

THE ECONOMICS *of* ANCIENT GREECE

By H. MICHELL, M.A.

A portrayal of the Greek in his economic life, in the workshop, the market-place, the counting-house, and in trade with other people. Professor Michell has made use of all the main results of modern research, examining afresh such matters as Greek sea trade, agriculture, mining, the payment of citizens, and the accusation that the Greeks despised manual labour and were "work-shy"; and, though he is skilful in defending the Greeks by their own standards, his impartial analysis makes him conclude that the whole political and economic system was essentially unsound and wrought its own destruction. The book gives many vivid pictures of life as the Greeks must have known it, and, though learned, will be a pleasure to the unlearned too.

CAMBRIDGE UNIVERSITY PRESS

The Economics of
Ancient Greece

CAMBRIDGE
UNIVERSITY PRESS
LONDON: BENTLEY HOUSE
NEW YORK, TORONTO, BOMBAY
CALCUTTA, MADRAS: MACMILLAN
TOKYO: MARUZEN COMPANY LTD

All rights reserved

THE ECONOMICS OF ANCIENT GREECE

Τῇ Ἑλλάδι πενίη μὲν αἰεὶ
κοτε σύντροφος ἐστὶ

BY

H. MICHELL, M.A.

PROFESSOR OF POLITICAL ECONOMY IN MCMASTER UNIVERSITY,
HAMILTON, ONTARIO

CAMBRIDGE
AT THE UNIVERSITY PRESS

1940

PRINTED IN GREAT BRITAIN

COLLEGIO · REGINAE · OXONIENS
NUTRICI · ALMAE
D. D.
ALUMNUS · PIUS

CONTENTS

<i>Preface</i>	<i>page ix</i>
<i>Abbreviations</i>	<i>xi</i>
Chap. I. THE BACKGROUND OF GREEK ECONOMICS	I
II. AGRICULTURE	38
III. MINING AND MINERALS	89
IV. LABOUR	125
V. INDUSTRY	169
VI. COMMERCE (I)	210
VII. COMMERCE (II)	258
VIII. TRADE IN VARIOUS PRODUCTS. GREEKS AND PHOENICIANS. PIRACY	284
IX. MONEY AND BANKING	311
X. PUBLIC FINANCE	352
<i>Select Bibliography</i>	<i>394</i>
<i>Index</i>	<i>399</i>

P R E F A C E

SINCE the day when Boeckh published his *Political Economy of the Athenians*, now a hundred and twenty years ago, the study of Greek economic life has advanced considerably, more particularly in the epigraphical field, and much attention is now being given thereto. I have endeavoured in the following chapters to give, in short compass, the results of modern research, and the conclusions of scholars working in this fascinating field. Many of the problems are of almost baffling complexity and have given rise to much controversy. I have not attempted to set out in detail the views, often sharply divergent, of various scholars on this or that question, but have been content to refer those who desire to go deeper to the sources where they can find a great mass of material, much of it of importance. Our knowledge on many points is lamentably imperfect, and all we can do is to make intelligent guesses. I have thought it best to end the survey at the conquests of Alexander. The developments of the Hellenistic Age were so great and far-reaching that they demand a far more extended treatment than could conveniently be included in a book of this size.

During the several years that I have been engaged in this work, I have had occasion to correspond with many scholars who have, without exception, responded most courteously to my inquiries and given me much help. I cannot name them all here, but I am grateful for their generous assistance. I cannot, however, fail to mention the constant help I received from my colleague in this university, Dr E. T. Salmon. Dr F. M. Heichelheim read the manuscript, and his meticulous scholarship and profound knowledge of the subject have been invaluable to me. The acute criticisms of Dr J. H. Clapham and Dr Max Cary have saved me from many serious mistakes in fact and method of treatment.

But for such errors as have crept in, and I cannot hope that many will not be found, these scholars are assuredly not accountable.

H. MICHELL

*McMaster University,
Hamilton, Ont.*

ABBREVIATIONS

- P.W.* Pauly-Wissowa-Kroll, *Realencyklopädie der Klassischen Altertumswissenschaft*.
- D.S.* Daremberg-Saglio, *Dictionnaire des Antiquités Grecques et Romaines*.
- J.H.S.* *Journal of Hellenic Studies*.
- C.A.H.* *Cambridge Ancient History*.
- Rhein. Mus.* *Rheinisches Museum für Philologie*.
- Klio.* *Klio, Beiträge zur alten Geschichte*.
- I.G.* *Inscriptiones Graecae*.
- I.G.²* *Inscriptiones Graecae, Editio Minor*.
- C.I.G.* *Corpus Inscriptionum Graecarum*.
- Ditt. Syll.* *Dittenberger, Sylloge Inscriptionum Graecarum*.
- Michel.* *Recueil d'Inscriptions Grecques*.

