it approaches Gooty; and then takes a SE courfe by Gandicotta and Cuddapah : after which it changes to the eaft, and reaches the fea at Gangapatnam, after paffing the fort of Nellore. The MS. account of the Paffes, remarks that this river is 300 yards wide at Sami-Iffuram, about 70 miles from the fea; although it is confined in its courfe, by hills, on both fides.

It has been obferved in the firft fection, that Capt. Ritchie's chart of the coaft of Coromandel, made the point at the Pennar river, project too far out. I find by a reference to 6 different MS. and printed maps of this part, that the diftance of the fea from Nellore, is not reprefented in any of them, at more than $1^{\frac{1}{2}} \mathbf{G}$. miles, and moft of them allow only 12. And although I have allowed 16, it comes confiderably within Mr. Ritchie's account.

Cuddapah is determined by the map of the Pennar river: and the conftruction agrees with its reputed diftance from Arcot in a Malabar map; or rather a map drawn by a native of the Carnatic. It is there ftated at 60 coffes; which on the fcale adopted for the Carnatic (in page 5) and which allows only $37 \frac{1}{2}$ coffes to a degree, will correfpond with the 96 G . miles, arifing on the confruction.


#### Abstract

$\left[\begin{array}{ll}{[203}\end{array}\right]$


Tripetty and Chandeghere (or Kandegheri) the firft a famous place of Hindoo worhip; and the latter, the fite of the capital of the ancient kingdom of Narfinga, are placed with reference to Dalmacherry, by Montrefor's map; and by the MS. account of the Paffes. Kandegheri is there faid to be 22 B. miles (road meafure) from Dalmacherry, bearing about ENE; and Tripetty is 3 miles S E from Kandegheri. I have placed Tripetty accordingly: and it ftands in the map $53^{\frac{1}{2}}$ G. miles, nearly north, from Arcot; and about 66, nearly N W by W, from Madras. Mr. Orme fuppofed it to be 50 miles N E of Arcot: and the Univerfal Hiftory fays it is 22 leagues $W \mathrm{~N} W$ from Madras.

Calaftri appears alfo in the map of Montrefor. There is alfo a route of General Caillaud's from Polypet to Udegheri, and Nellore, paffing through Calaftri. I have endeavoured to fix the pofition of Calaftri, by thefe joint authorities; and have placed it $\mathrm{i}_{5} \mathrm{G}$. miles E NE from Tripetty; and 6I from Arcot: but I have my doubts concerning the accurary of its pofition.

Sami-Iffuram pafs, on the Pennar river, is reckoned in the MS. of the Paffes, 55 B. miles, or 44 G. miles horizontal diftance, weft from Nellore: and this pofition is corroborated by Montrefor's map (as far as the apparent rudenefs of his materials for this part, may be faid to confirm any pofition) and I have placed it accordingly. It comes within about $1_{5}$ G. miles, or $9^{\frac{1}{2}}$ coffes of Cuddapah; which bears from it WS W.

Udegherri and Sangam, two-places in General Caillaud's route ${ }_{*}$ are corrected by Col. Pearfe's pofition of Nellore; and by the relative pofitions of Sydaporum and Nellore, in a French copy of M. Bufly's marches: Sydaporum beìng alfo a pofition in Mr. Caillaud's soute. 1 am confcious how incomplete the northern part of the Carnatic is, incomparifon with the fouthern part: but all mp enquiries have produced nothing fatisfactory, on the NW of $\mathrm{Po}-$ lipet, Had the route of General Caillaud been,meafured, it would

## [ 204 ]

have produced feveral primary fations: but as it is, the fcale appears to be ill proportioned in the different parts of it.

Narnaveram and Bomrauzepollam, are both placed on the authority of Mr. Pringle's obfervations : and the Pullicate lake is from the Jaghire map; Col. Pearfe's route; and other authorities. This lake, called by D'Anville, Ericans, feems to owe its exiftence to the fame caufe as the Chilka lake; that is, to the fea's breaking through a low fandy beach, and overflowing the lands within; for its communications with the fea, are extremely narrow, like the emboucbures of fmall rivers. This lake is in extent 33 B. miles from N to S , and in over, in the broadef part; and contains fome large iflands within it. One of thefe is named Ircum, in Mr. Barnard's map of the Jaghire, publifhed by Mr. Dalrymple: and as M. D'Anville names this illand, as well as the lake, Ericans, I conclude it to be a corruption, or mifconception of Ircum.

I have not found it an eafy tafk to fix the pofitions either of Innaconda, Combam, Adoni, or Canoul. On thefe four places. many others depend, in the conftruction of the map; and they are neither of them afcertained to my fatisfaction. There is, in particular, a degree of obfcurity in the accounts of Canoul, that I can $\rightarrow$ not clear up. My local information fails me entirely, in this place: and this kind of knowledge is fo requifite to 'a geographer, that no degree of atudy, or inveftigation, can compenfate for the want of it. It not only enables him to. reconcile names and fitua, tions; but aftentimes furnifhes him with acriterion to diftinguifh the value of his materials. Few Europeans, :vagrant ones'excepted; have vifited there places fince the time of M. Buffy ( 175 r ) and it is a misfortune to geography, that his marches between Arcot, Hydrabad, Adoni, Canoul, and Seringapatam, have not: been reconded, in the fame intelligent manneri as the reft of his matches have been ; and from wherice swel haveidrawi fo'much informatipn. But, however I may repine, ás áséographer; Itought; iperhaps as a philofopher, to be fatisfied, thatifo much has been preferved.

Innaconda (called alfo Viniconda, and Huiniconda) is a fortreis on a hill ; within, or bordering on, the Guntoor circar. It is undetermined, as to its precife bearing, from any known place : therefore I have been reduced to take it on the authority of fome vague maps, and by a reference to circumftances: and have placed it about N W by N from Ongole (a point in Col. Pearfe's route). Mr . Pringle meafured the road, and found the diftance to be $46 \frac{1}{2}$ B. miles; for which I allow 36 G . miles, in horizontal diftance. By the Malabar map, it is 28 coffes, which may be reckoned about 45 G. miles. It is fomewhat more wefterly in bearing, and alfo more diftant, from Medipilli, than from Ongole.

Combam is reckoned 25 coffes from Innaconda; and 32 from Ongole; or about $5^{\mathbf{1}} \mathbf{G}$. miles from the latter. It is placed in the map, at 48 miles diftant, and nearly weft, from Ongole: but as its parallel is regulated by the affumed pofition of Innaconda, it is fubject, of courfe, to the fame errors. Tavernier's route from Gandicotta to Mafherlaw, paffed through Combam, (which he calls Kaman) and its pofition accords very well, with the proportion of diftance affigned it. More will be faid on this fubject, hereafter.

Adoni is reckoned to be 66 coffes from Combam, by the Malabar map; and 67 by a route tranfmitted by Col. Harper to the Madras Government ; and which was collected from the information of his guides, while at Innaconda, in $17^{81}$. Thefe coffes on the Carnatic fcale ( $37^{\frac{1}{2}}$ to a degree) are equal to 106 G . miles; and this is 'the:diftance allowed in the conftruction, between Combam and Adóni, weftward. And for its parallel, no better authority ean be found, than its diftance from Gooty, which is fituated to the S E. of it, two days journey, or 36 G. miles according to my' calculation; which is founded on fome confiderable degree of experience in thefer matters. Adonit, thus placed, is 63 G. miles NNE from Roydroog, and about 44 ' fotuth of the Kintan river.

## [ 206 ]

Adoni, as to genetal pofition, is about the middle of the peninfula, and exactly in the parallel of Goa. It was, not many years ago, a fine city, and extremely well fortified, fituated on the fide of one of the branches of the Tungebadra * river; and the capital of a fmall principality, or rather feudatory province, of Golconda. A part of itshiftory will be found in Mr. Orme's works. It was fince affigned, together with Rachore, and Guntoor, to the late Bazalet-Jung, brother to Nizam Ally, the reigning Soubah of the Deccan. Hyder's defperate grafp fixed on this, as well as the reft of the provinces on the fouth of the Kifna, previous to the late war: but all of them were, or ought to have been, reftored by the peace of 1782 . Adoni certainly was: becaufe the attack of Adoni, then in the hands of the Nizam, was one of Tippoo's exploits, laft year.

The pofition of Canoul appears the moft uncertain ot all. 'I he authorities for it, are, the Malabar map, in which its diftance from Rachore, Cuddapah, Adoni, and Combam, are given in coffes; but the interfections of thefe from the different' points, do not agree. The map alluded to, is not conftructed by a fcale, but rudely fketched out without much proportion being obferved either in the bearings, or diftances of places, from each other: and the names, and the diftances between the fages, are written in the Malabar language. Canoul is there faid to be 57 coffes from Cuddapah; 38 from Combam; 28 from Rachore; and the farne from Adoni: and 36 from Timapet, a place that accurs in General Jofeph Smith's route from Hydrabad to Sollapour: By this account, the number of cofles between Cuddapah and Rachore will, be 85 ; which is really the diftance on the map, within 2 coffes; reckoning $37^{-2}$ to a degree. Nor are the crofs diftances. from Com-

[^119]
## [ 207 ]

bam, and from Adoni, far out; but that from Timapet is irreconcileable. However, as the pofition of it agrees pretty well with Cuddapah, Rachore, and Combam, it may be concluded that the diftance of Timapet is falfely given. In a map of M. Buffy's fouthern marches, faid to be compofed by M. D'Anville; Canoul is reprefented in a very different pofition from the above refult: for there it fands only 18 coffes from Rachore, inftead of 28.

Condanore is 15 coffes to the eaft of Adoni, according to Col. Harper's route.

Rachore, or Adoni-Rachore, a city, on or near the fouth bank of the Kiftna river, and not far above the conflux of the Tungebadra with it, and below that of the Beemah has its pofition from the map of M. Buffy's northern marches.

Rachore is four days journey from Adoni, according to the report of an European who travelled it. This perfon came from Seringapatam, by way of Sera and Gooty, to Adoni; and communicated this, and feveral other particulars in his itinerary; to Mr. W. Townfend; who obligingly gave them to me. It is reckoned three days journey from Seringapatam to Sera (or Merki-Seray) fix more to Gooty; two from thence to Adoni; and four more to Rachour. If we take the whole diftance through thefe feveral points on the map, the produce will be 276 G. miles. A days journey for an ordinary traveller, may be fixed at 22 Britifh miles, in road diftance; which reduced to horizontal, will be about 18 G . miles: and it will be found that the 276 miles will be nearly 15 days journey, at that rate: and the intervals are generally well proportioned. Although 22 miles are ftated to be a days journey for an ordinary traveller; yet a çoffid or courier goes ordinarily from 30 to 33 Britifh miles in a day : and that for many days together.

Timerycotta, a confiderable fort in the Palnaud country. (which is a diftrict belonging to the Carnatic $c_{x}$ but fituated towards the ,Kiftna river, on the weft of Guntoof) gaverns moft of the pofitions in Guntoor and Palnaud; as alfo the croffing place of the Kifna, in
the road from Madras to Hydrabad. In Montrefor's map, there are a number of places round Timerycotta; but they have no connexion with any other known place. Capt. Davis, in his account of the places in and about the Guntoor circar, fays that Timerycotta is 40 coffes weft from Guntoor fort: and Guntoor is placed by the Malabar map 9 coffes from Sattinagram; a place on the fouth bank of the Kiftna, oppofite Bezoara; a point afcertained by Major Stevens. The bearing of Guntoor from Sattinagram, we can only infer, from its lying in the direct road to Ongole, to be about S W : but it is ftrongly corroborated by Montrefor's map, which gives the diftance between Guntoor and Siccacollum (another fixed point on the Kiftna) at about $25 \frac{1}{2}$ G. miles. Timerycotta; then, is placed according to there data, in refpect of Iongitude: and is 89 G. miles to the weftwatd of Siccacollum; or 64 from Guntoor, which anfwers to 40 Carnatic coffes. With refpect to its parallel, the Malabar map gives only a circuitous route of 49 coffes to it from Ongole. Mr. Montrefor's map makes the diftance to be 66 G. miles from Ongole; and the bearing about $N W$ by $N$ : but, as I faid before, the connexion between thefe places is imperfeet, in his map. Capt. Davis's map (or rather fketch) has it at 57. Again, Montrefor makes Guntoor and Timerycotta, nearly under the fame payallel, which would reduce the diftance to 59. I have allowed $60 \frac{1}{2}$ : and have been guided principally by the computed diftances in the Malabar map, applied to Capt. Davis's bearings, in his circuitous route from Ongole to Timerycotta : and this pofition agrees nearly with Montrefor's idea.

Montrefor's map, as is faid before, contains many pofitions round Timerycotta, to the extent of 20 or 30 miles: among others, Currumpoody, Patack, Pongallah, Pulredygur, and Marherlaw or Macherla. This laft place, together with Combam and Doupad, from other authorities, helps me to trace out the route of Tavernier from Gandicotta to the Kiftna, in his way to Golconda, in 1652. Combam or Commum, is the fame with his Kaman, faid
to be the frontier town of the Carnatic, towards Golconda. Deopad, is what he calls Doupar; fituated, according to his account, in a country that is interfected by many torrents from the neighbouring hills. Col. Harper makes the fame remark on Doupad or Deopad: and thefe torrents help to form the river Gondegama (or Gondlacomma) which gains the fea at Medipilly, and is the nominal boundary of the Carnatic. The Malabar map writes it Gilligama, and other accounts give it Gunta-camma: Gondegama, is the common name. Combam is fituated near its fource. Tripanty pagoda lay near Tavernier's route, and is a few miles to the north of Doupad. Some have confounded this with Tripetty, a more celebrated pagoda in the vicinity of Chandeghere; and 160 miles to the fouthward of Tripanty. Tavernier's next flage is Mamli; which may be recognifed in D'Anville's map of CoromandeI, under the name of Mamenda. His Mạcheli, is, no doubt, Mafherlaw: foon after which he arrived at a large river; which was the Kiftna. It is fingular that his curiofity fhould not have led him to enquire the name of the moft capital river, that occurred during his, journey.

Tavernier's route would hardly be worth remarking, did not his: diftances help to corroborate generally, the pofitions of Combam: and Timerycotta. He reckons 77 leagues from Gandicotta tor Mahherlaw : 42 of which are between Gandicotta and CombamThefe leagues, $I$ apprehend, are meant for coffes, a common error of Tavernier's: and it is remarkable that Thevenot falls into an abfurdity of the fame kind, by reckoning coffes for half leagues. How men of fenfe and reflection can apply the names of the itinerary meafures of their own country, to thofe of another, when the: fcale differs fo widely, I confefs I am at a. lofs toraccount. Coffes and leagues, differ at leart a third part, in their length : how then can Thevenot fay, that a cofs is equal only to half a league? Tavernier's whole number of leagues from Gandicotta to Golconda, is 112; and the real diftarice, through the points of Combam, and

Mafherlaw, only. 176. G. miles: it will follow then, that nothing more than coffes could be meant, and thofe rather fhort, than otherwife. Between the Kiftna and Golconda, his account gives 39 leagues or coffes, which interval is 60 G . miles, by my confruction. There muft, however, be an error in the diftance between Mafherlaw and the. Kiftna, which he reckons only 3 leagues, or coffes; whereas, it cannot be lefs than 7 coffes.

The fort of Condavir is the principal poft in the Guntoor circar ; and is ftrongly fituated on a mountain, 8 coffes to the weft of Guntoor, according to Capt. Davis; and 10 from the fouth bank of the Kiftna. The pofition of Mongelgary, I am not fatisfied about, as there are great contradictions in the accounts of it. Colour is from D'Anville:- it is a diamond mine on the fouthern bank of the Kiftna, and not far from Condavir. Chintapilly and the roads in Guntoor, are from Capt. Davis's fketch, and the Malabar map.

I could get no better authority for the road from Nellore toHydrabad, than what appears in.D'Anville's Coromandel, publifhed in 1753. I have altered the proportion of its parts, by changing: the place of Podalah (his Poudela) as it is known to be 12 . coffes, nearly W by N from. Ongole, inftead of the northern pofition he has given it; for want of fuch a check as. I was enabled to apply, by being. in poffeffion of a route acrofs, from Ongole to Combam. It is very extraordinary, confidering the long intercourfe that the Englih at.Madras, have with Hydrabad, that there Chould be nothing better of the kind, on record.

The road from Udegherri to Ongole, is alro from D'Anville.
Sanore-Bancapour is from M. Buffy's march, as has already been obferved, in the fourth fection, page 171 . Sanore and Bancapour, are two forts, lying about 3 coffes from each other; at 120 G. miles; nearly eaft from Goa, Mr. Ewart procured (while at Nagpour) a route from Hydrabad to Sanore-Bahcapour; and from thence to Chinaputtun, a city, with a fort of ftone; and fituated 37 : coffes beyond Bancapqur. There is nothing to guide the judg-
ment in determining the general bearing of it, further than that we may conclude it to be to the weftward of Sanore-Bancapour, becaufe the road from Hydrabad, leads through it ; and as the Sanore river (the Toom) was croffed 9 coffés beyond Bancapour, it may probably bear to the northward of weft from it, as the rivers in that part, run to the fouthward of eaft (fee the map). The diftance between Hydrabad and Bancapour ( $\mathrm{r} 3 \dot{3}$ coffes) determines the fcale of coffes to be at the rate of $39^{\frac{1}{7}}$ to a degree; fo that Chinnaputtun is about $56 \frac{1}{2}$ G. miles from Sanore-Bancapour; moft probably, in a W N W direction. We learn one interefting particular, if true, from this route; which is, that the Nizam's territories extend 3I coffes beyond Bancapour.

Bifnagur, or Bijinagur, the capital of the ancient kingdom of Narfinga, is fituated near the weftern bank of the Tungebadra river, and about 30 miles SE or SSEE from Bancapour. It was vifited by Cæfar Frederick in 1567; and was then a very large city. He. reckons it 8 days journey from Goa, which, by the calculation in page 207 , fhọuld be 144 G . miles; but it is only i. 30 by conftruction. We are told by Ferifhta, that Bijinagur was founded by Belaldeo, King of the Carnatic, in 1344. The Carnatic then, included the whole peninfula; or at leaft, all that lay to the eaft of the Gauts. Our hiftories of the Deccan and Carnatic are very imperfect; and at this day we can hardly diftinguilh betweèn the: kingdoms of Bifnagur and Narfinga; and whether they were two fucceffive, or two coexifting kingdoms. It appears probable; however, that in the i6th centurys, the kingdom of Bifnagur included: the greateft part of the peninfula; and that on the invafion of the King of Vifiapour; and other northern Princes of the Deccan, the: King of Bifnagur retired, firft to Penuconda and then to Kandighery (or Chandegheri) but ftill preferyed his ancient: title of: Bifnagur. In $\mathbf{1} 599$, Kandegheri was' the refidence of a HindooKing, whofe dominion extended over Tanjore and Madurar; and.

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## [ 212 ]

in 1640, a defcendant of this Prince reigned there: and permitted the Englifh to fettle at Madras.

Ranni-Bedalore, as well as the heads of the Tongebadra river, are from M. D'Anville. We know generally, that this river is formed out of feveral fmaller ones, that iffue from the eaftern fide of the Gauts, in and about the Bednore country. Further down, it pafies Bifnagar (as is faid above, although Cæfar Frederick calls the river of Bifnagar, Nigonden) and between that and the Kiftna, it receives the Hindenny, or Endri river, which paffes by Adoni; as well as feveral fmaller rivers. The general courfe of the Tungebadra is reprefented in the map of M. Buffy's northern marches: and that of the Hindenny is marked more particularly, in the map of his fouthern marches, by D'Anville. It is alfo defcribed in the map communicated by Mr. Sulivan, as paffing under Chitteldroog, Rydroog, Chitrigally, \&c.
M. Bufly's route from Seringapatam to Adoni and Rachore is not to be found in the map of his other marches. Thofe who caft their eyes on that naked part of the map, will regret its being wanting.

The route from Goa to Galgala is from Mr. Dalrymple's collection; and appears to have been travelled by fome Portuguefe, who vifited Aurungzebe's camp on the Kifna, in the latter part of the laft century; or early in the prefent.

The environs of Goa and the country to the foot of the Gauts, are from a Portuguefe MS. It is from Goa only, if from any quarter, that we are to expect the geography of the tract between the Gauts, Vifiapour, and Adoni; and which yet remains almoft a perfect void, in the map.
-The general courfes of the rivers in the peninfula, indicate that a ridge of high land runs directly acrofs it, from Calaftri to Mangalore: but if we are to truft report,' the country has not a hilly appearance between the Gauts and Bangalore; but that rifing fud-

## [ 213 ]

denly from the weft, at the Gauts, it declines gradually eaftward: fo that the Gauts form a fort of a terrace on an immenfe fcale.

The Gauts are marked only in certain places where the different roads crofs them, or where they have been viewed from the coaft. This famous Appenine, which marks, with more precifion, perhaps, than any other boundary whatever, the line of fummer and winter, or rather of dry and wet; extends 13 degrees of latitude; that is, from Cape Comorin to Surat (with the exception of the gap mentioned in page 196) at unequal diftances from the coaft: feldom more than 70 miles, and commonly about 40 : and within one fhort face only, it approaches within fix miles. Although the altitude of thefe mountains is unknown, yet it is fufficiently great to prevent the great body of clouds from paffing over them; and accordingly, the alternate NE.and SW winds (called the monfoons) occafion a rainy feafon on one fide of the mountains only ; that is on the windward fide. It would appear, though, that clouds enough do pafs over, to occafion a rainy feafon, at a confiderable diftance to leeward, where thofe clouds defcend: as we may fuppofe them to do, although at the time they paffed over the Gauts, they muft neceffarily have been too high, and of courfe too light, to condenfe and fall in rain, there. This, I am led to confider, by Lieut. Ewart's account of the weather at Nagpour, in the very centre of India; where the feafons differ but little from their ufual courfe in Bengal, and on the weftern fide of India : that is, the S W mon'foon occafions a rainy feafon: but the rains are not fo violent, nor of fuch long continuance, as in thofe places. At the mouth of the Godavery river and its neighbourhood, the S W monfoon occafions a rainy feafon alfo; and the Godavery is then fwoln and overflows : and this part is about as far to leeward of the Gauts, as Nagpour is. It is pofiible, however, that the clouds which

## [ 214 ]

which occafion a rainy feafon at the mouth of the Godavery, may come from the eaft of Cape Comorin: though I rather believe the contrary, as the Cape bears S S W from it, and the reigning winds are much more wefterly. The Nagpour clouds, however, muft pals over the Gauts. We may, I think, conclude then, that the ridge of the Gauts fhelter a particular tract only; beyond which, the light and elevated clouds that pafs over it, defcend in rain. Madras is within the limits of the fheltered traet, though at leaft 300 miles to leeward of the Gauts: Rajamundry (near the mouth of the Godavery) and Nagpour, may be about 500. It would be curious to know the exact limit of wet and dry. If I miftake not, until lately it was a general opinion, that the Gauts extended from the northern (or Bootan) mountains to Cape Comorin; and occafioned a diverfity of feafons, at one and the fame time, throughout all India. But the truth is, that different feafons exift at the fame moment, only in a part of the peninfula: for the caufe ceafes in the parallel of Surat; where the S W wind, no longer oppofed by a wall of mountains, carries its fupplies of moifture uninterruptedly, both far and near, over the whole face of the country. For fome particulars refpecting the northern extremity of the Gauts, fee page 179.

As the peninfula, or tract difcuffed in this fection, contains more interefting matter than could well be comprifed within the fpace furnifhed by fuch a fcale, as could conveniently be applied to a: general map, of fo large a tract as India; it was judged neceffary to form another map of the peninfula, on a much larger fcale: but an accident has retarded the publication. Thofe who may hereafter become poffeffed of it, will find the account of its confruction in this Memoir: which is common to both maps, throughout this whole fection; and alfo in the firf fection, as far as the map of the peninfula is concerned. The fcale of this map; is juft double that of the general one

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## SECTION VI.

## The Countries between Hindoostan and China:

IT has been faid before (page $4^{88}$ ) that the firft ridge of mountains towards Thibet and Bootan, form the limits of the furvey to the north: to which I may. now add, that the furveys extend no' farther eaftward, than to the frontiers of Affam and Meckley.

The Jefuit's map: of China, as given in Du Halde, places the weftern boundary of Yunan (the weftmoft of the provinces of China) between the 97 th and 98 th degrees of eaft longitude; in the parallel of $24^{9^{\circ}}$ : fo that the eaftern frontier of Bengal (Silhet) is within 350 Britilh miles of the weftern part of China; or to fpeak' comparatively, the fame diftance as Silhet is from Calcutta: Here one is apt to wonder, that confidering their proximity to each other, there fhouild be na communication between the two countries. The reafons probably are, that Yunan does not produce fuch mianufactures as are in requeft among foreigners; and that the courfes of the great navigable rivers in thofe parts, are unfavourable to a communication by water. The fpace between Bengal and China, is occupied by the province of Meckley, and other diffricts, fubject to the King of Burmah, or Ava.

The river Nou-Kian, little, if at all, inferior to the Ganges, runs to the fouth, through that angle of Yunan which approaches neareft to Bengal; where the Jefuits, who formed the map of China, left it; in its courfe to the fouth-wef. This river, M. D'Anville conceived to be the fame with that of Pegu; in like manner

## [ 216 ]

as he fuppofed the Sanpoo to be the Ava river: but fucceeding accounts have left no doubt remaining, that the Nou-Kian is the river of Ava. In the Modern Univerfal Hiftory (Vol. VI, p. 205) is an account of a voyage performed on this river, by four Chinefe, about the middle of the laft century. They went from Yunan to Yuntchian, and from thence to the frontiers of Ava; where they embarked, and went down the fream to Ava city.

In my account of the conftruction of the fea coafts (page 39) my authorities for defcribing the delta of the Ava river from the fea to the parallel of $18^{\circ}$, are given. The Dutch MS. map there quoted, defcribes the whole courfe of the river, as high up as the city of Ava itfelf, which it places in latitude $21^{\circ} 4^{\prime \prime}$; and alfo fays in a note " by obfervation:" and indeed, the whole fcale" of the map feems to be formed from the difference of latitude.

The difference of longitude, as inferred from this Dutch map, places Ava in $97^{\circ}$. But Capt. George Baker, of whofe accuracy I entertain a high opinion, took the bearings, and eftimated the diftances, the whole way from Negrais to Ava; and the refult, corrected by the obfervation at Ava, $21^{\circ} 48^{\prime}$, gives the longitude $97^{\circ}$ $45^{\prime}$ : and this longitude I have adopted. Capt. Baker's eftimation of the courfes and diftances between. Negrais and Ava, placed the latter in lon. $97^{\circ} 54^{\prime}$, lat. $22^{\circ} 5^{\prime}$; or $17^{\prime}$ to the north of the obfervation, recorded in the Dutch map. This error, on a diftance of about 400 miles, is trifling; being lefs than a 20th part*. Ava.

\footnotetext{

- Left the particulars from whence the river of Ava \&co is confructed; Should be loft, I have recorded them here.
From Negrais to Perfaim NNE 4 ; G. miles. Camma to Meachagong N by E 20 G. miles.


The, whole traverfe gives a courfe of $\mathrm{N} 27^{\circ} 30^{\prime} \mathrm{E}$, diftance 408 G . miles. The diftance. corrected, is 389 .
The Dutch map gives a bearing of $\mathrm{N} 35^{\circ} 50^{\prime} \mathrm{W}$, diftance 80,3 miles, between Syrian river Point (meaning the point of conflux of the Syrian and Dogon rivers) and the head of Negrais xiver; the upper point of the delta.

## [ 217 ]

flands in the old maps, in lat. $25^{\circ} 20^{\prime}$, lon. $96^{\circ} 36^{\prime}$. The particulars of the courfe of the river, I have taken from the Dutch map; as Capt. Baker defcribes only the general direction of it.

Monchaboo, a city, and the refidence of the King of Burmab, or Ava, in 1755, is by Capt. Baker's account, $3^{8 \frac{1}{2}}$ G. miles north from Ava: and this was the extreme point of his travels that way.

The Nou-Kian is named Irabatty by the people of Ava; and is faid by them, to be navigable from the city of ${ }^{*}$ Ara, into Yunan, Monchaboo being within 130 B. miles of the Chinefe frontier, we want only fo much, to complete the courfe of the river in the map. This break is there defcribed by dotted lines.

Capt. Baker defcribcs the country bordering on the Ava river. from the fea to Lundfey; as being very flat, and the foil rich; and, I fuppofe, like that at the lower parts of the courfes of the Ganges, Indus, and other capital rivers, formed out of the mud depofited by the inundations of the river. This low tract is named Pegu, and formed an independent kingdom in 1.754, when it was reduced by the King of Burmah, to the ftate of a dependent province.

Burmah borders on Pegu to the north, and occupies both banks of the river, as far as the frontiers of China. On the north-weft is Meckley, which we have before taken notice of: and on the weft Aracan (or Reccan) and Rofhaan. On the eaft, it has the kingdom or country of Upper Siam; which, Capt. Baker informs us, begins at a fmall diftance eaftward from the city of Ava: a ridge of mountains feparating it from Burmah and Pegu.

The King of Burmah, whofe reputed capital is Ava, and from whence the whole kingdom, though erroneoully, is often denominated, is faid to poffers not only the country of Meckley, in addition to thofe of Pegu and Burmah; but alio the whole tract which lies on the north of it, between China, Thibet, and Affan. Du-Halde's map fpeaks pofitively, as to this point, but with what
truth I know not, as I have never been able to gain any information on the fubject.

Capt. Baker informs us, that the country of Burmah, adjacent to the banks of the Irabattey, or Ava river, between Pegu and Monchaboo, is in fome places hilly, and in others flat ; but not fo low as to fuffer inundations. Its produce is, in moft refpects, nearly the fame as that of the countries contiguous to the Ganges; and, it is remarkable, that the lands which produce the greateft quantity of faltpetre, are much about the fame diftance from the fea, as thofe of the fame nature on the fide of the Ganges.

Mr. Verelft, who meditated an expedition into Meckley from Bengal, and actually advanc̣ed as far as Cofpour on his way to it, in 1763 ; was informed by his Meckley guides, that after pafling the firft ridge of mountains beyond Cachar, he would find a fertile and well inhabited country all the way to Ava. He, however, went no farther than Cofpour; but the particulars of the road between that place and Ava, are defcribed from the intelligence furnilhed by the guides who attended him.

The country of Burmah produces fome of the beft Teek timber in India. The forefts which produce this moft ufeful and valuable article, are fituated between the weftern bank of the Ava river, and the country of Aracan; and are only 250 miles from the fea, by the courfe of the river.

The Sanpoo, or Thibet river, was fuppofed by M. D'Anville to be the fame with that which is called, in the lower part of its courfe, the river of Aya: but we have not the leaft doubt at prefent, of its being the fame with the Burrampooter, which enters Bengal. on the north-eaft, and joins the Ganges near the fea. I traced it in 1765, to about 400 miles above the conflux; that is, as high as the latitude of $26^{\circ}$, longitude $91^{\circ}$; where the Bengal diftrictsend, and thofe of Affam begin: but I was not permitted to go any higher. However, fome few Europeans, engaged in the Gcalparah trade, and among others, M. Chevalier, the late Governor
of Chandernagore, by permiffion of the King, went as high up as the capital of Affam, about the year. 1762 : but was under a confiderable degree of reftraint, with refpect to making remarks, either on the courfe of the river, or on the country. As M. Chevalier, however, went on a very large embarkation, we are convinced that the riyer is navigable for large boats, through a fpace about equal to the diftance of Buxar,from the fea; that is, between 600 and 700 miles. It may probably be navigable much higher up; though its navigable courfe cannot be equal to that of the Ganges; this flowing chiefly through a level country, and the Burrampooter through a mountainous one.

I have placed the capital of Affam, Ghergong, (or Kirganu) 160 G. miles nearly. E by N from Goalparah, according to the report of the Affamers. They alfo informed me, that the Burrampooter has a very long courfe previous to its entering Affam; and that it comes from the N W through the Thibet mountains. Now the Lama's map of Thibet in Du Halde, defcribes the courfe of the Sanpoo, to within 12.0 G . miles of the affumed fituation of the capital of Affam: and fill nearer to fome parts of the Burrampooter that are known, and have been defcribed by the Affamers:

Thefe facts, together with thofe refpecting the Ava river; and Nou-Kian ${ }_{2}$ eftablih (I think) the frongett prefumptive proof poffible, of the Sanpoo and Burrampooter being one and the fame river, under different names: and pofitive proof can never be obtained, but by actually tracing them; a circumftance unlikely, ever to happen to any Europeans; or their dependants. The interval between the known part of the Sanpoo, and that of the Burrampooter, is defcribed in the map by dotted lines. The Ayin Acbaree fays that the Burrampooter comes from Khatai : meaning China. We muft not forget that the fame book fays, that the fource of the Ganges had never been traced, at that time..

Some difficulty arifes in fixing the pofition of Laffas; the capital of Great Thibet. We have the hiftory of the Lamas' map in. Ff. 2.

Du Haldes,

Du Halde, which is not aftogether favourable to its character; efpecially in the parts towards the fource of the Sanpoo and Ganges. A clofe examination of its particulars, turns out fill more unfavourable to it. For inftance, the place where the Ganges enters the plains of Hindooftan, is placed under the 28th degree of latitude ; though it is known by our late oblervations, to be in about $30^{\circ}$. With refpect to the longitude, we have no grounds, on which to form an exact compatiifon; but we may conclude generally, that the diftance between Laffa and Hurdwar is near 2 degrees of lon. gitude lefs than it ought to be: I mean, provided that Laffa be near its true pofition with répect to Pekin, in the Lamas' map. The difference of longitude between them is $24^{\circ} 17^{\prime}$; Lafla being placed $91^{\circ} 40^{\prime}$ ealt from Greenwich.

With refpect to Hurdwar, the proof is pofitive of its being 2 degrees farther to the fouth than it ought to be; and this furnimes a ftrong prefumptive one, that all the weftern parts of the map, are faulty in the fame proportion : and that the fources of the Ganges and Sanpoo, inftead of being between the 29th and 30 th degrees of latitude; are feveral degrees further to the north; and probably between the 32 nd and 34 th : of which more will be faid in the fequel. Nor am I fingular in this opinion; for M. D'Anville found it neceffaty to make an alteration of 2 degrees in latitude ; and to adopt the very longitude, which I have fuggefted. And I nlould be wanting in candour, and in refped to his memory, fhould I forbear to do juftice to his nice difcernment, in placing the entry of the Ganges into Hindooftan, by inference from Delhi, almoft in the very foot where I have now placed it, by actual furvey.

But M. D'Anville; ignorant of the refpective pofitions of Bengal and Laffa, adopted the latitude of the latter place, given in the Lamas' chart : that is to Ray, about $29^{\circ} 35^{\prime}$. Father Giorgi (Vide Alphabetum Thibētanum) fays, the latitude of Laffa is "about

30 degrees and a half;" and by what follows, it can hardly be in a lower parallel.

The late Mr: George Bogle; who was fent by the Governor of Bengal (Mr. Hastings) on an embaffy to the Grand Lama of Thibet in 1774, travelled by way of Coos-Beyhar, Taflafudon, and Paridrong, to Chanmanning, the then refidence of the Lama, and nearly in the fame parallel of latitude with Laffa. Unfortunately, very little geographical information was furnifhed by this journey; unlefs the bare account of the number of days he was on the road between the two laft places, may be deemed fuch. However, this information, fuch as it is, joined with other circumftances, helps to affure us that Laffa is farther to the north, than the Lama's map reprefents it: for Taffafudon, the capital of Bootan, is by the accounts of the Bootanners, about 46 G . miles horizontal diftance from Luckiduar, in a direction nearly north; and Luckiduar being in $26^{\circ} 5^{\prime}$, Taffafudon cannot be in lefs than $27^{\circ} 43^{\prime}$. Paridrong (called Paridfong in the Lamas' map) is a confiderable way beyond that, and may be fuppofed to be in 28 degrees at leaft: but the Lamas' map places it in $27^{\circ}$; making an error of a whole degree of latitude. This place and the chain of mountains near it, have beeh regarded as the common boundary between Thibet and Bengal : but Mr. Bogle has cleared up this matter, by affuring us that Paridrong is the frontier town of Thibet towards Bootan, and not towards Bengal. And we have before afcertained that Bootah 'occuipies an interval of at leaft a degree of latitude between Bengal and Thibet. Thibet and Bootan, are often confounded together: the latter is a feudatory or dependency of the former, and borders on Bengal.

Thus, I flatter myfelf, this difcuffion refpecting the fituation of Paridrong, joined to the information' of 'P. Giorgi, will convince the reader, that the latitude of Lhffa, if not perfectly right in my map is, at leaft, nearer the truth than it has uffually been reprefented. Its longitude is taken from the Lamas' map, in which it is reckoned
[ 222 ]
$24^{\circ} 17^{\prime}$ weft from Pekin, or $91^{\circ} 40^{\prime}$ eaft from London. Had the bearings and latitudes of Mr. Bogle's route been taken, we fhould not only have been able to determine the pofition of Laffa, with fome degree of accuracy (as the direction of the road is fo much to the north) but alfo mof of the intermediate places. Mr. Bogle was fixteen days on the road from Paridrong to Chanmanning. The diftance affigned between thefe places in the Lamas' map, is about 167 G. miles of horizontal diftance: it is about 10 more on the map.

The fouthernmoft ridge of the Bootan mountains, rifes near a mile and half perpendicular, above the plains of Bengal, in a horizontal diftance of only 15 miles; and from the fummit, the aftonifhed traveller looks back on the plains, as on an extenfive ocean beneath him. There are not many paffes through this ridge, and all are fortified. The fort of Dellamcotta, which commands the principal pafs, was taken by ftorm in 1773, by a detachment under the command of Capt. John Jones; and the fame of this exploit made the Thibetians fue for peace; and was the immediata occafion of Mr. Bogle's embaffy. The road between Bengal and Taffafudon, lies chiefly over the fummits of ftupendous mountains, of along the borders of craggy precipices; fo that the direct diftance is not eafily afcertained, even by the maft intelligent traveller..

Between Taffafudon and Paridrong, is a chain of mountains ftill figher than the other. They are vifible from the plains of Bengal, at the diftance of 1.50 miles, and are commonly covered with fnow. Thefe are a continuation, of the mountains Emodus and Paxopamifus of the ancients; and are fometimes by the moderns erroneoully called Caucafus. In the Lamas' map, they are called Rimola: and by the people of Hindooftan Himmaleb (fee page 96). I take it ${ }^{-}$ for granted that Himola or Himmaleh ought to be fubftituted for Rimolah, in Du Halde's.map. I fuppofe them to be in point of elevation equal to any of the mountains of the old hemifphere. In deed, the country of Thibet is, altogether, one of the higheft in

Afia; it being a part of that elevated tract which gives rife not only to the rivers of India and China, but to thofe alfo of Siberia and Tartary: for if we examine the map of Afia, we thall find that moft of thofe capital rivers rife between the 3 Ift and $47^{\text {th }}$ degrees of latitude, and between the 70 th and $97^{\text {th }}$ degrees of longitude; from whence they run in every direction to the fea, as the Rhine, Rhone, Danube, and Po, do from the Alps in Europe.

Father Giorgi, whom I have mentioned before, has given us in his Alpbabetum Tbibetanum, an itinerary between Calcutta and Laffa. The diftances he eftimates in miles, which he probably meant for Italian, although they agree nearly with Englifh ones. For he reckons 284 between Coffimbuzar and Patna, which is the exact number of meafured ftatute miles between the two places. And between Singhya and Maiffy, he reckoned 40 , for 37 meafured ones. We may therefore conclude that he was equally fortunate in proportioning the reft of his diftances; although the roughnefs of the road will not always admit of forming any juft proportion between the diftance by the road, and the horizontal diftance. We are almoft entirely in the dark ās to the particular direction of his courfe.

Catmandu, the capital of Napaul, is placed according to the authority of fome MS. maps made by fome miffionaries who travelled from Bettyah to that place : and I found no material difagreement between their accounts and Giorgi's. I have therefore placed Catmandu ${ }_{105}$ G. miles nearly north from Maify, that is, in latitude $28^{\circ} 6^{\prime}$.