All dates are B.C. unless specifically marked A.D.

The spelling of proper names follows the recommendation of the Council of the Hellenic Society for use in the *Journal of Hellenic Studies*, where all Greek proper names are transliterated into the Latin alphabet, according to the practice of educated Romans of the Augustan Age.

SELECT BIBLIOGRAPHY

- Abrahams, E. B. *Greek Dress*. London, 1908.
- Andreades, A. M. *History of Greek Public Finance*, i, Eng. trans. by C. N. Brown. Cambridge, Mass., 1933.
- Ardailion, E. *Les Mines de Laurion dans l'Antiquité*. Paris, 1897.
- Bacon, J. R. *Voyage of the Argonauts*. London, 1925.
- Baily, K. C. *The Elder Pliny's Chapters on Chemical Subjects*. London, 1929-32.
- Becker, W. A. *Charicles*. (8th ed.) London, 1889.
- Beloch, J. *Griechische Geschichte*. Berlin-Leipzig, 1913-23.
 — *Bevölkerung der Griechisch-Römischen Welt*. Leipzig, 1886.
- Bérard, V. *Les Phéniciens et l'Odyssée*. Paris, 1902-3.
- Billeter, G. *Geschichte des Zinsfusses im Griechisch-Römischen Altertum bis auf Justinian*. Leipzig, 1898.
- Bluemner, H. *Technologie und Terminologie der Gewerbe und Künste bei den Griechen und Römern*. 2 vols. Leipzig, 1875. Revised ed. of vol. i, 1912.
 — *Gewerbliche Tätigkeit der Völker des klassischen Altertums*. Leipzig, 1869.
- Boeckh, A. *Die Staatshaushaltung der Athener*. 1817.
 — Revised edition by Fränkel. Berlin, 1886.
 — English translation, *Public Economy of Athens*. Cornwall Lewis, London, 1828.
- Brendel, O. *Die Schafzucht im alten Griechenland*. Würzburg, 1934.
- Bücher, K. *Beiträge zur Wirtschaftsgeschichte*. 1922.
 — *Industrial Evolution*, trans. by S. M. Wickert. New York, 1907.
- Buechsenschütz, A. *Besitz und Erwerbe im Griechischen Altertum*. Halle, 1869.
- Burns, A. R. *Money and Monetary Policy in Early Times*. London, 1927.
- Busolt, G. and Swoboda, H. *Griechische Staatskunde*. 2 vols. Munich, 1926.
 — *Griechische Geschichte*. Gotha, 1893-1904.
- Calderini, A. *La Manumissione e la Condizione dei Liberti in Grecia*. Milan, 1908.
- Calhoun, G. M. *The Business Life of Ancient Athens*. Chicago, 1926.
 — *The Growth of Criminal Law in Ancient Greece*. 1927.
- Carpenter, R. *The Greeks in Spain*. New York, 1921.
- Cary, M. and Warmington, E. H. *Ancient Explorers*. London, 1929.
- Casson, S. *Macedonia, Thrace and Illyria*. Oxford, 1926.