From Catmandu to Laffa, Giorgi reckons 504 miles by the road; but it muft be obferved that he omits to mention the diftances of two ftages between Khanfa and Mefcinzungh : and as the preceding ones were of 14 and 16 miles, and the two fucceeding ones 16 each, I may venture ta add 32 miles for the two.omiffions; and then the whole diftance will be 536 B . miles, or 462 G . ones. :

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The horizontal diftance between Catmandu and Laffa (the Iatter being placed as defcribed in page 221) is 364 G. miles: fo that according to Giorgi's diftance, one mile in five, will be taken up by the windings of the road: and this is not improbable, conlidering the mountainous nature of the country; for in the flat countries of Hindooftan, the proportion is oftentimes 1 in 7 .

The territories of Napaul extend to the mountains of Rimola, as they are called in the Lamas' map. Giorgi does not give the modern name of them; but juftly concludes that the ancient one was Emodus. Thefe are a continuation of the chain between Taffafudon and Paridrong. Between Catmundu and thefe mountains, he pafled by a famous place of worfhip, called by him Nogliocot, but by the Bengalefe, Nogarcot 5 and which gives name to a pafs that leads to it through the Bootan mountains, on the north of Purneah. (There is alfo a famous place of worfhip of nearly the fame name in the mountains of Lahore.) He alfo croffed the upper part of the Kofs, or Cofa river, which takes its courfe through Purneah, to the Ganges.

Tankia, or Tinkia-ling, is a fortrefs and town fituated at the hither foot of Mount Langur, a fecond ridge of ftupendous mountains, fituated about 50 miles beyond Mount Rimola; and faid to abound with fuffocating exhalations, which increafe as you afcend; but are weakeft when the mountains are covered with fnow. Tankia is the firft place in Giorgi's itinerary, that can be recognifed in the Lamas' map: for Nialma on the Nitchou river (probably the Nobotba of Giorgi). does not agree with any of Giorgi's names, although it's fituation does with Catmandu; which, however, the Thibetians call Jangbu.

About 25 miles beyond Mount Langur, is the beautiful valley of Tingri, faid to be 50 miles in length, though but narrow. It is defcribed by Giorgi as an earthly paradife, in every refpect fave the tharpnefs of the air.

The next place of note is Zuenga, or Tzuenga, a caftle or fortrefs on the river Bontfu (fuppofed by Giorgi to be the Bantifo of Ptolemy) and about 90 B, miles from Tankia. From hence two roads lead to Laffa: the northernmoft by Sgigatche (or Jiecfee as it is called in the Lamas' map) and Rimbu; the other, and which was travelled by Giorgi, is by Kiangfee, or Tchiantfe. He fpeaks of wild horfes varioully fpotted, in great numbers on the banks of the Bontfu. Thefe, I prefume, are of the kind that are annually brought for fale into Hindooftan, where they are known by the name of Tanyans; and are of a hardy breed.

Kiangfe is reprefented as a fine city and fortrefs; with a convent near it, which is fo very extenfive and magnificent, that it has the appearance of another city.

About 50 miles beyond, Kiangfe, and 3 days journey hort of Laffa, is the famous lake Palte, called by the natives Jamdro, or Jangfo. It is of fo great extent, that according to the report of the natives, it requires eighteen days to walk round it. In the Lamas' map, however, the circumference is only 150 Britifh miles. In the middle of it, there are according to Giorgi, a continued range of hillocks and illands; or, according to the Lamas' map, one large ifland, incircled by a lake from 3 to 8 miles wide. On the weftern thore of this ifland, or congeries of iflands is a monaftery, and the feat of the Lamifia* Turcepamo, or The Great Regenerate: in whom the Thibetians think that a divine firit is regenerated, as in the Great Lama. The road frcm iangfe to Laffa lies along the north fide of this lake, a day and half's journex.

Between the lake and the river Sanpoo, which is about 12 miles, another very high ridge of mountains croffes the road. This ridge is named Kambala, and from the top of it may be feen towards the north, a range of fill higher mountains, covered with fnow.

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The river Sanpoo*, or, according to Giorgi, Tzanyciu, or Tzanga, is 7 miles from the foot of Mount Kambala; and is croffed in the way to Laffa, about 12 miles farther on, either over a bridge, or in a boat. The bridge, as well as moft others in this country, is compofed of iron chains ftretched from fide to fide, with planks or logs laid acrofs them.

Giorgi fays that the chains are compofed of 500 links, each a foot long $\dagger$. We may. conclude that the bridge is laid over the narroweft part they could find, which, by this account, is 160 Englifh yards in breadth; otherwife we might expect a larger body of water in a river that had ran at leaft 7 or 800 miles; and had received into its bed, fo great a namber of Atreams. I compute that at this croffing place, the Sanpoo (which is afterwards called the. Burrampooter) has as far to run to meet the fea, as the Ganges has at its firt entry on the plains of Hindooftan ; that is, about 1350 B. miles.

The city of Laffa is, by the road, about 24 miles to the northeaftward of the crofling place of the Sanpoo; and is fituated in a fpacious plain. It is not confidered as a large city; but the houfes are of ftone, and are fpacious and lofty. The mountain of Putala, which contains on its fummit the palace of the grand Lama, the High Prieft and Sovereign of Thibet, is about 7 miles on the caft of the city.

Much confufion arifes from the application of fo many different names to this capital of Thibet. Giorgi tells us, that the proper name of it, in the language of Thibet is Baronthala; but that the Tartars call it Laffa, or Lahaffa. Other accounts call it Tonker; and apply the names Laffa and Baronthala to the diftrict which contains Tonker and Putala. And again others give the name of Putala inftead of Laffa, to the capital of Thibet. But we ought to apply the name Laffa, or Lahaffa, to the capital; and to confider

[^121]
## [ 227 ]

Putala as the cafle and palace of the Lama, and his ordinary place: of refidence.

By Thibet, or more properly Great Thibet, we are to underftand all that valt country extending from the fources of the Indus to the borders of China; and from Hindooftan, to the great defert of Cobi, northward; though we have but a faint idea of its extent towards that quarter. Its length from eaft to weft cannot be lefs than 1600 Britilh miles; its breadth is very anequal. We are informed generally that it is divided into three parts; that is, Upper, Middle, and Lower Thibet. The upper divifion feems to refpect the countries towards the fources of the Ganges and Sanpoo rivers: the middle, that in which Laffa is fituated, and of which it. forms the centre: and the Lower Thibet, that which borders on China. But the fubject is obfcure, and likely to remain fo. I am not informed, whether or not the country called Little Thibet is fubject to Laffa: this is fituated betweeen Upper Thibet and Cafhgur-
Confidering the exceeding rough and ferile fate of the country of Thibet, and the feverity of its climate, from its wonderful elevation, we are aftonifhed to find its inhabitants in a high flate of civilization; their houfes lofty and built of ftone; and the ufeful manufactures in fome degree of improvement. All thefe advantages they probably owe to their vicinity to the Chinefe; : to whom, indeed, the Lama is tributary. For an account of Thibet, fee Aftley's Collection, Vol. IV.; Phil. Tranf. Vol LXVIII. ; and. the Alphabetum Thibetanum.

With refpect to the heads of the Ganges and Sanpoo rivers, although they were vifited by the Lamas or priefts, fent by the Emperor Camhi; whofe laudable curiofity led him to add thefe: particulars to the geography of Thibet; yet we are far from being. well informed concerning the true pofitions of thefe celebrated fountains. A late publication by M. Bernoulli (who has done metoo much honour in the courfe of it) contains among a variety of other matter, a map of the courfes of the Ganges and Gogra rivers ;
drawn by $M$. Anquetil du Perron, from the materials of the late P. Tiefentaller. This map is highly interefting, on the fcore of its containing the courfe of the Ganges, as high up as the Gangotri, or cavern, fyled by the Hindoos, the cow's mouth; and which is near 300 miles above the place where the Ganges enters Hindooftan : as well as the courfe of the Gogra river, to its fource, in the weftern part of Thibet. Unfortunately, no obfervations appear to have been made for the purpofe of determining the latitudes of either of there places $\therefore$ which, on a courfe approaching to meridional, would have furnifhed a rule for correcting the diftances: thofe remaining quite problematical, from the circumftance of the route's being very crooked, and paffing through a very mountainous country; to which the fcale of computed coffes cannot be applied, with any degree of certainty. What is yet more againft the latter part of the performance (the Gogra river) is, that P . Tiefentaller did not vifit the fource of it, himfelf, as he did the Gangotri; but ftopt fhort at a place not far within the Kemaoon mountains, and took the account of the upper part of its courfe, from a native (of Hindooftan we may prefume). The names of places, and remarks, are written in the Perfic character, and tranflated (it appears) by M. Anquetil du Perron.

But notwithfanding any imperfections that may be imputed to the materials, or want of judgment in determining the fcale, this map conveys much intelligence refpecting the heads of the Ganges and Burrampooter rivers, as well as that of the Gogra; if we employ the lights furnifhed by Du Halde, in his map of the heads of the Ganges and Sanpoo, to illuftrate the fubject before us. Let us proceed to the examination of it, without any regard to nicety of fcale.

The Gogra or Soorjew river, then, is traced into a lake named Lanke-Dbe; which has immediately on the eaft of it, but without communicating with it, a much larger lake, named Manfaroar; out of which proceed two rivers, the one to the weft, or $\mathrm{N} \mathbf{W}$,

## [ 229 ]

the other to the eaft, or SE. Both of thefe lakes are faid to bo fituated within Thibet; as indeed fome of the villages on the bank of the Gogra, much farther to the fouthward, are. By the confruction of M. Anquetil's map, the fite of thefe lakes is carried as high up as the latitude of $3^{\circ}$ : however, by an analyfis of the fcale, they can hardly be higher than $33^{7^{\circ}}$; as will be prefently fhẹwn. Now, in the Lamas' map of Thibet, the heads of the Ganges and Sanpoo rivers (which laft, is called the Burrampooter, in the lower part of its' courfe) are feparated only by a ridge of mountains, named Kentaiffe. The head of the Ganges is compofed of two ftreams, which run weftward; and the fouthmof of thefe branches runs through two lakes, of which the firt is named Mapena, and the fecond Lanken. Thefe lakes are placed in refpect of each other, as Tiefentaller's are ; and the names of the correfponding ones, are Lanke in one, and Lanken in the other account: and Manfaroar, and Mapana. The names of the latter have certainly no affinity with each other ; but the fimilitude in point of fituation, remains. The river that runs from the Lanken lake in Du Halde, is named Lank-thou : and that from the Lanke lake of Tiefentaller, is the Gogra. With regard to the two rivers that iffue from the Manfaroar lake of Tiefentallet, that which runs to the weft is faid to be the Satloudj (Setlege) a river that has been noticed in page $8_{3}$, as the eafternmoft of the five Panjab rivers. This particular, however, the author himfelf difcredits, and very juntly: and the reader by turning to the map of the heads of the Indus, $\& c$. at page 102, may fatisfy himfelf as to the probability of it. In my opinion, this is the fouthernmoft of the two heads of the Ganges; above noticed; and which is known to run by Dfaprong; or (Chaparang) a confiderable city not a very great way to the weftward of thefe lakes (vide Lama's map in Du Halde, or D'Anville's map of Afia). If it be objected that the Ganges is too famous a: river to efcape the notice of the people who knew the Burrimpnoter, at its fource; I anfwer, that I do by no means believe thatt the people
in Thibet know the Burrampooter, by any other name than that of Sanpoo; and that the word Burrampooter is an interpolation. Indeed the writing in the map, imports only, "it is faid that the Burrampooter, \&cc." and the tranilation of the Perfic writing, at the efflux of this eaftern river, gives a very diffetent idea; being "Grand Riviere qui va du côte de Neipal" (or Napaul). It is clear, however, that the people have an idea, that the weftern river has a very long courfe: I fcruple not to believe, that the Lanke lake of Tiefentaller, is the Lanken of Du Halde; and that the Manfatoar of one, is alfo the Mapana of the other: and that the circumftances relating to the effluxes of the rivers, which appear to contradict each other, have not been carefully examined into, either by one, or the other party. As the Manfaroar lake is faid to be 60 milles Indiens (which ought to mean coffes) in circumference, that is, 115 B. miles; we can hardly fuppofe that the native who furnifhed the account, made the tour of it, either to meafure its extent, or to explore the heads of the rivers: and on the other hand, the Lamas fent by Cambi, might take a great deal of their account on truft. Therefore without contending about the exact circumftances of the cafe, I have defcribed the Ganges (that is, the fouthern branch of it) as iffuing out of the lake Manfaroar : but have not regarded the eaftern river as the Burrampooter, or Sanpoo; becaufe it would be doing too much violence to the account given by the Lamas; which defcribes the Sanpoo as iffuing from the eaftern fide of Mount Kentaiffe, and at leaft 40 miles from thefe lakes. Befides, the Lamas give an account of a third lake named Conghé, which intervenes between the Manfaroar lake, and the head of the Sanpoo. If I am miftaken in my conjectures, I cannot millead others, while the map is accompanied with this difcuffion. The Lamas'map which appears in Du Halde, places the head of the Ganges in latitude $29^{\frac{2^{2}}{2}}$; and $M$. D'Anville found it neceflary to -xemove it almont as high as $3^{\circ}$. In the prefent map, it ftands in $33^{\frac{10}{*}}$ : all which may ferve to fhew how vague a performance the

## [ 23 i ]

Lamas' map is, which errs $3 \frac{1}{2}^{\circ}$ in latitude. It alfo placed Laffa, which ought to be a well known pofition to them, a full degree too far to the fouth.

In the conftrultion of the map of the Gogra, $3^{2}$ coffes are reckoned to a degree, in a country, the moft rugged and mountainous, imaginable; while 42 is the ftandard in the level country. A diftinction, however, mult be made in the fcale of the upper and lower parts of the courfe of the river. For, from Mirzapour, which occurs in my map of Oude, to the lake DoulooSagur, the country is generally level : and was alfo explored by Tiefentaller himfelf; while the upper part is taken from the reports of a native. Therefore I have allowed 43 coffes to a degree, between thofe two points; fo that the diftance will be 98 G . miles, inftead of the 131 in the map. Then for the upper part of the river, I have allowed 60 coffes to make a degree, inftead of 32 : by which the diftance from the lake Douloo-Sagur, to the lake Lanke, is only 230 G. miles, inftead of the 373 on the map. To thofe who may object to fo great a diminution, as from 60 to $3^{2}$; I fhall obferve, that $3^{2}$, or even $37^{\frac{1}{2}}$ coffes to a degree, is a proportion widely different from that which my experience fuggefts: and which allows 42 in the level country of Hindooftan proper: (fee page 5) and whofoever has travelled in very mountainous countries, and has moreover traced the courfe of a river through it; will not object to the diminibing to 1 , what was 1,43 in the plains: for this is the proportion between 60 and 42.

If Tiefentaller's fcale is right, the Lanke lake would be in latitude $3^{\circ} 6^{\circ}$ and upwards; which I confider as highly improbable. It is certain that our beft maps of Afia (that is, D'Anville's) prefent nothing but a blank fpace, in the part affigned to the heads of there rivers, by M. Anquetil du Perron: and therefore, there is no pofitive evidence againft it.
In afcending this river Gograwe find noted in the map; not far within the firft ridge of mountains, and near the fecond ridge, three

## [ 232 ].

three fubterraneus caverns, from whence proceed with violence, fire, wind, and water. No other particulars are given. About 30 miles higher up, the Gogra forces its way through that vaft ridge which has been often taken notice of before, under the name of Himmaleh, and which is a branch of the Himaus, or Imaus, of the ancients. This ridge, which is covered with fnow, and vifible from the plains of Hindooftan, appears to be the genetal boundary of Thibet, through that whole extent from the Ganges to the Teefta river; inclofing between it and Hindooftan, a tract of country, from 100 to 180 miles in breadth; divided into a number of finall ftates, none of which are underftood to be either tributaries or feudatories of Thibet: fuch as Sirinagur, Almora, Kemaoon, Gorka, Napaul, and Morung. Bootan, a feudatory of Thibet, clofes on the eaft of this tract ; and is the extent of our knowledge, as to particulars, that way.

The fmall number of towns and villages on the banks of this river, induces one to fuppore that the weftern part of Thibet, is no better inhabited than we have before defcribed the eaftern part of it to be. Indian names prevail, even within Thibet: and a temple of Mahadeo is found on the banks of the Manfaroar lake.

We have before ftated the diftance of the cow's mouth, or Gangotri, to be about 280 or 300 road miles, above Hurdwar; where the Ganges enters the plains of Hindooftan. As the compafs of 'Tiefentaller's map of the Ganges, declines 12 degrees more to the weftward of north, than that of the furvey does, between Allahabad and Hurdwar ; this allowance is, made accordingly : and Tiefentaller's diftance exceeds that of the furvey, within the fame fpace, which is 33 I G. miles, about $\pi^{2}$ of the whole. Not being abfolutely certain whether or not Tiefentaller took the latitude of Gangotri, I did not venture to alter the parallel in which he has, placed it, $33^{\circ}$ : but contented myfelf with correcting the bearing 12 degrees; thereby fhortening the diftance, which was originally 240 miles, to 227 . If the latitude was not taken, by colential obferva-
obfervation, but the diftance calculated on the fcale of $37 \frac{1}{2}$ coffes to a degree, the Gangotri will fill be placed too far to the north.

To fum up the whole information, collected from the different accounts of the upper part of the courfe of the Ganges, it appears that the two branches of it, which fpring from the weftern fide of Mount Kentaife, take their courfe weftward, inclining confiderably: to the north, for a courfe of about 300 miles, in direct diftance; when meeting the great chain or ridge of Mount Himmaleh, whiclr extends from Cabul along the north of Hindooftan, and through Thibet, the rivers are compelled to turn to the fouth; in which courfe they unite their waters, and form what is properly termed the river Ganges. This great body of water now forces a paffage tbrough the ridge of Mount Himmaleh, at the diftance, poffibly, of 100 miles below the place of its firft approach to it, and fapping its very foundations, rufhes through a cavern, and precipitates itfelf into a vaft bafon which it has worn in the rock, at the hither foot of the mountains. The Ganges, thus appears, to incurious fpectators, to derive its original fprings from this chain of mountains: and the mind of fuperftition has given to the mouth of the cavern, the form of the head of a cow; an animal held by the Hindoos, in a degree of veneration, almoft equal to that, in which the Egyptians of old, held their god Apis..

From this fecond fource (as it may be termed)' of the Ganges, its courfe becomes more eaftwardly than before, through the rugged country of, Sirinagur; until, at Hurdwar, it finally efcapes from. the mountainous tract, in which it has wandered for about 800 B . miles. At Hurdwar, it opens itfelf a paffage through Mount Sewalick; which is the chain of mountains that-borders on the level country, on the north of the province of Delhi.. Even Sewalick would be deemed a lofty ridge, but for the prefence of Mount. Himmaleh, or Imaus; which rifes behind it, when viewed from: the plains of Hindooftan.

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It may truly be faid that the knowledge of the origin of the Ganges was referved for the prefent age: for it was as late as the year 1717, that the Emperor Camhi, fent perfons to explore it, and to bring fome of its water back with them to Pekin, a journey of about 2500 B . miles from the head of the Ganges. Until the refult of this expedition was known in Europe, it was believed, on the faith of the Hindoos, that the fprings of the Ganges, were at the foot of Mount Hirnmaleh.

A circumftance attending the courfes of the Ganges and Burrampooter rivers, in refpect to each other, is remarkably fingular. Iffuing from oppofite fides of the fame ridge of mountains, they direct their courfes towards oppofite quarters, till they are more than 1200 miles afunder; and afterwards meet in one point near the fea, after each has performed a winding courfe of more than 2000 miles. Our ignorance of this circumftanc, till fo very lately, is a ftrong prefumptive proof, that there yet remains a vaft field for improvement, in the geography of the eaftern part of Afia.



## [ $235^{\circ}$ ]

## SECTIONVII.

## Tables of Distances in Hindoostan.

THE following Tables, will, it is hoped, be particularly acceptable, not only to thofe ${ }_{2}$ who for ufeful purpofes may be defirous of calculating the time required for a courier or meffenger to travel from one place to another, but alfo to thofe, who on the fcore of curiofity, or for the illuftration of hiftory, may wifh to be informed of the diftances between the principal towns in Hindooftan. This information cannot be obtained me ely by the application of the compaffes to the map, becaufe the windings and inflections of the roads are not there taken into the account: but an approximation towards it, may be obtained, by the double operation of meafuring the diftance on the map, and then applying to it, the rule given in page 7 of this Memoit.

To accomplifh the tafk above propofed, I firft felected the names of fuch cities and other places as appeared likely to become. -objects of enquiry in future; and in fo extenfive a country, no lefs than 168 fuch places occurred. To have given the diftance between every two of thefe places refpectively, would not only have extended the tables to an immoderate length (upwards of 14,000 diftances occurring on the above number) but would have burthened the purchafer with much ufelefs matter. For inftance, although Jionpour has a political connexion with Lucknow, and Tanjore with Madras; and it may be neceffary that'the diftance of each of there fubordinate places from its fuperior, thould be given:

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yet, as Jionpour and Tanjore fand in little or no relation to each other, it was of no ufe to give the diftance between them. The fame may be faid of moft of the other fubordinate places.

The method, therefore, that I have followed, is this: I have chofen fuch places as appear to be of the greateft political confequence (fuch as the Britifh Prefidencies, and the Courts of the native Princes) and of which I reckon 12; and confidering them as centres, have formed for, each a feparate table, in which the diftance from the central place to every other place of note, whofe fituation may be füppofed to become a matter of enquiry, is inferted; the names following in alphabetical order. A page is allotted to each of thefe central places, which are Agra, Benares, Bombay, Calcutta, Delhi, Hyderabad, Lucknow, Madraś, Nagpour, Ougein, Poonah, and Seringapatam, and thefe alfo follow in the fame order.

The tables contain near 1000 diftances; and although thefe are reckoned only from 12 different points, yet by attending to the particulars of each table, a great many other diftances may be found; as the communication between places, is ufually by the medium of the capital towns that intervene (fee page 6). For inftance, the diftance between Arcot and Allahabad may be collected from the tables of Hydrabad and Nagpour, as thefe places lie in the line of direction between the two former. Alfo, the diftance between Patna and Aurungabad may be found by means of the Nagpour table: and that from Mirzapour to Surat, by fubtracting the diftance of the one from the other, in the Benares table. And by the fame methods, the diftances between moft other places of note may be found. And in order to facilitate the fearch, and. bring into one view the refpective pofitions of the feveral places mentioned in the tables, I have added a fmall map.

To avoid repeating the diftances between the 12 central or primary places, through every table, they are inferted in that table, alone, whofe name ftands firft in the alphabet. Thus the diftance
between Calcutta and Agra, will be found in the Agra table, and not in that of Calcutta.

With refpect to the diftances themfelves, it muft not be expected that they are in general critically exact; for although the pofitions of 8 out of the 12 primary places are determined with fome degree of precifion; and 3 out of the 4 remaining ones, pretty nearly; yet the intermediate roads have, in few inftances (thofe between Bengal and Delhi excepted) been meafured. But fince the publication of the firft tables, the meafured routes of Col. Pearfe from Calcutta to Madras, Mr. Ewart's between Calcutta and Nagpour ; and Mr. Pringle's tables of routes in the Carnatic; have come to hand : and the prefent tables will accordingly be found much improved. The deficiencies could only be fupplied by the computed diftances; which, however, appear to come as near the truth in India, as in any country whatever: or where thefe have failed, by allowing fuch a degree of winding, as is found by experience to take place in a fimilar kind of country. The cofs is always reckoned at one Britifh mile and nine-tenths, in road meafure. For other particulars refpecting the length of the cofs, and the windings of roads, the reader is defired to turn to the firlt pages of this Memoir.

The length of a day's journey in Hindooftan (as has been obferved before) is from 11 to 12 coffes, or about 22 miles, for an ordinary traveller. But that of a courier, or profeffed meffenger, may be reckoned at 30 or' 33 ; and on occafions of emergency, they can travel even more ; and that for a continuance of 15 or 20 days.

A regular poft is eftablifhed throughout the parts of Hindooftan fubject to the Eaft India Company, and alfo from Calc̣utta to Madras. The poftmen always travel on foot. Their ftages are commonly from 7 to 8 miles; and their rate of travelling within our own diftricts, about 70 miles in the 24 hours.

## [ 238 ]

## $\begin{array}{llllll}\mathbf{T} & \mathrm{A} & \mathbf{B} & \mathrm{L} & \mathrm{E} & \mathrm{I} .\end{array}$

A GRA, to

|  | Britifh Miles. |  |  | Britioh Miles. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Agimere | - - | 230 | Hurdwar | - | 217 |
| Allahabad | - | 296 | Hydrabad by Elichpour |  | 806 |
| - Amedabad | - | 534 | by Nagpour |  | 835 |
| Amednagur | - | 713 | Jagarnaut | - | 793 |
| Arcot | - - | 1160 | Joinagur or faepour | - | 136 |
| Attock | - - | 704 | Lahore - |  | 503 |
| Aurungabad | - | 633 | Lucknow |  | 202 |
| Bareilly | - - | 129 | Madras by Elichpour | - | 1158 |
| Beder |  | 740 | by Nagpour |  | 1187 |
| Benares |  | 379 | Mafulipatam |  | 83 I |
| Bifnagur | - - | 989 | Meerta |  | 294 |
| Bombay by Bur | Burbanpour | 848 | Mirzapour |  | 346 |
| by $A$ | Amedabad | 858 | Moorfhedabad |  | 826 |
| Burhanpour | - | 508 | Moultan by Delbi |  | 615 |
| Cabul | - - | 922 | Mundu |  | 420 |
| Calberga | - - | 865 | Myfore |  | 1238 |
| Calcutta by | Moorßhedabad | 944 | Nagpour by Huflingabad |  | 548 |
|  | Birboom | 839 | by Cbatterpour |  | 514 |
| Calpy | - - | 160 | Napaul - |  | 424 |
| Cambay | - | 587 | Narwah | - | 127 |
| Candahar | - - | 942 | Oude or Fyzabad |  | 287 |
| Canoge | - - | 1.27 | Ougein by Narwab |  | 374 |
| Cafhmere | - - | 728 | Patna |  | 544 |
| Cattack | - - | 785 | Pondicherry |  | 1287 |
| Chatterpour | - - | 212 | Poonah |  | 796 |
| Cheitore | - - | 300 | Ramgaut | - | 74 |
| Corah | - - | 184 | Rantampour |  | 120 |
| Dacca | - - | 990 | Ruttunpour |  | 513 |
| Delhi | - - | 117 | Sattarah |  | 840 |
| Dowlatabad | - | 628 | Seringapatam |  | 1230 |
| Ellichpour |  | 487 | Sirong |  | 253 |
| Etayah | - - | 7.1 | Sumbulpour |  | 617 |
| Fyzabad. | See Oude. |  | Surat by Amedabad | - | 680 |
| Goa | - - | 1020 | Tatta or Sindy |  | 887 |
| Golconda | - - | 790 | Vifiapour |  | 825 |
| Gwalior | $=$ | 80 | Warangole | - | 868 |

TABLE II. - BENARES to

| Britin Miles. Brith Miles. |  |  |  |
| :---: | :---: | :---: | :---: |
| Agimere | 571 | Hydrabad | I |
| Allahabad | 83 | Jagarnaut | 512 |
| Amedabad | 793 | Jionpour | 42 |
| Arcot | 1105 | Jndore | 584 |
| Attock | 1083 | Joinagur or faepour | 515 |
| Aurungabad | 740 | Lahore - | 882 |
| Balafore by Cbuta Nagpour | 316 | Lucknow | 189 |
| Bareilly | 345 | Madras by Hydrabad | 1103 |
| Baroach | 820 | Mafulipatam by Nagpour | 853 |
| Beder | 726 | Meerta | 636 |
| Bidjigur | 56 | Mindygaut | 253 |
| Bilfah | 416 | Mirzapour | 30 |
| Bombay by Nagpour | 982 | Monghir | 255 |
| by Burbanpour | 950 | Moorfhedabad by Birboom. | 417 |
| Bopaltol | 449 | by Mongbir | 477 |
| Burhanpour by Sagur , | 609 | Moultan - - | 990 |
| Buxar - | 70 | Mundlah | 306 |
| Cabul | 1301 | Myfore | 1165 |
| Calberga or Kilberga | 783 | Nagpour | 430 |
| Calcuta by Moorfbedabad | 565 | Napaul | 280 |
| by Birboom | 460 | Narwah | 356 |
| Calpy | 239 | Oude | 130 |
| Cambay | 806 | Ougein | 554 |
| Candahar | 132 I | Patna by Buxar | 155 |
| Canoge | 259 | by Daoadnagur | 165 |
| Cafhmere | 1107 | Pawangur | 754 |
| Cattack, by Cbuta Nagpour | $45^{2}$ | Pondicherry | 1203 |
| Chatterpour | 237 | Poonab by Nagpour |  |
| Cheitore | 601 | by Burbanpeur | 897 |
| Chittigong | 752 | Ramgaut | 419 |
| Chunargur | 17 | Rewah. | 126 |
| Corah | 195 | Rotalgur | 81 |
| Dacca | 601 | Ruttunpour | 275 |
| Delhi | 496 | Sagur | 34 I |
| Dowlatabad | 742 | Sattarah | 942 |
| Ellichpour | 552 | Seringapatam | 1157 |
| Etayah | 308 | Sindy or Tatta | 1210 |
| Furruckabad | 295 | Sirong - | 389 |
| Fyzabad. See Oude. |  | Sumbulpour | 375 |
| Ganjam |  | Surat by Sirong and Ougein | 863 |
| Ghod or Gobud | 336 | by Burbanpour | 869 |
| Goa | 1070 | Tanjore by Nagpour | 1273 |
| Golconda |  | Tritchinopoly | 1277 |
| Gurrah | 270 | Vifagapatam | 758 |
| Gwalior | 355 | Vifapour | 876 |
| Hurdwar | 500 |  |  |

[ 240 ]

## TABLE III. - B O M B A Y to


[24r]
TABLE IV.-CALCUTTA to
Britih Miles.

| Britih Miles. |  | Britifh Miles. |  |
| :---: | :---: | :---: | :---: |
| Adoni | 1030 | Canoge by $M$. | 824 |
| Agimere by Moorfaedabad | 1136 | by $B$. | 719 |
| by Birboom | 1030 | Cafhmere, Capital of, by M. | 1672 |
| Allahabad by $\bar{M}$. | 649 | by $B$. - | 1567 |
| : by $B$. | 544 | Cattack - | 251 |
| Amedabad by Ougein | 1234 | Chatterpour by $M$. | 803 |
| Amednagur - | 1119 | by $B$. | 698. |
| Anjenga | 1577 | Cheitore by $M$. | 1168 |
| Aracan | 475 | by $B$. | 1063 |
| Arcot | 1070 | Chittigong | 317 |
| Aflam, Capital of | 660 | Chunargur by $M$. | 574 |
| Attock - | 1648 | - by $B$. | 469 |
| Ava | 1150 | Cicacole | 490 |
| Aurungabad | 1022. | Comorin Cape | 1470 |
| Bahar | 297 | Condavir or Guntoor | 79 I |
| Balafore | 141 | Corah by $M$. | 7.60 |
| Baroach by Nagpour | 1220 | by $B$. | 6.55 |
| Bareilly by M. | 910 | Dacca | 177 |
| - by $B$. | 805 | Delhi by $M$. | 1061 |
| Baffeen by Poonab * $\div$ | 1317 | by $B$. | 956 |
| Beder | 980 | Dellamcotta | 344 |
| Bedsore | 1290. | Dowlatabad. | 1029 |
| Bilfah by Mundlah | 867 | Ellichpour | 844 |
| Bifnagur | 1120 | Ellore = | 719 |
| Bopaltol by Mirzapour by Mundlab | $\begin{aligned} & 929 \\ & 802 \end{aligned}$ | Etayah by $M$ M. | 873 $7,68$. |
| Burhanpour by Nagpour | 2.78. | Furruckabad by $M$. | 860 |
| Buxar by $M$. | 485 | by $B$. | 755 |
| by $B$. | 408 | Ganjam - | 369: |
| Cabul by $M$. | 1866 | Gangpour | 393 |
| by $B$. | 1761 | Ghod or Gobutd by M. | 888; |
| Calberga by the Circars | 1018. | - by $B$. | 783 |
| Calpy by $M$. | 804 | Goa | 1300 |
| C by $B . \quad{ }^{-}$ | 699 | Golconda | 907 |
| Cambay by Nagpour | 1273 | Guntoor. See Condavir. |  |
| by Mundlab and Ougein | 1253 | Gwalior by $M$. | 910 |
| Candahar by Moorfkedabaid by Birboom | $\begin{aligned} & 1886 \\ & 1781 \end{aligned}$ | , by $B_{0}$ - | 805 |


| 9 4 $E$ $H$ |  <br> 岂納言 <br>  <br>  <br>  <br>  |
| :---: | :---: |
| $\square$ |  |
| 0 |  |
| 4 |  |
|  |  |

TABLE V.-DELHI to





| [ 246 ] |  |  |  |
| :---: | :---: | :---: | :---: |
| T A BLE VIII. - M A D R A S to |  |  |  |
| Britio M | h Miles. |  | Brition Miles. |
| Adoni | 310 | Guntoar. See Condavir. |  |
| Agimere - - 1 | 1152 | Gurramconda | $\pm 53$ |
| Allahabad . - I | 1055 | Gwalior | 1078 |
| Amedabad - - 1 | 1049 | Jagarnaut | 719 |
| Anjenga | 506 | Indore | 902 |
| Arcot | 73 | Ingeram | 399 |
| Aurungabad | 647 | Liahore | 1665 |
| Balafore | 689 | Madura by Tanjor | 307 |
| Bancapour (Sanore) | 416 | Mangalore | 440 |
| Bandarmalanka | 358 | Mafulipatam | 292 |
| Bangalore | 215 | Mirzapour | 1074 |
| Baroach | 947 | Moorfhedabad | 1148 |
| Beder | 430 | Mundu | 859 |
| Bednore | 445 | Nagpour | 673 |
| Bifnagur | 386 | Negapatam | 183 |
| Burhanpour by Aurungabad: | 769 | Nellore | 120 |
| . by Faffierabad | 732 | Oude | 1163 |
| Cabul - - 2 | 2080 | Ougein | 896 |
| Calberga- | 422 | Palamcottah | 401 |
| Cambay | 998 | Patna by Nagpour | 1266 |
| Canoge - - 1 | 1141 | Pondicherry | 100 |
| Canoul : | 279 | Poonah | 660 |
| Cafhmere - - 1 | 1886 | Rachore | 323. |
| Cattack | 77.9 | Rajamundry | 365 |
| Chatterpour | . 975 | Raolconda | 382 |
| Cheitore - - | 1065 | Ruttunpour | 903 |
| Chitteldroog | 335 | Sattarah | 626. |
| Cicacole | 540. | Seringapatam | 290 |
| Coimbetour - | 306 | Siccacollam - | 267 |
| Combam or Commum | 214 | Sindy or Taita | 1467 |
| Comorin Cape (Arameny Gate) | e) 440 | Sirong | 905 |
| Condapilly - - | 306 | Sirripy | 281 |
| Condavir | 276 | Surat = | 903 |
| Conjeveram | 46 | Tanjore - | 205 |
| Corah - - '' | ' 1080 | Timerycotta | 278 |
| Cuddapa | 753 | Trankebar | 165 |
| Dalmacherry | 115 | Travancore | 464 |
| Dindigul | 275 | Tritchinopoly | 208 |
| Dowlatabad. | 655 | 'Tutacorin. | 394 |
| Ellichpour | 671. | Vellore $\quad$ - | 88 |
| Ellore | 310 | Vifagapatam | 483 |
| Ganjam | 661 | Vifjapour = | 534 |
| Goa | 575 | Warangole | 414 |
| Golconda | 358 | Yanam $=$ E | 400 |
| Gooty or Gutti ${ }^{\text {a }}$ | 269. |  |  |

TABLE IX-NAGPOUR to


## $[248]$

## TABLE X.-OUGEIN, to

|  | Miles. |  | Brition Miles. |
| :---: | :---: | :---: | :---: |
| Agimere | 256 480 | Janfi | 8 |
| Amedabad | 4275 | Indore | 365 30 |
| Amednagur | 365 | Joinagur or faepour | 85 |
| Arcot | 905 | Joudypour | 260 |
| Aurungabad | 287 | Kotta | 150 |
| Baroach | 266 | Meerta | $25^{6}$ |
| Bareilly. | 503 | Mirzapour | 526 |
| Baffeen | 448. | Moorhedabad by Gurry | Mund- |
| Bilfah | 140 |  | 983 |
| Bifrragur | 645 | by Patna | 1007 |
| Bopaltol | 112 | Mundu | 46 |
| Burhanpour | 164 | Mundilla | 363 |
| Calpy | 382 | Naderbar or Noondabar | 203 |
| Cambay | 270 | Nagore | 305 |
| Canoge | 464 | Nagpour Little | 780 |
| Cattack, by Nagpour | 822 | Narwah direet | 254. |
| Chanderee | 242 | by Sirong | 291 |
| Chatterpour | 320 | Oudipour | 135 |
| Cheitore | 169 | Patna | 726 |
| Corah | 426 | Pondicherry | 998 |
| Dowlatabad | 280 | Poonah by Burbanpour | 452 |
| Ellichpour | 237 | Powangur - | 200 |
| Etayah | 402 | Ramgaut | 488 |
| Furruckabad | 468 | Rantampour | 260 |
| Fyzabad or Oudz | 583 | Ruttunpour | 508 |
| Ghod or Gobud | 356 | Sagur | 212 |
| Goa by Poonab | 697 | Sattarah | 02 |
| Golconda | 539. | Seringapatam | 886 |
| Gwalior | 336 | Sirong | 165 |
| Hindia | 116 | Sumbulpour | 608 |
| Huflingabad Gaut | 153 | Surat $=$ | 309 |
| Jalore | 220 | Vifapour | 42.4 |



## [ 250 ]

## TABLE XII.-SERINGAPATAM to



## A $\quad \mathbf{P} \quad \mathbf{P} \quad \mathrm{E} \quad \mathrm{N} \quad \mathrm{D} \quad \mathbf{I} \mathbf{X}$.

## ADVERTISEMENT.

HE within Tract has already made its appearance in the
Philofophical Tranfactions of 178 r . It was fuggefted to the Author, that it would make a very proper Appendix to the Memoir of the Map of Hindoostan; and he accordingly offers it to the Public under that denomination : happy fhould the Appendix meet a degree of indulgence, equal to what the Work itfelf has experienced.
A N
$\begin{array}{lllllll}A & C & C & O & U & N & T\end{array}$
OFTHE
$\begin{array}{llllll}\text { G } & A & \mathrm{~N} & \mathrm{G} & \mathrm{E} & \mathrm{S}\end{array}$
A N D
BURRAMPOOTER RIVERS.
They gathering many a flood, and copious fed With all the mellowed treafures of the fky , Wind in progreffive majefty along;
And traverfe realms unknown, and blooming wilds, And fruitful defarts - Forfaking thefe, O'er peopled plains they fair-diffufive flow, ' And many a nation feed, and circle fafe, Within their bofom many a happy ifle.
Thus pouring on, they proudly feek the deep, Whofe vanquifh'd tide, recoiling from the fhock, Yeilds to this liquid weight

## [ 255 ]

## A. N ACCOUNT, छ$c$.

THE * Ganges and † Burrampooter Rivers, together with their numerous branches and adjuncts, interfect the country of Bengal (which, independent of Bahar and Orissa, is fomewhat larger than Great Britain) in fuch a variety of directions, as to form the moft complete and eafy inland navigation that can be conceived. So equally and admirably diffufed are thofe natural canals, over a country that approaches nearly to a perfect plane, that, after excepting the lands contiguous to Burdwan, Birboom, \&c. which may be reckoned a fixth part of Bengal, we may fafely pronounce, that every other part of the country, has, even in the dry feafon, fome navigable fream within 25 miles at fartheft, and more commonly within a third part of that diftance.

It is fuppofed, that this inland navigation gives conftant employment to 30,000 boatmen. Nor will it be wondered at, when it is known, that all the falt, and a large proportion of the food confumed by ten millions of people are conveyed by water within the kingdom of Bengal and its dependencies. To thefe muft be added, the tranfport of the commercial exports and imports, probably to the amount of two millions ferling per annum; the interchange of manufactures and products throughout the whole country; the fifheries; and the article of travelling $\ddagger$.

[^122]Thefe

## 256 ]

Thefe rivers, which a late ingenious gentleman aptly termed' fifters and rivals (he might have faid twin fifters, from the contiguity of their fprings) exactly refemble each other in length of courfe; in bulk, until they approach the fea; in the fmoothnefs and colour of their waters; in the appearance of their borders and iflands; and, finally, in the height to which their floods rife with the periodical rains. Of the two, the Burrampooter is the largeft; but the difference is not obvious to the eye. They are now well known to derive their fources from the valt mountains of Thibet *; from whence they proceed in oppofite directions; the Ganges feeking the plains of Hindoostan (or Indostan) by the weft; and the Burrampooter by the eaft; both purfuing the early part of their courfe through rugged vallies and defiles, and feldom vifiting the habitations of men. The Ganges, after wandering about $8 a 0$ miles through thefe mountainous regions, iffues forth a deity to the fuperflitious, yet gladened, inhabitant of Hindooftan $\dagger$. From Hurdwar (or Hurdoar) in latitude $30^{\circ}$, where it gufhes through an opening in the mountains, it flows with a fmooth navigable ftream through delightful plains, during the remainder of its courfe to the fea (which is about 1350 miles) diffufing plenty immediately by: means of its living productions; and fecondarily by enriching the

[^123]
## [ 257 ]

adjacent lands, and affording an eafy means of tranfport for the productions of its borders. In a military view, it opens a communication between the different pofts, and ferves in the capacity of a military soay through the country; renders unneceffary the forming of magazines; and infinitely furpaffes the celebrated inland navigation of North America, where the carrying places not only obftruct the progrefs of an army, but enable the adverfary to determine his place and mode of attack with certainty.

In its courfe, through the plains, it receives eleven rivers, fome of which are equal to the Rhine, and none fmaller than the Thames, befides as many others of leffer note: It is owing to this vaft influx of ftreams, that the Ganges exceeds the Nile fo greatly in point of magnitude, while the latter exceeds it in length of courle by one-third. Indeed, the Ganges is infetior in this laft refpect, to many of the ;northern rivers of Afia; though I am inclinied to think that it difcharges as much or more water than any of them; becaufe thofe rivers do not lie within the limits of the periodical rains.*.

[^124]The bed of the Ganges, is, as may be fuppofed, very unequal in point of width. From its firt arrival in the plains at Hurdwar, to the conflux of the Jumna (the firlt river of note that joins it) its bed is generally from a mile to a mile and a quarter wide; and, compared with the latter part of its courfe, tolerably fraight. From hence, downward, its.courfe becomes more winding, and its bed confequently wider *, till, having fucceffively receịed the waters of the Gogra, Soane, and Gunduck, befides many fmaller ftreams, its bed has attained its full width; although, during the remaining 600 miles of its courfe, it receives many other principal ftreams. Within this fpace it is, in the narroweft parts of its bed, half a mile wide, and in the wideft, three miles; and that, in places where no iflands intervene. The fream within this bed is always either increafing or decreafing, according to the fearon. When at its loweft (which happens in April) the principal channel varies from 400 yards to a mile and a quarter; but' is commonly about three quarters of 'a mile, in width.

The Ganges is fordable in fome places above the conflux of the Jumna, but the navigation is never interrupted. Below that, the channel is of confiderable depth, for the additional freams bring a greater acceffion of depth than width. At 500 miles from the fea, the channel is thirty feet deep when the river is at its loweft; and it continues at leaft this depth to the fea, where the fudden expanfion of the ftream deprives it of the force neceflary to fweep away the bars of fand and murd thrown acrofs it by the ftrong foutherly winds; fo that the principal-branch of the Ganges cannot be entered by large veffels.

About 220 miles from the fea (but 300 reckoning the windings of the river) commences the head of the delta of the Ganges,

[^125] which.
which is confiderably more than twice the area of that of the Nile. The two wefternmoft branches, narned the Coffimbuzar and Jellinghy rivers, unite', and form what is afterwards named the Hoogly river, which is the port of Calcutta, and the only branch of the Ganges that is commonly navigated by thips*. The Coffimbuzar river is almoft dry from October to May; and the Jellinghy tiver (although a fream runs in it the whible yeat) is in fome years unnavigable during two of three of the' dryeft months': fo that the only fubordinate branch of the Ganges, that is at all times navigable; is the 'Chundnah river, which 'reparates at Moddapour, and terminates in the Hooringotta.

That part of the delta bordering on the fea, is compofed of a labyinth of tivers' and creeks, all of which are falt, except thofe that immediately communicate with the principal atm of the Ganges. This tract, known by the name of the 'Woods; or Suns derbunds, is in extent equal to the principality of Wales; and is fo completely enveloped in woods, and infefted with tygers, that if any attenipts have ever been made -to clear it (as is' teported) they have hitherto mifcarried. Its numerous canals are fo difpofed as to form a complete inland navigation throughout and acrofs the lower part of the delta; without either the delay of going round the head. of it, or the hazard of putting to fea.. Here falt, in quantities equal to the whole confumption of Bengal and its dependencies, is made and $\operatorname{tranfported}$ with equal facility:: and here alfo is found an inexhauftible ftore of timber for boat-building. The breadth of the lower part of this delta is upwards of 180 miles ; to which, if. we:

[^126]L. 12
add
:add that of the two branches of the river that bound it, we fhall have about 200 miles for the diftance to which the Ganges expands its branches, at its junction with the fea.
It has been obferved before, that the courfe of this river, from Hurdwar to the fea, is through an uniform plain; or, at leaf, what appears fuch to the eye: for, the declivity is much too fmall to be perceptible. A fection of the ground, parallel to one of its. branches, in length 60 miles, was taken by order of Mr . Hastings; and it was found to have about nine inches defeent in each mile, reckoning in a ftraight line, and allowance being made for the curvature of the earth. But the windings of the river were fo great, as to reduce the declivity on which the water ran, to lefs than four inches per mile : and by a comparion of the velocity of the fream at the place of experiment, with that in other places, I have no reafon to fuppofe, that its general defent exceeds it *.
The medium rate of motion of the Ganges is lefs than three miles an haur in the dry months. In the wet feafon, and during the draining off the waters from the inundated lands, the current runs from five to fix miles an hour ; but there are inflances of its running feven, and even eight miles, in particular fituations, and under certain circumftances. I have an experiment of my own on record, in which my boat was carried 56 miles in eight hours ; and that againft fo frong a wind, that the boat had evidently no progrefive motion through the water.
When we confider, that the velocity of the fream is three miles in one feafon, and five or more in the other, on the fame defcent of four inches per mile; and, that the motion of the inundation is only half a mile per hour, on a much greater defcent; no farther

[^127]
## [ 261 ]

proof is required how fmall the proportion of velocity is, that the defcent communicates. It is then, to the impetus originating at the fpring head, or at the place where adventitious waters are poured, in, and fucceffively communicated to every part of the ftream, that we are principally to attribute the velocity, which is greater or leffer, according to the quantity of water poured in.

In common, there is found on one fide of the river an almoft perpendicular bank, more or lefs elevated above the fream, according to the feafon, and with deep water near it: and on the oppofite fide a bank, fhelving away fo gradually as to occafion fhallow water at fome diftance from the margin. This is more particularly the cafe in the moft winding parts of the river, becaule the very operation of winding produces the fteep and Chelving banks*: for the current is always ftrongeft on the external fide of the curve formed by the ferpentine courfe of the river; and its continual action on the banks either undermines them + , or wahes them down. In places where the current is remarkably rapid, or the foil uncommonly loofe, fuch tracts of land are fwept away in the courfe of one feafon, as would aftonifh thofe who have not been eye-witneffes to the magnitude and force of the mighty ftreams occafioned by the periadical rains of the tropical regions. This neceffarily produces a gradual change in the courfe of the river; what is loft on one fide being. gained on the other, by the mere operation of the Atream: for the fallen pieces of the bank diffolve quickly into muddy fand, which is hurried away by the current along the border of the channel, to the point from whence the river turns off to form the next reach;

[^128]where the ftream growing weak, it finds a retting place: and helpw to form a thelving bank, which commences at the point, and extends dowrwards, along the fide of the facceeding reach.

To account for the flacknefs' of the current at the point, it is meceffary to obferve, that the ftrongeit part of it, inftead of turning fhort round the point, 'preferves for fome time the direction given it by the lait fteep bank : and is accordingly thrown obliquely acrofs. the bed of the river to the bay on the oppofite frde, and purfues.its. courfe along it, till the intervention of another point again obliges it to change fides. See plate L .

In thofe few parts of the fiver that are ftraight, the banks undergothe leaft alteration*, as the curreht runs parallel to them: but the leaft inflection of couffe, has the effect of thtowing the current againft the bank; and if this happens in a part where the foil is compofed of loofe fand, it produces in time a ferpentine winding.

It is evident, that the repeated additions made to the fhelving bank before mentioned, become' in time an encroachment on the channel of the river; and this is again counter-balariced by the depredations made on the oppofite fleep bank, the fragments of whicheither bring about a repetition of the circumitances above recited, or form a bank or fhallow in the midft of the charinel. "Thus a fteep. and a fhelving bank are alternately formed in the crooked parts of the river (the fteep one being the indented fide, and the fhelving one the projecting); and thus, a continual fluctuation of courfe is induced in all the winding parts of the river; each meander having a perpetual tendency to deviate more and more from the line of the general courfe of the river', by eating deeper into the bays, and at the fame time adding to the points; till either the oppofite bays

[^129]Ineet, or the fream breaks through the narrow ifthmus, and reftores It temporary ftraightnefs to the channel.

Several of the windings of the Ganges and its branches are faft alpproaching to this ftate 3 . and in others, it actually exifts at prefent, The experience of thefe changes hould operate againft attempting sianals of any length, in the higher parts of the;country; and I s nuch doubt, if any, in the lower parts wopld long continue naviErable. During eleyen years of my refidence in Bengal, the outlet cr head of the Jellinghy river was gradually removed three quarters of a mile farther down : and by two furveys of a part of the aldjacent bank of the Ganges ${ }_{r}^{\prime}$ taken about the diftance of nine years $f_{\text {rom }}$ each other, it appeared that the breadth of an Englifh mile and $a_{1}$ balf had been taken awway. This is, howeser' the moft "rapid $x$ :hange that I have noticed; a mile in ten or twelve years being the ufual rate of incroachment, in places where the current ftrikes Twith the greateft force; namely, where two adijoining reaches iap1roach neareft to a sight angle. In fuch fituations it ngt anfre4uently excavates gulfs. * of confiderable length within the bank. 'Thefe gulfs are in the direction of the ftrongef parts of the ftream ; and are, in fact, the young fiootid (if I may fo exprefs myfelf) which $i_{n}$ time frike out and become branches of theriver: for we generally find them at thofof turnings that bave: the malleft anglest.

Two caufes, widely different from each othery occafion the tneandering caurfes of rivers; the one, the irregularity of the ground through which they rup, which obliges, them, to warides in queft ()f a declivity; the other, the loofenefs of the foil, whieh yields

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264 \\
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to the friction of the border' of the ftream. The meanders in the firf cafe, are, of courfe, as digreffive and irregular as the furface they are projected on: but, in the latter, they are fo far reducible to rule, that rivers of unequal bulk will, under fimilar circumftances, take a circuit to wind in, whofe extent is in proportion to their refpective breadths: for I have obferved, that when a branch of the Ganges is fallen fo low as to occupy only a part of its bed, it no longer continues in the hine of its old courfe; but works itfele a new channel, which winds from fide to fide acrofs the former one. I have oblerved too, that in twa fteams, of equal fize, that which has the floweft current has alfo the fmalleft windings: for as thefe (in the prefent cafe) are folely owing to the depredations made on the banks, by the force of the current; fo the extent of thefe depredations, or, in other words, the dimenfions of the windings, will be determined by the degree of force acting on the banks.

The windings of the Ganges in the plains, are, doubtlefs, owing to the loofenefs of the foil: and (I think) the proof of'it is, that they are perpetually changing; which thofe, originally induced by an inequality of furface, can feldom, or never do *.

I can eafily fuppofe, that if the Ganges was turned into 1 Atraight canal, cut through the ground it now traverfes in the mof winding parts of its courfe, its ftraightnefs would be of hort duration: Some yielding part of the bank, of that which happened to be the moft ftrongly afted on, would firft 'be corroded or diffolved: thus a bay or cavity would be formed in the fide of 'the bank. This begets an inflection of the current, which, falling obliquely on the fide of the bay, corrodes it inceffantly. When the current has pafled the innermoft part of the bay, it receives a new direction, and

[^131]is thrown obliquely towards the oppofite fide of the canal, depofiting in its way the matter excavated from the bay, and which begins to form a fhallow or bank contiguous to the border of the canal. Here then is the origin of fuch windings as owe their exiftence to the nature of the foil. The bay, fo corroded, in time becomes large, enough to give a new direction to the body of the canal: and the matter excavated from the bay, is fo difpofed as to affirt in throwing the currentragainft the oppofte bank; where a procefs; fimilar to that I have been defcribing, will be begun.

The aftion of the current on the bank will alfo have the effect of deepening the border of the channel rear it; and this again increafes the velocity of the current in that part. Thus would the canal gradually take a new form, till it became what the river now is. Even when the windings have lefiened the defcent one half; we ftill find the current too powerful for the banks to withfland it.

There are not wanting inftances of a total change of courfe in rome of the Bengal rivers*: The Cofa river (equal to the Rhine) once ran by Purneah, and joined the Gànges oppofite Rajemal. Its junction is now 45 miles higher up. Gour, the ancient capital of Bengal, food on the old bank of the Ganges: although its ruins are 4 or 5 miles from the prefent bank:

Appearances. favour very flrongly the opinion, that the Ganges had its former bed in the tract now occupied by the lakes and moraffes between Nattore and Jaffiergunge, ftriking out of its prefent courfe at Bauleah, and'paffing by Pootyah: With an equal degree of probability (favoured by tradition) we may trace its fuppofed courfe by Dacca, to a junction-with the Burrampooter or Megna near Fringybazar ; where the accumulation of two fuch mighty ftreams, probably fcooped out the prefent amazing bed of the Megna f. See plate II.

[^132]Mm
In:

In tracing the fea coaft of the delta, we find no lefs than eight openings; each of which, without hefitation, one pronounces to have been in its time the principal mouth of the Ganges, Nor is the occafional deviation of the principal branch, probably, the only caufe of fluctuation in the dimenfions of the delta. One obferves that the deltas of moft capital rivers (the tropical ones particularly) encroach upon the fea. Now, is not this owing to the mud and fand brought down by the rivers, and gradually depoited, from the remoteft ages down to the prefent time? The rivers, we know, are loaded with mud and fand at their entrance into the fea; and we alfo know, that the fea recovers its tranfparency at the diffance of twenty leagues from the coaft; which can only arife from the waters having precipitated their earthy particles within that fpace. The fand and mud banks at this time, extend twenty miles off fome of the iflands in the mouths of the Ganges and Burrampooter ; and rife in many places within a few feet of the furface. Some future gemeration will probably fee thefe banks rife above water, and fućceeding ones poffers and cultivate them! Next to earthquakes, perhaps the floods of the tropical rivers produce the quickeft alterations in the face of our globe. Extenfive iflands are formed in the channel of the Ganges, during an interval fat fhort of that of a man's life; fo that the whole procefs is completed in a period that falls within the compafs of his obferyation*. Spme of thefe illands, four or five miles in extent, are formed at the angular turnings of the river, and were originally large fand banks thrown up round the points (in the manner before defcribed) but afterwards infulated by breaches of the river, Others are formed in the ftraight parts of the river, and in the middle of the ftream; and owe their origin to fome obftruction lurking at the bottom. Whether this be the fragments of the river bank; a large tree. fwept down from it; or

[^133]
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a funken boat; it is fufficient for a foundation: and a heap of fand is quickly collected below it. This accumulates amazingly faft: in the courfe of a few years it peeps above water, and having now ufurped a confiderable portion'of'the channel, the river borrows on each fide to fupply the deficiency in its bed; and in fuch parts of the river we always find fteep banks on both fides *. Each periodical flood brings an addition of matter to this growing illand; increafing' it in height as well as extenfion, until its top is perfectly on a level with the banks that include it: and at-that period of its growth it has mould enough on it for the purpofes of cultivation, which is owing to the mud left on it when the waters fubfide, and is indeed a part of the economy which nature obferves in fertilizing the lands in general.

While the river is forming new illands in one part,' it is fivesping away old ones in other parts. In the progrefs of this deftructive operation, we have opportunities of oblerving, by means of the fections of the falling bank, the regular: diftribution of the feveral. flrata of fand and earths, lying above one another in the order in which they decreafe in gravity! As they can only owe this difpofition to the agency of the ftream that depofited them, it would appear, that thefe fubftances are fufpended at different heights in the Aream, according to their refpective gravities. We never find a Aratum of earth under one of fand; for the muddy particles float neareft the furface $t$. I have counted feven diftinct ftrata in a fection of one of thefe iflands. Indeed, not only the iflands, but moft of the river banks wear the fame appearance: for as the river is always changing its prefent bed, and verging towards the fite of fome former one now obliterated, this muft neceffarily be the cafe.

[^134]M. m 2

As a ftrong prefumptive proof of the wandering of the Ganges from the one fide of the delta to the other, I muft obferve, that there is no appearance of virgin earth between the Tipcrah Hills on: the eaft, and the province of Burdwan on the weft; nor on the north till we arrive at Dacca and Bauleah. In all the fections of the numerous creeks and rivers in the delta, nothing appears but fand and black mould in regular ftrata, till we arrive at the clay that forms the lower part of their beds. There is not any fubftance fo coarfe as gravel either in the delta or nearer the fea than 400 miles *, where a rocky point, a part of the bafe of the neighbouring hills, projects into the river: but out of the vicinity of the great rivers the foil is either red, yellow, or of a deep brown.

I come now to the particulars of the annual fwelling and overflowing of the Ganges $\dagger$.

It appears to owe its increafe as much to the rain water that falls in the mountains contiguous to its fource, and to the fources of the great northern rivers that fall into it , as to that which falls in the plains of Hindooftan; for it rifes fifteen feet and a half out of .thirty-two (the fum total of its rifing) by the latter end of June: and it is well known, that the rainy feafon does not begin in moft of the flat countries till about that time. In the mountains it begins early in $\ddagger$ April; and by the latter end of that month, when the rain water has reached Bengal, the rivers begin to rife, though by very flow degrees; for the increafe is only about an inch per

[^135]day for the frof fortnight. It then gradually augments to two and three inches before any quantity of rain falls in the flat countrics; and when the rain becomes general, the increafe on a medium is five inches per day. By the latter end of July all the lower parts of Bengal, contiguous to the Ganges and Burrampooter, are overflowed, and form an inundation of more than a hundred miles in width; nothing appearing but villages and trees; excepting very rarely the top of an elerated fpot (the artificial mound of fome deferted village) appearing like an inland.

The inundations in Bengal differ from thofe in Egypt in this particular, that the Nile owes its floods entirely to the rain-water that falls in the mountains near its fource; but the inundations in Bengal are as much occafioned by the rain that falls there, as by the waters of the Ganges; and as a proof of it, the lands in general are overflowed to a confiderable height long before the bed of the river is filled. It muft be remarked, that the ground adjacent to the river bank, to the extent of fome miles, is confiderably bigher than the reß of the country *, and ferves to feparate the waters of the inundation from thofe of the fiver until it overflows. This high ground is in fome feafons covered a foot or more; but the height of the inundation within, varies, of courfe, according to the irregularities of the ground, and is in fome places twelve feet.

Even when the inundation becomes general, the river fill fhews itfelf, as well by the grafs and reedson its banks, as by its rapid and muddy fream; for the water of the inundation acquires a blackifh

[^136]hue, by having been fo long ftagnant among grafs and other vegetables : nordoes it ever lofe this tinge, which is a proof of the prcdominancy of the rain water over that of the river; as the flow rate of motion of the inundation (which does not exceed half a mile per hour) is of the remarkable flatnefs of the country.

There are particular tracts of lands, which, from we namure of their culture, and feecies of productions, requires lefs moifture than others; and yet, by the lownefs of their fituation would remain too long inundated, were they not guarded by dikes or dams, from fo copious an inundation as would otherwife happen, from the great elevation of the furface of the river above them. Thefe dikes are kept up at an enormous expence; and yet do not always fucceed, for want of tenacity in the foil of which they are compofed. It is calculated that the length of thefe dikes collectively, amounts to more than a 1000 Englifh miles. Some of them, at the bafe, are equal to the thicknefs of an ordinary rampart. One particular branch of the Ganges, (navigable only during the rainy feafon, but then equal to the Thames at Chelfea) is, conducted between two of thefe dikes, for about 70 miles: and when full, the paffengers in the boats, look down on the adjacent country, as from an eminence.

During the fwoln ftate of the river, the tide totally lofes its effect of counteracting the ftream; and in a great meafure that of ebbing and flowing, except very near the fea. It is not uncommon for a Atrong wind, that blows up the river for any continuance, to fwell the waters two feet above the ordinary level at that feafon : and fuch accidents have occafioned the lofs of whole crops of rice ${ }^{*}$. A very tragical event happened at Luckipour + in $\mathbf{1 7}^{6} 3$, by a frong

[^137]
## [ 271 ]

gale of wind confpiring with a high fpring tide, at a feafon when the periodical flood was within a foot and half of its higheft pitch. It is faid that the waters rofe fix feet above the ordinary level. Certain it is, that the inhabitants of a confiderable diftrict, with their houres and cattle, were totally fwept away; and, to aggravate their diftrefs,' it happened in a part of the country which fcarce produces a fingle tree for a drowning man to efcape to.

Embarkations of every kind traverfe the inundation: thofe bound upwards, availing themfelves of a direct courfe and ftill water, at a feafon when every ftream rufhes like a torrent. The wind too, which at this feafon blows regularly from the fouth-eaft *, favours their progrefs; infomúch, that a voyage, which takes up nine or ten days by the courle of the river when confined within its banks, is now effected in fix. Hufbandry and grazing are both fufpended; and the peafant traverfes in his boat, thofe fields which in another fealon he was wont to plow; happy that the elevated fite of the river banks place the herbage they contain, within his reach, otherwife his cattle muft perih.

The following is a table of the gradual increafe of the Ganges and its branches, according to obfervations made at Jellinghy and Dacca.

At Jellinghy.


Ft. In.
2. 4
4. 6 56


143

- Athough in the gulf or bay of Bengal the monfoon blows from the S S Wand S W, yet in the eaftern and northern parts of Bengal it blows from the S E or E S E.

Thefe obfervations were made in a feafon, whien the waters rofe rather higher than ufual; fo that we may take 31 feet for the medium of the increafe.

It mult be obferved, that the Ganges rifes in a more confiderable degree than the northern rivers that communicate with it, in the lower parts of its courfe (the Burrampooter excepted) and this is evident by the different.circumftances that take place on the mixing of the waters of the Ganges and Teefta rivers, in the different feafons. The Teefta is a large river which runs almoft parallel to the Ganges, for near 1.50 miles. During the dry feafon, the waters of the Teefta run into thofe of the Ganges by two diftinct channels; fituated about 20 miles from each other; and a third channel at the fame time difcharges.itfelf into the Megna. But during the feafon of the floods, the Ganges runs into the Teefta, whore outlet is then confined to the channel that communicates with the Megna. This alone, is fufficient to thew how trifling the defcent of thefe rivers. muft be, whofe courfes' are thus regulated (not by the declivity of their beds, but) by their heights in refpect to each other; which, like the flux and reflux of the tide, have the effect of giving contrary directionst to the ftream, at different feafons.

The inundation is nearly at a ftand for fome days preceding the middle of Auguft, when it begins to run off; for although great quantities of rain fall in the flat countries; daring Auguft and September, yet, by a partial ceffation of the rains in the mountains, there happens a deficiency in the fupplies neceffary to keep up the inundation*. The quantity of the daily decreafe of the river is nearly in the following proportion; during the latter half of Auguft $_{2}$ and all September, from three to four inches; from Septem-

[^138]
## [ 273 ]

ber to the end of November, it gradually leffens from three inches to. an inch and a half; and from November to the latter end of April, it is:only half an inch per day at a medium. Thefe proportions mutt be underftood to relate to fuch parts of the river as ate removed from the influence of the tides; of which more will be faid prefently. The decreafe of the inundation does not always keep pace with that of the river, by reafon of the height of the banks; but after the beginning of October, when the rain has nearly ceafed, the remainder: of the inundation goes off quickly by evaporation, leaving the lands higfily manured, and in a fate fit to receive the feed, after the fimple operation of plowing.

There is a circumftance attending the increafe of the Gatiges, and which I believe ${ }_{2}$. is little known or attended to; becaufe few people have made experiments on the heights to which the periodical flood rifes in different places. The circumftance I allude to, is, the difference of the quantity of the increafe (as expreffed in the foregoing table) in places more or lefs remote from the fea. It is a fact, confirmed by repeated experiments, that from about the place. where the tide commences, to the fea, the height of the periodical. increafe diminighes gradually, until it totally difappears ati the point of confluence. Indeed, this is perfectly conformable to the known laws of fluids: the ocean preferves the fame level at all feafons (under fimilar circumftances of tide) and neceffitily influences the level of all the waters that communicate with it, unlefs precipitated in the form of a cataract. Could we fuppofe, for a moment, that the increafed column of water, of 31 feet perpendicular, was continued all the way to the fea, by fome preternatural agency:-whenever that agency was removed, the head of the column would diffureitfelf over the ocean, and the remaining part would follow, from. as far back as the influence of the ocean extended; forming a Ilope, whofe perpendicular height would be $3^{1}$ feet. This is the precife ftate in which we find it. At the point of junction with the
fea, the height is the fame in both feafons at equal times of the tide. At Lackipour there is a difference of about fix feet between the heights in the different feafons; at Dacca, and places adjacent, 14; and at Cuftee, $3^{1}$ feet. Here then is a regular flope; for the diftances between the places bear a proportion to the refpective heights. - This llope muft add to the rapidity of the fream; for, fuppofing the defcent to have been originally four inches per mile, this will increafe it to about five and a half. Cuftee is about 240 miles from the fea, by the courfe of the river; and the furface of the river there, during the dry feafon, is about 80 feet above the level of the fea at high water *. Thus far does the ocean manifeft its dominion in both feafons: in the one by the ebbing and flowing of its tides; and in the other by deprefing the periodical flood, till the furface of it coincides as nearly with its own, as the defcent of the channel of the river will admit $\dagger$.

Similar circumftances take place in the Jellinghy, Hoogly, and Burrampooter rivers; and, I fuppofe, in all others that are fubject either to periodical or occafional fwellings.

Not only does the flood diminifh near the fea, but the river banks diminifh in the fame proportion; fo that in the dry feafon the height of the periodical flood may be known by that of the bank.

I am aware of an objection that may be made to the above folution; which is, that the lownefs of the banks in places near the fea, is the true reafon why the floods do not attain fo confiderable a

[^139]height
height, as in places farther removed from it, and where the banks are high; for that the river, wanting a bank to confine it, diffufes itfelf over the furface of the country. In anfwer to this, I hall obferve, that it is proved by experiment, that at any given time, the quantity of the increafe in different places, bears a juft proportion to the fum total of the increafe in each place refpectively: or, in other words, that when the river has rifen three feet at Dacca, where the whole rifing is about 14 feet; it will have rofe upwards of fix feet and a half at Cuftee, where it rifes 3 I feet in all.

The quantity of water difcharged by the Ganges, in one fecond of time, during the dry feafon, is 80,000 cubic feet; but the river, when full, having thrice the volume of water in it that it had at the time when the experiment was made; and its motion being alfo accelerated in the proportion of 5 to 3 ; the quantity difcharged in a fecond at that feafon is 405,000 cubic feet. If we take the medium the whole year through, it will be nearly. 180,000 cubic feet in a fecond.

THE BURRAMPOoter, which has its fource from the oppofite fide of the fame mountains that give rife to the Ganges, firf takes its courfe eaftward (or directly oppofite to that of the Ganges) through the country of Thibet, where it:is named Sanpoo or Zanciu, which bears the fame interpretation as the Gonga of Hindooftan;: namely, The River. The courfe of it through Thibet; as givenby Father Du H ${ }_{\text {Hilde, }}$ and formed into a map by Mr. DíAnvitie, though fufficiently exact for the purpofes of general geography; is not particular enough to afcertain the precife length of its. courfe, After winding with a rapid current through Thibet, it walhes the

## [ 276 ]

border of the territory of Laffa (in which is the refidence of the grand Lama) and then deviating from an eaft to a fouth-eaft courfe, it approaches within 220 miles of Yunan, the wefterinmoft province of China. Here it appears, as if undetermined whether to attempt a paffage to the fea by the Gulf of Siam, or by that of Bengal ; but feemingly determining on the latter, it turns fuddenly to the weft through Affam, and enters Bengal on the northeaft.. I have not been able to learn the exact place where it changes its name; but as the people of Affam call it Burrampoot, it would appear, that it takes this dame on its entering Affam. After its entry into Bengal, it makes a circuit: round the weftern point of the Garrow Mountains; and then, altering its courfe to fouth, it meets the Ganges about 40 miles from the fea.

Father Du Halde expreffes his doubts concerning the courfe that the Sanpoo takes after leaving Thibet, and only fuppofes gene-, rally that it falls into the gulf of Bengal. M. D'Anville, his geographer, not without reafon, fuppofed the Sanpoo and Ava river to be the fame ; being juftified by the information which his materials afforded him: for the Burrampooter was reprefented to him, as one of the inferior ftreams that contributed. its waters to the Ganges, and not as its equal or fuperior; and this was fufficient to direct his refearches, after the mouth of the Sanpoo river, to fome other quarter, The Ava river,-as well, from, its bulk; as the bent of its courfe fort fome hundred miles above its mouth, appeared to him to be: a continuation of the rivering queftion : andidit was, accordingly defcribed as fuch in bis maps, the authority, of which was jufty: eefteemed as decifive, and, till the year 1765 , the Burrampooter, 7s a capital riveri was, unknown in Europe:

- On trating this raver in 1765 , I was nolefs furprized, at finding it rather lagget than the Gapges than at: its courfe previousc to its, entering Bengaletit This 1 found to fbo from the eaft; althqugh all

expected difcovery foon led to enquiries, which furnihed me with an account of its general courfe to within 100 miles of the placewere Da Halde left the Sanpoo. I could no longer doubt, that the Burrampooter and Sappoo were one and the fame river: and to: this was added the pofitive affurances of the Affiamers," That their "river came from the north-weft, through the Bootan mountains." And to place it beyond a doubt, that the Sanpoo river is not the. farne with the rivẹ of Ava, but that this laft is the great Nou-Kian of Yunan; I have in my poffeffion a mannufcript draught of the Ava river, to within if 50 miles of the place' where Du Halde leaves the Nou Kian, in its courfe, towards Ava ; together with very authentic information that this river (named Irabattey by the people of Ava) is navigable from the city of Ava into the province of Yunan' in China*.

The Burrampooter, during a courfe of 400 miles through Bengal, bears fo intimatee a refemblance to the Ganges, except in one particular, that one-defcription may ferve for boths. The exception. I mean, is that during the laft 60 miles pefore its junction with the Ganges, it forms a ftream which is regularly from four to five miles wide, and but for its frehhnefs might pafs for an arm of the feaw Common defcription fails in an attempt to convey an adequate idea: of the grandeur of this magnificent object; for $\%$.
$\therefore$ Scarce the mufe
Dares, ftretch her wing ooer thịs enotrmous mals
Of rulhing water'; to whole dread expante,
Continuouts depth, and wond rous length of courfe".
Out floods are rills.

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{ }^{\text {' THPMson's Seafons. }}
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## [ 278 ].

I have already endeavoured to account for the fingular breadth of the Megna, by fuppofing that the Ganges once joined it where the Iffamutty now does; and that their joint waters fcooped out its prefent bed. The prefent junction of thefe two mighty rivers below Luckipour, produces a body of running frefh water, hardly to be equalled in the old hemifphere; and, perhaps, not exceeded in the new. It now forms a gulf interfperfed with iflands, fome of whicls rival, in fize and fertility, our inle of Wight. The water at ordinary times is hardly brackifh at the extremities of thefe iflands; and, in the rainy feafon, the fea (or at leaft the furface of it) is perfectly frefh to the diftance of many leagues out.

The bore (which is known to be a fudden and abrupt influx of the tide into a river or narrow ftrait) prevails in the principal branches of the Ganges, and in the Megna; but the Hoogly river, and the paffages between the iflands and fands fituated in the gulf, formed by the confluence of the Ganges and Megna, are more fubiect to it than the other rivers. This may be owing partly, to their having greater emboucbures in proportion to their channels, than the others have, by which means a larger proportion of tide is forced through a paffage comparatively fmaller, and partly, to there being no capital openings near them, to draw off any confiderable portion of the accumulating tides In the Hoogly or Calcutta river, the bore commences at Hoogly Point (the place where the river firft contracts itfelf) and is perceptible above Hoogly town; and fo quick is its motion, that it hardly employs four hours in travelling from one to the other, although the diftance is near 70 miles. At Calcutta, it fometimes occafions an inftantaneous rife of five feet: and both here, and in every other part of its track, the boats, on its approach, immediately quit the fhore, and make for fafety to the. middle of the river.

In the channels, between the illands in the mouth of the Megna, \&ic, the height of the bore is faid to exceed twelve feet ; and is fo-

## [ 279 ]

terrific in its appearance, and dangerous in its confequences, that no boat will venture to pafs at fpring tide. After the tide is fairly paft the illands, no veltige of a bore is feen, which may be owing to the great width of the Megna, in comparifon with the paffages between the illands; but the effects of it are vifible enough, by the fudden: rifing of the tides.

THE sivers are in a tranquil fate, from the time of the change of the monfoon in October, to the middle of March; when the nortbweffers begin in the eaftern parts of Bengal (though later as we advance weftwards) and may be expected once in three or four days until the commencement of the fainy feafon. Thefe northwefters, which have their denomination from the quarter they ufually originate in, are the moft formidable enemies that are met with in this inland navigation; they being fudden and violent fqualls of wind and rain; and though of no long duration, are often attended with fatal effects, if not carefully guarded againt; whole fleets of trading-boats having been funk by them, almoft inftantaneaufly. They are mofe frequent in the eaftern, than in the weftern part of Bengal; and happen oftner towards the clofe of the day, than at any other time. As they are indicated fome hours before they arrive, by the rifing and very fingular appearance of the clouds, the traveller has commonly time enough to feek a place of fhelter. It is in the great rivers alone, that they are fo truely formidable : and that about the latter end of May, and beginning of June, when the rivers are much increafed in width.

After the commencement of the rainy feafon (which period varies in different parts, from the middle, to the end of, June) tempertuous weather mult be occafionally expected. Places of ihelter are more

## [1 280 ]

common at this feafon, than at any other, by the filling of the creeks and inlets, as the river increafes: and, on the other hand; the bad weather, when it happens, is of longer continuance than during the feafon of the northwefters. The rivers being now fpread to the breadth of feveral miles, a ftrong wind has the power of raifing large waves on them, and particularly when blowing in a contrary direction to the rapid parts of the fream; which at fuch times fhould be avoided, as much from motives of conveniency, as of fafety.

During the long interval between the end of the rainy feafon, and the beginning of the northwefters, one proceeds in fecurity with refpect to weather, and has only to obferve a common degree of attention to the piloting the boat clear of fhallows, and fumps of trees. Thefe will generally be avoided by keeping neareft to the fide that. has the fteep bank; but not fo near, as to be within the verge of its inferior flope. This fleep bank (fee page 261) has the deepeit water, and the ftrongeft current near it; and is therefore, on both accounts, the proper fide to keep on, when going down with the ftream; as its rate of motion muft principally determine that of the boat; for the motion acquired by the oars of a large budgerowe * hardly exceeds 8 miles a day, at ordinary times.

From the beginning of November to the middle or latter end of May, the ufual rate of going woith the fream, is forty miles in a day of 12 hours; and during the reft of the year, from 50 to 70 miles. The current is ftrongef while the waters of the intudation are draining off; which happens in part of Auguft and September.

In many of the fhallow rivers, the current is exceedingly flow during the dry months ; infomuch, that the track-rope is frequently ufed in going downwards.

[^141]
## [281]

In towing againft the fream, the fteep fide is alfo generally preferred, on account of the depth of water; although the current runs fo much fronger there, than on the oppofite fide. On there occafions, one ought to be provided with a veèry long träck-rope, as well to avoid the falling pieces of the fteep bank on the one fide, as the fhallow water on the other; when it becomes neceflary to change fides, through the badnefs of the tracking ground. .The anchor fhould always be kept ready for dropping, in cafe the track-rope breaks.

Seventeen; to twenty miles a day, according to the ground, and the number of 'impediments, is the greateft diftance that a large budgerow can be towed againft the ftream, during the fair feafon; and to accomplify this, the boat muft be drawn at the rate of four miles and a half per hour, through the water, for 12 hours. When the waters are high, a greater progrefs will be made, notwithftanding the increafed velocity of the current ; becaufe the filling of the river-bed gives many opportunities of cutting off angles. and turnings; and fometimes even large windings, by going through creeks. And as the wind at this feafon, blows upwards in moft of the rivers, opportunities of ufing the fail frequently occur.

In the very fingular navigation aerofs the Fifels, or inundation, between Dacca and Nattore, \&c. in which rod miles or more, are filled on nearly a ftraight courfe, leaving the villages and groves to the right and left; little difficulty occurs, unlefs the wind fhould fail : for while it continues to blow, it is always fair, during the feafon of the inundation. The current prefents only a trifing obftacle; fince its motion (which is nearly parallel to the courfe of the Ganges) is feldom half a mile per hour.

The feafon of the nortbwefters, is, above all others, that which requires the moft attention and care. Should one of thofe fqualls. approach, and no creek or inlet offer for fhelter, when in the wide

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rivers;

## [ 282 ]

rivers; the fteep bank, if not in a crumbling ftate *, Mould always be preferred to the flat one, whether it lie to windward or leeward. If the bank be in a crumbling ftate, a retreat to a firm part of it, (which is moft likely to be found in the ftraighteft parts of the river) hould be attempted. But if this cannot be done, the flat fide muft be taken up with; and if it be a lee-flore, the anchor hould be thrown out to prevent driving on it. In thefe cafes the maft is always fuppofed to be ftruck; and provided this be done, and the cargo judicioully difpofed, it is probable that a well-conftructed budgerow will be in no danger of overfetting by the mere force of the wind alone : although by an unfortunate, or an ill-chofen fituation, it may be fo much expofed to the waves, as to be filled and funk by them. At this feafon, every traveller thould be particularly atténtive to the nature of the river-bank, as well as to the appearance of the horizon, during the laft hours of the afternoon; and if he finds a place of fhelter, he fhould ftop for the night : and not hefitate about lofing time, which may be retrieved the next morning, by fetting out fo much earlier. The boatmen work with much more alacrity on this plan; becaufe they have day-light before them to fecure their boat, provide fewel, and drefs and eat their provifions.

As the water is always either rifing or falling within the beds of the rivers, it is impoffible for a map to affign precifely where a place of chelter fhall be found, at any giyen time. Thus much, however, may be concluded, that in a place where the junction of two confiderable channels is effected when the rivers are up, there will be an inlet, or deep. bay, throughout the dry feafon, although one of the channels fhould be dried up. The waters (as we have faid before) are rifing from the latter end of April, to the middle of Auguft: and falling during the reft of the year.

The navigation through the Woods, or Sunderbunds, is effected chiefly by means of the tide. In the large rivers, or thofe

[^142]
## [ 283 ]

that communicate immediately with the fea, the circumftances of the tide are more analagous to the ordinary courfe of $i t$, than in the fmall lateral channels which ferves to connect the great rivers together; the motion of the tide in thofe fmall channels, being regulated by the pofitions of their openings into the rivers. For if two rivers of equal bed and parallel courfe, are united by a lateral or crofs canal, the flood tide will enter that opening of the canal which lies neareft to the fea, and run through it into the other river ; and the ebb tide vice verfa. But as the arrival of the tide depends on the capacity and formation of the rivers, as well as on the abfolute diftance it has to run, it will not be an eafy matter to determine its direction at any given time, even with the help of a map.