- Cavaignac, E. *Études sur l'histoire financière d'Athènes au Ve Siècle*. Paris, 1908.
— *Population et Capital dans le Monde Méditerranéen Antique*. Strasbourg, 1923.
- Ciccotti, E. *Il Tramonto della Schiavitù nel Mondo Antico*. Turin, 1899.
— *Le Déclin de l'Esclavage Antique*. French translation by G. Platon. Paris, 1910.
- Clerc, M. *Les Métèques Athéniens*. Paris, 1893.
- Davies, O. *Roman Mines in Europe*. Oxford, 1935.
- Drachmann, A. G. *Ancient Ore Mills and Presses*. Copenhagen, 1932.
- Drumann, W. *Arbeiter und Communisten in Griechenland und Rom*. Königsberg, 1860.
- Ferguson, W. S. *Hellenistic Athens*. London, 1911.
— *Greek Imperialism*. Boston, 1913.
— *The Treasurers of Athena*. Oxford, 1932.
- Francotte, H. *L'Industrie dans la Grèce Ancienne*. Brussels, 1900.
— *De la Condition des Étrangers dans les Cités Grecques*. Louvain, 1903.
— *Les Finances des Cités Grecques*. Liège-Paris, 1909.
- Gardner, P. *History of Ancient Coinage*. Oxford, 1918.
- Gercke, A. and Norden, E. *Einleitung in die Altertums Wissenschaft*. 3 vols. Leipzig, 1914.
- Gernet, L. *L'Approvisionnement d'Athènes en Blé au Ve et au IVE Siècles*. Paris, 1909.
- Glötz, G. *Le Travail dans la Grèce Ancienne*. Paris, 1920.
— *Ancient Greece at Work*. Eng. trans. by M. R. Dobie, London, 1926.
— *Histoire de la Grèce*. Paris, 1925.
- Gomme, A. W. *The Population of Athens in the Fifth and Fourth Centuries*. Glasgow, 1933.
— *Essays in Greek History and Literature*. Oxford, 1937.
- Groningen, B. A. van. *Aristote, le second livre de l'Économique*. Leyden, 1933.
- Grundy, G. B. *Thucydides and the History of his Age*. London, 1911.
- Guiraud, P. *La Main d'Œuvre industrielle dans l'Ancienne Grèce*. Paris, 1900.
— *La Propriété Foncière en Grèce jusqu'à la Conquête Romaine*. Paris, 1893.
- Haeseler, H. *Veteränensfürsorge im Griechischen Altertum*. Jena, 1926.
- Halliday, W. R. *Growth of the City State*. Liverpool, 1923.
- Hasebroek, J. *Griechische Wirtschafts- und Gesellschaftsgeschichte*. Tübingen, 1931.
— *Staat und Handel im alten Griechenland*. Tübingen, 1928.

- Hasebroek, J. *Trade and Politics in Ancient Greece*. Eng. trans. by Fraser and Macgregor, London, 1933.
- Hassinger, H. *Geographische Grundlagen der Geschichte*. Freiburg-i.-Br., 1931.
- Hatzfeldt, J. *Les Trafiquants Italiens dans l'Orient Hellénique*. Paris, 1919.
- Head, B. V. *Historia Numorum*. Oxford, 1911.
- Heichelheim, F. M. *Wirtschaftliche Schwankungen der Zeit von Alexander bis Augustus*. Jena, 1930.
- *Wirtschaftsgeschichte des Altertums*. Leyden, 1938.
- Heitland, W. E. *Agricola*. Cambridge, 1921.
- Herfst, P. *Le travail de la femme dans la Grèce Ancienne*. Utrecht, 1922.
- Hicks, E. C. and Hill, G. F. *Manual of Greek Historical Inscriptions*. Oxford, 1901.
- Hoffmeister, E. W. *Kritische Untersuchung zur Charakterentwicklung der Athener*. Hamburg, 1932.
- Hörnchemeyer, A. *Die Pferdezucht im klassischen Altertum*. Giessen, 1929.
- Jardé, A. *Les Céréales dans l'Antiquité Grecque*. Paris, 1925.
- *La Formation du Peuple Grecque*. Paris, 1922.
- Jones, W. H. S. *Malaria: A Neglected Factor in the History of Greece and Rome*. Manchester, 1911.
- Kaepfel, C. H. *Off the Beaten Track in the Classics*. Melbourne, 1936.
- Keil, B. *Die Solonische Verfassung in Aristoteles Verfassungsgeschichte Athens*. Berlin, 1892.
- Kinkel, J. *Die Sozialökonomischen Grundlagen der Staats- und Wirtschaftslehre von Aristoteles*. Leipzig, 1911.
- Knorringa, H. *Emporos*. Amsterdam, 1927.
- Köster, A. *Das Antike Seewesen*. Berlin, 1923.
- Laistner, M. L. W. *Greek Economics*. London, 1923.
- Laum, B. *Das Eisengeld der Spartaner*. Braunsberg, 1925.
- Leaf, W. *Homer and History*. London, 1915.
- *Strabo on the Troad*. London, 1924.
- Lenormant, F. *La Monnaie dans l'Antiquité*. Paris, 1878.
- Lucas, A. *Ancient Egyptian Materials and Industries*. London, 1926.
- Mallet, D. *Les Premiers Établissements des Grecs en Égypte*. Cairo, 1893.
- Mauri, A. *I Cittadini Lavoratori dell' Attica nei Secoli 5 e 4 A.C.* Milan, 1895.
- Meyer, E. *Geschichte des Altertums*. Stuttgart, 1897-1909.
- *Kleine Schriften*. Halle, 1910.
- Milne, J. G. *The First Stages in the Development of Greek Coinage*. Oxford, n.d.