There are two diftinct paffages through the Sunderbunds, the one named the fouthern or Sunderbund Passage, the other the Baliagot Passage. The firf is the fartheft about, and leads through the deepeft and wideft rivers; and is of courfe, the moft expofed during tempeftuous weather. It opens into the Calcutta river, thro' Channel-creek *, about 65 miles below the town. The Baliagot Paffage opens into a lake on the eaft fide of Calcutta; from whence, within a very few years, a fmall canal has been cut to join the lake with the river.

Thefe paffages prefent to the imagination both a grand and a curious fpectacle : a navigation of more than 200 miles through $a$ foreft, divided into numberlefs illands by a continued labyrinth of channels, fo various in point of width that a veffel has at one time her mafts almoft entangled in the trees : and at another, fails uninterruptedly on a capacious river, beautifully fkirted with woods, and affording a vifta of many miles each way. The water is every where faIt; and the whole extent of the foreft abandoned to wild beafts: fo that the fhore is feldom vifited but in cafes of neceeflity; exceept

[^143]by the wood-cutters. and falt-makers whofe "dreadful trade" is exercifed at the conftant peril of their lives: for the tygers not only appear on the margin in queft of prey, but often, in the night time, fwim to the boats that lie' at anchor in the middle of the river.

Thefe paffages are ufed during the whole year, by thofe who go: to and from the lower parts of the Ganges and Calcutta, \&cc: and during the feafon when the weftern branch of the Ganges is almont dried up, the whole trate of Bengal (the weftern' provinces excepted): paffes either by Channel-creek, or Baliagot, but chiefly by the former ; fome articles of the Company's cargoes being brought more than 900 miles by water, at this feafon.

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\text { Explanation of PLATE, } \mathrm{N}^{\circ} \text {. I. }
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A. A. A. Steep Banks, corroded by the current; the fragments of which are depofited, and form the Banks B. B. B.
C. A fand Bank, accumulating to an Illand. This once joined to $D$; till infulated by a breach of the river.
E. An Illand, formed and inhabited. This alfo was a fand-bank, thrown up round the point $F$.
G. An Illand aecumulating in the midft of the Channel.

H . The line of the ftrongeft current.
I. A Gulf occafioned by the force of the current, from the oppofite fide, friking againft the Bank : the origin of a future branch. iffuing from the great river. In a courfe of time, the firft reach of it becomes retrogade to the courfe of the river (fee note, page ${ }^{26} 3$ ) as at K and L .
N. B. The fection of the Branch of the Ganges is exactly fimilar to that of the Ganges itfelf, except in the article of width.





## P O S T S C R I P T.

## Correction of the Geography of the Indus, and its Delta, $\mathscr{E}^{\circ} c$.

SIN CE the Memoir was printed, fome better information refpecting the country of Sindy, and the river Sinde * (or Indus) than what appears in page 80, has been moft obligingly communicated by a perfon of character, who refided fome time in that country, in the fervice of the Eaft India Company. The delta, and courfe of the river, have in confequence, been corrected in the map: but the form of the coaft has undergone no change, although the pofition of it, has ; for Ritchel and Cape Monze are removed feveral miles further to the fouth, while their former diftance from Jigat Point is preferved. Cape Monze now ftands in lat. $24^{\circ} 55^{\prime}$, lon. $65^{\circ}, 4^{\prime}$ : Ritchel, in lat. $24^{\circ} 14^{\prime}$ (it was $24^{\circ} 12^{\prime}$ by Capt. Scott's -obfervations) and the mouth of Larry-Bunder river, which was the principal channel of the Indus, during the laft century, and early in the prefent one, is in lat. $24^{\circ} 44^{\prime}$; being within one minute of the parallel affigned it, by the India pilot.

The city of Tatta, the capital of the province of Sindy, and fuppofed to be near the fite of, the Pattala $\dagger$ of the ancients, is fituated, according to the idea of the abovementioned gentleman, about $3^{8} \mathrm{G}$. miles to the north of Ritchel, and 50 to the eaft of

[^144]it: fo that it ought to be in lat. $24^{\circ} 50^{\prime}$, lon. $67^{\circ} 37^{\prime}$; and about 125 miles from the fea, by the courfe of the river *. According to M . Thevenot, it is three days journey from Larry-Bunder town; which according to Capt. Hamilton, is 5 or 6 leagues from the fea. M. Thevenot's 3 days journey may be taken at 54 G. miles of horizontal diftance; and the whole diftance of Tatta, from the mouth of Larry-Bunder river, at about 68 G . miles: and this does not difagree with the account given above.
. According to a MS. itinerary (kept by N. Whittington, no date to it) Tatta is about 180 coffes from Radimpour on the Puddar river: and 228 from Amedabad, pafling through Radimpour. This laft town is placed in the new map, chiefly on the authority of Mr. Hornby's MS. map of Guzerat, mentioned in page 149: and 180 coffes, laid off from it, would place Tatta about 22 G. miles further to the weft, than the pofition affigned it above, provided that the general direction of the road, was fraight: but it appears by the ideas of Janfen and Blaeu, who have feverally defribed this road, that it berrds greatly to the fouth; and therefore will accord very well with the above data: and it may be concluded, on the whole, that the longitudes of Tatta and of Cape Monze, are not far from the truth. The route in queftion, goes by the yillage of Negar-Parkar, and by the town of Nuraquimire; and through part of the territory of Cutch: it crofles the great fandy defert alfo.

It is not to be expected that any particular account of the number and pofitions of the feveral branches and mouths of the Indus, fhould exift, unlefs a fürvey of them had previounly been made. All the information that I have been able to obtain on the fubject,

[^145]
## $\left[\begin{array}{ll}{[287} & 1\end{array}\right.$

refpects three of them only; and is as follows. About 170 miles from the fea, by the courfe of the river, the Indus divides into two branches; of which the wefternmoft is by much the largeft. This branch, after a courfe of about 50 miles, to the S W , divides into two more; the finalleft of which runs on a W S W courfe, to Larry-Bunder, and Darraway : and the largeft, taking the name of the Ritchel river, runs on a more fouthwardly courfe to the town or village of Ritchel, on the fea coaft. (Tatta is fituated within this inferior delta, and about five miles below the upper angle of it.) The third branch remains to be mentioned, and is that which bounds the eaftern fide of the fuperior delta; feparating as is faid above, at about 170 miles from the fea. It is fmaller than the Ritchel river, but larger than that of Larry-Bunder; and by circumftances, and by report, it opens into the mouth of the gulf of Cutch, nearly oppofite to Jigat Point ; its courfe being fomewhat to the eaftward of fouth.

From thefe data, together with the aid of the chart of the coaft, it may be collected, that the delta of the Indus is about 150 Britilh miles in length, along the fea coaft; and about 115 in depth, from the place of feparation of the fuperior branches of the river, to the moft prominent point of the fea coaft. Arrian (after Nearchus) reckons the firft diftance 1800* ftadia; and Pliny 220 Roman miles : that is, he reckoned about 8 of thofe ftades to as mile.

The lower part of this delta is interfected by rivers and creeks, in almoft every direction, like the delta of the Ganges : but unlike that, it has no trees on it ; the dry parts being covered with brulhwood; and the remainder, by much the greateft part, being noifome fwamps, or muddy lakes. A minaret, at the mouth of Ritchel river, ferves for a mark for the road, which, from the: flatnefs and famenefs of the appearance of the coaft, could not other-

[^146]wife be difcriminated. The upper part of the delta is well cultivated, and yields abundance of rice.

From the ideas generally entertained concerning the nature, and treatment of camels, it would not be expected that this delta, and efpecially that part of it, neareft to the fea, fhould be fet apart for the breeding of thofe animals. It is, however the cafe; and the tender parts of the bruhh-wood ferve them for fodder.

It is a remarkable circumflance that the tide fhould not be vifi-, ble in this river, at a gteater diftance than 60 or 65 miles from the fea. The bores are high and dangerous in the mouths of the river. (See the Introduction page xxiv.)

The breadth of the Ritchel branch is eftimated at one mile, juft above the tide: and at Tatta, at only half a mile *. It is certain that the Indus is very confiderably lefs than the Ganges. The velocity of its current, is eftimated at 4 miles per hour, in the dry feafon; which I fhould fuppofe to be over-rated, unlefs the declivity be much more than I have an idea of: though indeed, the fhort courfe of the tide, upwards, feems to require fome fuch caufe.

The province of Sindy in many particulars of foil and climate, and in the general appearance of its furface, refembles Egypt: the lower part of it being compofed of rich vegetable mould, and extended into a.wide delta ; while the upper part of it, is a narrow nlip of country, confined on one fide by a ridge, or ridges of mountains, and on the other by a fandy defert; the river Indus, equal at leaft to the Nile, winding, through the midft of this level valley, and annually overflowing it. During great part of the SW monfoon, or at leaft in the months of July, Auguft, and part of September, which is the rainy feafon in moft other parts of India, the atmofphere, is here generally. clouded, but no rain falls, except very near to the fea. Indeed very few fhowers fall during the

[^147]
## [ 289 ]

whole year. Capt. Hamilton fays, that when he vifited Tatta, no rain had fallen for 3 years before. Owing to this, and to the neighbourhood of the fandy deferts, which bound it on the eaft, and on the north-weft, the heats are fo violent, and the winds from thofe quarters fo pernicious, that the houfes are contrived fo as to be occafionally ventilated by means of apertures on the tops of them, refembling the funnels of fmall chimnies. When the hot winds prevail, the windows are clofely thut, by which the hotteft part of the current of air (that neareft the furface, of courfe) is excluded : and a cooler part, becaufe more elevated, defcends into the houfe, through the funnels. By this means, alfo, vaft clouds of duft are excluded, the entry of which alone would be fufficient to render the houfes uninhabitable. The roofs are compofed of thick layers of earth, inftead of terraces. Few countries are more unwholfome to European conftitutions: particularly the lower part of the -delta.

Sindy extends along the courre of the Indus from its embouchure to Behker or Bhakor on the frontiers of Moultan; and may be reckoned at leaft 3.00 B. miles in length, that way. Its breadth is yery irregular: it may be about 160 miles in the wideft part: On the NE, lie the territories of the Seiks; and, on the north, thofe of the King of Candahar ; on the weft is Makran *, a province of Perfia, whofe Prince is tributary to the King of Candahar. A fandy defert bounds Sindy on the eaft, and extends the whole way from the territory of Cutch, to the confines of Moultan; being near 550 B. milẹ in length, and from 100 to $\$ 50$ wide. P.Wendell in his account of the Rajpoot'ș country (or Rajpootana) fays, that the country begins to grow fandy, immediately on the weft of Agimere : fo that the defert muft be exceedingly wide in that part. This is the fandy defert mentioned by Herodotus. See page xxii

[^148]
## [ 290 ]

of the Introduction. The fort of Ammercot, the retreat of the Emperor Humaioon, and the birth place of his fon Acbar (page lvii) is fituated within this defert. In the Ayin Acbaree, it is claffed as belonging to the Nufferpour divifion, of the province of Sindy : Ferifhta reckons it about 100 coffes from Tatta. It may reafonably be fuppofed that this defert contains many habitable tracts or iflands, within it, like the OAsEs* of the Lybian deferts.

The city of Tatta, the pofition of which we have defcribed above, was, in the laft century, very extenfive and populous, and was a place of great trade ; poffeffing manufactures of filk, carmania wool, and cotton: and was alfo celebrated for its cabinet ware. Little of thefe now remain; and the limits of the city are very much eircumfcribed. On the fhores of the Indus, above the delta, confiderable quantities of faltpetre are made: and within the hilly tract, which commences about three miles on the NW of Tatta; are found mines of iron, and falt. The ruins of a city, fuppofed to be Braminabad, lie within 4 miles of Tatta.

The river Indus and its bratiches, admit of an uninterrupted navigation from Tatta to Moultan, Lahore, and Cafhmere, for veffels of near 200 tons; and a very extenfive trade was carried on between thofe places, in the time of Aurungzebe: but at prefent yery little of this trade remains, owing to a bad government in Sindy; and probably to the hoftile difpofition of the Seiks, the prefent poffeffors of Moultan and Lahore. Capt. Hamilton fays that boats came from Lahore to Tatta, in 12 days. Had Ferofe's canal been completed, there twould have been an inland navigation from Tatta to Bengal, and Affam. (See page 72.)

The reader will recollect that Nadir-Shah, im s739, obtained a ceffion of the province of Sindy, as well as the reft of the Indian provinces, lying on the weft of the Indus: and he even vifited

[^149]
## [ 291 ]

Tatta. Abdalla, when he feized on the provinces, which compofe his prefent empire, retained the fovereignty of Sindy alfo: and the Prince of this province, is accordingly, tributary to the prefent King of Candahar, Timur Shah ${ }^{*}$. The Prince is a Mahomedan, and of Abaffynian extraction: his ufual place of refidence is at the fort of Hydrabad, fituated on the Indus, not far above the head of the delta; and in the neighbourhood of the city of Nufierpour. The Hindoos, who were the original inhabitants of Sindy, and were reckoned to outnumber the Mahomedans, in the proportion of 10 to r , in Capt. Hamilton's time, are treated with great rigour by their Mahomedan Governors; and are not permitted to erect any pagodas, or other places of worfhip: and this feverity drives valt numbers of them into other countries.

The gentleman from whom $\mathbf{I}$ had my information concerning the delta of the Indus, \&cc. went up the Indus as far as the city of Bhakor (or Behker) which is about two-thirds of the way to Moultan. He obferved the moveable towns or villages on the banks of the river (noticed by Nearchus, and the Ayin Acbaree: fee Introdiuttion page $x \times x$ ). Some of thefe are the habitations of fifhermen, and others of graziers: and they are conftantly changing their pofitions like a camp. Few rivers abound more with fifh than the Indus does; and among thefe, are fome very delicious forts.

Among the various tribes, that inhabit the hilly tracts bordering on the weftern fide of the Indus, there is according to my friend's account, one of the name of Nomurdy. They are of the Mahomedars religion; are freebooters, and very troublefome to the villagers, and travellers. The Ayin Acbaree alfo takes particular notice of this tribe; and ftates its ftrength to be 7000 infantry, and 300 horfemen (about the year 1560). This being a part of the tract

[^150]named Indo-Scythia by the ancients, a doubt arifes whether they may not be the defcendants of the Scythian Nomades; if the Scythians on the borders of Mount Imaus, did really call themfelves by that name; and that it was not a term applied to them by the Greeks*, alone. It may alfo be a queftion whether the graziers abovementioned, may not have derived their cuftom of moving their habitations, from Scythian anceltors : for the cuftom, as far as I know, does not prevail in the reft of India.

The upper part of the courfe of the Indus, is taken from M. D'Anville's map of Afia; as I know of no better authority. The towns on its banks are taken chiefly from the itinerary, mentioned in page 68; as is alfo the point of conflux of the Setlege (or Suttuluz) with the Indus. The latitude of Behker is given at $27^{\circ} 12^{\prime}$ in this itinerary, which I have corrected to $27^{\circ} 32^{\prime}$; for reafons given in pages 68 and 80 . Finding Hajykan mentioned as one of the diftricts belonging to Sindy, in the Ayin Acbaree, and it being very clear that a large province of the fame name, lies on the weft of the Indus oppofite to Moultan, I can no otherwife reconcile thefe two.accounts, than by fuppofing that Hajykan extends fouthward, along the Indus, until it meets the borders of Sindy; and that a fmall part of it was fubject to Sindy. In this cafe, the prosince of Behker muft be confined chiefly to the eaft fide of the Indus. No part of Hajykani is reckoned to belong either to Moultan or Candahar ; in the Ayin Acbaree.

Cutch, is a territory of confiderable extent, fituated on the foutheaft of Sindy; the eaftern branch of the Indus feparating the two

[^151]
## [ 293 ]

countries. It extends along the northerri coaft of the gulf of Cutch, and is reparated from Guzerat, by the Puddar river, or one of its branches. The prefent capital; and refidence of its Rajah, is Boodge-boodge; and appears to be the place named Booz in Mr. Hornby's map, where it is placed about 34 G. miles to the eaftward or ESE of the eaftern branch of the Indus. Cutch is compofed chiefly of hills, woods, and fandy wilds: and we are utterly ignorant of ány particulars relating to thee interior part of it. The mouths of feveral rivers appear in the map of its coaft: and the ancient maps defcribe the Puddar river as difcharging itfelf into the gulf of Cutch,' through thefe openings. It is poffible that the river formed by the Caggar and other Itreams, may difcharge itfelf by one or more of thefe openings; unlefs it lofes'itfelf in the fands of the defert, which borders on the north of Cutch.

On the fouth coaft of the gulf of Cutch is a diftrict inhabited by a piratical tribe named Sangarıans, who cruife for merchant Thips; as far to the weft as the entrance of the gulf of Perfià. The capital of this Itate, is Nonagur; and Bate. (or Bait) and Aramroy, are its principal ports. The Ayin Acbatee takes notice of the founding of Noanagur, by a Rajah who was driven out of Cutch, about 280 years ago: and fays that the territory in which it is fituated, is named Littte Cuitch". "No mention is made of Sangarians, in the fame book: nor of any piracies being committed by the people of Noanagur.

Nearchus names certain parts of the country between the mouth of the Indus and the river Arabius, Sangada and Saranga; but the traCt was too confined, to be the abode öf a nătion.' 'M. D'Anville fuppofes that the country of Sangada*, was the lame with the modern Sangara: if -fo, the 'Sangariànis muft firft have 'removed from the weftern, to the eallern fide, of the Indus; and afterwards
muft alfo have croffed the gulf of Cutch. The latter fact, feems verified by the Ayin Acbaree.

I cannot omit to obferve, in this place, how exactly the pofition and defcription of the haven, named by Nearchus, the port of Alexander ; and which had an ifland near it, named Crocola; agrees with that of Crotchey: and proves inconteftibly, by the circumftance of the proximity of the mountains to the fea coaft, when the fleet had advanced only 150 ftadia from the mouth of the Indus, that Nearchus failed out of the weftern branch of that river. However, one might conclude, from Arrian's account of Alexander's voyage down the two branches below Pattala, that he fixed on the eafternmoft branch, for Nearchus's fleet to proceed through, to the ocean; as Arrian calls it the left branch: but the circumftance of Alexander's landing, with a party of borfe, and proceeding three days along the coaft, in the direction that his fleet was to fail, that is, weftward, overthrows fuch a fuppofition entirely: for no one will fuppofe that he chofe to march a party of horfe three days, along the coaft of the delta, where he muft have been continually interrupted by deep rivers and creeks.

Correction of the Coast of Orissa, in the Map.
THE arrival of Capt. Ritchie in England, has enabled me to correct that part of the coalt, between the mouth of the Kannaka river (on the north of Point Palmiras) and the moft fouthern branch of the Mahanuddy, or"Cattack river; from a tracing of that coaft ${ }_{2}$ made by Capt. Ritchie, by order of Mr. Haftings. From this chart it appears, that Point Palmiras is further to the eaftward, in refpect of Jagarnaut and Balafore, than is warranted by the materials, dif-
difcuffed in page in : for by the late obfervations, it ought to be placed (at leaft) in $87^{\circ} 5^{\prime}$ longitude, inftead of $87^{\circ} 1^{\prime} 30^{\prime \prime}$. A reference to the map will beft explain the refpective pofitions of the principal mouths of the Mahanuddy, and other rivers, between the black pagoda and Kannaka. It is proper to obferve, that the coaft was not traced home to the black pagoda; fo that the exact pofition of Point Palmiras, is yet a de/jderatum. Capt. Ritchie was informed, when at the fouthmoft opening of the Mahanuddy, that the black pagoda, was very near, on the fouth-weft. It was, however, out of fight; but this may be accounted for, by the form of the coaft, which projects in a very large curve, and might intercept the view of the pagoda, from a perfon clofe under the fhore, as Mr. Ritchie was : although the pagoda might not be many miles off. The fouthmoft mouth or opening of the Mahanuddy is in lat. $19^{\circ} 54^{\prime}$ : and is fuppofed to be about 19 miles to the eaftward of Jagarnaut pagoda. The object of this examination, was, to enable the Government of Bengal, to fix on a proper fpot for a light houfe, for the direction of hips round Point Palmiras, and into Balafore road. Capt. Ritchie gave the preference to the point itfelf (named Mayaparah by the natives) but no light-houfe is yet erected. I believe the matter refted with the merchants of Calcutta. The reef extends near 10 miles to the E N E of Point Palmiras, in the new chart. There was too much furf on the coaft to allow his boat to land, fo that he could not learn the names of the few villages that are difperfed along the coaft. He is pretty certain that no large river falls in between Point Palmiras and the falfe point.

INDEX.

## $\mathbf{I} \quad \mathrm{N} \quad \mathrm{D} \quad \mathrm{E} \quad \mathrm{X}$. <br> TOTHE <br> $\begin{array}{llllll}\mathbf{M} & \mathbf{E} & \mathbf{M} & \mathbf{O} & \mathbf{I} & \mathbf{R} .\end{array}$

- The Names of Countries, or Nations, are in Roman Capitals; and the'Names, or Titles of Princes, Rajahs, or Chiefs, in Italic ones. The Titles of Books, and the Names of Authors, as well as of other Perfons whofe Authorities are quoted, or whofe Aflifance has been acknowledged in the Courfe of the Work, are in Italics : and the Names of Places belonging to Ancient Geography, have an *prefixed to them. The Roman Figures, refer to the Introdrction: and the Arabic ones, to the Memoir, and Appendix.

It $\dagger$ Abbreviations. Terrs. Territories. I. Iland. R. River. Pt. Point. Mt. or Mts. Monntain, or Meuntains
A.

| Adamas riverADJIDSING Rajaf, Terr. ofAdjodinAdoniAFGHAN or PAEAS |  |
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| the Hydafpes, \&c. $2^{6}$ Eg feq. Wounded |  |
| :---: | :---: |
|  | a city near the prefent Toulomba, c,8. |
| Has had too much credit for his Indian conquefts, roo.* Conjefure crancerning his |  |
|  |  |
| fleet 102. His marches on the welt of the |  |
| Indus, remarks on, 11;. Bridge over the |  |
|  | Indus, 92, 121. Never faw Cafhmere, 26. |
|  |  |
| his marches between the Cafpian fea ànd the Indus, 102. His voyage Irom Falta'a, down the lndus, and expecition along the |  |
|  |  |
|  |  |
|  | coaft, 295. Port of Alexander, 205 |
| 4LLA, Emperor, attacks the Deceín xivini |  |
|  | Allahabad city, 62. Not Palibuthr |
|  | 9LMORAH |
|  | LLUMGUIRE II. |
| Alluvions of rivers, remarks on, 176, 261 EO feq. |  |
|  |  |
|  | 9lpbabetum Thibetanum |
|  | Amboor |
| AMEDNAGUR, foubah of |  |
|  | Amednagur city |
|  | Amedabad - $34,35,135$ |
|  | Ammercot - - 9t, 293 |
| Andaman ifland - 41 |  |
| Anderfon, Mr. Dav-d viii, 146, 155 |  |
|  | Anderjon, Mr. James |
| Angedive iflands |  |
| Anjenga |  |
| Annamally Mts: |  |
|  | quitel du Perron |
|  |  |

ANTHROPOPHAGI in the iflands, in the bay of Eengal, \&c. - xxxix E feq. Anticquité Géografbique de L'Inde j76, 11 ic, 118

- Aornus Mt. - 117 ש́ feq.
- ARACHOSIA - - 125

Aracan, coaf, and river - 38
Aramroy
$A R C O T^{-}$,

- ${ }^{-}$of, his territories and revence cxxxvi $\sigma^{\circ}$ feq. Pays a fublidy to the Eaft India Company, cxiv. An Ally of the Britifh $\quad$ cxxxvi
Arcot, city of - - 185
Areg, or Arrek - - 173
- ARIA, or ARIANA - 125

Arinkill of Ferifhta, the fame as Warangole
AROKHAGE $\quad$ cxi, 169
AR - 125
Arnaul illand - - 33
Arrian, his account of the dimenfions of India, xxvi. His Indian hiftory, merit of, xxviii, xxix. Cited, xxiv, xxvii, xxx, xxxiii, 54, 78, 93, 94, 95, 98, 99, 101, 108, 115, $117,121,287,295$
Afiatics, give the fame names to countries that lie on both fides of any capital river cxxiy


Attock city, 76, 77, 92. Suppofed to be on, or near the fite of Taxila. River, 79, 114, 117.

AVA, dominions of, 217. City, 226. River of, $39,40,215,217,219$
Avenue of trees, 590 miles in length 69
Aurungabad $\quad 135$ EO feq.
$A U R U N G Z E B E$, of AILUMGUTRET. his elevation, lxi. Abrent from his capital, 30 years, Ix i. His revenue, Ixiii. Two letters of his ${ }_{2}$ to his fons, 16. Contefts of his funs, and their deicendants, for the throne, ib. EG fep.
Ay.n Aibaree. or Infitutes of Acbar. compiled by Abul Fazil, cix. I randated into Englim, 2b. Its latitudes and longi:udes, very incorrect, 67. Cied, vi, $65,67,69,70$, 71, 73, 78, 81, 82, 83, 113, 119, 135. 147, 149, 150, 151, 152,154, 156, 159. 163, 219, 290 G fe7. 294, 295•
Azmere. See Agimere.
AZUPH DOWLAH. See Oude.

## B.

$B A B E R$, Emperor, conquers Hindooftan, Ivi. Wrote commentaries - 122 * BACTRIA $\quad$ - 123,125 Badra, applied to the names of rivers 206
Badrachillum .. - 166
BAGLANA - - 180
BAHADER SHAH, Emperor
lxiv

## BAHAR, Coubah of

 cx Bahbelgong - 134,138 Bain river - - 167 Ef feq.Baker, Cafi. Gecrge. $\quad 40,216,217,218$

BALAGAT, cxxvii. A province of the Deccan.


|  | Bijinagur, the proper name of Bifnagur. See Bifnagur. |
| :---: | :---: |
| Bafteen - - 32 | Bijore, the ancient Bazira - 117 |
| Bate . - - 294 | BILSAH - $\quad 155,156$ |
| Batnir, or Battenize - 88, 89 | Fifaagur city founded, liii. Pofition of, 211 |
| Batules, a great many fought on the plains of | Biton or Belon, his gergriphy of Alexander's |
| Panniput and Carnawl - 1 xxiv, |  |
| Pttles of the French and Englifh with th | Black pagoda - - 296 |
| ves of India, gained with a very fmall portion of European troops | Boad PILLANA. See BAGI.ANA. $16 \sum^{-}$ |
| Gazaar, on the Indus - 88 | Bogle, Mr. George - 221, 222 |
| BAZALET JUNG, late - cxxxvi | Bombay, 31. Tables of diftances from 240 |
| - Bazira - - 117,118 | Bomrauzepollam 204 |
| Beder - ${ }^{-} 7^{\circ}$ | $B O N S O L A$, or BOONSLAH, the family |
| BEDNORE, or BIDDANORE xcvi, | name of the Rajahs of Beiar lxxx |
| xvid | Boodge-boodge - 294 |
| Bedafta, ancient Hindoo name of the Hy- | BOOTAN, a feudatory of Thibet, 221. |
| dafpes river, or modern Chelam 82 | Mountains, valt height of - 222 |
| Beemah, a facred river 166, 175, 179, | Bopal'ol - - 132 |
| Behker, or Bhaker, . 80, 289, 290 | Bore - - xxiv, 278 |
| Behut, or Chelum river - 82,95 | Boudter, Cland - cxxiu, 66, 75 |
| Beiragur - - 163 | Bramins, or Brachmins, burn themfelves 97 |
| Bejapoar, or Vifiapour - 172 | BRITISH POSSESSICNS in Hindooftan, |
| BEMBA EE, Terrs. of - cxx | extent, fopulation, and revenues of, cxini |
| EENARES, province of, acquired by the | E' feq. and - exxxvii |
| Britif $_{;}$c. Revenues of, cxiv, exvi. City, | BRIIISH NATION, or its reprefentative |
| 62. Tables of diftances from 239 ENGAL, happily finuated with refpect to | India, the Ealt India Company, conquefts of, xcii, xciv, xcv. Wars with |
| ecurity from foreign attacks, cxp. Re | Hyder Ally; and the Nizam of the Dect can, xcvi, \&c. With the Mabrattas, c. |
| Invaded by the Mahrattas, xxxvi. | llies in India, the Nabobs of Oade, and |
| it of its. Governors, in the conduct of | the Carnatic exiii, exit |
| the Carnatic, \&c, wars, civ. It | Britich Channel, no good chart of, exitting vii |
| obtained by the Eatt India Com | Brodera - - 34, 149 |
| der circomftances particularly favourable, | Bruce, Major William - 156 |
| . cv. In a better ftate than the relt of Indis | - Bucephalia - 95 |
| cv | BUCHARIA - - 125 |
| Bengalla - - 57 | Ballaupour - 90 |
| Bathey, Mr. .- viii, 76, 152 | BUNDELA or BUNDELCUND exvii, 156 |
| Beraifen - . - 72 | Burhanpour - 33, 129,130 |
| BERAR, foubah of - cx | BURM 4 H - $\quad$ - 17,218 |
| BERAR RA才AH, MOODAJEE BOON: | Burrampooter river, the fame with the San- |
| SLAH, territories of, exxix. Hi.Ids Orifla, | poo river of Thibet, 275: General courfe |
| which feparates the Britih poflefions in | of, 275, 276. Unknown in Europe as a |
| Bengal, from the northern circars, $i b$. | capital river, until the year 1765, 276: |
| -Great extent of his dominions, cxxx. Red | Valt breadth of - 277 |
| venue; ib. A defcendant of Sevajee ib. | Burrampooter, and Ganges rivers, a remark- |
| Bernoull, M. - - $\quad$, 227 | able circumftance attending their courfes, |
| Bernier, M. - , 66, 104, 105 | in refpect to each other - 234 |
| Bereilly . - 63 | Uff, M. the geography of his marches the |
| Beyah R. (ancient Hypbafis) 82, 94, 95 | ly remaining monument of the power of |
| Beypatha R. ancient Hindoo name of the | the Fiench, in the Deccan, 171. Great |
| Beyah, or Hypbofis ezoara, or Buzwarahi | dvantages arifing to geography, from, $i 6$. Map of his marches, cited, $136,137,140$, |
| Bhakor. See Behker. | $11,171,175,204,207$ |
| BHARATA, the Sanferit name of Hindoo. | Butlafs, or Puddar river - 150 |
| ftan - - xx | Buzwarah, Sce Bezoara. |
| BICKANERE ... cxxiii |  |

C.


Cameron, $M r$.
CAMHI, Emperor of China, 227, 230,2345
131, Sends perfons to difcover the fprings of the Ganges - - 234
Campbell, Capt. - - 11

Canal of FEROSE III. $\quad 72,73$
CANDAHAR, King of, (THMUR SHAH, fon and fucceffor of $A B D A L L A$ ) his kingdom founded by Abdalla, cxxiii. Further account of, 112, 113. The country of Sindy, tributary to him exxiv, 291
Candahar, city, 112, 113. The gate of India towards Perfia, III. Suppofed to be the Parofamifan Alexandria 113
Canoul - 206
Canoge - - 54
Cannon, an extraordinary large one 61
CARNATIC, anciently included the whole peninfula fouth of the Kiftna river, cxxxvii. Extent and revenues of, ib. Inconvenient form, confidered with refpect to its defence, ib. Vaft number of fortrefles, in 195
Carnatic Gur - 195
Carnawl, 70, 72. A place of battles, $\begin{array}{r}\text { lxxiv, } \\ .62\end{array}$
$\begin{array}{llll}\text { Carter, Capt. } & - & - & 132 \\ \text { Carwar } & - & 29 \\ \text { CASHGUR } & - & - & - \\ \text { CASHE }\end{array}$
CASHMERE, pofition of, 90 . Account of, 104 EO feq. Shawls manufactured there, 106. Has a breed of theep that carry bur-
thens, 25 . The valley of Calhmere, originally a lake - - 107

* CASIA - - 110

Catbcart, Hon. Colonel - 194, 298

* CATHERI-of Diodoras Siculas, the Kuttry tribe of Hindoos $\quad 52,78,93,100$
Catmandu - 223
CATRY tribe of Thevenot, the Catberi of Diodorus

78
Cattack, II. Importance of its pofition cxxx
Cauvery river, or Cavery - 195
Caveripatam - Mint 190

- Caucafus, Indian, 222. Millakes about

123, 125
CEYLON inland, 43 急 feq. Its figure doubtful

44
Chandernagore - - $\quad 59$
Chandegheri, or Kandegheri - 203
Chanda - $1 ; 0$
$\begin{array}{ll}\text { Chandor } \\ \text { Chanderee } & 134\end{array}$
$\begin{array}{lll}\text { Chanderee - - } & 156 \\ \text { Changamah } & - & 193\end{array}$
Chanmanning - 221,222
$\begin{array}{lll}\text { Chaparang } \\ \text { CHARASM } & - & 229 \\ \text { - } & & 85\end{array}$
"CHATAE - 110
CHATEESGUR, one of the names of the Ruttanpour province. See Ruttan pour.
CHEEN, or MAHA CHEEN, the Hindoo name of China - 110
Cheitore, 153. Firft taken by the Mabomedans
lii
Cherralier, M. $\quad$ 217. 219
Chelum, or Behat river (the Hydafpes) 82.95
Chilka lake - - 164
Chillambrum - - . . . 13
CHINA, its comparative vicinity to Bengal, 215. Map of, in DuHalde . ${ }^{2} 6_{0}$

Chinaputton $\quad-\quad-\quad 210,211$
Chinefe travellers embark on the Nou Kian, or Ava river $\quad 4 \quad 216$
Cininnabalabaram $\quad . \quad 201,202$
Ctinfurah

- $\quad 59$

Chitteldroog - - i89, 212
Chittigong - - 38
Chitwa ${ }^{-}$C ${ }^{-}{ }^{-}$
CHOROMANDEL. See Coromandel.
Chronological Table of Emperors cxli
Chunaub river, or Jenaub (the Acefnes) 82
Chunagar or Junagur (in Guzierat) $\begin{array}{r}93, \\ \hline 149\end{array}$
CIRCARS, NORTHERN, enumerated, cxxxiv. Whence denominated, ib. How fituated in refpect of Bengal and Madras. cxxxv. Revenues of, ib. Geographical conftruttion of, 165, 166. Ottaitsed by the French from the Nizann of the Decean, lxxi. Conquered by the Briting, xci

## INDEX to tar MEMOIR.

Page

| Lord, - xci, xciii; xciv, xcv, 59, 185 | Dacca, city, 61 An extrardinary lare |
| :---: | :---: |
| lifobara - - 49 | Dacca, city, 61. An extraordinary large |
| - Cocala - - 165 | cannon there |
| Cochin, 22. Lakes | - DAHE |
| Climbettore - 196, 197 | DAHISTAN - 123, 125 |
| louring of the MAP of HINDOOSTAN | Dalmacherry ${ }_{\text {Darymple, Mr. }}$ ix, $17,18,19,20,28,30{ }^{20}$ |
|  | Dalrymple, Mr. ix, ${ }^{\text {17, }}$ |
| lercone river |  |
| Colour, or Coloor - 21 |  |
| Combam, or Commum - 205 |  |
| OMIS |  |
| Comorin, Cape - 17 Efeq | D'Axville, M. X, 6, 7, 13, 14, 19, 36, 38 |
| CONCAN - . - cxxvi |  |
| Cond, or Kond, a termination fignifying | 22, |
| fortrefs - - 142 | 150, 193, |
| Condanore - - 207 | 21, 209, 210, 212, 215, |
| adavir |  |
| onflux of the Hydafies, and Acefines (Chelum, and Chunaub) turbulent and dangerous | was mifinformed refp Panjab riiers |
|  | D' |
| onfederacy of the principal Powers of Hindooflan, againtt the Britifh, in 1780 ciii | $\mathrm{D}$ |
| Conghé lake - 230 | DARIUS AYSTASPES, |
| onquefts of Europemns in Hindooftan, \&c. |  |
| xc. Impolicy of profectuing, by the Bri- | tary |
|  | Darwar |
| Condamiut, M. - - 70 | Davir, Capr. - 175, 208, 210 |
| mnoifance de Temps 29 | $D^{2}$ Auvergne, |
| Coote, Sir Eyres xci, ci, cii. 184, 186 | Davy, Major |
| Cous-Beyhar, or Cooch-Beyhar 221 | Days journey in Hindooftaz, length of 207 |
| - Cophenes river - 115, 120, 121 |  |
| CORAH provirces - 63 | Debalpour |
| OROMANDEL coaft, authorities for the |  |
| geography of, 12, 12. Has no port for |  |
| Cofpour | Mabomedans in 1293, 1 i. A |
| Cofa river, or Kofs $\quad 224$ | block to the Emperors of Hindoota |
| Cofs, an itinerary meafure, 4 母゚ feq. A term |  |
| Cofimbazar ${ }^{\text {of highty }}$ - - ${ }^{\text {a }}$ | to appear is Englin, Ixisi |
| Cotford, Mr. |  |
| Coveripatam. S | by the Mahrattas cxa |
| ow river | ECCAN, SOUBAH of, NIZAM ALLY |
| Cridland, Lieut -- 11, 165 | ers. and revenues |
| Crocala - - 295 |  |
| Croix. Patits de la $=71089$ | Delhi, 65, 66. Table of diftances from 243 |
| Crorchey - -- 295 | Dellamcotta |
| Cuddapah - - 202 | Delta of the Ganges, 266. Of the Indus |
| Cuddalore - . - 15,199 | 37, 287. Of the Ava, or Peg |
| udapanattam - - 198 | 217. Of |
| Cumming, Capt, Edwward - 47 | Dena river |
| Curtius, 2viutus - xxxi, 89,94; 93 | Deogire (Dowlatabad) |
| CUTCH, 292، A ragged country, exxiv. | Deogire, or Deogur (in Nagpour, or Gond- |
| Litte Catch |  |
|  | eopad, or |
| alvi |  |


E.

EAST INDIA COMPANY, a greater imperinm in imperio, than, perhaps, everi before exifted, cxv. Military eftablifhment; and amoust of their, fales, ib. Their sevenue in India
cxiv
Eilairctfemens Géograpbiques fur la Catce de L'Inde - 7, 145, 118, 292, 294
Egyptiañ trade to todia
Elevated plain, in Coimbettore . 197
Elephanta ifland
ELLICHPOUR, province of 159 tmptied allo in page cxxx, cxxxy; it being the wéttern part of BERAR.

## Ellichpoir, city

Ellioit, Mr. elogium on - i6, 159
Ellore $\quad 140 \times 144$
Elora, temples of, or pagodas $\quad 32,1,40$
*Embolima - $\quad . \quad 119$

Endelavoy. See Indelavoy.
Endoíe. See Indore.
Eradut Carwn, Memoirs of - Ixiii
Erätofbenes
xxví, xxvï. 54

* Erranaboas R. - - 49

Etefian winds,' what meant by them, in Arrian . - - - 101
EUROPEANS, conquefts, of, in Hindooflan, \&c. . xc छ̋ Seq. European force in India, may be tog great, in proportion to the fepoy force civ
Ewwart, lieut. $\quad 142,143,144,158,160$, $161,170,171,210,213$
F.

Farmer, Mr. Page
Farfang of Perfia, what $\quad \begin{array}{r}\text { 48, } \\ 179 \\ 122\end{array}$
TFEROSE III, his publick works liv, 72,73
Ferofeghad $\quad 73$
Ferifta, writes a hilory of Hindooftan, which is tranflated by Col Dow, xli. His hiftory of the Deccan not publifhed in any European Ianguage, Ixxix. Cited from his hiftory of Hindcoftan, $54,55,72,73,79$,

85,149:211
FEROKSERE, Emperor, Ixvi Grants particular privileges to the Englig Ean India Company.
FIZOOLA $A$ CAWN, his Terrs. ". - cib.
Forfer, Mr. George, his route from India to the Carpianfea, 103 छ犬 jeq. Cited, exxiii, $82, \mathrm{SO}_{2} 103,104,105,107,108,115$, 119, 122. Map of his route, \&oo at page
Forit William. See Calcutta.
Fort St. George. See Madras.
Erafetr, Mr.
ERENCH NATION, conquelts of, in Hindooflan, xc. Will probably enjoy' more advantages in the Carnatic, under Mahomed Ally than if Tippoo poffeffed jt, ci Can effect nothing without a territorial pevenue:

Fullarton, Col, his marches in, the fouthern
provinces, of great advantage to geogra-
phy, jv, 196, Mentioned, ive 15, 24, 196
FURRUCKABAD, territory © cxvii
FUTTY SING GWICUUAR cxxv, exxvi
$\mathrm{F}_{\mathrm{z}} \mathrm{zabad}$. - - $6_{3}$
G. :

- Gagarmira

45
Galgala -- . ${ }_{212}^{212}$
Galle, or Pt. de Galle - 48 छ' Seq .
Gandicotta, fortrefs and diamond mine 202
Ganga, or Gonga, an appellative of riyer, whence Ganges

领 206,255
Ganges river, unknown to Herodatus xxinj. Sailed up, before the time of Strabo, xxxix. Soutce of, unknown till the prefent ceytury, 234. Sum of the inffermation concerning its fource, 233 , for which we ate indebted to the Emperor CAMHI, $234 \cdot$ Account of the Ganges 2.25 . Indian names of, ib. Fabulous acciount of 756. Particulars relating to its.banks, windings, depth, and rate of motion,' $256^{\prime \prime}$ jeq. Proof of the fmallnefs of its detcent, 272. Inundaticns, and their height, 268 धo feq.

Different

| Page |  |
| :---: | :---: |
| Different heights of the inundation, at places more or lefs remdite from the fea 273 | GUNTOOR circar, 210. Account of $\begin{array}{r}152 \\ \mathbf{E x x x i}^{2}\end{array}$ |
| Panges and Burrampooter rivers, a remark- |  |
| able circamfance attending their courfes, | G |
| - in refpect to each other - 234 |  |
| Gangia Regia - 55 | GUZERAT, poffeffed chiefly by the Poonah |
| Gangotri, or cavern through which the |  |
| Ganges paffes, in Mount Himmaleh or | nous, |
| Honaus - . 228,232,233 | 49, 151. Coaft of, 37. Bilifh |
| G3njam | conquets in |
| Gap, or opening in the Gaut mountains 196 | Gwalior taken by Col. Popham |
| Gardmer, Major - 137, 140, 1699 | Gyalgur |
| Gants, or Indiant Appenine, 109, 213, 214. |  |
|  |  |
| 713. A ftupenduous wall of mountains, | H. |
| Cxxvii. Gap, or opening, in 196 |  |
|  |  |
| Gaur - - 125 | HAJYKAN - - 29 |
| - GEDROSIA, ancient name of MACK | Hanılion, Capt. - 286, to 29 |
| RAN - $\quad 289$ | Harper, Cal. |
| GELALI, or GELALEDDIN ziviii, 85 | Hafings, Mr. ci, cix, 66, 74, 75, 76, 142 |
| GENGIZ CAWN - xlviii, 85 | $145,152,154,162,221,260$, |
| GETES - - exix | Hafli, or Hanil |
| Ghergong' - 219 | Hemming, Mr. |
| ah |  |

$\underset{\text { ded }}{\text { GHIZ }}$ empire of, iliv. Forcibly divi-
Ghizni, city of - $113,114,117$
GICKERS; Gehkers, or Kakares 86
Gilfres, Dr. . $\quad 7 \quad \bar{x}-101$.
Girgee : …



Godavery river $\quad 166,167,176$
Goddard,' General : 1 :-: 31, 33,34, 130
Gogra; or Soorjew river $\quad 63,228,231$
GOHUD' ' 5 's, Exxix. RAYAH of cxix
GOLAM CAWDIR. Tetrs. of - "edvi
Golam Mubomed. $137,145,160,161,162$
GOLCONDA, tountry of; exi, cxixxy Fortrefs of -
Gold, proportional value of, to fiver, according to Hefodotots, xxv. 'Found in the rivers, that flow from the Thibet monn-

- iains, into the Ganges and Indus, $x_{x r y}$ 69. 108. Tribute so Darius Hỵtarpes, paid in gold " $\because, \quad \cdots \quad \mathrm{xxi}, 108^{i}$ Gondegama fiver , -.- ${ }_{208}$
GOONDW ANAH, the ancient name of the.
Nagpour province
Goondy cofs; what
Gönty
Görka $\quad \begin{array}{r}\text { Gos, an Ifinerary meafure } \\ \text { Gour, or Lucknouti }\end{array}$

Gumfoar - - 152
GUNTOOR circar, 210 . Account of kxxxvi

- Gurai, 116, 117. (Suppoled to be the modern Gurdeys.)
- Guraus river - - 116保 Mahrattas, cxxvi. The wettern parts and mountainous, cxxiv. Geography of, 149, 151. Coaft of, 37. Bitinh

Gwalior taken by Col. Popham 156
Gyalgur
H.

Haftings, Mr. ci, cix, 66, 74, 75, 76, 142, $145,152,154,162,221,260,295$
Haff, or Hanfi - 72,73
Herat - - 225 .
Herodotus, knew ouly the wellern parts of India, xxii. The Ganges mot knowin to him, xxiii. His account of Scylax's exr. pedition down the Ifdus, about t8o years before Alexander, txiii.. His actount of. the Indians, $t b$. Of the tides in the Red. Sed, xxiv. Of the tribute paid by the Intians to Darius, xxv. Mentioned 108.

* Hefadrus river (The Setlege), $51 ; 72,82$
- Himaus, or Imaus mountains (the modern Himmaleh). - 95,96 Hinmaleh Mis, (See the laff articlie) fignify? ing frowy - $96,232,233_{2}=234:$ Hindenny river - $\because-\quad 212$
Hindoo-Ko, the Indiats Cauchaus, $96, \begin{gathered}\text { I11, } \\ 112\end{gathered}$
HINDOOSTAN (applied in a geteral renfe to India initra Gangem, and more patticu-1 larly to the modern fate of it) geographi-. tcdt definition of, xix. Hindoolat Profurm what, xix, 20. Its extent compared roंEarope, xix: Sketch of its hiftory, 4 trin
 Mogul empire, lvill. Downatl of, JxixGo jeq. Reyenue of, uñder Aurungzebe;. 'Ixiil', Cxii. Acbar's diveffon: of Hindodo -fant, cix. Prefent divifion "cxdir Ěeq. Hifar-Ferozeh
$73,74$.
Chief,
HOLKAR YUCKO守E E, à Mahrata Chief, territories of, cxxvi, cxxyii. Revenuè and. refidence of
cxxix.

Holnefs.


INDEX to the MEMOIR.

Irabátty, or Ava river -
Irawutry (ancient Hindoo name of the preIrawutry : (ancient Hindoo name of the pre-
fent Raluvee, or Hydraates of Alexander 82

## Ircum lake - - - 204

ISSAKYL - $\quad$ - 117,119
Linerary, down the Indus \&e. 69, 77; 85, 83,

cxxiii, 75
JYENAGUR, or Joinagur; called alfo lyepour, and Jaepcur cxix, cxxxiii; cxxxiv,

## K.

Kaman (of Tavernier, meaning Combam) 238
Kambala Mts. - - 225
Kanahoody Mts. (The Mafdcramus of Pros $\begin{array}{ll}\text { Kandegheri, or Chandegheri } & \text { 2-3, } 2411\end{array}$
Kafif (ancient Hindoo name of Benares) 62
-KATHERI, or CATHERI of Diodorus, (the Kuttry tribe)

93
KEDGE; Or KETCH-MAKRAN 289
Kel'y, Col. - - 15, 188, i95
Kemaoon - - 232
Kentaife Mt. . . . 229, 2302.235
Kera R. - - $\quad . \quad 110,219$
KHATAI


Kihhengonga $\because$ ? ' $1:-108$
Kiftna river $173,175,176,207,208,209$.
Kiftnagheri. ". - $\because \quad 190$
Kond, or Cond, a termination, fignifylitg fortrefs
Koorket lake , - : :if? , 72
KORASAN $\because, x^{1 \cdots},-{ }^{2}+1, \ldots 23$

Kutheil, or Kythil - - . 73
Kuttry or Rajpoot tribe (the Catberi of 'Dio.-
-dorus) $\therefore \therefore . \quad . \quad 93$
Kythil, or Kutheil - - ..... . $73^{i}$

## L.

LACCADIVE illands -45
Lahore, 68, 69. . Capital of the Seiks, exxii
Lakes, more commonly found near the fources' 210\%

Larry Bunder $\quad-\quad 28 ; 286$
Laffa, 219, 220,-221, 223, 226, 231. Latitude of 220
Latitude taken at, Agra, 63. Amedabad, 135, Angenga, 18. Ava city, 216. Baffeen, 32. Bombay, 31. Bopaltol, 132. Burhanpour, 133. Cadiapatam Pt. 17. Cilcuta, 8. Calpy', 131. Calymere Pt. 15. Chinna-Balabaram, 188. Cochin. 24 Cumorin Cape, 21. Cuddaiore, 13 . Lelhi, 66. Dilla Mt. 22. Dundrahead, 46. Pt. de Galle, 46. Ganjam, 9. Goa, 29. Iflamabad, 38. Jyepour, 75. Madras. 13. Maldive Is. 47. Mafutipatam, 12. Mergai, 440. Nagpour, 143. Naiwah, 131.- Negapatam, 14. Negrais, 39. Pigeon-1. 29. Pahmiras Pt. 11. Ponidicherry, 13: Poonah, 134. Porcah, 21. : Ruttunpour, 144. - Sirong, i $32 .{ }^{\text {. }}$ Surat, 32. Tritchinopoly, 15. Vifagapatam, iz Lettres Edjfiantes … - 172,188
Longitude by celeftial obfervation, taken at Agra, 48. Anjenga, 18. Bombay; 31. Burhanpour, 134. Calcutta, 8: Delhi, 66. Goa; 29.' 'Jynenagur; 75; Madras, 9. Mergui, 40. Pondicherry, 13. Poonah, 134. : Vifagapatam

Longitudes inferred from time-keepers, fur"veys; or charts. "Agimere, 145. Acheen-- head, 42. Agra, 63: Aguada Pt. 29.

- Amedabad, 135. Anjenga, 19. Attock, 77. Ava; 216. Aurungabad, 139. Ban-- Elolore, 188. - Baffeen, 32: Brodera, 149 - Barhanpoury 33. Bopaltol, 132. Cábul, 111. Calpy;"48;'130. Calymere Pt. 15 . Cambay, 35. Candahar, 113. Canoge, 2-54: Cafhmere, ho4:" Cáttáck, rí. Co-- chin, 22. Comorin Cape, 19. Cudda. - lore, 13. Devicotta; 44. ${ }^{\circ}$ Dilla Mr. 22. - Diur head, 36. Ditindrahead, 46. G4n-- jam, 9. Gheriah, 3 i. "Galle Pt. 46. - Hurdah; riz2: Hufingabał, I33. Hy-- drabad, f4 It Itamabad, " 3 '8. Jynéna - gar, 75 : Lahoré 68: Laffa, 222. Ma. - dura, 1g. Maldive Is. 47. Mangalore. 128. Mafulipatam, 12, 136 Moplian, 78. Nag pour, 143. Narwah; 131. Ne:-
gapatam,

|  |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
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|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## M.

MABER, underfiod to be the fouthern part
of the peninfula of India MACHERRXRAJAH - exix, cxx Madras, or Fort St. George, 183. Has no port, ib. -Surf at, 8.84: Boats ufed there, ib. Table offdiflances from : $\quad 246$



Mahadeo, temple of in Thibet $\quad 232$
Mahé $M A M M O D$, Sultan, of GHizZNI, the firlt Mahomedan; conqueror ,of HINDOOSTAN , , xlv Mahmoodabad 149 MAHOMED SHAH, cedes the provincep weft of the Indus; to NADIR SHAHI lxviei, cxxiii, cxxiv

## MAHOMED GHORI

MAHRATTA NATION, Aketch of its hiftory, lxxix Esfeq. Origin of the mame, $1 \times x \dot{x}$. Rote on the revins of the Mogule emPpire, 1xxini. Separatea into, \&ates, Poonah and Berar, bxxxiv, Both invade Bengal, - Jxix, Ixxxiv. Contefts with Abdalla, and total oyerthrow at Panniput, lxxiv, lyxxyi. Decline, $\mathrm{i} b_{n}$ and cxxxi. War with the Britifh, Exxxvii, c. Eafern or Berar Mahrattas, lxxxviii. Prefent, ftate of both, ib. and lxxxix. Their extenfive dopains, cxxiv E̛jeq. Primpsipal Jaghiredars, cyxy. Revenue of, yuncertain acxyviii. .Geography of the fouthern part of their cempire, uncertain, cxxvii. Their habits of pluadering cexxi. Nature of their treops, cxxxii
Mahur, or Maor 171
MAKRAN, the ancient GEDROSIA 289

MALABAR COAST, ats diretion in thei charts, too oblique to tho meridian, and why $30^{\circ}$
Malabar map - - $205^{i}$

- MALLI, ancient people of Moultan. 77 . 78, 86, 93, 96, 97, 100. Ancient capital of, flood near Toulomba - 99,98 MALDIVE ilands * 47
MALVA, divided among the Poouah Mah-. ratta Chiefs, cxxvi. An elevated traCt r6a
MMandefle, M. - exxv, 172s.573, 179
Mangalore - - $\quad-\quad 28$
Maniorah. The fame with Bhakor 80
Manforoar lake - 228, 230
Manzorah river . . 190
Mapana lake - - ${ }^{229}$
Map of the countries between the head of the Indus, and the Carpian fea, account of, 102 E̛ feq.
* Maracanda $\quad \because \quad-\quad 125$,
$\begin{array}{ll}\text { MARAWARS } \\ \text { Marfden, } \\ \text { Mr. }\end{array} \quad-\quad . \quad$ xI, 185
MARGIANA - - 125
MARWAR, cxxaiv, 155. It is alfo called JOODPOUR.
* Maddoramus.Mts, 124
- Maffagak capital of the Afacaiz: - 1117

Mafulipatam - $\quad, 36$
MARHAT; the original/ conntry of thes MAHRATTAS - - lixx
MAVER-UL-NERE, or-Tranfoxiana 125
Mayapara, the proper name of Point Palmi-
ras - - - 296

MAZANDERAN - - 123
MECKLEY - - ${ }^{235}$
Megqibenes refides at Palibotbra, xxv : Meno tioned - 文xvi, xxvi, xxx, 50
Meerzaw, or Mirjee- 28, 29, xxxviii
Mehran R. a name of the Indas :79-
Meritch, Meritz, ion Merrick ${ }^{\text {® }}$ cxxq. Taken by Hyder Ally, in 1778 , cxxvii. Its geo. graphical poficion, yot well 'afcertained

Merjee, or Mirjee . xxxriii, 28',' $\mathbf{z 9}$
Mrikiferay, 207. The fame as Sera:? A
Merat, 89. Implied - . ${ }^{\prime}$ live
Mergui - $\quad-\quad \cdots{ }^{2}$

- Mefolia - - il s36.
- Methora or MIDWAR' : 49, 53: xlk

MEYWAR, or MIDWAR 155
MEWAT - Emin Effig 75
MEWATTI, inhabitants of Mewat, xlix. Hired for the purpofe of plundering an enemy's country , - cxx
Middleton, Mr. N. - viii

Mirjee, or Meerzaw, -- 28, 29 :
Mirje, fuppofed to mean Meritch , cocxy.

Page
MOGUL EMPIRE (meaning the'empire eftablified in Hindooftan, and Deccan, by the defcendants of Timur, or Tamerlane). See Baber, Acbar. At its greateft extento under: Aurungzebe Jxiii. Dowafall of Ixix Geographicul divition of, under Acbar
MOGUL GREAT, meaning SHAH AULUM hasi, an eftablifhment from the Englisto lxxy: : Throws himfelf on the Mahrattas, Ixxvi. A penfioner to Madajee Sindia

Monchazboo : $\quad \therefore$, .... 217
Monze, Cape ...........: 36,285
MOODAJEE BOONLAH, or Bonfola. See Berar Rajah.
Moorradabad
MORUNG

Matte, Mr. - $\quad 161 \mathrm{si} 162,164$
Moultan. -- $77 \times, 78,80$
Muir, Col. - $\quad 76 \times 147$ 156
Mulgratue, Lord
Niundu
Nat
Murray, Colw 7aber 68, 70, 74: 77s 78, 844
musichant: : it: $\quad . \quad 99$
Myfore
igo
MYSORE, Regent, or Sovereign ofs $\boldsymbol{F} / 1 / 2$ POO SULTA $A N$, bis territories, xevenues,
 $\xi$ feq. The maft ppwerfal of the inative Pripces of India
cxisxiz

## N.

NADIRSHAM, his invafion of HINDOO STAN, Ixviii. The provinces welrof the Indus, ceded to: himr:py, MAHOMED



NAGORE' (in Agimere) cxxxiii, 155
Nagpour, 142, 143. Rainy feafon ata, 243. Table of diftances from
NAGROUR RA/AH. See,Beqar. ....t
Naldorouk; or Naldroog - 174
NAPAUL . - .. . 22442.232
NARDECK $\therefore \cdots \quad-\quad \therefore \quad$ CXX
Narnaveram Hill , : 1204
NARSLNGA, kingdom of, its hillory obfcure

24
Narwah $\because-\quad . \quad$,
Naffick-Trímack - - i 180
Navigation, Roman, from the Red, ©eatt

feq. Inland, by the Ganges and Burumb
pooter rivers, 255. N. B. Fextends frome Dooter rivers, 25.5. N. B. Foextends from milesi' Improwernents intended by the Emperor Ferofe ILL.. - - liv, 72, 73
Nearcbus, conducts the frirt European fleer
i. that navigated the Indian feas, Ior. Remarks on a paflage in his journal, soz. Mentiòned :, ,

291, 294, 295
Neermpl - - $\quad 158,170$
Negapatam . - 14,198
Negar Parkar - - 286
Nehrwalla, ancient city of, xlvi. fe appears to have been anciently applied to the province of Guzerat, in general: See Orme"s Hiltor. Frag. p. 149.
Nelifuram $\quad-\quad$ xxxviii, 28

- Nelcynja - - xxxviii
Nellore -

Neftune Orientale. See D'Apres.
Nerbudda tiver - riy
Newtya - $\quad$ - 31
${ }^{*}$ Nicza ${ }^{-}$- 95

NICOBAR illands - 4i
NIDYIR' DOWEABI late: Terri bf, exxd. Ses , cOLAM CAGKDIR and ZABEY $A$ C $A W N$.
Nilah (ruppofed to be meantif for the Indu's river) - - $79,10{ }^{\text {10 }}$


- Nitrias 1
NLZAM ALLST-Soabah of the DECCAN.

Noanagur
Nagarcot
NNOMADS
NOMURDIES

Northwelters, guts of wind, fo called, in Bengal, \&xc.
NORTHERN CIRCARS. See Cirćars

$\checkmark$ Chinefe travellers embark on it, and come


ANUDYUFF CAWN,illate; his edriquefs,
. '"Exix.s Sudden rife alld. fall of his. princi-
pality - $\quad-\quad t b$.

Nulld sankrạ . $\therefore \therefore$. . . . 291
:-Nyßa 120

| Ornircdut. , sSee Ammercat.: <br> OMMAN, fea of is <br> Qnore: <br> QRISSA, in the poffefion of the Mahrattas, <br> micxiii,s cxxix,: Ise gaaf corrected, 205 <br>  <br>  |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Dotian.

INDEX to the MEMOIR.

| Ootiampaliam, valley of .Page <br> rge | * Pattala, ancient name of Tatta 80,89, |
| :---: | :---: |
|  | - Pattala, ancient name of Tatta 80,89, |
| An Ally of the Britif, cxvi. Revenue, | Paukpution - ${ }_{\text {at }}$ |
| d military eftablichment of, cxvii. Pays | Pawangur - 146 |
| a fubfidy to the Eaft India Company cxiv, | Payen-Gaut, applied to the Carnatic exxviji, |
| tal of Madaje | 03 |
| Sindia, 2h. Table of diftances from 248 | Pedro Point $\quad$ - $43 ; 44$ |
| OUDIPOUR, Rajpoot province of, exxii. | Pehkely, or Puckley, 108. Sappofed to be |
| Cheitore, the ancient capital cxxiii | claotis of Arrian, i6. and 116,118, |
| Outch - 93 | 119 |
| xus R. (the modern Jihon) 125 | Peifhore - - - 110 |
| XYCANI - 99 | Pekin, lon. of - 220 |
| XYDRACE $93$ | PENINSULA of India, the fcene of frequent |
| Ozene - - 147 | wars, 182. A large map of it announced |
|  | 214 |
| P. | enukouda 202, 211 |
|  | pper plant, black, difcovered in the North- |
| Padtya - xxiii | ern Circars - . 168 |
| Paddar R. See Puddar. | Perry, Mr. - - 68 |
| ahar, an Indian term for hill, or mountain | - Peucelaotis, or Peuceta 115,186,118, |
| PAISHWAH of the MAHRATTAS, | Pigeon 1. - 29 |
| pation of, xxxiv. Terrs. of exxy, exxvii | PIRATE COAST, remarks on 30 |
| Palamcotta, or' Tinevelly - 16 | Piny's Indian itinerary, 51. Mentioned, |
| Palicaudcherry: - - 196 | 30, 31, 49, $50,5 \mathrm{r}, 52,54,70,72,79$, |
| Paliconda - 186 |  |
| * Palibothra xxvii, xxxii, xxxix, 49, 50, | Podaia, or Poudela - 210 |
| - ${ }^{\text {a }}$ 52,54 | Polzer, Colonel . - - 10, 11 |
| almiras Point, 295, 296. A light-houfe propofed to be built on it, ib. Extent of | Pondicherry, original grant of, lxxxi. Pofition of, 13. Account of - 198 |
| its reef -- - ib | Poolytopu - - 16, 17 |
| PALNAUD - - - 207 | Poonah, 134. Table of diftances from 249 |
| Palté lake - 225 | Popham, Col. viii, 75, 76, 111, 113, 115, |
| Panafla - cxvii, 155 | 154 |
| ANJAB country, what fo named, xxii, 80. | PORTUGUESE, did not poffers any great |
| Geography of, 80 Ej feq. Flat and marihy, | $t$ of territory, in India - xe |
| in the part near Moultan - 99 | Portonovo $+\quad * 199$ |
| anjab rivers, their courfes and mode of con- | Pof, regular, throughout the Eaft India |
| fluence, favourable to the tracing of Alex- | Company's poffeflions, 237. Rate of tra- |
| Paniany, 22, 23. River of | RASII, kingdom of xxxiii, cxvi, 54, |
| anna, or Purna, a diamond mine there, |  |
|  | Preparis iflands - 48 |
| anniput, a place of battles, 70, 72, lxxiv. | Primary fations in geography - 186 |
| Famous battle of, in 1765 lexiv | Pringle, Mr. 13, 17, 184, 186, 192, 193, 194, |
| Pannela - 174 | 195,204 |
| Parafanga, or Farfang - 123 | Price, Capr. -Jojeph - 152 |
| Paridrong, or Paridrong - 221, 222 | Ptolemy, the geographer, an apology for fome |
| - PAROPAMISUS, province of, 115. | of his errors, 163. Mentioned xxvi, 64, |
| Mountains of, 123, 125, 222. Probably derived from Pabar, Hill | Puckley. See Pehkely. 82, 120,124 |
| ARTHIA, 123, 124. Mifconception re- | Puddar siver cxxxiii, 91, 150, 293 |
| fpeting its geography $125,126,127$ | Pulicat lake - , 204 |
| Patalipootra, or Patelpoother, ancient name | Pundua Purnah - - 56 |
| Fna, 62. Suppofed to be the ancient Pa. | Putala Mt. |
| liborbra - 50, 52, $54{ }^{-}$ | $\mathbf{Q a}$ |

Quilon. See Cōylan.

## R.

RACHORE, proviace of, cxxxvi. Town of


- 1 - -

RECCAN, the fame as ARACAN. 97 ?
REGISTAN; or fandy' defert of Agimere


Bimola Mts. in Du Halde's map, , ought 'to be Himola, of Himmaleh . 222, 224
Ringrofe, Lieut. - - $33 \pm 34$

Ritchel R. $\quad=2853287$
Rivers pften form lakes near their fources; and why, 107. Proportional length of courfe of fome, capital ones. ${ }^{2}{ }^{2} 7^{\prime}$
Roads winding of. See Winding. Have a greater degree of crookednefs in India, than inEurope : $\times 1.3: 115$

ROHILLA. country, or ROHLLCUND, conquered by the Nabob of Oude' ' ' c
ROMAN trade to. India, xxxil Roter of . theiri hips - ib. Ef feq:




TABERISTAN - xxi, 123, 125
Tables of diftances between the principal cities and towns, in Hindooftan 235
Tamana - 31
Tanda, or Tanrah . 55, 56
TANJORE, cxxxvii. Pays a fubfidy to the Eaft India Company - cxiv
Tanjore city - 15,17
Tankia - - 224
Tannafar - $\quad$ xiv, 71,72
Tanore - 22 ध゚̛ feg. 25

Tanyan horfes, from whence brought 225
Tapty R. - - 159
Tariore. See Terriore.
Taffifudon - 221, 222
Tatta, account of - 285,290
Tavernier 68, 70, 82, 100, 113, 137,145,
$149,152,170,172,202,205,209$

- Taxila

51, 92, 93
Taylor, Mr.
Teek forefts, $167,180,218$.
Durability of fhips, built of Teek, 181: Ships of war, for India, propofed to be bailt of it $i b$.
Tellicherry - 22
TELLINGA language, in ufe over a large extent of country - cxi TELLINGANA - cxi, cxxxp.
Terriore $\quad-\quad-\quad \therefore 197$
Fbevenat, M. 68, 77, 78,93,135,140, 170, 171, 209, 286
THIBET, one of the molt elevated tracts of the old continent, 221, 223. Great extent, 227. Inhabitants highly civilized, 227. Tributary to China, ib. Thinly inhabited, 232. Indian names prevail, in the weftern part of it

## INDEX to, the MEMOIR.

| Thamar, Mr. - Page | Velore | $\begin{array}{r} \text { Paige } \\ 185,186 \end{array}$ |
| :---: | :---: | :---: |
| Tiagar - - 198 | Vrrelf, Mr. |  |
| Trefinialler, Mr. $229,230,231,232$ | Vingorla rocks | - 3 |
| Timerycota - - 207, 208 | Viniconda. See Innaconda, |  |
| TIMUR, or T'AMERLANE, invades Hin- | Vifiapour, or Bejapour | - 172 |
| dooftan, liv. A monfter of cruelty, 26. | Vifagapatam |  |
| Made no eftablichment in Hindooftan, Iv. | Univerfal Hifiory, modern | 202, 203, 216 |
| Geography of his marches $8_{4} \mathrm{E}^{\circ} \mathrm{feg}$ : | Unkei-Tenki | 134, 339 |
| ITMUR SHAH, ABDALLA. See Candahar. | Volconda |  |
| Tinevelly. See Palamcotta. | Volney, M. | xxiv, xxxiv, 106 |
| Tingri, valley of 224 | Upton, Colond | 129, 141, 174 |

YIPPOO SULY AN. See Myfore.
Tobacco, a fine fort, from Bilfah
Tondy
$\begin{array}{lll}\text { Tondy } & - & 19,44 \\ \text { Tonker, a name of Lafa }\end{array}$
Fopping, Mr. 13, 45, 47
$\begin{array}{ll}\text { Toulomba, or Tulmabini } & 84 \text { É feq. } \\ \text { Gownéend, Mr. William } & 190,207\end{array}$
Townfend, Mr. William - 190, 207
Trade from the weftern world, to India, men-
tioned in the earlieft hiftories

- TRANSOXIANA 125

Travellers ought to record their diftances, in
the itinerary meafures of the country they travel in

| Trinomalee hill | 3,209 193 |
| :---: | :---: |
| Tripanty pagoda | 209 |
| Tripetty pagoda | 203 |
| Tritchinopoly | 15 |
| Tungebadra river | 205, 211, 212 |

Gurner, Mr. $\quad-\quad-\quad 35$
Tygers infeft the woods at the mouth of the
Ganges
Tyrians, traded to India - xxxiv
U.


# I <br> $\mathbf{N} \quad \mathbf{D}$ <br> E <br> X 

## TOTHE

## M * A P.

1 The whole Map being divided into. Squares, or Spaces, by the Interfections of the

- Parallels of Latitude with the Meridians, each particular Square is pointed out by Letters of keference, alphatetically arranged, along the Margins of the Map; the fide-Margins having Capital Letters, and the top and bottom ones, fmall Letters. For inftance, the City of Deibi is given in the Index under the Letters E o: and if the eye be guided along horizontally in the Map, from $E$, until it comes under 0 , the Square which contains Drumi will be found.
* The Names of Countries, or Nations, are in Roman Capitals; and thofe of Princes, Rajahs, or Chiefs, in Italic Capitals : and fuch Places as have their Situations deferibed in the Index only, and not in the Map (owing to want of room) are in Italics. Others have.only a Part of their Names written in the Map: and the Part wanting, is alfo diftinguifhed by Italics in this Index. The Places without Names, in the Mapz are left, in expectation of being able to fupply the Names, hereafter.
$\dagger \dagger \dagger$ Abbreviations. Terrs. Territories. I. Ifiand. R. River. Pb. Point. Me or Mts $\ddagger$ "Mountain, ọr Mountains. F. Fort". G. Gaut, or Pals.


INDEX ro the MAP.




| Bantwa | M | Barcalore | $Y \mathrm{n}$ | Beeifingyouy |  | G |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Bapcout | $\mathrm{P}_{1}$ | Bareatty | 2 n | Beefnah. | - | H P |
| Banfwara | P p | Barbarein I.- | 6 q | Behara | - | Mk |
| Bandemgur | Rn | Barlepanetote | 6 C | Behat | - | B h |
| Band | R of | Batren I. | Wg | Behaungur | - | B I |
| Bandem | Sk. | Barago R. | S 6. | Beheruh |  | B h |
| Bancapour-Sanore | Sm | Barouah | Pw | Behker |  | Fg |
| Bankypour | U m | Barenda | 1* | Behngur | - | $A$ |
| Bangalore | Uo | Batambe | $A \pi$ | Behrouz | - . | Co |
| Bangarim | A1 | Bafta Rajpoot | B 0 | Behta |  | Oi |
| Bandey | Fu | Baffa Byraghy | ib. | Behat R. |  | B ${ }^{\text {¢ }}$ |
| Bangah | I. | Bafain | G $\mathrm{n}^{\text {a }}$ | Behut | - | G $\mathbf{P}$ |
| Bandoogur | Ks | Babagee | G mi | Behut | - | H ${ }^{\text {p }}$ |
| Banybumra. | M ${ }^{\text {x }}$ | Hafra | L $\mathbf{k}$ | Bejurah | - - | Id |
| Banderpol | M y | Baffeen | 0 i | Beilfingur |  | L x . |
| Banow | A. | Baflas, great | C: | Beiragur | - $\therefore$ | N |
| Banai | Bk | $\ldots$ - little | $C$ t | Belalgur | - | Ni |
| Banour | Cm | Baffur | G. ${ }^{\text {I }}$ | Eelafpour | - . | Lu |
| Bangur | Ep | Batgao | E $\times$ | Belco'́s |  | H: |
| Ban R. | Fin | Batcole | UI | Belcuchy |  | 16 |
| Badikara | Fr | Batacola | $B \mathrm{t}$ | Beldeah |  | I y |
| Bandeer | H $q$ | Bateena | BI | Bellá |  | G |
| Banderfandry | Gm | Batnir | Ek | Belgar |  | Hi |
| Bangermow | G r | Battlegunta | Yo | Belgram |  | Fs |
| Banfiwaleh | K 1 | Bate ${ }^{\text {a }}$ | Le | Belharee | - | $\mathrm{K}^{\mathbf{\prime}} \mathbf{r}$ |
| Banjary | K r | Baucotty | B $n$ | Bellepahary |  | LY |
| Banwar | Lf | Batgpour | D p | Peiliah |  | Hy |
| Bapatla | S r | Baungaut | $i{ }^{\text {i }}$. | Relluah |  | 16 |
| Bar | Hx | Baurey | Fs | Belkt |  | M $n$ |
| Barrafur | K w | Baum | Nq | Belore | - | Pp |
| Barafet | Le. | Bauglore | Wo | Belouda | - - | Lt |
| Batrapalong. | Me | Baunafoor | O | Belowry |  | G. |
| Barra | N $x^{2}$ | Baumingot - | L y | Belfund |  | G $\boldsymbol{x}$ |
| Barta | Hr | Baugnan | $\underline{L}$ | Beltangady |  | W m |
| Barai | $\mathrm{Ch}^{\text {b }}$ | Bautconda | L. $y$ | BEMBAJEE | Terrs, of | M |
| BAREE DOABAH | Ci | Bauleah | $1{ }^{\text {a }}$ | Bemaveram | - | Uq |
| Rarod | Do. | Baudihapour | Hu | Benaveram | - | $\mathrm{U}_{\mathbf{n}}$ |
| Baroda' | Nq | Baypour | X m | BENARES | - | Hu |
| Batapulla | E\% | Bazar | Do | Penares | - | ib. |
| Bartapour | Es | Bazar | M $q$ | Bendah |  | H |
| Baroud | F ${ }^{\text {max }}$ | Bazaar | Ag | Bendalla | - | m |
| Batodeana | F $n$ | Bearmah | K w | Bendelly |  | C |
| Baronda | G 1 | Bechia | K o | Eenafa |  | Ar |
| Bardia | XI | Bechnah | Ls | Bendrabad | - | F $\boldsymbol{p}$ |
| Baree | G:P | Beddapollam | Up | BENGAL | - | K ${ }^{\text {a }}$ |
| Barelly | G s | Beddigam | $C^{8}$ | Eeniagunge |  | G ${ }^{\text {g }}$ |
| Bardiano | $1 . f$ | Beder | Qp | Benayke | - | G $\mathbf{u}$ |
| Barilla | Kr | BEDNORE | TI | Bentot | - | C |
| Brareah | L, k | Bednore | U1 | Berapour |  | R |
| Bareala | Lr | Bedramangoody | Un | Berdah |  | Ln |
| Baroach | Mi' | Beed | Lf | Bereilly |  | Eq |
| Bargong | Mn. | Bredagur | $\underline{\mathrm{K}}$ | Beridge | - | $\underline{1}$ |
| Baroogong | N ${ }^{\text {n }}$ | Beegygar | I ${ }^{\text {a }}$ | Berie | - . | R'I |
| Barramooty | P1 | Beegygur | ${ }^{\mathbf{H}} \mathrm{P}$ | Bermah | - ', | K |
| Bari | RL | Beejypour* | H.s. | Bermya. | -- $\therefore$ | 1 |
| Barrihua | G $\mathbf{x}$ | Beehpour | $\mathrm{F}_{\mathrm{t}}$ | Bernaba | - | D 0 |
| Rardelore | U11 | Beelmal | Ik | Bernagar | - ${ }^{\text {- }}$ | -Ia |
| Batriconda | , Wr pi | Bremah R. | Qm. | Beroudge |  | Ah |
| Bakramaul. The | lley: ${ }^{\text {af }}$ | Beerah | Lu. | Berowly | - | * HW |
| . Vaniambaddy'. | ...a. + | Beèricool | M 2 | Berowly | $\checkmark \quad$ |  |


| vindex to the MAP. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Betwala - ${ }^{1}$ | Em | Bifñee | G ${ }^{\text {c }}$ | Boothpour |  | Er |
| Berranam | F ${ }^{\text {d }}$ | Bifary | 1 r | Bopaliol |  | - |
| Befelpour | Gk | Bifoo | Li | Bopara | - | O k |
| Befudagunge | Kp | Bifloah | Fs | Bore |  | P1 |
| Betah | L'2 | Biffore | M y | Borea |  | 1 P |
| Betchee . - : | $\therefore \mathrm{R}$ ' m | Bifowlah | Eq | Borefail I. |  | $\mathrm{I}_{3}$ |
| Beteru | Hu | Bifunpour | K | Boriah |  | D $n$ |
| Betoor | Gr | Biffuntpour | $\mathrm{Hz}_{2}$ | Borrow |  | Gq |
| Bettamungulum | Wp | Bifypour | G y | Borudgow - |  | P m |
| Bettyah | G w | Bittounjah | 1 a | Bory |  | Ni |
| Betwha R. | H ${ }^{\text {d }}$ | Black pagoda | Oy | Bafotandy |  | He |
| Beurab | L w | Boad | N w | Bouidelore | - | $\mathrm{Y}_{\mathbf{q}}$ |
| Beyah R. | Ck | Boanfa | On | Boudgong |  | Ix |
| Bezoara | R' ${ }^{\text {r }}$ | Bobilee | Pu | Boudhan |  | M k |
| Bhaiawar | Lf | Bocar | Om | Bovincoral |  | Xo |
| Bhakor | Fg | Bodanda |  | - Boujepour |  | Hw |
| Bhartpour | $\mathrm{F}_{0}$ | Boden | P'p | Bounkee |  | Lx |
| Bhatter | Lg | Bogga | Fw | Bourafinghy |  | Pw |
| Bherwa | 11 | Bogga Chuta | Gw | Bourgni |  | $\mathrm{P}^{\mathbf{p}}$ |
| Bhotul | M ${ }^{\text {p }}$ | BOGGILCUND | Is | Bowah |  | Fw |
| Bhouferee | Q | Boglipour | Hz | Bowanigunge |  | 12 |
| Bhuder | Mf | Bogmuty R . | Hy | Bowanigunge |  | G6 |
| Biana | Go | Bogru | G | Bowanipour - |  | $\mathrm{Hz}_{z}$ |
| Bibhee | L ${ }^{\text {r }}$ | Bujepour | Nu | Bowapeer |  | Mk |
| Bibigum | Eg | Bokira R. | Mf | Bowat |  | $B_{\text {r }}$ |
| Bicangong | L m | Bokinagur - | 18 | Bowchagong |  | Qh |
| Bicholim | Sk | Bolee | Ip | Bower |  | $\mathrm{D}_{\mathrm{P}}$ |
| Bicciacor | Fx | Bolia R. | Q | Bowly |  | Nq |
| Bickaneer | Fk | Bolloda | Ki | Boivmore |  | $\mathrm{H}_{\mathrm{P}}$ |
| Biddanore. See Bednore |  | Bombally (Santa) | Pw | Bowr |  | G ${ }^{\text {y }}$ |
| Bidgerawn- | Io | Bombay | Pi | Bowraffa |  | ${ }_{1}$ |
| Bidifur | N ${ }^{\text {d }}$ | Bombnalli | S 1 | Bowri |  | 1 y |
| Bidzigur or Beejygur | I4 | Bomel | Op | Boxah |  | $\mathrm{Eq}_{\text {q }}$ |
| Bigoneah | M y | Bominy | Ld | Bóykunpour |  | Ga |
| Bikkar | $\mathrm{H}_{\mathrm{p}}$ | Bomman | Mf | Boyfee |  | Nq |
| Bilghey | T1 | Bomrauzpollam | Uq | Bozenguere |  | Q1 |
| Bilgum | P | Bonafyl |  | Bozingur |  | W P |
| Biligam | Cr | Bondah | H | Braminabad |  | 1 d |
| Bilitot | Cq | Bondgom | M. 1 | Bramnee R. |  | M ${ }^{\text {x }}$ |
| Billaigur- | M u | Bongama | G ${ }^{\text {y }}$ | Brinjaun |  | $A^{n}$ |
| Billapour | 01 | Bongary | X' | BRIIISH POS | SSESSIO | NS in |
| Bilfah. | K ${ }^{\text {d }}$ | Ronneguir. | Q | Bengal |  | 1 y |
| Bimber-Koomaub | Bi | Bonfola. The diftrict | border- | - Circars |  | ${ }^{\mathbf{P}}$ |
| Bimlepatam | Q | ing on the north |  | - Carnatio |  | $\mathrm{U}_{5}$ |
| Bimnaut | Lh |  | Sk | Malabar | Coaft | Oi |
| Bimped | F' ${ }^{\text {x }}$ | Bontaldrim | T P | Brodera |  | 1 k |
| Biming | $\mathrm{P}^{\mathbf{4}}$ | Boodighery | U. | Brodra |  | $\mathrm{H}_{\mathrm{n}}$ |
| Bimulwilla- | Qu | Boodicotta . | ${ }^{W} \mathrm{P}$ | Brokry, |  | M n |
| Binde | Gq | Boodge-boodge | Kf | Bruxe f . |  | Rk |
| Bindi | Pw | Boolbarya | 18 | Bucciorferai |  | G'q |
| Bindkee | G. | Boolecoote | N1 | Bucht-Hazary |  | $\mathrm{C}_{6}$ |
| . Binko | Na | Boondy | Hn | Buckrah |  | Gu |
| Birboom | K | Boorah | Fq | -Buckrah |  | G $\mathbf{x}$ |
| Birchee | M. | Boorfet | $L \mathrm{~L}$ | Budayoon |  | Eq |
| Birikingam | 0 m | Booradung | Ho | Buddakano |  | 1 l |
| Birkooty | $\mathrm{I}_{2}$ | Boofnah | K ${ }^{\text {b }}$ | Budderuck - |  | M y |
| Biruckpour | I. ${ }^{\text {d }}$ | BOOTAN | ${ }^{1} \times$ | Buddenpour |  | Ls |
| Bifantagan | L ${ }^{-}$ | Bootee | N'm | :Biddeswas - |  | Ho |
| Bifnagur $\quad \therefore$ | -Sm | Bootgong |  | Buddlegungo- |  | $\mathrm{H}, b$ |

INDEX to the : MAP.