- Minns, E. H. *Scythians and Greeks*. Cambridge, 1913.
- Motzki, A. *Eubulos von Probalinthos und seine Finanzpolitik*. Königsberg, 1903.
- Murray, G. *Rise of the Greek Epic*. Oxford, 1924.
- Myres, J. L. *Who were the Greeks?* Univ. of California, and Cambridge, 1930.
- Neuberger, A. *The Technical Arts of the Ancients*. Eng. trans. London, 1930.
- Neurath, O. *Antike Wirtschaftsgeschichte*. Leipzig, 1918.
- Newbigin, M. I. *The Mediterranean Lands*. Edinburgh, 1924.
- Oertel, F. "Die Soziale Frage im Altertum"; *Neue Jahrbücher f. d. klass. Altertum*. 1927.
- O'Neill, J. G. *Ancient Corinth*. Baltimore, 1930.
- Ormerod, H. A. *Piracy in the Ancient World*. Liverpool, 1924.
- Poehlmann, R. *Griechische Geschichte und Quellenkunde*, 5th ed. Munich, 1914.
- *Geschichte der Sozialen Frage und des Sozialismus in der Antiken Welt*. 3rd ed. Munich, 1925.
- Radcliffe, W. *Fishing from the Earliest Times*. London, 1921.
- Reinach, Th. *Histoire par les Monnaies*. Paris, 1902.
- Richter, Gisela. *Craft of Athenian Pottery*. Yale Univ. Press, 1923.
- Rider, Bertha C. *The Greek House*. Cambridge, 1916.
- Ridgeway, W. *Origin of Metallic Currency and Weight Standards*. Cambridge, 1892.
- *Early Age of Greece*. Cambridge, I, 1901; II, 1931.
- Riezler, K. *Finanzen und Monopole im alten Griechenland*. Berlin, 1907.
- Robertson, H. Grant. *Administration of Justice in the Athenian Empire*. Toronto, 1924.
- Rose, J. H. *The Mediterranean in the Ancient World*. Cambridge, 1933.
- Rostovtseff, M. *Iranians and Greeks in South Russia*. Oxford, 1922.
- *History of the Ancient World*. 2 vols. Oxford, 1926-28.
- *Caravan Cities*. Oxford, 1932.
- Roth, H. Ling. *Ancient Egyptian and Greek Looms*. Halifax, Yorks., 1913.
- Salvioli, G. *Le Capitalisme dans le Monde Antique*. French trans. by A. Bonnet. Paris, 1906.
- *Il Capitalismo Antico*. Bari, 1929.
- Sargent, R. L. *Size of the Slave Population at Athens in 5th and 4th Centuries B.C.* Univ. of Illinois Press, 1924.
- Sauciuc-Saveanu, T. *Cultura Cerealelor in Grecia Antica*. Bucarest, 1925.
- Schaal, H. *Vom Tauschhandel zum Welthandel*. Leipzig and Berlin, 1931.