IND:EX to ter MA.


INDEX TO the:MAF.


INDEX to tag MÁp.


INDEX To the MAP.


INDEX to the MAP.

| Danda | D | Dehnee | Cg | Dewree |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DANDAR - I | 1 k | Dehily | ${ }_{\text {L }} \mathrm{f}$ | ${ }_{\text {Dewry }}$ |  |  |
| Dander - 1 | Iw | Dekhan |  | Dewrya |  |  |
| Dangee Praw - M | Mi | Delawar |  | Dewfor |  | M |
| Dànoon - I | Lz | Delbatta |  | Dharamfaleh |  |  |
| Daogaut - F | Fw | DELHI | EO | Dhoolpour |  | G |
| Daoudanagur - H | H w | Delhi | ib. | Dhoopour |  |  |
| Dapette - | Qo | Dellameotta | Fa | Dibdonda |  |  |
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| Darracoote - | Ow | Denebue | 2 | Dig |  | A |
| Darrah | I 2 | Denkina | Wo | Diggy |  |  |
| Daranduk - P | P ¢ | Denfarai | FP | Dignagur- |  |  |
| Daraporim - Y | Yo | Deogur | GP | Dilla Mt. |  |  |
| Dara Keelah | ib. | Deogur | 19 | DILZAT ROY | Or Ter |  |
| Daraveram - T | To | Deogur | M q | Dimal |  |  |
| Darbel | Gf | Deopour |  | Dimmoody R. |  |  |
| Darempoury - W | W p | Deolary | E ${ }^{\text {q }}$ | Dinagepour |  |  |
| Daried : | Qr | Deony | $\boldsymbol{R}$ | Dincole |  |  |
| Darinagur - D | $\mathrm{D}_{\mathrm{P}}$ | Deorbedga | Ms | DINDIGUL |  |  |
| Darmadijira - - A | Ar | Deorcodra | $\mathrm{R}_{\mathrm{p}}$ | Dindigul |  |  |
| Darore - P | Pn | Deorrag | Ro | Dioly |  |  |
| Darraway | 1 c | Deotan |  | Diu Pt. |  |  |
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| Darrug - $M$ | Mt | Hyder Ally) | U。 | Divinelli: See | See |  |
| Darwar. Suppofed to be | be fi- | Depah | Lx | Divy Pt. |  |  |
| tuated between Mandapo | apour | Deparla |  | Doareah |  |  |
| and Hubely, and near | eareft | Dergong |  | Doarinny ${ }^{-}$ |  |  |
| Edoar - - R | R m | Derriabad |  | Dobygur |  |  |
| Dary = $\quad$ F | Fg | Deriabad |  | Doefah |  |  |
| Dafonkar - | O | Derry |  | Dogon |  |  |
| Datha | H. | Defburriah | Mi | Dojon |  |  |
| Daita - - M | M h | DESERT of Agimere | Fh | Doley |  |  |
| Datteah - - H | Hp | DESERT of MOULT | TAN | Doldogam |  |  |
| Daubow - - I | ${ }^{1} 0$ |  | Di | Dolla |  |  |
| Daudpour - K | K 6 | Devalcoty |  | Dollopattagam |  |  |
| Daumnagur - N | Ny | Devalcotty | Bo | Doimbes |  |  |
| Dawapour - H | ${ }^{\mathrm{H}} \mathrm{r}$ | Devicotta |  | Dombuck R |  |  |
| Dawl | Id | Devidan |  | Dommary |  |  |
| Dêbalpour - D | Di | Devipatnam |  | Donah |  |  |
| Debalpour - ${ }^{\text {a }}$ | ck | Deviryconda |  | Donderiky |  |  |
| Debalpour - - K | K m . | Deulgong ${ }^{\text {- }}$ |  | Dondigal |  |  |
| - Debarry - ${ }^{-1}$ | Nm | Deuprag |  | Dondrahead |  |  |
| DEB-RATAH - F | F.c | Deutan | Nm | Donduca |  |  |
| DECCAN - N | Nm | Dewad | L $k$ | Dongartal |  |  |
| DECCAN, SOUBAH of, | f, his | Dewah R. The fame" | with | Dongong |  |  |
| Terrs. - | Q | the Gogra R. |  | Dongow |  |  |
| Deccan-Shab - | L. | Dewalgong |  | Dongree |  |  |
| Deckanpour - I | Lo. | Dewan | Li | Dongrine |  |  |
| Deckenal - M | M y | Dewancole |  | DOOAB |  |  |
| Deckfhan - L | L ${ }^{\text {n }}$ | Dewangunge - |  | Doogur |  |  |
| Decla - ${ }^{\text {P }}$ | W1 | Dewangunge |  | Dooliapour |  |  |
| Decurchutta - M | M-s | Dewanferai |  | Doomah |  |  |
| Deemah - $\because$ - H | Hz | Dewar | $1 \times$ | Doomah |  |  |
| Degligi | $B r$ | Dewafghera | In | Doondacta |  |  |
| Degourpar | S. r | - Dewgawry | M't | Doorygaut |  | G |
| Dehatya |  | Dewgur | R $k$ | Doowis |  |  |

INDEX то тне $\mathrm{M}_{1} \mathrm{~A} \mathrm{P}_{\mathrm{o}}$



INDEX TO the MAP.

| Gootoka | L: | ,Gummurgee | It | Hokman |  | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gooty | So | Gumplegood | Qr | Hallegandhè |  | c |
| Gopaulgunge | K $b$ | Gumioor | Ow | HaLLIar |  | ${ }_{\text {g }}$ |
| Gopalnagur | K. | Gundar | M1 ${ }^{\text {i }}$ | Hamapet |  | $\mathrm{Y}_{4}$ |
| Gopalpour | Ho | Gundavee | Ni | Hamapati |  | 20 |
| Gopalpour | Ki | Gundavow | Me | Hamed |  | $\mathrm{F}_{\text {r }}$ |
| Gopalpour | K r | Gundell | M ${ }_{\text {g }}$ | Handya |  | G |
| Goychin | Fs | Gundewah | Q | Hanepari |  | 8 |
| Goperapilly | Q | Gundiaw | 1 d | Hanoie |  | Lk |
| Giosa | Ag | Gundigud | Rs | Hanouta |  | P |
| Gora | 15 | Gundilipally | $\times \mathrm{n}$ | Hanfquar | - | G |
| Goragot | H $b$ | Gundocr | Rs | Hanfoot |  | M i |
| Gordygong | Lr |  | Tq | Happer |  | Ep |
| Goriatum | ${ }^{W} \mathrm{p}$ | Gunduck R. | Gw | Hargur |  | I |
| Gorka | Ew | Gunganar | 01 | Harlia |  | R4 |
| Gorka | F,o | Gungaveram | To | Harowly |  | F |
| Gorpeta | Nrq | Gungolee | U1 | Harrioupour |  | Fx |
| Gorínah | L.e | Ganjew | 13 |  |  | 8 |
| Gorna | I w | Gunfeeah | Lk |  |  | y |
| Gofaypour | Ht | GUNTOOR | R r | Harriergunge |  | $\mathrm{H}^{\mathbf{w}}$ |
| Gofgar | Do | Guntoor | ${ }^{2} 5$. | Harrichunder |  | k |
| Goffauird | Cg | Gurewar | F: | Haffengur |  | E |
| Gottaul | L:\% | Gurga | In | Hateoule |  | E |
| Gatteni | R1 | Gurhady | M y | Hatin |  | Ea |
| Govandal | $\mathrm{C} k$ | Gurmacktifher | $\mathrm{E}_{\mathrm{p}}$ | Hatta |  | 11 |
| Goverdan | Fo | Gurmada | $S_{\text {P }}$ | Hatanudda |  | \% |
| Goverdan | Gu | Gurmah | 12 | Hatteenoo |  | M |
| Governdungurry | T1 | Gurnady | Lic | Hatteri |  | F |
| Govery | Q | GURRAH | 1 r | Hattiah I. |  | L ${ }_{\text {d }}$ |
| Govinpour | 1 x | Gurrah | K \% | Hautchella |  | H 6 |
| Goulamconda | So | Gurramconda | U. | Hautdobé |  | M |
| Goulargaut | C P | Gúrrood | I:u | Hautgur |  |  |
| Goulkoun | R 1 | Gurry-Mundlah | Kr | Hautimabad |  | E'P |
| Goulour | Sm | Gurfenry | Ku | Hautindar |  | C1 |
| Gour,ruins | Ia | Garfoot | Km | Hazalpour |  | 1 n |
| Gautgouty | Ro | Guruza | R. 8 | Hazeratnagur |  | D |
| Gourmungul | Qo | Guftan | Ah | Hebbore |  | U |
| Gourpour | W1 | Gurigui | R.n | Heerapour |  |  |
| Gow | IF | Gutterana | Sm |  |  | L. ${ }^{\text {r }}$ |
| Gongat | F. P | Gattura | Hr |  |  | M |
| Geurah | Lx | Gurymary | Ge |  |  | Ro |
| Gourey | ${ }^{\text {F }}$ | Guy G. | 10 | Helawak |  | Q |
| Graen | Q 1 | Guzelhaty | X | Helfautgunge |  | A |
| Grammum | W n | g.UZERAT | $1{ }^{\text {L }}$ | Helpitin |  | C |
| Grenier Mts. | Lg | Guzgotty | H 6 | Hemynpour | * | G |
| Groapnaught Pt. | M h | Gwallior | Gp | Heran R. |  | $\mathrm{K}_{\mathrm{r}}$ |
| Gruapet | ${ }^{1} \mathrm{q}$ | Gyalgur - | M 0 | Herapous |  | Na |
| Gubinagur | Ga |  |  | Herpett |  | $\mathrm{U}_{\mathbf{q}}$ |
| Gudegow | Eq |  |  | Hoflerah |  | $\mathrm{P}_{\mathrm{m}}$ |
| Gudgove | $\mathrm{N}, \mathrm{m}$ | H. |  | Hevilkaferai |  | Mn |
| -Gudjara | G P |  |  | Hibutpour. |  |  |
| Guineara | Lt | Hatzgunge |  | Hierapollam |  | S |
| Gujurat | Bi | Hajygunge | K b | Hieracura. |  | R |
| Guilabgunge | Ko | HAJYKAN | Df | Hierofomal |  | K b |
| Gullapaloor | Qt | Hajykan Chokey | Dg | Hilconour |  | $\mathrm{U}_{\mathrm{m}}$ |
| Gullipanaig | 2.0 | Hajypour | $\therefore \mathrm{Bl}$ | Hillegurry |  | Un |
| Gulma | Ga |  | Hm | Hilfah | - | Hx |
| Guminpilly | R.s | - - | Hx | - Himaus Mts. |  | D w |
| Gumipollam | $\mathrm{U}_{\mathrm{p}}$ | $\cdots$ | K h | Himma |  | E ${ }^{\text {a }}$ |

Him-

INDEX to ths MAP.


INDEX to the MAP.

| Jingergutcha Jinzoowara | $\begin{aligned} & \mathrm{K} b \\ & \mathrm{~L}_{\mathrm{H}} \mathrm{~g} \end{aligned}$ | Iflagunge Itchapour | F ${ }_{\text {F }}^{\text {No }}$ | KairabadKAKARES |  | g |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jionpour | $\mathrm{H}_{\mathrm{t}}$ |  | Ow | Kakna R. |  | n |
| firfee | Ho | juar | E ${ }^{\text {P }}$ | Kalgapet |  | 6. |
| Juwary | Gp | Judan | 0 k | Kalkally |  | 0 O |
| Jiwar | G m | Judda | Is | Kalkiffe |  | C |
| Hilacour | $\mathrm{W} \cdot \mathrm{m}$ | Judookpour | $1{ }_{c}$ | Kallodra |  | M ${ }^{\text {i }}$ |
| Illahabad | Oq | Jugang | Da | Kallydum |  | n |
| Illambazar | K | Jugdeefe | Ht | Kamrapour |  | Q 1 |
| ${ }^{-1}$ Imaus M. | D w | Jugdifpour | Gu | Kanar catar |  | Es |
| Inacoil | 2 p |  | Hw | - lake |  | D |
| Inchacolus | Hd |  | Hx | Kandabil |  | Ed |
| In'shel | R.1 | Jughigopa | Ge | Kandagla |  | Pk |
| Indelavoy | Po | Jugrat | Hp | Kandegherri |  | U |
| Indergur | Ni | Juhoo R. | 1 c | Kanepour |  | B |
| Inderfoul | 0 m | Jujumora | Ma | Karigani |  | O |
| Indos | K | Jukar | Lf | Kangoon | - | Pb |
| Indrat | ${ }^{\mathbf{P}}$ | Juiganoo | M o | Kanhar R. |  | M |
| Indús R. or Sinde | Gf | Julgong | Om | Kanjee |  |  |
| Inguelgong | Q1 | Julkanpour | K h | Kan-Kanan |  |  |
| Ingurty | Q9 | Julkuddar | M 。 | Kankerara |  | Hm |
| Injellee | Mz | Jumboaah | L | Kankre |  | S 1 |
| Innaconda | Sq | Jumbofeer | 1 | Kannaka |  | N y |
| Intawa | 1 r | Jumday | I 9 | Kanneah |  | p |
| Intour | Sp | Jumgerbad | $\mathrm{H}^{\text {t }}$ | Kannya |  | ${ }_{5}$ |
| Joarya | Me | Jumilamurka | Sq | Kanooara |  | $\mathrm{L}_{1}$ |
| Jobah | $\mathrm{L}_{5}$ | Jummaneah | M ${ }^{\text {n }}$ | Kanoon |  | En |
| jocroms | T ${ }^{\text {n }}$ | Jummoo | Bk | Kanowly |  | P. |
| Joghygong | L 1 |  | Ka | Kanfa |  | Ey |
| Johanabad | Mn | Jumnah R. | Do | Kanwarah |  | Kt |
| St. John's Pt. | Ni | Junaghur | M ${ }^{\text {f }}$ | Kara |  | g |
| JOINAGUR, See Jyena |  | Juncaw | Ly |  |  | ${ }_{\mathbf{N}}$ |
| jolian | Lh | Jungile | I | Karriarpoar |  | G |
| Jompir R. | Fo | jungipour |  | Karagode |  |  |
| jona | E 0 | Junglebary |  | Karavan- |  | FP |
| JOODPOUR | G $k$ | Junkfeiloíl. | AI | Kardy G. |  | C |
| joodpour | ${ }^{* 6}$. | junoh | K ${ }^{\text {x }}$ | Karnawl |  |  |
| joogdya | ${ }_{\text {L }}{ }^{\text {d }}$ | Juriahgur - | K | Kaffgunge. |  | ${ }_{\text {F }}$ q |
| Joory -- | $\mathrm{Ht}_{t}$ | Jurilgunge | L ${ }^{\text {d }}$ | Kaftee |  |  |
| Joppa Eurarya | Gz | Jurouda | ${ }^{\mathrm{K}} \mathrm{p}$ | Katimbevole |  |  |
| Joynagur joypour | 1 g | JUSHPOUR | ${ }_{\text {L }}{ }^{\text {u }}$ | Katoene |  | ${ }^{\text {ib }}$ |
| joypour | 1 1, | Juflawha | C | Katta . |  | G |
| Irabattey R. | K ${ }^{\text {y }}$ | Jutram | $\underline{1}$ | Kaukanarow |  |  |
| ${ }_{\text {Irabattey }}$ R. | K | Juttara | Q | Kaumbole |  | R |
| Iramally | ${ }_{P}$ | JUTWAR, Litt | K | Kanngurra |  |  |
| Ircunda | $\mathrm{P}_{\mathrm{S}}$ |  | Fi | K2anpour Kaunudon |  | B ${ }^{\text {c }}$ |
| Jres | $\mathrm{H}_{\text {q }}$ | Jyepour | G ${ }^{\text {a }}$ | Kaurkah |  | $G \mathrm{~m}$ |
| Irelly | Q9 | 号 | $\mathrm{N} \times$ | Kawali ${ }^{\text {- }}$ |  |  |
| Ireniam | If | tepour | $\mathrm{H}_{5}$ | Kawtah |  | 1 L |
| Irgaong | N 1 |  |  | Kaypour |  | K |
| Irnẹe | Op |  |  | Kayuwaht |  | P $b$ |
| Jliamabad | L.d | K. |  | Kedar |  | L' |
| Inamnagur | K o |  |  | Kedgoorah |  | $\mathrm{H}_{8}$ |
| Inampour | Fm | Kadraguta | Lx | Keerah | - | 15 |
|  | Hx | Kargum | 0 m | Keeretpour |  |  |
|  | $1{ }^{1}$ | Kajipet | T ${ }^{\text {P }}$ | Keerpoy |  | $\mathrm{L}_{2}$ |
|  | -Q1 | Kaimow | H | Kecrychar |  |  |
| Ifmael Kan Durgah | Bg | Kaira | $L_{1}^{?}$ | Keeferah |  |  |

I'NDEX то тhe MA'P.

| Keheep - - . B ${ }^{\text {B }}$ | Kihnenagur Kiffelpour $\quad \because \quad \mathrm{Ka}$ |  |
| :---: | :---: | :---: |
|  |  |  |
|  | Kiforegunge - 1 r | Krijinagur - E\% |
| Kellinore - . W\% | Kifnah R. - ${ }^{\text {cmm }}$ |  |
| Kelmee - : $: \mathbf{O}$ | Kiifnagur $=\mathrm{K}^{2}$ | Kiifhnah R, See Kitina. |
| Kelfey - - sir Pr | Kifnapour - - Y P | Kubbooleah - Dh |
| Keltanpufnaclian -C. | Kiftnagherri - $\mathrm{W}_{\mathrm{P}}$ | Kuchee Serai - ${ }^{\text {- }}$ h |
| KEMAOOM : . . DF | Kiftnapatam - Tr | Kudda - $\mathrm{P}^{\text {k }}$ |
| Kemazon Mts. ${ }^{\text {a }}$, Ef | Kifthay orum - $\mathrm{RP}^{\text {P }}$ | Kudet - Kx |
| Kerngur - . ${ }^{\text {c y }}$ | Kifnaveram - ${ }^{\text {P }}$ P | Kulla - Mg |
| Ken ${ }^{\text {a }}$ - | KITCHWARA $i \cdot .1 n$ |  |
| Keniamow - Ga | Kitora - - ${ }^{\text {a }}$ IJ | Kallerwa |
| Kéraree Haonz : '.f.Edi | Kitzhick R.- - - Ex | Kundalla |
| Kender - - Co | Kivalore - Y ${ }_{\text {q }}$ | Kundawilfa |
| Keñdy - - - ${ }^{\text {c-Ix }}$ | Koadgwah - - $\quad$ Bh | Kungipara |
| Kenjar $\quad=\quad \mathrm{HX}$ | Koelcotty $\quad \therefore \quad A \quad$ n | Kukra |
| Kenker R, - Ed | Kohcheeny - : ${ }^{\text {B }}$ | Kundal |
| Kentchian Mts ${ }_{\text {a }}$. ${ }^{\text {a }}$ As | Kokerwara $\because \quad \mathrm{Ki}$ | Kunnipour |
| Kebgong R. ${ }^{\text {a }}$ - $\mathrm{Q}^{\text {b }}$ | Koketarra - - L w | Kupporeah - D |
| Kepeldee - - 1 Xm | Kokore - - . ${ }^{\text {Mo }}$ | Kupfinga - Mu |
| Keraun - $\quad \cdots \mathrm{Bi}$ | Kokra - - Mit | Koreeh - Bi |
| Kerbooza $\quad \therefore$ A ${ }^{\text {a }}$ | Kolaboora - Mu | Kurjaun - ${ }^{\text {P }}$ |
| Kergong $\quad \therefore \quad \mathrm{L}$, in | Komara - Tn | Kurkumba - L |
| Kerigar $\quad$ - ${ }^{\text {e }}$ | Kónapour - - ${ }^{\text {P }}$ | Kurkuna - Ku |
| Kerleh - Lp | Kondur - Po | Korrah R - PI |
| Kermana $\mathrm{san}^{-1} \mathrm{Ft}$ | Konorcia - ${ }^{\text {- }} \mathrm{n}$ | Karregur - Mw |
| Kerona - , H P | Kooch - - Gq | Kurrera - . ${ }^{\text {pp}}$ |
| Kerowly, $\quad \because \quad$ 'Go | Koolbary - $\mathrm{Rr}^{\text {r }}$ | Kurrigora - L |
| Kerrah - - M | Kodecut - - 'Ak | Kurly |
| Kerroundar n:* , Dn | Koond - Hm | Kurtarpour - Cl |
| Kerton - A A' | Koonda - - ${ }^{\text {a }}$ | Kufbah |
| Kefocotty - - - An | Koonjoor - - M M | Kuffor |
| ${ }_{\text {Kevalcotty - -- }}$ | Koonka Koorbah - $\mathrm{L}_{\mathrm{u}}^{\mathrm{X}}$ |  |
|  | $\underset{\text { Koorbah }}{\text { Kor }}$ | ${ }_{\text {Kuti }}^{\text {Kurheel }} \quad$ - ${ }_{\mathbf{D}}^{\mathbf{D} \mathbf{y}}$ |
|  | Koorta Koorumba - $\quad{ }_{P}^{K_{P}}$ |  |
| Khuntijaut - - Mi | Kooihaub * Ch | Katum - Iu |
| Khudt Kote - : $\quad$ Kgi | $\mathrm{B}_{1}$ | Kydrebad, |
| Kiangfee - - $\quad$ C | Kootakurwa - - M $\mathrm{M}^{\mathbf{n}}$ | Kyra -- ${ }^{\text {¢ }}$ 'q |
| Kiankia - ${ }^{\text {a }}$ - A | Kooty - - . ${ }^{\text {a }}$ |  |
| Kierady - - . ${ }^{\text {Hu }}$ | $\underset{\text { Koram }}{ }$ | Kyragur - ${ }^{\text {M }}$ |
|  | Korol - MK | Kyranty - Gd |
| Kilkare - - ${ }^{\text {P P }}$ | 'Korfa - Ep |  |
| Kliwara -- Ho | Kotana - $\quad$ Cr |  |
| Kimedy $\therefore \quad \therefore \quad \mathbf{P w}$ | Kotcheel - $\quad \because \mathrm{Gm}$ | L. |
|  | Koterbugga - - ${ }^{\text {a }}$ Mu |  |
| Kimmoul - - Nu | Koterry * - "1.uKo | Lachracconda - Kz |
| Kintarra - ${ }^{\text {a }}$ | Kotinghy - -Mr | Ladcadive Is.* - ${ }^{\text {P }}$ |
| Kiomnapour ${ }^{-}$- ${ }^{\text {R }}$ | Koibna - \% FH | Lachrangar - ${ }^{\text {a }}$ Foo |
| Kiranoor - ${ }^{\text {- }}$ P | Kota - $\quad \cdots \mathrm{Hn}$ | Lackanwaddy -- Nod |
| Kiranore $\quad$.." $\mathrm{Z}_{\mathrm{p}}$ | Kotul - - . ${ }^{\text {a }}$ - | Lackergaut - CP |
| Kirgonga R. . $\because \mathrm{Cs}$ | Koty - 'Is | Lacki - ${ }^{\text {d }}$ |
| Kirkee - - 'lq | Koudra * $\quad . \cdot$ L'w | Lackricota - ${ }^{\text {ra }}$ |
| Kirkur - - $\because$ \% ${ }^{\text {P }}$ | Koukhoun - $\quad$ Q | Eackritacota" $\quad$ Qu |
| Kiroll - . 'FFq | Kouman - - A ${ }^{\text {P }}$ | Lackritapila - ${ }^{\text {P }}$ |
| Kiroo - $\quad \cdots \mathrm{L}$ L | Kounmeon - : Lk | Laekwalfa - ${ }_{\text {Pw }}$ |
| Kifgoe - . ${ }^{\text {cy }}$ | Kowra - . N : | Ladoda - Gn |
| Kihenagur - ${ }^{\text {a }}$ (m | Kowrah - MG | Lahaar $\quad, \quad$ G'q |



INDEX.to ta! MAP.


INDEX.TO thz MAP.




INDEX'to tha MAP.

| Onbre - - | T1 | Painam | cb | Pannyallum-crutco | 18 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Ooda Ootaly R. M | M 0 | Pairumbaucum | Uq | Panfar | $\mathrm{K}^{\mathbf{i}}$ |
| Oodapour - K | Kd | PAISHWAH of the 1 | MAH. | Panihah | K 6 |
| Oolandoor - X | X q | RATTAS, Terrs. | of Q1 | Panwell | Oi |
| Oolpar - A | M ${ }^{\text {i }}$ | Palamcota - | $A 0$ | Papanaud | $Y$ |
| Oongonda - R | R9 | - - | X q . | Papamow | $\mathrm{H}_{t}$ |
| Oorey - H | $\mathrm{H}^{\text {q }}$ | Palamerdy | Z p | Paracho | Hp |
| Dorgaum - 0 | 0 m | Palamow | K w | Parachurecoil | $\mathbf{Y}{ }^{\text {P }}$ |
| Dotamally - | Yo | Palapetty | Y P | Paradanga | $\mathrm{H}_{6}$ |
| Ootampaliam - Z | Z0 | Palatchy | Yo | Paragur ruins | $\mathrm{H}_{\mathbf{p}}$ |
| Ootatore - X | $\mathbf{X} \mathbf{P}$ | Palavai | $B \mathrm{q}$ | Paramboor | $Y_{p}$ |
| Ootcour - | U0 | Palavafeny | G1 | Paramonfera | Sp |
| Ooterawoody * Y | Yo | Palcoor | 10 | Paramutty | - |
| Ootramalore - W | W $q$ | Palcote | L* | Parafaali | $\mathrm{F}_{n}$ |
| Orangabad - E | Fp | Palgunge | 1 y | Paratella | R |
| Oreyoor - - $\mathbf{Z}$ | $\chi^{2}$ | Palhanpour | Ii | Parchoor | ib. |
| ORISSA - N | N | Paliar R. | $W^{2}$ | Pargow | $\mathrm{H}_{\mathrm{c}}$ |
| Oraenny - P | $\boldsymbol{P}^{\text {a }}$ | Paliacar | 2 r | Paridrong or Paridfong | $\mathrm{E}^{\mathbf{P}}$ |
| Offara - I | L. ${ }^{\text {F }}$ | Paliapade | ${ }^{W}$ | Parkel | Q |
| Offorah - K | Kz | Paliconda | So | Parlagow | Mn |
| Ofunpour | 15 | - | W $q$ | Parlie | Ni |
| Ottingbah | If | - - | $Z_{n}$ | Parmenalore | X |
| Oudanulla | I 2 | Palicaudrbery- | $\boldsymbol{Y}$ | Parnafla | Ht |
| OUDE | Fs | Palighery | TP | Parnel | 01 |
| Oude - - . | G | Palindi | 2 n | Parone | $\mathrm{Y}_{\mathrm{m}}$ |
| OUDIPOUR | 11 | PALL | $\mathbf{K} \mathbf{k}$ | Paropal |  |
| Oadipour | ib. | Palligoram | Rq | Parpooty | S |
| Oudgah - I | L. $x$ | Palmiras Pt. | Nz | Parroah | A |
| Oudighir - | Po | PALNAUD | R $q$ | Parhepatnam | 2 |
| Ougein - + R | $\underline{M}$ | Palredygur | ib. | Parfoi | M |
| Ougly - | R1 | Palté latre | D. | Particotty | 10 |
| Oajoulinké - | De | Palvarya | Es | Partilcotty | $\mathrm{CP}_{\mathrm{P}}$ |
| Oulaguinagore - | X | Palwall | EO | Parur I . | Y |
| Oumary - N | Nq | Pamada | $0:$ | Pafar | $\mathbf{X P}$ |
| Ouple - P | Pa | Pamandoor | 4 P | Paflawar | $\mathrm{F}_{0}$ |
| Ourgoor - | R ${ }^{\text {d }}$ | Pambu | D. | Patada | 0 |
| Ourigai - | $\mathbf{P} 0$ | Pimnagur | Id | Patchwarry | 1 |
| Onfcotta - - S | Sm | Pamodurte | TP | Patcoom | K |
|  | W | Panagur | K | Pategow- |  |
| Oaffoor . - W | Wd | Panamgoody | . ${ }^{-1}$ | Pateagar | R |
| Outapallam - X | X ${ }^{\text {d }}$ | Parangoody | - 2 p | Pateeta | H |
| Outch - | C g | Panarcourchi | X ${ }^{\text {d }}$ | Pateli, or Putala | C |
| Oator | RI | Panatallat | L: | Patenode - |  |
| Owferah - . | $\cdots \mathrm{In}$ | Pancawir | 1 m | Patgong | G 6 |
|  |  | Painchgong | OR' | Patiala | D m |
| - |  | Panchpara- | M | Patinoor | 2 P |
| P. |  | Paniderla | : $2 \mathbf{2}$ | Patmour | $\mathrm{R}_{p}$ |
|  | " | Pandonfer | P1 | Patna | H ${ }^{\text {\% }}$ |
| Paalavanke - | Q | Panere | $B \underline{1}$ | Patnoura |  |
| Pacherry- - ' | $\underline{k}$ | Paneture | $c q$ | Patokak | 08 |
| Pachete - . K | K ${ }^{\text {y }}$ | Paniany | $\mathbf{Y m}$ | Patou | 86. |
| Pachore - - H | H ${ }^{\text {p }}$ | PANJAB | B | Patoual | Om |
| Pada - ${ }^{\text {P }}$ | M | Pankira | N1 | Patree | L 1 |
| Paddar R. See Purddar. |  | Pailang | Qi | Patris | O |
| Padeparnam - Y | Y $q$ | Painnah or Rurnak | 17 | Patrowra | It |
| Padongmew - 0 | $0 \%$ | Pannela | Q1 | Patfah | K |
| Padram - ..' | F | Pannipat | Da | PATTAN ROHILLAS | F ${ }^{\text {d }}$ |
| Padreah - .. | Mi | Pannolak : - | N1 | Pattan | E ${ }^{\text {x }}$ |
| Pathahpour - . . E | .E. 0 | Pamunah | M $q$ | - | Fa |

INDE,X ro the MAP.


IN.D.EX To tas MAP.


INDEX TO THE MA. $\mathbf{P}_{\boldsymbol{j}}$

| Ramcotty | Ca | Ratur | 00 | Roymala R. |  | Ma |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ramdilly | W1 | Ratula | Ft | Roymungul R . |  | M ${ }^{\text {B }}$ |
| Ramedega | M w | Ratoly | $\mathrm{H}_{5}$ | Roypour |  | I: |
| Rameeapatam - | S S | Ratwah | G ${ }^{\text {P }}$ |  |  | 1. |
| Ramenapally | Q |  | K。 | Ruadel |  | $\boldsymbol{B}$ |
| Rameferam | T ${ }^{\text {P }}$ | Rauvee R. | C 1 | Ruguporam |  | QP |
| Ramgary | Yn | Rawlow | Rq | Rujamper |  | $P$ |
| Ramgaut - EP | d 51 | Rantty Dungaree | Me | Rojjueah |  | ${ }_{B}{ }^{\text {P }}$ |
| Ramgonga R. - | Cq | Raynangong | N | Rundulla. |  | M1 |
| Ramgur | $\underline{\mathrm{K}} \times$ | Raypour | M | Runga |  | ${ }^{\text {P }}$ |
|  | ${ }^{P} 9$ | Razula | M g | Rungpour |  | H6 |
|  | ${ }_{\sim}^{\mathbf{F}} \mathrm{p}$ | Reang | $1 \stackrel{1}{d}$ | Runneah |  | M $n$ |
|  | NW | RECCAN. Th | ame ${ }^{\text {as }}$ | Runnode |  | Hp |
| Ramgurra | Ip | ARACAN | $\mathrm{O}_{8}$ | Rurrow |  | $\mathrm{G}_{\mathrm{q}}$ |
| Ramingam | Pa | Recumpada | $Q$ | Ruthgar |  | M ${ }^{\text {n }}$ |
| Ramiferam L. | 2 q | Red Crab I. | M | Rutlam |  | K m |
| Ramifundrum | $\mathrm{U} \mathbf{p}$ | Redigoodam | R t | Rustagarra |  | $\mathbf{K} \mathbf{p}$ |
| Ramnagur | G y | Redipatnam | Z $p$ | Ruttangur |  | 0 |
| Ramoo | Me | Remal | G1 | Ruttangunge |  | K |
| Pamoury | La | Remporetty | 26 | Rattunpour |  | $L_{t}$ |
| Ramoutch R. | C | Remapour | P | Ryacotta . |  |  |
| Rampah | 0 | RETCHNABAD | Doabah | Ryalcherry | * | - U ${ }_{q}^{\text {P }}$ |
| Rampara | Qi |  | B 1 | Rydraire |  | X |
| Rampicherla | R 9 | Rettinghery | T0 | Rydroog- |  | T |
| Rampour | D $n$ | Kewah, or-Rooah | 1. | Rynabad |  | $L 3$ |
| -- | Eq | Rewari | En | Rypour |  | G p |
|  | Fs | Reyoor | R |  |  |  |
| w, Gw | 1 m , | Ridolly | G p |  |  |  |
|  |  | Rikikes | C P | - S. |  |  |
| Ramteak - - | $\mathrm{M}_{9}$ | Rimbu | C6 |  |  |  |
| RANA, Terrs. of. | O O - | Rinaur | Up | Saapour |  | $K$ |
| dipour. |  | Ripera | N\$ | Sabermatty-R. |  | , |
| Ranạagur | H w | Ritchel R. | 1 c | Sabuly . |  | K $\mathbf{k}$ |
| Randeer - | M i | Rixi | K w | Sackerigurry |  | Yo |
| Rangalore | P | Roanpour | 14 | Sacklymuny | - | Tp |
| Rangamaty | G. | ROCKHAGE | B 6 | Sacrapatam |  | $v_{m}$ |
| Ranganya | L. | Rodak | Dn | Sacrapoup |  | $\times \mathrm{q}$ |
| Rangapilla. | W | Rooah or Bewah | I. | Sacrifice rock | - | X m |
| Rangafundrum | A ${ }^{\text {a }}$ | Roodawn | Fq | Sactagong | - | 0 m |
| Rangoon R. | R | Rogonatpour | K y | Sacuda |  | M m |
| Ranjetpour | K y | Roheeta - | G 9 | Saddamol | - | He |
| Rankera | Nr | ROHILCUND | Eq | Sadi R. |  | E ${ }^{\text {e }}$ |
| Rankporah | 1. | Rohnd | Kw | Sadras | - | W |
| Rannee | M y | Rolepara | Nw | Saghordy | - | 1 |
| Ranny Bedalore | Tm | Rómaneah | U | Sagral |  | R 0 |
| Rannygong. | 1 | . Romkera | P1 | Sagrally | - | $\mathrm{P}_{\mathrm{p}}$ |
| RANTANPOUR | G $\mathrm{n}^{\text {d }}$ | Robnay. | I ${ }^{1}$ | Sagor 1. |  | M ${ }_{\text {P }}$ |
| Rantampour - | $i b l$ | Roopnagur | G m | SAGUR - |  | 19 |
| Ranycotty - | An | Roopour | Cm | Sagur |  | ${ }^{4} \mathrm{~K}$ |
| Rannypookra ${ }^{\text {a }}$ | K ${ }^{\text {y }}$ | Roofoolnagur | Bi | Sahar |  | $\mathrm{F}^{\mathrm{P}}$ |
| Raolconda | Ra | Rofcotty | Bo | Sahoor | - |  |
| Raqutty | $\mathbf{K}$ m | ROSHAAN | $=$ L'f | Gahrah |  | G |
| Raperlah | , S | Rotas | A ${ }^{\text {b }}$ | Saibgunge | - | G |
| Rapty R. | T | --Gur | It | Saidnagur |  | Bi |
| Raree | Sk | Rounreak | Q | Saikote | - | 11 |
| Rafin | $\mathrm{P}_{\text {ni }}$ | Rosflarah | Hy | Saipour |  | $1 t$ |
| Raffoolpour | F 81 | Rowlee | Fi | Sailgong |  | $\mathrm{Nm}_{\text {m }}$ |
| \%-.. | G 9 | Rowrah | Hq | Sailoor |  | Xo |
| Bate | T0 | Rowite - | $\therefore . . \mathrm{Dp}$ | Salkar | - | R ${ }_{\text {d }}$ |

I：N．DEX To THE MAP。

| Satadun | P 8 | Santhal | Mh | Seebgunge－ | H5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Salafour |  | Sanuparah | K |  | $\mathrm{Hz}^{\text {z }}$ |
| Salawauk | W： | Sanyangong | Qi | Seedly | F y |
| Salbarry | M P | Saonlas | 01 | Secharah | K |
| Salbey | － H P | Saouker2 | BO | Seekpour－ | H |
| Salem or Selim | $\therefore \mathrm{XP}$ | Saourgam | OO | Seerka | K w |
| Saler－Moular | $N 1$ | Sarandaga | K h | Seerpour | 12 |
| Sali | Oo | －Saranga | He |  | 16 |
| Salimpour | $\underline{G}$ | Sarangpour | A |  | EP |
| Saliom | m |  | K |  | H w |
| Salli | P o | Sarapilly | T ${ }_{\text {d }}$ | Scetacoon | L ${ }^{\text {d }}$ |
| Salloorgant | Pu |  | Qq | Seetrungee R． | M |
| Sallamea－ | M | Sarhant | 17 | Segardee | R |
| Salon | $\mathrm{X}_{\mathrm{p}}$ | Sarlapally | Tp | Segh | ci |
| Salopar | A ${ }^{\text {a }}$ | Sarmee | 12 | Segwah | Ni |
| Salfette I． | 01 | Sarney | Pa | Sehaloar | Un |
| Sambarra | K p | Sarrowly | 01 | SEHAURUNPOUR | Do |
| Samber | Gm | Sarfer | 0 | Sehaurun pour | Co |
| －Salt lake of | \％ 3. | Sararpoar | D。 | Sehwan | Gf |
| Sambrani－ | S1 | Sarunna | 1．d | Sejahilpour | K |
| Samiaveram | Yp | Safanam | P w | SEIKS，Terrs．of | Ci |
| Sami－lfuramr | T 9 | Sadaw | L $x$ | Selim，or Salem | P |
| Samulcota | Qt | Saferam | I w | Selimabad． |  |
| Sanafhygotta | G | Safnah | Gs | Selimpour | \％ |
| Saiaflygunge | 16 | Salwan | Eq | Selka | ， |
| Sanbafte－ | Ai | Satanoor | Wo | Sellee－ |  |
| Sancatty | ${ }^{\text {P }}$ 。 | Satafhygur | ${ }^{\mathbf{H}}$ | Sellempour |  |
|  | P P | Sateram－ | －Wn | Sellinagur |  |
| Sandela | Fr | Sathora． | 10 | Selogoorar－ |  |
| Sandole | R | Sattarah | Qk | Selon． | q |
| Sandy | $F$. | Satilpour | Ih | Semanah | m |
| Sandry | Hm | Sattinagram－ | R | Seminagur | E 8 |
| －Sangada－ | He | Sattipalum | 89 | Sédiapatam＊ | W o |
| Sangaipilla | TP＇ | Satuifanagana | YP | Senaura－ | k |
| Sangam | P ${ }^{\mathbf{p}}$ | Sattimungalum | X | Sengana： | F |
|  | Tq | Satrum | $\mathrm{Y}^{\mathbf{P}}$ | Senké－ | E ${ }^{\text {d }}$ |
| Sangamundan | An | Savendroog | Wa | Sepaun |  |
| Sanganeer－ | G | Saumapetta | UP | Sepaunagur | Lo |
| SANGARIANS | Le | Saunkley | M m | Sepoory | H p |
| Sangool | K． | Saurzah | Fr | Sepou | P |
| Sangurry | Um | Sautgud | ，W P | Sepra R． | m |
| San | Hf | Sawkul． | $\mathrm{O}_{\mathrm{p}}$ | Sepieng | c 6 |
| Sankaaty ．－ | Hd | Sawpour | Ko | Sequeang． | 2 |
| Sankerya | $\mathrm{E}_{\mathrm{P}}$ | Sawree R． | Mg | SERA | Un |
| Sankerydurgam | Xa | Sayr | G w | Sera | ib． |
| Sanko | $1 a$ | Scheuporti | C P |  | Kk |
| Sanku | E× | Schouri | Pk | Serai | M 1 |
| SANORE | 5 m | Sealcot | BK | Serampour． | 1 y |
| Sanore－Bancapour | $i{ }^{\text {b }}$ ． | Seamlee | Do |  | La |
| Sanowly | F | Seaum | C1 | Sarapgunge | Ha， |
| Sanparam | Pw | Sebhore | K。 | Seray | 15 |
| Sanpoor R． | Cz | Secundarah | $E_{p}$ | Seraya | G $\mathrm{I}_{\text {：}}$ |
| Sanquelim | Sk | －－．－ | G： | Sergade | Um ． |
| Sanquem | ib． | Secunderpour | Fo | Sergom | Oi． |
| Sanfor | Mo | －－ | Gw | Sergour |  |
| Santa | 12 | Secundra | Cn | Serinagur | H ${ }^{\text {d }}$ |
| Sauta Bombally． | Pw |  | F9 | Serineah | H2 |
| Santaheeta． | Ld | Sedgwara | M | Seringham | $Y_{\text {P }} \mathrm{P}$ ． |
| Santerabarry | G 6 | Sedhout | Iq | Seringapasam | \％W．${ }^{\text {a }}$ |

INDEX TO. THE M!A:P.

.INDEX ro the-MAP.


I NDEX ro the MAP.


| Toolmedin | K。 | Trivenulore | Xq | Untoorah | M |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Tooluc | Ly | Trumian | $\mathrm{Y}_{\mathrm{p}}$ | Upella | Pq |
| Toomcoar | U | Tubbauleh | ${ }^{\text {B }}$ | Upella Chanderaghery | ib. |
| Toomfir | Mr | Tubeipilly | U0 | Upparah - | t |
| Toorgudy | Yp | Tuckatpour | Lt | Uracunda |  |
| Topodurty | T* | Tuckea | M $q$ | Uratoor | Tp |
| Topparpour | Ft | Tuckt Hazara | Ch | Urecullyconda | $\mathrm{U}_{0}^{\text {p }}$ |
| Torar | K w | Tuckwapour | Fs | Uregur | $A$ |
| Toree | ${ }^{\text {ib }}$ i | Tuelcar | An | Urfingunge | $\mathrm{H}_{\mathbf{t}}$ |
| Toreparah | B1 | Tuefah | $\mathrm{N}_{\mathrm{p}}$ |  |  |
| Torres Is.- | Xi | Tukera | Fs |  |  |
| Torroff | 12 | Tulah | K ${ }^{\text {d }}$ | V. |  |
| Torfera | Mu | Talon | ${ }^{\text {D }}$ |  |  |
| Totiom | XP | Tulloon | D 1 | Vackaleer | P |
| Tovaley | $A$ | Tullowgam | Pk | Vadacouchery | $\mathbf{Y}^{\text {n }}$ |
| Toudfong | Dif | Tully | Mp | Vadagary | Z |
| Touery | G1 | Tumbali | 2 n | Vadamaderry | P |
| Touhene | D m | Tummeroo | I $b$ | Vaddal | St |
| Toulomba | Ch | Tummoo | ib. | Vadenagorchy | X |
| Toumanuggree birth plac | ce of | Tumuchanaig | Zo | Vadoranium | Y $q$ |
| Rajah Biekermajeet | 10 | Tungebadra R.' | Sa | $V$ Velue |  |
| Tounfe R. | Is | Tungeong | $1{ }^{\text {b }}$ | Vagalon | X |
| Tourchengada | X | Turancourchy | ${ }^{\mathbf{F}} \mathrm{F}$. | Vagouly |  |
| Touryacora | $\mathrm{U}^{\mathbf{p}}$ | Torbunny | Fw | Vaigal |  |
| Towlgaw | $\mathrm{P} \mathbf{n}$ | Turee | I'y | Valagode |  |
| Towpaal | I6 | Turgah | $\underline{x}$ | Valar R. | n |
| Trangarde | Y m | Turki | G ${ }^{\text {P }}$ | Valdore | 9 |
| Tranquebar - | X ${ }^{\text {d }}$ | Turkpour | Bh | Valegar |  |
| TRAVANCORE | 4 A | Tarlah | Pw | Valiodu |  |
| Travancore | ${ }^{1} 0$ | Turoot | B1 | Vallagam | ${ }^{1} \mathbf{r}$ |
| Tricalore | Xq | Turrorah | Mr | Vanancoupan |  |
|  | $\mathrm{XP}^{\mathbf{p}}$ | Turrunga | M | Vangole | P |
| Trickandore | ${ }^{4} \mathrm{p}$ | Tutacorin | ${ }_{\text {A }}{ }^{\text {P }}$ | $V$ aniambaddy | $\mathrm{w}^{\mathbf{p}}$ |
| Trimanetre | $\mathrm{X}^{\text {q }}$ | Tuteferai | ${ }_{\mathrm{C}}$ | Vanjemfoar | Qr |
| Trimalore | Yq | Tuttum | Hr | Vari | Sk |
| Trimapour | $\mathrm{Y}_{\mathrm{Y}} \mathrm{P}$ | Tuxal | C | Varore | W. |
| Trimetwady | ${ }^{\mathbf{Y}} \mathrm{q}$ | Tymarrah | K ${ }^{\text {x }}$ | Vahavan | Y |
| Trincoli ${ }^{\text {P }}$ | Bt | Tyferrah | L x | Vaypar | ${ }_{2}$ |
| Trimamaly | $A^{3}$ |  |  | Veerapatch | 0 |
| Trinomaly | W ${ }_{\text {q }}$ | 0. |  | Veh |  |
| Tripalore | W |  |  | Velam | n |
| Tripanti | S ${ }_{\text {¢ }}$ | Udafia | M ${ }^{\text {q }}$ | Velangoody | ${ }^{\mathbf{Y}} \mathrm{P}$ |
| Tripafore Tripatore | U ${ }^{\text {r }}$ | Udeampour | 2 n | Vellacherry | ${ }_{\text {P }}{ }_{\text {P }}$ |
| Tripatore | W ${ }^{\text {p }}$ | Udebode. | Cr | Vellas | $B^{\text {s }}$ |
|  | ${ }_{4}{ }^{\mathrm{Y}} \mathrm{P}$ | Udegherri | T-q | Vellechy | - |
| Tripawanum | ${ }_{2}{ }_{p}$ | Uduar | $c_{5}$ | Velloul | Mf |
| Tripety | Uq | Umballa | Dm | Vellam | $\mathrm{Y}_{\mathrm{q}}$ |
| Tripunetaire | Yn | Umberpattons | I. | Velore | W ${ }_{\text {g }}$ |
| Tritany | Uq | Una | Mg | Vencatigherry | W P |
| Tritchinopoly | $\mathrm{X}_{\mathrm{p}}$ | Unampilly | S.O |  | T ${ }_{\text {q }}$ |
| Trivadi | $\times$ | Unawah. | Ki | Vencatram | To |
| Trivicary | W q | Unchafair | Ep | Vendelos | As |
| Trivanduar | $\mathrm{Z}_{\mathrm{Y}} \mathrm{P}$ | Undearcore | M | Ventre | s |
| Trivatoor | ${ }^{\mathrm{Y}} \mathrm{P}$ | Underdengarde | X n | Veracundalore | q |
| Trivatore | W q | Undret | Nm | Veramalley | YP |
| Trivatore | $\mathrm{Y}_{\text {i }} \mathrm{F}_{\mathrm{p}}$ | Uniara | Go | Verdachelon | X. ${ }^{\text {q }}$ |
| Trivelavary | ${ }^{i b}$ | Unkei Tenky | N 1 | Verguttum |  |
| Trivembar | $\mathrm{Z}_{\mathbf{P}}$ | Unnup-pouppy | K 6 | Verimungalum Y y 2 | $40$ |


| Verfa'neyra | Kf | Wankary | Pk | Yatepul |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Verfara | Li | Wanfawur | L. g | Yaree |  | M/ |
| Verfaul | N i | Waradura | 'Tp | Yatcheveram |  | T |
| Vetavelum | Wq | Warangole | Q | Yatong |  | M $/$ |
| Viato e | W m | Wardwan | Lh | Yattonur |  | r |
| $V$ Vckryoandy | W q | Waree | $\mathrm{K}_{\mathrm{g}}$ | Yaugar |  | N , |
| Vietoria F. | Pi | Wargam | $1{ }_{\text {L }}$ | Yeanglaw |  | M |
| Vilepatty | $A$ s | Wari | O m | Yeapour |  | B. 1 |
| Villaporum | X q |  | Q1 | Yedacota |  | Y |
| Villenore | ${ }^{\text {a }}$. | Wanel R. | Kd | Yeddimungulum |  | $\mathbf{Y}$ |
| Vingorla | S $k$ | Wani | X q | Yehenagur |  | C |
| Vinja | Kf | Warriore- | $i{ }^{\text {b }}$. | Yehungfehaul |  | C'h |
| Vinkatty Chillum | Tq | Waftara | Um | Yelafuram |  | R q |
| Virague | P n | Watara | Qu | Yelchore |  | i6. |
| Virimgan | Lh | Warrap | 20 | Yelcour |  | Uq |
| Virour | Oq | Watterputten | Rk | Yeilamoody |  | Z |
| Vifagapatam | Q ${ }^{\text {a }}$ | Wattinad | Y $q$ | Yellang |  | Oi |
| Vimianary | $A$ o | Wau | 1 h | Yellegood |  | Sp |
| VISIAPOUR | Q1 | Weerawau | Ii | Yemella |  | R p |
| Vifiapour - | Qm | WERREAR | K h | Yenletcheru |  | S |
| Vizamunguium | Xo | Weylaroo | Nf | Yeowah |  | M |
| Vizapour | O1 | Wholagunge | Gt | Yerapatta |  | Uq |
| Vizerabad | Bh | Wocanally | Sn | Yertnagoodam |  | R |
| $V$ Vizeroy | Rs | Woglydurgam | Wo | Yetcheradaw |  | Tn |
| Vizianagram | Pu | Wollapollam | Xo | Yetcopauk |  | Qt |
| Vizianagur | Ow | Wombinellore | X p | Yeula |  | 01 |
| Vizraby | Oi | Wontamitta | $\mathrm{U}_{\mathrm{P}}$ | Yocotte |  | $\mathrm{O}_{\mathrm{P}}$ |
| Volconda | Xq | Woodgurry Woodiour | $\mathrm{U}_{\mathbf{Y} \text { ¢ }}$ | Yo-Sanpoo R. YUNAN |  | $\underset{\mathrm{Hz}}{\mathrm{F}}$ |
|  |  | Woodfamadrum | Qs | Yuntchian |  | $i b_{0}$ |
| W. |  | Woodycutty 9. | T1 |  |  |  |
|  |  | Wootamally | Zo | Z | 2. |  |
| Wachinellore |  | Worgaum | Pk |  |  |  |
| Waer | Fo | Wurnama | $\stackrel{\mathrm{M}}{\mathrm{L}} \mathrm{g}$ | Z. Cape. <br> Zamrekote |  | 6 |
| Wagnagur | M ${ }^{\text {r }}$ |  |  | Zangefir. |  | Qi |
| Wagoly | ${ }^{P} 1$ |  |  | Zeagong |  | Ni |
| WAGUR, Little | Kg | Y. |  | Zean |  |  |
| Waidgunge' | Ht |  |  | Zelon |  | C |
| Walgom | $B \mathrm{r}$ | Yaegongmew | Pb | Zemowah |  | Pb |
| Wallapatam | Yn | Yale | Cs | Zinnore |  | 14 |
| Walloor | S | Yanam | R.t | Zivagee |  | Q |
| Walom | Ki | Yanatong | $\mathrm{O} i$ | Zogor |  | Da |
| Wamwaloo | Le | Yangbonraw |  | Zuenga |  | ${ }^{\text {c }}$ c |
| Wandewafh | Wq | Yangoon | $i b$, | Zufferabad |  | Ch |
| Wankaner | Lg | Yankeon Mts. | Ca | Zufferwal |  | B $k$ |


| 0 M | I S S I O | $\dot{N}$ S. |
| :---: | :---: | :---: |
| $A_{\text {Lmanchery }}$ Uq | Catbanawes - Fo Cuckanara | Macowal $\quad$ Cm MARHAT. The country |
| Amrutfur. The fame with | Daber. Implied to be the | now called BAGLANA |
| Chuckgroo - Ck | fame with Loagbur near | N $k$ |
| Ananpour ${ }^{\text {- }}$ - Mk | Macowal - Cm | Nellipilly. It lies about a |
| Arieewa - Lu | Davagoodam - Rt | mile and half to the eaft of |
| Bajetpour - $\mathrm{K}_{\mathbf{z}}$ | Dampere The fame as Ude- | Yanam - Rt |
| Bandarmalanka $\quad$ Rt | ampour $\quad-\quad \mathrm{Zn}_{n}$ | Owlah or Aonlah Eq |
| Bangur. This fertrefs was | Farree - . - $t$ | Pearl fithery - A p |
| fituated between Owlah and | Fauzilabad - B h | Pehkely. See Map p. 102. |
| Bereilly - Eq | Gadibunda - Uo | Policaud. See Palicaudcherıy |
| Batinda. The fame as Batnir. | St. George's I. $\quad$ Sk | $Y_{n}$ |
| Bawnagur - M | Golonore - TE | Ponaveram - $\mathbf{Y}_{0}$ |
| Rehnbur or Bembher Ai | Goomgong - Mq | Ramafferam - Rt |
| BERAR - $\quad$ Nq | Goondah - Ft | RATHOKE. RAJPOOTS, |
| Boriah - Ls | Goopygunge - Gq | original country of Hk |
| Bunjarata - K o | Gordeware Pt. $\quad$ Rt | Rubals - Fo |
| Burarya - G w | Gureewar - Ft | Santapilly Rocks ${ }^{\text {-u }}$ |
| Cabul city. See the map at | Gurymary - Gc | Santipollam - ${ }^{2 b}$. |
| page 102. | Hendowne or Hindia Go | Singhole - $\mathrm{K}_{\mathrm{q}}$ |
| Candahar city: See the map at page ioz. | $\begin{aligned} & \text { Jagrenatporumi } \\ & \text { Inevarum }\end{aligned} \quad-\quad \begin{gathered}\text { Rt } \\ i b\end{gathered}$ | Sinkbazar Tentamoody $\quad-\quad \underset{R}{\text { K }}$. |
| Chamulgoody . $\quad$ Z | Ingeram - ic. | Tifianah - Ep |
| Chandpour $\quad \mathrm{Dp}$. | Limbra - M ${ }^{\text {r }}$ | Toddipoondy - Rt |
| Condrapatty - Rt | Loaghur. In the neighbour- | Tomarum - Qu |
| Coringa . $\quad$ - Rt. | hood of Macowal Cm |  |

## ADDENDA, \& ERRATA.

## INTRODUCTION.

Page xxiv. line 2 from bottom, read, and it will alfo prove, \&c.
——xvii. line 1 , read then,-line 10, for Mabrattas, read, founder of the Mabratta State which about, \&c.

- xlix. line 11, for 80, read 25 .
- Jii. line 9 from bottom, after-Mabrattas, read (or ratber that of MARHAT)
- liii. line II, read ig16.
—— Ivi. add a note of Ferifita *, line 14. [*That is to fay, in his hiftory of Hindoostan; for in that of the Deccan, he fpeaks very fully on the fubject: but this latter has never yet been publighed in any European language. See note p. Ixxix. $]$
- Ivii. line 7, read furn, $/ 6$
- Iviii. line 18, after Mogul, dile the comma
- 1x. line 9 from bottom, for 1627 , read 1628
- Ixi. Aurungzebe was the third fon of Shah Jehan
-ibid. and throughout, for Sewagee read Servajee
—_ Ixiii line 8, read exceeded
- Ixxiv. The note refers to Ferwan Bucbt; not Sbab Aulum
—— lxxx. line 5 from bottom, dele [he]
——lexxv. line 19, read aftermards
——cxi, line 9, read foubab
- cxiii. note, for 21,650 , read 41,650
——. cxir. line 3 , to the fum, add 1 . for pounds fterling
——cxxix. note on "cextending bis conquefs*", line 6. [*The laft accounts from India, inform us, that Sindia had been defeated by the confederated Rajpoots, on the fide of Jyenagur and Joodypour: and that in confequence, he had setreated fouthwatd to Gwalior. They add, moreover, that the nominal Mognl, Shah Aulum, had taken the opportunity of efcaping from Sindia's camp, to the Rohilla Chief of Sehaarunpour.]
——cxxxvii. line 10 from bottom, read per annum


## MEMOIR.

Page 10. line 2, after longitude, read, the meafurement giving fo mucb more, \&c.

- 13 line 4, read, a fat coaff, nearly fraight
- ibud. laft line, for them, read it
- 14. line 1 , for their, read its "1
-15, note, read Werfebe
- 22. line 20, read thoje

32. line 6 from bottom, read $72^{\circ} 3^{8^{\prime}}$, and $72^{\circ} 40^{\circ}$
33. note, read other temples cut out of the rock

62, line 7 from bottom, read Pryaug, or Praig
-66. line 9. [It appears that ancient Delhi itood on the fame fide of the Jumna, with the prefent city of that name. B.]

- 68. line 16. [The map in queftion, was drawn by Lient. Rind, of the Bengal eftablifhment; as well as that of the roads in the Dooab, mentioned in page 66. B.]

70. line 19, dale [weftern]

- 78. line 9 from bottom. [Moultan city, has been garrifoned by the King of Candahar, fince 1779. B.]
- 8i. and throughout, read M. Petis de la Croix


## ADDENDA, \& ERRATA.

Page 89. Batnir. [This placeis allo namied Batinda; by the people of the Panjab. It is fituated in a country famous for paftores; nnd fine horfes, B ] For th:s, and for the reft of the notes marked $B, I_{\text {am }}$ indebted to Major James Browne of the Bengal eftablifhment.
ga. line 2 , for $t$ berm, read sben
96. line 9 , for in, read an

97 line 6, read [was ncw divided]
102. In the map, read Rauvee river
115. fecond note, read tbe axcient
117. line 5, Gureus. There is a ditria of the name of Gorders, in this quarter.

125 line the laft, read as tbe Partbian boundariss
144. line 19, read and between Babar, \$c.

155 line 6 from bottom, read between Bilfab and Pannab
161. line 7 from bottom, for sbe river, read at
174. latt line, put a period, afier authority
175. line 19, read jourvey
178. line 3, after fia, read in 1 be next
182. line 12, for are read is

- 190. line 8, read comm. /Foners
- 193. line 21, for Now, read But
- 283. line 3, for ferves, read ferve
- 239. laft line, read Gedrofia
- 291. line 2, read compofe tbe prifent empire of tbe Abdalli, \&sc.
-ibid. note, line 1, for this, read tbe.


[^0]:    - Whatever charges miay be imputable to the Managers for the Company the neglect of ufeful Science, however, is not among the number. The employing of Geographers, ${ }^{\text {, }}$ and furveying Pilots in Indid; *and the providing of aftronomical -inftrúments, and the holding out of encouragement to fuch as fhould ufe them; indicate, at leaft, a fpirit fomewhat above the mere confideration of Gain: but above all, theeftablifhment of an office at home, for the improvement of hydrography and navigation, and their judicious choice of a fuperintendant, for $\mathrm{it}_{2}$, reflects the higheft honour on their adminiftration ; 'and ought to convince us,' that in a ${ }^{1}$ free country, a body of fubjects may accomplifh, what the State itfelf defpairs eyen to, attempt. For, however furprifing it may appear, 'it is neverthelefs true, that the firft maritime 'nation in the' world, has no good chart to direct its fleets towards its own coafts:- nor even a criterion, by which the public may be enabled to judge of the merit of any hydrographical production whatfoever. So that the foundings on the coaft of Bengal, are better known than thofe in the Britill' channel ; of which, no tolerable chart exifts, even at thís day': During the late war, an Eaft India fhip owed her fafety to the knowledge obtained from a chart of the mouths of the Ganges (made, and publifhed by order of the Company) into one of which the efcaped from two French cruifers, and afterwards came into the Hoogly river by the inland navigation. We had juft become mafters of the hydrography of America, when we loft the fovereignty of it. I hope no one will think ominoully of dur Indian poffeflions from this circumftance: but even if he does, he.may. make himfelf eafy on the fore of Great: Britain.

[^1]:    * To Mr. James Anderfon, I am, in particular, indebted, for the account of the derivation of the term Mahratta, and for that of the'anceffry of Sevajee: as alfo: for the fubject matter of the notes that accompany thofe articles. And to him, and to his brother, Mr. David Anderfon feach of whom, at difiereat times, refided in a public $\mathrm{C}_{2}-$ pacity with Madajee Sindia)' $P$ owe the moff valuable part of the information, 'refpecting. the geographical divifion of the Mahratta States, and cheir tributaries.

[^2]:    * See the notes to the Heetopades or Fables, recently tranilated fiom the Sanfrit (or Sanfereet) by Mr. Wilkins, page 332. This gentleman has the merit of being the firlt European who acquired the knowledge of the Sanfcrit language : which was that of ancient Hindooftan (or Bharata) but which ceafed to be the vernacular tongue, foon after the Mahomedan conquet, in the inth century. A few years ago, it was known only to the Pundits or learned Pramiza; whio religioully kept it from the knowledge of all but their own order:; it being the facred depofitajy of their religious inflitutions, and myteries ; and which it was inconvenient to communicate to the vulgar, otherwile than through the medium of their own comments, and interpretations. The honour done Mr. Wiexigs on this oceafion, reminds us of the cominunications made to His rodot us, by the Egyptian Priefts : and it is a fair infereace; that the perronal merit of both of thefe men, had a principal hare in obtaining fo difinguimed a preference.

[^3]:    - The term Lixbia belonged at frit only to the countries of Africi, that were colonized by, the Greeks: but was afterwards 'applied by them to the whole continent. The Romans, in: a fimilar manner, extended the name of Arpica, which originally belonged only to the territories of Carthage, toisthe whole! continent: ort, ats. leaft, to as much as they knew of it. AsiA was applied at frift only to Natolia; which took the name of Lesser Asia, afterwards, when AsIA was applied to all the known parts of that concinent.

[^4]:    - The country watered by the 5 eaftern bránches of the Indus. See page 80 of the Mcmoir.

[^5]:    * I conclude that Patya, is the modern Pbbkely. See page 108 and 116 of the Memoir. Some have fappofed Cafpatyrus to mean Cafonere: but this is improbable, from its ftuation, which is remote from the Indas.

[^6]:    * The tide in the Indus is perceptrible at about 65 miles above its mouth; according to the information of Mr. Callander, who refided a confiderable time at Tatta,' near the head of the dilla of the Indu3. In the Ganges the tidesare parcertible at 240 miles ap: and in the river Amazons, at tco.

[^7]:    * Here it would appear, that Arrian followed the geography of Alexander; who fuppofedIndia to be the molt ealtern part of Alia; and that the fhore of the ocean, from the mouth of the Ganges, took a quick turn to the north and northweft: for he fuppofed the Cafpian laketo be a gulf of it. (Vide his.fpeech on the banks of the Hyphafis.) But Ptolemy, as we are given to undertand, had, before the time of Arrian, defcribed SERica, and the borders of Sinfe : that is, the countries bordering on the weft and NW of China; the country of the. Elviths; and part of Tartary, to the latitude of 50 degrees north.

[^8]:    - No part of:the Roman empire, was diffant from its capital, by the moft circuizous ronte, more than 2800 miles.

[^9]:    The reader is requefted to confult the map at fage :02, for the countries l ing between
    the Fidus and the Cafpian fea.

[^10]:    - For, the dates of, the reigns of the Emperors of Hindoodars, the reader is refierred to, $\boldsymbol{A}_{3}$ Chronotogical Table, at the end of the Introduction.

[^11]:    - It is to he regretted that Col. Dow, did not give a literal tranflation of Ferihta, as a text; and add his own matter, or explanations, in the form of notes. We thould then have been able to diftinguifh the one from the other.

[^12]:    * Properly fpeaking, the Mogul Empire was that, over which Tamerlane and his immediate fucceffors reigned; and in which, India was not inclnded. Cuftom, however, has transferred the name to the empire held by the defcendants of Tamerlane, in Hindoottan and the Deccan.

[^13]:    - The:reader may find in the 4gth note to Mr. Orme's Hifforical Fragments of the Mogul empire, a letter written by Jefwont Sing, Rajah of Joudypour; to Aurungzebe, expoftulating with him on the unjuft meadures he was purfuing, with refpect to the Hindoos. I bis letter breathes the mof perfect firit of philanthropy, and of toleration in matters of religion : togethet with the moftdetermined refolation to oppore the meditated attack on the civil and religious rights of the Hindoos. The elegant tranilation of this letter was made by Mre, Boughton Roufe.

[^14]:    - Memoirs of Eridut Khan, tranllated fron the Perfizn by Capt. J. Scot, 1786. This valuable fragment of Mogul hiftory; contains an account of the revolutions that happened in the Mogul empire, from the death of Aurungzebes, in 1707, to the acceffion of Ferokfere, in 1712. It contains much curious' matter; and fully developes the political character of a Mogil cour rier.
    + Thefe letters are preferved in one of the notes to the above work (page 8) and furnifh this ftriking leffon to frail mortality; that, however men may forget themfelves, during the tide of profperity, a day of recoli ictron will inevitably come, fooner or later. Here we are prefented with the dying confeffion of an aged monarch, who made his way to the throne, by the marder of his brethren, and the imprifunment of his father: and who, after being in peaceable pofiefion of it, perfecuted the moft inoffenfive part of his fabjects, either through bjgotry, or hypocrify. Here we behold him in the act of refigning that, to obtain poriefion of which, he incurred his grilt: and prefented to us, a mere finful man, trembling on the verge of eternity; equally deploring the paft, and dreading the future. How awful muft his fitua tion appear to him, when he lays, "Wberever 1 look, $I$ fee nothing but the divingix."

[^15]:    [. His. hintory is given in the abovemeptioned Memoirs."

[^16]:    *He was 204 years old. Me left 5 fons; Gazi o'dien, Nafrjung, Salabidjung, Nizamally (the prefent foubah of the Dectan, and che only furvivor) :and Bazalet jang.

[^17]:    The geographifal pofition of the circars , and the origin of the application of the term nortbern, to them, will be found in the latter part of this Introduction.

[^18]:    \# It is neceffary to obferve, that the Gazi $o^{\circ}$ djen in quefione is not the perfon whom we have feen before, in the capacity of Vizier to Mahomed Shah; but his fon. But this is the Gazi, who is fo famous, or rather infamous, for affafinations and crimes of almoft every other kind. The elder. Gazi perifhed in an atteript to recover the poffefion of the Deccan from his younger brother Salabidjung, in $\mathbf{5 7 5 2}$.

[^19]:    - This is the perfon who vifited Mr. Hafings at Lucknow, in 1784. He was about 13 years old at the time of Abdalla's laft wift to Delhi.

[^20]:    * This information occurs not only in Ferifhta's hiftory of Hindooftan, bat in that of the Deccan, \&c. likewife. The former we have before fpoken of, as being trandated by Col. Dow : but the latter has never yet made its appearance in any European language. It is expected, however, that the public will foon be in poffeffion of it, from the hands of Capt. Jonathan Scott, who has already exhibited a fpecimen of one part of his intended work; and has engaged to complete it, on conditions, which the public, on their part, appear to have performed. Ferifhta lived in the Court of Ibrahim Audil Shah, King of Vifiapour; who was cotemporary with Jehanguire in the beginning of the laft century Ferifha's hitory of the Deccan, \&c. opens to our view, the knowledge of an empire that has fcarcely been heard of, in Europe. Its Emperors of the Bahmineah dynafty (which commenced with Haffan Caco, A.D. 1347) appear to have exceeded in power and fplendour, thofe of Delhi ; even at the mot flourifhing periods of their hiftory. The feat of government was at Calbergaz (fee Orme's Hiftorical Fragments p. cxxxvi.) which was centrical to the great body of the empire ; and is at this day a confiderable city. Like other overgrown empres, it fell to pieces with its own weight : and out of it were formed forr potent kingdoms, under the names of Vifiapour (properly Bejapour) Golconda; Berar, and Amednagur; whofe particular limits, and inferior members, we are not well informed of. Each of there fubfifted with a confiderable degree of power, until the Mogul conquelt; and the two firt, as we bave feen above, preferved their independency until the time of Aurungzebe. It is worthy of remark, that the four Monarchs of thefe kingdoms, Jike the Cafars and Ptolemies, had each of them a name, or title, common to the dynafty to which be belonged; and which were derived from the refpective founders. Thus, the Kings of Vifiapour, were Ayled Audil (or Adil) Shah; thofe of Golconda, Cuttub Shah; and thofe of Berar and Amednagur, Nizam Shah, and Amul Shah.

[^21]:    * Nizam-ul-Deen, was an officer in the court of Acbar; and wrote a general hiftory of Hindoofian, which he brought down to the 40 th year of that Emperor.
    $\dagger$ This aito occurs in Ferifita's hillory of Hindooftan. It was in the teign of Alla I. A. D. 1312. - See alfo page lii, of the Introduction.

[^22]:    *The French obtained the grant of Pondicherry in 1674, from a Rajah of Gingee, who acknowledged the King of Narfinga as his fuperice; but this latter; was at the fame time, dependant on Vifiapour. Sevajee took poffefion of Gingee, about the year 1677; and confirmed the above grant, in 1680.
    t I am ignorant of the period, when the Mahratta Prince, whofe defcendants now hold Tanjores, came inta the poflefion of it.

[^23]:    - The city of Moorfhedabad is fituated on the wefternmof branch of the Ganges:-whict branch is navigable only during a part of the year. See Appendix, page 259:

[^24]:    - Some believe that a Rajah of Sevajee's fine is fill hiving; that up in the fortrefs of Sattarah. It is certain that the new Paifhwalts go thither, to receive the inveftiture of their office; as they were accuftomed to do, in former times: whether fuch a Rajah be in exiftence, or ocherwifes. is of no importance to the fate, to matters are now conditeted.

[^25]:    * I am far from being well informed concerning the early bitory: of the Portagucle in India: but by a pdrage in Mr. Orme's Hiftotical Fragments, page 175, it wodd appear that
     "Goa took the held (againit Sambajee) with 1200 Europeans, and 25,000 natuvet of bis ous "terryory." From the confined limits of the Portuguefe territories, we may conclude that thefe were the ordinary inhabitants only.

[^26]:    - Capt. Robfon's, and M. M. L. D. T.'s Lives of Hyđer Ally, \&c. \&c.

[^27]:    * The charafler of the late Hyder Ally appearing to me to be but little uanaertlood in this part of the world, I have ventured to attempt an outline of it. His military fuccefs, founded on the improvement of difcipline ; attention to merit of every kind ; conciliation of the different tribes. that ferved under his banners ; contempt of fate and ceremonj, except what naturally arofe. from the dignity of his charater ; and his confequent economy in peifonal expences (the different habits of which, form the ebhief diftinction.of.what is called Character among ordinary

    Princes),

[^28]:    Princes) together with his minute attention to matters of finance; and the regular payment of his army ; all thefe together, raifed Hyder as far above the Princes of Hindoontan, as the great qualities of the late Prufian Monarch raifed him above the generality of European Princes: and hence I have ever confidered Hyder as the Frederick of the Eaft. Cruelty was the vice of Hyder : but we are to confider that Hyder's ideas of mercy were regulated by an Afiatic ftandard ; and it is not improbable that he might rate his own character for moderation and clemency, as far above thofe of Tamerlane, Nadir Shah, and Abdallah, as he rated his difcipline above theirs.

    Sir Eyre Coote furvived Hyder only about five months. It is a remarkablecircumftance that the, Commanders in Chief of two armies, oppofed to each other, ghould both die natural deaths, within fo thort a fpace of time.

    * In April 1783.

[^29]:    * It has been faid, that Nudjuff Cawn, who in latter times erected for himfelf a principality in the Soubah of Agra, made a fifth party in this confederacy. Of this circumftance, I am not fufficiently informed.

[^30]:    - That is, the Carnatic being already the propertiof another. ${ }^{-}$No arie can doubt but that it would be more for our advaptage to have the largeft part of the Carnatic in nur own hands, than in thofe of Mahomed Ally's 5 alchough the whote revenué of it thould be laid out in its defence. But the Carnatic is our weak fide, in more refpetts than one.
    + The province of Benares, in which' a-Rebetlion happened in' $\mathbf{5 7} 81$; is diftine fiom.the Eengal provinces. It was ceded to the Brịitiolyias has peenienferved abọẹ, in 1775:

[^31]:    * It is with pleafure I inform the reader; that an Englifh tranlation of the whole Arint Acbaree has been made, and publifhed in Bengal, by Mr. Gladwin; and was begun under the patronage of Mr. Haflings; to whofe munificence, and attention to ufeful literature, the world will be indebted for the means of accefs to a moft valuable repofitory of intelligence refpecting the former ftate of Hindooftan.

    Arr account of the contents of the Ayin Acbaree, will be found at the end of Mr. Frafer's hillory of Nadir Shah. _Catalogue of Oriental MSS. page 12.

    + It is probable that Acbar might have changed the boundaries of fome of the old foabahs, by adding or taking away certain circars, by way of rendering each province more compact; and the provincial capital, more centrical to the feveral parts of.it..

[^32]:    * Few circars are of lefs extent than the largeft Englif counties.
    $\dagger$ Called alfo Illahabad.
    $\ddagger$ Guzerat is by fome of the Hindoos copifidered as lying without the limits of Hindoofan. Vide Berar Rajah's letters.
    |l Called alfo Cuttack.
    § Named by Acbar, Dandeish, in honour of Prince Daniat; but at prefent it bears itsold name.

[^33]:    - The capital of this foubah being originally eftablifhed at the city of Amednagur, it gave thame to the whole province, but the name of the fortrefs of Dowlatabad has in turn fuperfeded it. In like manncr the name of Tellingana has now given way to that of Golconda.
    + Called Arinkill by Ferifhta. The rampart of this place can atill be traced, and thews that it muft have been a place of valt extent.

[^34]:    - I do not mean to infinuate that the country in queftion firft obtained its name of De'c. can, under the fucceffors of Acbar: on the contrary, it has been fo ditinguifhed from the earlieft times. It fignifies the South; as Poorub does the East, when applied to Bengal and its dependencies.
    $\pm$ Mr. Frafer, in his Life of Nadir Shah, ftates the revenues of the provinces under Aureng. zebe, as follows:
    

    Toral-30 crores, 18 lacks of ficca rupees, or about 32 millions of pounds fterling.

    * Bengal is rated in the Ayin Acbaree (towards the clofe of the 1 th century) at $849 \frac{2}{2}$ lacks; in Sujah Cawn's Nabobihip, A.D. 1727, at $142 \frac{1}{2}$; and in 1728 , at 197 lacks, net
    revenue.

[^35]:    - This circumfance was afcertained by the late Colonel Camac.
    + The following is an account of (nearly) the quantity of land contained in the countries fubject to the Britilh Government, and to the Britifh Allies in Hindooftan.

    Britisa Possessions.
    
    British Allies.
    
    bitants.

[^36]:    - The following is nearly the fate of the Cothpany's receipts and difourfements at the.prefent time, reduced to fterling money: the Sicca rupee being valued at 2s, $1 \frac{1}{4} \mathrm{~d}$.

    Bragala
    

    Madras,
    

    At Bombay the dißurrements exceed the receipts, by about And at Bencoolen fon the inand of Sumatra) the annual. 2 charges are about
    

    Total of net Revenue in India $\quad \begin{array}{r}350,000 \\ 3,405,000\end{array}$

[^37]:    It appears that the aggregate fum of the territorial revenue of the Eaft India Company, together with the cuftoms, falt; "\&c. is equal to $4,640,000$. per annum. The fabfidies from the Nabobs of Onde, and the Carnatic ; iand the Rajah; of Tanjore; are, of courfe, not included in this fum. The Company's military eftablifhment in India, in time of peace, is about :io,000 Europeans, and 52,000'regular fepoy infantry. It appears alfo, that the fum total of the fales of Eaft India aod China merchandife, imported into this kingdom in one year, has amounted to five millions and a.quarter fterlings Confidering the magnitude of the fums, in the above ftatement, one is led to fuppofe that fuch an imperium in imperio, as the Englifh Eaft India Company, never before exifted: or, at leaft, never was created, fvithout much greater affifance from the collective ftrength and refources of the flate, in which it was ccm prifed, than this Company has ever received.
    "It may appear paradoxical to fome parfons; but I am really of opinion that it is prifible to have 100 great a proportion of European troops, to feroys, ia our Indian fettiements.

[^38]:    - Dooab or Doabah fignifies a tract of land formed by the approximation and janction of two rivers : that formed by the Ganges and Jumna rivers is called by way of eminence Tue Dooas.

[^39]:    - The reader may with eafe reduce any fum in rupees, to fterling, by calculating roundly, at the rate of a lack of rupees to ten chouiand pounds.

[^40]:    * Ptolenty's Panafla, feems to be meant for Panna.

[^41]:    - Nidjib Dowlah, who was an eleve of the famous Gazi o'dien Cawn, died.in the year. 1770.

[^42]:    *The celebrated Sir William Jones very ingenioully remarks, that "c it is ufual with the "A Afiatics to give the fame names to the countries which lie on Both fides of any confiderable "f fiver." Thus the province of Siady is divided by the Indus; Bengal by the Ganges;'and Pegu by the Trabatty. Egypt, in like manner, is divided by the Nile. Probably; the facility of accefs to either fide, by means of a navigable siversand an occafional, inandation, fubjected each of the divifions, formed by the courfe of the river, to the conftant depredations of its opporiteneighbour ; till neceflity produced a compromife, which ended in joining them in ond
    community.

[^43]:    * Jaghire, means a grant of land from a Sovereign to a fubjea, revokable at pleafure; but generally, or almoft always, for a life rent.
    $t$ The exact geographical pofition of this important fortrefs and city, is not afcertained; but it is with great reafon fuppofed to be the fame with Mirje or Mirdji, of Mandelloe's ronte, drawn by P. du Val : which is fituated near the north bank of the Kifna river, about 70 road miles S W from Vifiapour; and 130 from Poonah. It is allo, moft unqueftionably, the fame -place with Merrick; $n$ place of confequence, id Anrongzehe's, wars with Sambajee. In the Select Committee's reports, it is named indifferently, Merrick and Meritz. It may be colleeted from thofe reports, and from Mr. Orme's hiftorical fragments, that this place is fituated on the north bank of the -Kifnah; on the NW of. Sanpre-Bancapour, and on the SW of Vifiapour; and its diftance from the former, oright to be very confiderable; for part of the Circars of Nourgal, Azimabad, and Raibaug, intervene, between thofe of Bancapour and Meritz. And this is the cafe with Mirjé on the map, which is about 108 G. miles from Bancapour. There is alfo a fortrefs of great note in Anrengzebe's, and in Hyder, Ally's wars, named Darwar, or Danwar. "This appears to be comprehended in the Circar of Bancapour, and aboat 30 coffes on the S E of Meritz. I have not ventured to place Darwar in the map : but both the pofition of it, and of Hubely, make it appear fill more probable that Mirje is the fame with Meritz, Meritch, or Merrick.

[^44]:    - It is probable that this irregular divifion, arofe from fome accidental circamfances at the time when the conqueft was made; and which cannot now be traced : but as it has the appearance of an expedient, calculated to check and reftrain the power of the different Jaghiredars, it is generally fuppofed to be che effect of policy and defign.

[^45]:    *Gant, or Ghait, IIgnifes either a pals through mountains, or'a landing-plact on the bank of a river. In the former fenfe, the term has been applied to the Carnatic, which is divided
    by ridges of mountains, abounding with paffes and aefiles.

[^46]:    - There tercitories have formerly yielded 3 or 4 crores per annum i but, they are naw in a flate of defolation, which it is impomble to form any idea of, without having acually beheld them. A. "TThis note is by a gentleman, who has been on the; \{pot.] Sea alfo page luxtiii, + Orifia, is nominally one of the Britifh provinces, but we have obferved in another place; that only a very fmall part of it, is fubje th to the Bengal government.

[^47]:    -The whole revenue of the foubah of Agimere, in the time of Acbar, appears to have been only about 75 lacks. Aurungzebe is faid to have doubled the land-tax on the Rajpcots : and Agimere is accordingly ftated in Mr. Frafer's account, at 163 lacks of rupees.

[^48]:    - Thefe cricirs, or provinces, were originally denotraidated fram, their poftion in tefpee to Madras, on which they depend : and the term nortbern circars has at length been adopted by:the Englifh-in general.

[^49]:    * See the term Gaut, explaired in page cxxviii.

[^50]:    * He began his reign in Ghizni, A. D. 977.
    $\dagger$ Tamerlane's Invafion happened in this reign;
    $\ddagger$ And Nadir Shah's in this reign.

[^51]:    * This is M. D'Anville's idea, p. 45 and 46 of his Confidérations Géographiques.

[^52]:    - Thofe who wifh for a general rule for changing horizontal diftance into road diftance, in their common references to maps; may break the line of diftance,' (if yery long) into portions of not more than 100 or 150 miles; and then add to the whole fum of the diftances, fo obtained, one eighth part. Thefe portions fhould be contrived, fo as feverally to include the fpaces, between tie points, that diverge moft from the general line of direction of the whole road. By this means, the errors arifing from the compound winding, will be avoided.
    $t$ Eclairciffemens, p. 14-

[^53]:    * All the latitudes mentioned in this work, being north of the Equator, and all the longitudes eaft of the meridian of Greenwich, I fhall in future mention only the terms latitude and longitude, leaving the fecies of each, to be undertood,
    + I have made ufe of Geographic miles, or thofe of 60 to a degree, in the account of the conflruction of the map; and of Britin flatute miles in giving the comparative extent of countries. They are dilitiguifhed by G. miles, and B. miles.

[^54]:    * I have'alloved Point Pennar to be 16 G . mites to the eaft of Nellore : moft' of the MS. maps make it lefs.
    
    tonova.

[^55]:    - A map, drawn by Baron Wefebe (of the Hanoverian corpsy accords in this particular, and indeed, in every other material one, with that of Col. Kelly: but I have no knowledge how Baron W. procured his materials.

[^56]:    *The bearing between Cotate and Poolytrpu, is inferred from force MS. maps of no great authority, to be about $S W \frac{1}{2} W$. The whole dallance being only 8 G . miles, the diference of
    

[^57]:    *One of thele bearings was $N W \pm W$. at $\frac{3}{4}$ of a mile off fhore : the other, faid to be 2 " of thore, was N W by W. By reference to a plan of the road, it appears that, the Jatter hation
     may obferve that Mount Dilla fhould have bore more wefterly from the oblerver that was nearef the shore, than the one fartheft off: but there is feldom much nicety obicrved in taking bearings on fhipboard, although fo mach depends on it. By calculation, the difference of the angle between an oblerver at $\frac{3^{\prime}}{4}$ of chore, and another at Mahé, would have been $3^{\circ} 15^{\circ}$; and that at $1 \frac{1}{4}$ off chore, $3^{\circ} 30^{\circ}$. So that Mount Dilla would bear from Mahé iby the firftcompafs \$ $36^{\circ} \mathrm{N}$. ; and by the fecond, W $30^{\circ} 30^{\circ} \mathrm{N}$ : themedium of which, is W: $33^{\circ}$ I $15^{\circ} \mathrm{N}$.

[^58]:    - It fhould be a fule obferved in all plans, to 'note how the feale wa's obtained; ' whether by' actual meafurement; difference of latitude; or eftimation of diftances : to which may be added; that the meridian line or parallel fhould be drawn acrofs the whole Ipace in the plan, to prevent efrors in meafuring the angles of bearing.

[^59]:    - When Fortified Ifland bore $E \cdot \frac{3}{4} \mathrm{~N}$ diftant $2 \frac{\pi}{2}$ miles, Pigeon IIland bore $S \frac{x}{2} \mathrm{~W}_{2}$ and Hog Ifand S S.E. Hog IIland bears from Pigeon Inland $E \frac{5}{2} S$ diftant about 7 miles.

[^60]:    * At Elora near Dowlatabad, more than $2 c 0$ miles to the eaft of Salfette, are other temples of the fame kind. For an account of thefe, fes Thevenot: and for the former, Anquetil du
    Perron.

[^61]:    * The longitude of this Cape was'reckoned by M . D'Anville only $93^{\circ} \times 6^{\circ \prime \prime}$ : fo that the New Map increafes the diftance between the mouth of the Sinde (or Indus) and Cape Negrais,
    2 degrees and 7 minutes of Iongitude.

[^62]:    - Dediused from Bombay, which is teckoned in $72^{\circ} 0^{\circ} 0^{\circ}$.
    + Capt. Weft reckoned from Sadras, which I place in $80^{\circ} 24^{\circ}$. He reckoned it $80^{\circ} 19^{\prime}$; and of courfe, Point de Galle in $80^{\circ} 2_{2 \prime}^{\prime}$ :

[^63]:    * The different readings are Caryybora, and Cyrifoborca.

[^64]:    - The olympic ftade can hardly be taken at a furlong, but probably at 200 yards. Then the dimentions will be about 9 B. miles in length, and $1 \frac{3}{4}$ in width.
    $\dagger$ The empire of the Prafii feems to have included moft of the tract through which the Ganges flavs, after it enters che plains of Hindooftan.

[^65]:    - Blackwall.
    $\dagger$ Taxila or Tapita, and' the Indus, are mentioned as one and the fame place by Pliny : Ad fumen Indxum et oppidum Yaxila. Book VIw
    $\ddagger$ Here we may remark, by the way, that if any capital city had food at the conflux of thefe rivers, it is likely that Pliny would liave taken notice of it.

[^66]:    - M. D'Anville is of opinion that Pliny turned the Greek flades into miles, at the rate of 8 to a mile; and thus accounts for their fhortnefs, M. D'Anville, who has gone deeply into she fubject, thinks that it requires 10 go itinerary ftades (of horizontal meafure, I apprehend) to make a degree of a great circle. . See his Eclairciffemens, page 5 s.

[^67]:    - P̀hilofophical Tranfaetions, VTol. Lxxi, page 99*

[^68]:    * See page 52 where 1050 to a degree is the proportion fixed on by M. D'Anville. + Latitude $27^{\circ} 3^{\prime \prime}$; Longitude $80^{\circ}$ 153.
    $\ddagger$ Before Chrift ${ }^{266 \text { yearso }}$

[^69]:    Latitude $24^{\circ} 53^{\circ}$, longitude $88^{\circ} 14^{\circ}$. $\quad+$ Dow 1 fl. $6 . \quad \ddagger$ A. D. 1575.

    1. This is Ferihta's account ; but fome of its prefent inhabitants told met that it was deferted in confequence of a peltilence.
[^70]:    * See Introduction.

[^71]:    - Petrifitan. . Thei Ayir Acbatee fays that the ancient name of Dellii, was-Inderpit.

[^72]:    * Panjab, tor the sountry of the frve miverst is a natural aivifioniof the country. contained bem tweepr the 5 eatern branches of the Indus.
    $t$ 'This itinerary was obligingly communicated by the 'fate'Mr. George Perry', and appears' to, Have, been, kept, by a, mifiomary who, travelled from Delhi to-Perfia, by way of the Panjaby and Sindy. It hould be obferved, that all the latitudes in it are foo far fouth. The latitude of Agra is fet down at $26^{\circ} 45^{\circ}$, though its true latitude is $27^{\circ} 15^{\circ}$. And Moultane in $229^{\circ} 32^{\circ}!^{\prime}$ and Tatta in $24^{\circ} 20^{\circ}$; which places are commonly taken at $29^{\circ} 52^{\circ}$, and $24^{\circ} 40^{\circ}$.

[^73]:    - It is probable that the fevere indifoofition to which Col. Mair was conflantly fabject, from the moment of his arriwal, to the time of his death, leit him no leifure to recollect that fuch materials were in his pofiefion. This excellent officer, and molt worthy charader, died
    in if 86 .

[^74]:    * Ptolemy's latitude of Taxila, which I fuppofe to be nearly on the fite of Attock, is $3^{\circ}{ }^{\circ} 20^{\circ}$.
    tion

[^75]:    in

[^76]:    *The name Sinde was not unknown to the Romans: Indus incolis Sindus appellatus, Pliny, Book VI.

    T The ancients reckoned otherwife: the fame Pliny continues to fay, in jugo Caucaft montis, quod qocatur Paropamijus, adversus Solis ortum effusus.
    $\ddagger$ Superftition gave birth to this law, among the Hindoos: a precept nearly, allied to that, which forbids their eating any food dreffed on board a boat or veffel. Ferifita calls the river on which Attock is built, Nilab; anglice, the blue river. There is fo much confufion in the Indian hiftories, refpecting the names of the branches of the Indus, that I cannot refer the name Nilab to any particular river, unlés it be another name for the Indus or Sinde.

[^77]:    - Pliny reckons the length of the Patale, or Delta of the Indus; at 220 Roman miles; in which he was very near the truth, it being about 210 .

[^78]:    - Tranitated by M. de la Croix.

[^79]:    *The Ayin- Acbaree does not give the ancient name of the Jenaub, Ptolemy names it anababahs.
    t. Said by the Ayin Acbaree to be anciently named Iyrarwutty (Mr. Gladwin's tranflation). -Mr . Boaghton Roufe tranlates it from his copy of the Ayin Acbaree, Iravati.

[^80]:    - Sherefeddin. $\quad$ Itinerary.

[^81]:    - My opinion is (I think) ftrengthened by a remark in the Perfian map of Panjab. $A$ mountain near the Indus, a very little below, and on the oppofite fide to Attock, is markedMount Yulluleab (or Gelali) moft probably from its being the place from whence the Emperot Gelali crofed the Indus, in his flight from Gengis Cawn in 1221: When Timur had crofled to the eaft fide of the Attock, or Indus, he was faid to be arrived in the Defrrt of Gelali : therefore I have no doabt but that they both croffed nearly at the fame place. Gengis Cawn semained on the well fide of the nyer.
    $\dagger$ Written by M. de la Croir.

[^82]:    *OAtober 11, 1398. The chronology of this event is differently flated: I have followed M. de la Croix's tranflation.
    t The term Doab or Doabah has been explained before. See the Index.

[^83]:    - Sherefeddin. †The name of this place does not occuf in the Ayin Achagree.

[^84]:    - Two days marches are mentioned, one day 14 or 15 coffes; anotier 18 coffes. It is not eafy to collect the diftance from Sherefeddin's. account of Timur's marches : but we find he was eight days on the march.
    + Sherefeddin.

[^85]:    - Quintus Curtius.
    + Batnir is reprefented as a very ftrong place, and yet Timur is faid'to have taken only a body of horfe with him (and indeed the extraordinary length of one of his marches feems to prove it). Did he reduce the place without artillery?
    $\ddagger$ At the time of Timur's conqueft ( $139 \hat{8}$ ) the British nation had fcarely, been announced to the people of Hindooftan ; nor was it till 200 years afterwards, that they found their way thither. Who could have believed that the Britifh conquefts would meet thofe of Tamerlane, in a point equidiftant from the mouths of the Ganges and Indus, in 1774?
    § The Gickers of Dow.

[^86]:    - Sir William Jones's Nadir Shah,

[^87]:    -Turmechirin Cawn, a defendant of Gengis, or Zingis Cawn, made an irruption into Hindooftan about the year 1240; but the particulars of his route are wanting. Sherefeddin mentions, in one place, that he croffed the Jenaub at Toulomba; and in another, that he befieged the city of Merat in the Dooab. But Ferifhta confines the explpits of this defcendant of Zingis (for his name is not mentioned) to the Panjab councry.
    $\dagger$ About 327 years before Chrif, according to Uher: and in the month of May.
    $\ddagger$ See the notes, page 5 I . Taxila mult neceflarily have been very near the Indus, to allow of its being 120 miles from the Hydafpes (or Chelum). See Pliny's Indian itinerary,

[^88]:    1 Although Diodorus and Curtius do not give the name Sangala, yet the city meant by Arrian, under that name, is pointedly defcribed by them.

[^89]:    - Imäus, incolarum lingua nivofum fignificante. Pliny Book VE.

[^90]:    - The Ayin Acbaree reckons 27 coffes, or $5^{1}$ B. miles, between the two confluences of the Hydarpes and Hydraotes with the Acefines; but this account includes the windings of the channel.
    $\dagger$ One of thefe was a town of Brachmans or Bramins. Some of them burnt themfelves, together with their houfes; and few came alive into the enemies hands. This mode of conduck bas been practifed in our own times. See Orme's Indoftan, Vol. II. P. 255.
    $\ddagger$ Itinerary 1662 .

[^91]:    * A comparifon of the modern names with the ancient, in many parts of Afia, leads me to conclude, that had they been faithfully written by the Greeks, mueh lefs difference would be found between them, than we now experience: and I am inclined to think that the names of the rivers, in particular, are fcarcely changed fince the time of the Greeks. Vanity has no fhare in new naming of rivers.

[^92]:    - Alexander had 120,000 men, and 200 elephants. Arrian.

[^93]:    - See the Introduction. + stid.
    $\ddagger$ The Etefian winds blew from the NE in the Mediterranean, in the months of July, and Auguft; and the ancients thought proper to apply the fame term to the periodical winds of the fame feafon in the Indian feas, although they blew from the, oppofite quarter.
    § The firft of October O.S. according to UTher.
    \# Pliny gives it. 220 miles, fo that he reckoned nearly 8 .fades to one of his, miles:

[^94]:    * The hiftory of this gentleman's travels is very curious. He proceeded by land from Bengal to the Cafpian fea, and from thence by the ordinary route on the river Wolga, \&c. to Petersburgh ; in the years 1783 and 1784 . It was neceffary, from a regard to fafety, to avoid the country of the Seiks; that is, Labore : he accordingly croffed the Ganges and Jumna rivers within the mountains, and proceeded to Cafhmere by the road of Jummoo. He vifited this celebrated country, I prefume, through motives of curiofity, as it lay fo far out of his way. From thence, croffing the Indus, about 20 miles above Attock, he proceeded to Cabul, the capital city of Timur Shah, King of Candahar; or more commonly known by the name of Abdalla. He meant to have proceeded from thence, through the country of Bucharia or Tranfoxonia; but finding it too hazardous, he purfued the accultomed route of the caravans by Candahar. From this place, which is fuppofed with reafon to be the Parcpamifan Alexandria, his route was nearly in a ftraight line through Herat, to the fouth extremity of the Cafpian ; acrofs the modern provinces of Seitan, Koralan, and Mazanderan; and which were known to the Ancients, under the names of Paropamlfus, Aria, or (Ariana) Parthia, and Tapuri. It will be perceived that (as far as a comparifon can be made) Mr. Forfer traced back à confiderable part of the route purfued by Alexander, when in purfuit of Beffus: As he travelled in the difguife of an Afiatic, and in the company of Afiatics; through a valt extent of Mohammedan country, where the religious prejudices of the natives, are nearly equalled by their political jealoufy of all forts of foreigners; we may pronounce the man who could perform fuein a talk without fufpicion, to poffers great prefence of mind, and no lefs difcretion ; added to an uncommon thare of obfervation of manners, and facility of attaining languages. Detection had been worfe than death: and he was fubject to continual fufpicion fiom bis fellow-travellets, who were not in the fecret. I hope he means to publinh his obfervations on the manners, goverinment, and prefent ftate of that part of Perfia, of which we know the lealt : as well as of Cathmere, a fubject yet more interefting to the philofopher and naturalif. It may ferve to fhew the extenfive commercial intercourfe, and credit in Hindooftan, and the adjoining country (once dependant on it) notwithtanding the variety of governments it contains, and the onfettled ftate of the greateft part of them; that the bills of exchange which Mr. Foriter obtained at Culcutta, were negociable at Cabul, 17 or 18 hundred miles diftant; and the capital of a kingdom totally unconnected with, and poffibly hoftile in political fentiments, to that in which the bills originated. From the time he left the laft Britifh fation in Oude, to the Calpian, in which he employed near a twelvemonth, and travelled $2 ; 00$ Englifh miles; he was compelled to forego molt of the ordinary comforts, and accommodations, which are enjoyed by the luweit clafs of poople, in European countries; feeping in the open air, even in rainy, and fnowy weather; and contenting himfelf with the ordinary food and cookery of the country he paffed through. Indeed it was barely poffible to carry with him the means of procuring comforts, without hazarding his fafety; as he was fo long on the road.

[^95]:    - This work is very fearce, and might bereprinted with emoturnt to tife publifier.
     modern-acepptation of them: The ancient names have i danf under them.

[^96]:    - Ayin Acbaree Vol. II. p. 195.
    $\dagger$ Ibid. p. 194 and 205 .
    $\ddagger$ Reckoning 10 flades to 2 mile.

[^97]:    - See the Index, article Gwalior:

[^98]:    - The whole number, fummed up, is 276; but there is an omiffion of the diftance of a fage between Nafirabad and Shawrott ; and this I have allowed 4 farfangs for.

[^99]:    - That long diftances may be accurately meafured by a perambulator, I need only menticn. that during the Bengal furvey, I meafured a meridian line of 3 degrees, with a perambulator, and found it to agree minately with the obfervations of latitude. However, due allowance was made for the irregularities of the ground, whenever they occured. The country indeed, was flat the uhole way.
    - A fepoy officer fent by Col. Camac, in 1774, to explote the roads and country of the Deccan, and to. gain intelligence concerning the Mahratta powers.

[^100]:    * M. D'Anville reckons the fame difference of latitude between the two places, but he has placed both of them too far north by 24 minutes; following I apprehend, the latitude of Burhanpour, given in the Ayin Acbaree.

[^101]:    - General Smith's proportion of coffes to a degree, is $51 \frac{1}{2}$; Col. Upton's, $52 \frac{1}{2}$; and the map by the native 55 .

[^102]:    *The termination, conda, or kond, fignifies fortrefs, and often occurs in the fouth part of India; as cotta, and cort, which have the fame fignification, do in the north Gur is ufed in the fame fenfe occafionally in every part.

[^103]:    * A difference of opinion feems to have arifen among the learned, whether tobacco came originally from Afia or America. It was poffibly indigenous to both continents. It is univerfally diffeminated over Hindooftan;, and China : and appears to have been in ufe fo long, in the former, that it is not regarded as a new plant. It is there named Tamba-patra; that is the copper, or copper coloured, leaf.
    $t$ The circumftances attending this capture are fo very curious, that I cannot help inferting them here, though confeffedly out of place. They are extracted from the printed account-of Gwalior, which accompanies a beautiful engraved view of that fortrefs, publifhed in 1784.
    " The fortrefs of Gwaliar ftands on a valt rock of about 4 miles in length, but nartow, and of unequal breadth; and nearly flat at the top. The fides are fo fleep as to appear almof.

[^104]:    * In juttice to General Goddard's memory, I think it incumbent on me to obferve that the author of the Hiftory of Hyder Ally (publined in 1784) though feemingly inclined to compliment him, has depreciated the merits of the undertaking, by over-rating the numbers and quality of General Goddard's troops. M. D. L. T. flates the ftrength of the army at 8000 ; of which, fays he, 1200 were Europeans. The truth is, that the detachment confifted of 103 European commiffioned officers, and 6624 native troops of all denominations; and without a fingle corps of Europeans. In the return from whence this was copied, the fervants and followers of this little army, amount to no lefs a number, than 19,779: befides the bazar or market people, not included in the return: and thefe are eltimated at 12,000 more : in all, more than 4 followers to each fighting man.
    + This muft not be confounded with a city of the fame name, which food near the fite of Dowlatabad.

[^105]:    - The number of eflimated coffes between Burwah and Nagpour, was 196, and from thence to Aurungabad, $163^{\frac{1}{2}}$; total $359 \frac{1}{2}$. And the diftance on the map is $517^{\frac{1}{2}} \mathbf{G}$. miles ; or at the tate of 41,7 coffes to a degree : agreeing with the feale of coffes, within three-tenths of a cofs, in a degree.

[^106]:    * An early death was Eliott's doom, 1 faw his op'ning virtues bloom, And manly fenfe unfold; Too foon to fade! I bade the fone, Record'his name 'midft hordes unknown, Unknowing what it told.

    Hor. Book II. Ode xvi.
    See the New Annual Regifter for 1786 .

[^107]:    * The fhip or veffel is built with her keel parallel to the fhore; and, as it may happen, from 200 to 300 feet from low water mark. When compleated, fhe is placed on two trong pieces of timber, called dogs (in the nature of a fiedge of enormous dimenfions) and on thefe, a fort of moveable cradle is conftructed, to keep the veffel upright. Two long Palmyra trees, as levers of the fecond kind, are then applied to the ends of the dogs, and lay means of thefe powers, they, together with the veffel that refts on them, are gradually pufhed forwards over a platform of logs, unfil they arrive at the loweft pitch of low water; or as far, beyond it, as the levers can be ufed. Tackles are applied to the ends of the levers, to increafe the power: the fulcrams, are wreaths of rope; faftened to the logs on which the veffel lides: and are removed forwards as the advances. Two cables from the land fide, are faftened to the veffl, to plevent her from giding too rapidly; and thefe are gradually let out, as fhe advances.

    It is commonly the work of two days to tranfpoit the veffel to the margin of low water. If the tide does not rife high enough to float her from thence (which it ieldom does if the veffel be of any confiderable burthen) part of the cradle is taken away, and the "hip left chiefly to the fupport of the cables till high water, when they are fuddenly let go, and the veffel falls on her fide: and with the tall, difengages herfelf from the remains of the cradle, and at the fame time, plunges into deeper watcr. A thip of 500 tons has been launched in this manner.

[^108]:    -. His bearing is corrected by the compafs of Col. Pearfe's map, from which it differed $\mathbf{2}^{\circ} \mathrm{F} 5^{\circ}$ :

[^109]:    * sc Frequent have been the opportunities I have had, of obferving how very rapid the decay. of hips brilt of European tinbers is, in the Eaft Indies: and, on the contrary, how durable the fhips are that are built of the wood of that country, namely, the Teer : which may not improperly be atyled Indian Oak. The number of hips of war that were ruined in thofe feas, during the late war ( 1757 to 1762) may be admitted as a proof of the former remark; and the great age of the fhips brilt in India, may ferve to prove the latter. What I mean to infer from this, for your Lordnhips ufe, is, that hips of war under third rates, may be conAructed in India $s$ and with moderate repairs, laft for ages : whereas, a thip of european conItruction can remain there but a very few years: to which difadvantage, may be added, that of lofing, in the mean time, the ferpices of the fhips that are fent to relieve the worn out ones.

    Bengal produces iron and hemp; and the neighbouring'forefts, pine malts : nothing is wanted to bring all thefe into ufe, but a fit opportunity, and proper encouragement.*

[^110]:    * It is lamentable to a feeling mind to refiect how large a portion of their miferies, the un.happy natives of the Carnatic owe to the Englifh : I mean from the infufficient protection afforded. them, at the commencement of the war of 1780 . The faying of the old woman to Philip. "Be no longer Kinge" might well have beer applied to the executive government in the. Carnatic. Much eloquence has been employed in defcribing the wretched. fate of the inhabitants of Bengal ; when, in reality, they are to be claffed among the happieft nations throughout Afia. Poets deal in fiction : but a plain tale of woe will beft defcribe the fufferings of the. helplefs inhabitants of the Carnatic, during Hyder's; invafion. And here I cannot refufe a tribute of applaufe to the character and abilities of the Nobleman, who affumed the government of Madras, at a period when the Brisifh interefts could hardly be faid to have an exiftence in the. Carnatic: Hyder having nearly the entire poffefion of the whole country. I cannot exprefs my opinion of this Nobleman's character, in a more forcible manner, than by regretting that fuch fhining talents, controlled by a difinterefted mind, should not be employed for the benefit of the public.

[^111]:    - The reader will.find in my friend Mr. Marfden's. very excellent hiftory of Sumatra, an account of the SURF: a phenomenon which I-do not recollect ever to have feen difcuffed in a philofophical manner, in any former treatife. The account will be found in page 28, to 33. $\dagger$ The term Jaghire means generally, a grant of land from a fovereign to a fubject, revokable at pleafure, but generally for a life rent. The Jaghire in queftion, is I believe, underAtood to be held in perpetuity. It contains 2440 fquare miles, and its revenue is reckoned at about $150,00 c 1$. per annum.

[^112]:    *. Other accounts are as follow : a large map, which I confider as the firf that was conAtructed from the materials, collected during the war of $1 ; 67-8$; and which may, be flyled the parent of moft of the others, that appear on different fcales; gives $99,3 \mathrm{G}$. miles; weft from Ki\&nagheri ; and $2^{\prime \prime}$ north of. its parallel. This would place Seringapatam 6 welt of its pofition, in the new map. Montrefor's map, gives $66^{\circ} \mathrm{G}$. miles from Bangalore, and Mr. Suli-
    

[^113]:    * The name Barra-mahal, or' Bacra-maul, anglice the 'twedve places; was given it becaúfe it contained iz fortrefles of fome note, (viz. 2 Kiftnagheri, Gegadivy, Candely, Congoonda, Vániambady, Mahrauzégur, Cockirgur; Cooturägur, Bazingur, Tripatore, Tadcull, and Gigangurry.

[^114]:    * Bearing of Volconda from Tritchinpoly, by D'Anvilte, $\quad \mathrm{N} 37^{\circ} \mathrm{E}$
    

[^115]:    * Meaning thofe on the fouth of the Cauvery river. And the countries between the Cauvery and Guntoor, are here named The Carnatuc, in a particular fenfe : and this is again fubdivided inso $\mathbf{N}$ and $S$ as the parts refpect Madras.

[^116]:    * As it may affift fome other perfon, who may undertake to correct this geography, I have inferted the following particulars, collected from different authorities: Mr. Sulivan's map places Attore, $\mathrm{S} 40^{\circ} 30^{\prime} \mathrm{W}, 3 \mathrm{I}$ G. miles from Darempoury; and E $10^{\circ} 20^{\circ} \mathrm{N}, 29 \frac{1}{2}$ from. Salem. D'Anville's map of pofitions, N $37^{\circ} 40^{\circ} \mathrm{W}, 24^{\frac{1}{2}}$ from Volconda. And Montrefor, E $42^{\circ} 50^{\prime} \mathrm{S}$, 18 from Darempoury.

[^117]:    - If we are to judge of the degree of turpitude of a crime, by the mode of punithing it, rivalhip in commerce thould be one of the mon keinons crimes in nature: for nothing lefs thant the moft flagitious, and univerfad criminality, can authorize the deftrution of the habitations, and the confequent difperfion of the inhabitants, of a great city. The fate of Rome might be involved in the exifence of Carthage: but the queftion here, was only which of the two parties Mould purchafe callicoes as the cheapelt rate, or fell them at the dearelt.

[^118]:    * Or Pen-aur. I believe the term aur, for riyer, which prevails generally throughout the--Carnatic, is not found any further to the north than Nellore.

[^119]:    * I fuppofe the termination badra in the name of this river, means the fame as the budda or Buddar in Nerbudda, and Soanbudda; in the north part of the Deccan, and in Hindooftan. If the fuppofition be true, that the names of large rivers undergo little alteration, the language to which Gonga or Gang belonged, muft have had a wide range: fince we find it applied both in Ceylon, and at the foot of mount Himmaleh.

[^120]:    - Lama fignifies a Prieft; or Minifter of Religion; and Lamiffa is the feminine of Lama:

[^121]:    - Sanpoo, in the fanguage of Thibet, means The River. $\dagger$ I take it for granted that he means Italian feet.

[^122]:    * The proper name of this river in the language of Hindooftan (or Indoftan) is Pudda or Padda. It is alfo named Burra Gonga, or the Great River; and Gonga, the River, by way of eminence ; and from this, doubtlefs, the European names of the river are derived.
    + The orthography of this word, as given here, is according to the common pronuncia. tion in Bengal; but it is faid to be written in the Shanferit language, Brabma-pootar; which fignifies the Son of Brabma.
    $\ddagger$ The embarkations made ufe of, vary in bulk from 180 tons down to the fize of a wherry. Thofe from 30 to 50 tons are reckpned the moft eligible for tranfporting merchandize.

[^123]:    * Thefe are among the higheft of the mountains of the old hemifphere. I was not able to determine their height; but it may in fome meafure be gueffed, by the circumftance of their rifing coniderably above the horizon, when xiewed from the plains, of Bengal, at the diftance of 150 miles.
    $\dagger$ The fabulous aceount of the origin of the Ganges (as communicated by my learned and ingenious friend C. W. Boughton Rouse, Efq.) is, that it flows oul of the foot of Bescian (the-fame wilh Viftnou, the Presirving Deity) from whence, fay the Bramins, it has its name Padda; that, word fignifying foot in the Shanfrit language : and that in in its courfe to the plains of Frindoótan, it paffes through an immenfe rock fhaped like a Cow'shead.
    The allegory is highly expreffive of the veneration which the Hindoos have for this famous fream; and no tefs to of their gratitude to the Author of Nature for beftowing it : for it defribes the blefing as flowing purely from his bounty and goodnefs.

    The rock before mentioned has, I believe, never been vifited by any European ; and is even allowed by moft of the natives to bear no refemblance to the object from whence it is denominated. However, as the effects of fupertition do often long furvive the illurions that gave it birth, the rock or cavern fill preferves its original name. (I his note was written before it was known that $M$. Tieffentaller had vifited it).

[^124]:    * The proportional lengths of courfe of fome of the moft noted rivers in the world are fhewn nearly by the following numbers;
    
    L. 1

[^125]:    * This will beexplained when the arindings-of the river are treated of.

[^126]:    * The Hoogly river, ot.weffernmont branch: of the Gangesy Fis a nuck-deeper butet to the fea. than the principal branch. Probably this may be owing to its precipitating a lefs quantity of mud than the other; the quantity of the Ganges water difcharged here being lefs than in the other in the proportion of one to fix. From the difficulcies that occur in navigating the entrance of the Hoogly river, many are led to fuppofe, that the channels are fhallow. The difficulties, however, arife from bringing the fhips acrofs fome of the fandbanks, which project.fo far into the feag, that the channels between ,them cannot eafily be traced from without.

[^127]:    * M. De Condamine found the defcent of the river Amazons, in a ftraight courfe of abouit 1860 'miles, to be about ' 1020 Englifh feet,' or $6 \frac{x}{3}$ inches in a mile. If we allow for the windings (which in the Ganges are about one mile and $\frac{1}{9}$ in 3 , taking its whole courfe fhrough the plains) it probably would not exceed 4 inches in a mile.

[^128]:    * Hence it is, that the fection of a river, that winds, through a loofe foil, approaches nearly to an obtufe angled-triangle, one of whofe fides is exceedingly hort and difproportioned to the other two . But when a river perfeveres in 2 ftraight courfe, the fection becomes nearly the half of an ellipfis divided longitudinally $\square$. See Plate I.

    I In the dry feafon fome of thefe banks are more than 30 feet high, and often fall down in pieces of many tons weight, and occafion fo fudden and violent an agitation of the water, as fometimes to fink large boats that happen to be near the thore.

[^129]:    * It is more than probable, that the fraight parts owe their exitence to the tenacity of the foil of which their banks are compofed. Whatever the caufe may be, the effet very clearly points out fuch fifuations as the propereft for placing towns in.

[^130]:    - The Count De Bufron advifes the digging of furch gulf io the banks pf ordinaty rit $\nabla$ ers $\rightarrow$ with a tiew to divert the current, when bridges or other buildings are endangered by to + The courfes of thefe branches at the efllux, generally, if not always, become retrograde ${ }^{t} 0$ the courfe of the river; for, a fand bank accumulating at the upper point of feparation,
     a.ngles. This fand bank being always on the increafé boccafions a coirroficn of the oppofite thank; and by this means all, or mof of the outlefs, have a' progrefive matiod'downwards ; $a_{i s}$ X bave before remarked of the Jellinghy river; in the forégoing page."

[^131]:    - It has been remarked, that the courfes of rivers become mose winding as they approach the fea. This, I believe, will only hold good in fuch as take the latter part of their courfe through a fandy foil. In the Ganges, and other rivers fubject to confiderable variations in the bulk of their freams, the beft marks of the vicinity of the fea, are, the lownefs of the river banks, and the increafing muddinefs of the fhallows in its bed.

[^132]:    * The Mootyjyl lake is one of the windings of a former channel of the. Coffimbuzar river.
    $\dagger$ Megna and Burrampooter are names belonging to the fame river in different parts of its courfe. The Megna falls into the Burrampooter; and, though a much fmaller river, communicates its name to the other during the reft of its courfe.

[^133]:    - Accordingly, the laws refpeßing alluvion are afcertained with great precifion.

[^134]:    * This evidently points out the means for preventing encroachments on a river bank in the ftraight parts of its courfe, , viz, to remore the fhallows that accumulate in the middle of its channel.
    $\dagger$ A glafs of water taken out of the Ganges, when at its height, yields about one part in four of mad. No wonder then. that the fubfiding waters thould quickly form a ftratum of earth; or that the delta mould encroach upon the fea!

[^135]:    * At Oudanulla.

    4 An opinion has long prevailed, that the fwelling of the Ganges, previous to the commencement of the rainy feafon in the flat countries, is in a great meafure owing to the melting of the fnow in the mountains. I will not go fo far as totally to drfallow the fact ; but can by no means fuppofe; that the quantity of fnow water bears any proportion to the increafe of the river.
    $\ddagger$ The vaft collection of vapours, wafted from the fea by the foutherly or fouth-weft monfoon, are fuddenly fopped by the lofty ridge of mountains that runs from eaft to weft through Thibet. It is obvious, that the accumulation and condenfation of thefe vapours, muft firt happen in the neighbourhood of the obitacle; and fucceffively in places more remote, as fref rupplies arrive to fill the atmofphere. Hence the priority of commencement of the rainy feafon in places that lie neareft the mountains.

[^136]:    All the rivers that are fituated within the limits of the monfoons, or hifing trade winds, -are fubject to overflowings at annually ftated periods, like the Ginges: and thefe periods return during the feafon of the wind that brings vapours from the fea (which in Bengal, \&c. is she foutherly one) and this being periodical, the falls of rain muit neciffarify be fo too.

    The northerly wind, which blows only over the land, is dry; for no rain (except cafual fhowers) falls during the continuance of that monfoom.

    * This property of the bank is well accounted for by Count Bufron; who imputes it to the precipitation of mud made by the waters of the river, when it overflows. The inundation, fays he, purifies infelf as it flows over the plain; fo that the precipitation mult be greateft oa the parts nearelt to the margin of the river.

[^137]:    *The rice 1 fpeak of is of a particular kind ; for the growth of its ftalk keeps pace with the increafe of the flood at ordinary times, but is deftroyed by a too fudden rife of the water. The harveft is often reaped in boats. There is allo a kind of grafs which overtops the flood in the fame manner, and at a fmall diftance has the appearance of a feld of the richeft verdure. $\dagger$ About fifty miles from the fea.

[^138]:    - I have fated the middle of Auguff for the periodwhen the watcrs begin to rus off; and in general it happens with as much regularity as the vicifitudes of the feafons do. But there are exceptions to it; for in the year 1774 the tivers kept up for near a month after the ufual time:

[^139]:    *The tides in the river Amazons are perceptible at 600 miles above its mouth ; but at an elevation of only go fect, according to M. De Condaming. It remains to be told what the ftate of the river was at the time of making the experiment; becaufe the land-floods have the effect of hortening the limits of the tide's way.
    $\pm$ The Count De Buffon has dightly mentioned this circumfance attending the fwelling of rivers; but imputes it to the increated velocity of the current, as the river approaches the fea: which, fays he, carries off the inandation fo quick, as to abate its height. Now (with the utmoft deference to fo great an authority) I could never perceive, that the current, either in the Ganges, or any other river, was ftronget near the fea than at a diftance from it. Even if we admit an acceleration of the current during the ebb-tide, the flax retards it in fo confiderable a degree, as at leaft to counter-balance the effects produced by the temporary junceafe of, velccity.

[^140]:    ${ }^{*}$ My information comes from a perfon who had yefided at Ava: "See the Memoir, page
     poboter and Ganges, as well as that of the Ava river trom X unann to the fea, are defrribed in the map of Hindoostant

[^141]:    - A trayelling boat, contructed fomewhat like a pleafore-barge. Some have cabins 14 feet wide, and proportionably lengs and draw from 4 to 5 feet water.

[^142]:    * See page 207, and the fecond note in the fame page.

[^143]:    - A part of this Creek forms the dlace known of late by the name of New-Harbour:

[^144]:    - Mr. Wilkins makes the proper name of this river to be Seendsoo. Heeetopades $x_{x}$;page 333 -
    t It is impoffible to fix the exact fite of Pattala, as there are properly two deltas, a, fiupericr and an inferior one; excluave of the many inlands formed by the Indus when it approaches the fea. Tatta is near the head of the inferior delta; and the ancient accounts mention only one great delta, having Pattala at the upper angle of it. 'In' Ptolèmy's map. (Afix' Tab. XX) Pattala is placed very far below the place; where the Indus firt begins to feparate into branches.

[^145]:    * Thefe are the particulars : From Ritchel to Shahbunder, about 40 miles by the courfe of the river, the bearing, much eaftwardly. Thence to Aurungabunder, 25 more (but by land only 10 or $q 2$ ) the courfe fomewhat more nortliwardy. Thence to Tatta, 60 miles, NNE, or NEBN. The windings of the river are fuppofed to reduce the diflance, on a ftraight line, to 63 G. miles, Thie latitude of Tatta, is fuppofed to be fomething more than $24^{8} 40^{\prime}$ : the confruction, atcording to thefe data, makes it $24^{\circ} 50^{\circ}$.

[^146]:    - It appears from Strabo, that Ariftobulas allowed only 1000 fladia for the balis of thedelta.
    Pp.2: wife

[^147]:    * Hamilton reckoned it a mile broad, in 1699 ; and fays it was 6 fathom deep, and that the inundations are in April, May, and June.

[^148]:    - Makran, or Mocran, is the ancient Gedrosia. One of its modern names is Ketch or Kedges, and is often prefixed to the other, as Ketch-Makran. If Ketch was in ufe anciently, it is likely to have given birth to the name Gedrofa.

[^149]:    * See Savary's Letters on Egypt.

[^150]:    * Mr. Frafer, in his account of Nadir Shah, gives a. copy of this partition treaty, by.which the Nulla Sunkra, or Sunkra river was to be that common boundary' between Hindooftan and the Perfian provinces, near the mouth of the Indus. It may then, be inferred, that the ealern branch of the Indus is named the Sunkra, river.

[^151]:    * The following paffage occurs in M. D'Anville's Eclairciffemens Géograpbiques fur le Carte de l'Inde, p. 42. "' On ignore le temps auquel les Scythes font venus occuper le' Sindi. Dans le Périple de la mer Erythrée *, la ville dé Minnagara, la même que Manfora 4, eft qualifiée de capitale de la Scythie. Denys Périegète dit, que les Scythes méridionaux, habitent fur le fleuve Indus. Euftathe les nomme Indo-Scythes: \& ce que Ptolémée appelle Indo-Scythie remonte le long de 'Indus jufqu' au fleuve Coas $\ddagger$.
    * The Arabian fea, or fea of Omman.
    + Bhakor or Behker, is the fame with the ancient Manfora-Ayin Acbaree.
    $\ddagger$ That which runs by Nagaz, and falls into the Indus a confiderable diftance below Attock; and which, according to my idea, is the Hir of the Perfians.