- Schaefer, H. *Staatsform und Politik. Untersuchungen zur griechischen Geschichte des 6. und 5. Jahrh.* Leipzig, 1932.
- Schönbauer, E. *Beiträge zur Geschichte des Bergbaurechts.* Munich, 1929.
- Segré, A. *Circolazione Monetaria e Prezzi nel Mondo Antico.* Rome, 1922.
- Seltman, C. T. *Athens: its History and Coinage before the Persian Invasion.* Cambridge, 1924.
— *Greek Coins.* London, 1933.
- Semple, E. C. *Geography of the Mediterranean Region.* New York, 1931.
- Seymour, T. D. *Life in the Homeric Age.* New York, 1908.
- Sieveking, H. *Das Seedarlehen des Altertums.* Leipzig, 1893.
- Spaventa-de Novellis, L. *I Prezzi in Grecia e a Roma nell' Antichità.* Rome, 1934.
- Speck, E. *Handelsgeschichte des Altertums.* Leipzig, 1900-6.
- Tarn, W. W. *Hellenistic Civilization.* London, 1927.
— *Hellenistic Military and Naval Developments.* Cambridge, 1930.
- Thiel, J. H. *Xenophontos Poroi.* Vienna, 1922.
- Tod, M. N. *A Selection of Greek Historical Inscriptions.* Oxford, 1933.
- Torr, C. *Ancient Ships.* Cambridge, 1895.
- Toutain, J. F. *L'Économie Antique.* Paris, 1927.
— Eng. trans. *Economic Life of Ancient World.* London, 1930.
- Tozer, H. F. *History of Ancient Geography.* Cambridge, 1935.
- Trever, A. A. *A History of Greek Economic Thought.* Chicago, 1916.
- Ure, P. N. *The Origin of Tyranny.* Cambridge, 1922.
- Vickery, K. F. *Food in Early Greece.* Univ. of Illinois, 1936.
- Wallon, H. *Histoire de l'Esclavage dans l'Antiquité.* Paris, 1879.
- Wilamowitz-Moellendorf, U. von. *Staat und Gesellschaft der Griechen.* Leipzig, 1923.
— *Aristoteles und Athen.* Berlin, 1893.
- Winkelstern, K. *Die Schweinezucht im klassischen Altertum.* Giessen, 1933.
- Woodhouse, W. J. *Solon the Liberator.* Oxford, 1938.
- Ziebarth, E. *Beiträge zur Geschichte des Seeraubs und Seehandels im alten Griechenland.* Hamburg, 1929.
— *Eine Handelsrede aus der Zeit des Demosthenes.* Heidelberg, 1936.
- Zimmern, A. E. *The Greek Commonwealth.* 5th ed. Oxford, 1931.
— *Solon and Croesus.* Oxford, 1928.

INDEX

- Abydos, Milesian colony, 219, 240
 Acacia wood for wine vats, 191
 Acarnania, grain from, 48, 277;
 cattle, 51; trade of, 244; sheep,
 291
 Achaea, horses from, 64
 Adcock, F. E., quoted, 266
Adeia, 382 n. 1
 Adriatic Sea, traders in, 244 f., 348
 Aegina, population of, 20; agri-
 culture, 53; wealth of, 92; manu-
 factures, 208; Lampis of, 232;
 trade, 236, 262, 277; piracy, 309;
 Pheidon and Aeginetan standard,
 316 f.
 Aelian, on Euboean cattle, 61; on
 fishing, 288
 Aenus, salt from, 124; wheat from,
 265
 Aenyra, gold deposits, 91
 Aeschines, seller of perfumes, 13;
 on interest rates, 342, 388
 Aeschylus, *Persae*, 98
 Aethalia, see Elba
 Aetolia, agriculture, 48; cattle, 61;
 timber, 197; sheep, 291
 Agatharchides on Nubian gold mines,
 92
 Agis, of Sparta, attempted reforms,
 86, 261
Agoranomos, 143, 358
 Agriculture, in Greece, 38 ff.; ade-
 quacy of, 83; after Peloponnesian
 war, 85; capitalistic, 86; wages of
 labour in, 131; women workers in,
 137
 Agrigentum, 220
Akestria, dressmaking, 135
 Alabaster, 238
 Alcibiades, 4, 43, 96, 137, 191, 203,
 242, 256, 282, 326, 357, 373
 Alciphron on moneylenders, 337
 Alexander of Macedon, 3, 8, 95, 98,
 239; relieves famine in Greece,
 275 f.; demonetises silver, 325,
 329
 Alexander of Pherae, raid on the
 Cyclades, 309
 Alexandria, banking in, 254
 Al Mina, Attic pottery at, 295
 Alyattes of Lydia coins electrum,
 323
 Alybe, silver from, 214
 Amasis of Egypt favours Greeks at
 Naucratis, 238
 Amber, provenance of, 216, 246; in
 Liguria, 123
 Ambracia, cleruchies in, 224; famine
 in, 277; timber from, 280
 Amisus, Milesian cleruchy on Pro-
 pontis, 219, 240; Athenian post at,
 266; timber from, 279
 Amitraghata of India, 284
Amorgis, conjecturally silk, 187
 Amorgos, lease of, 54; wool fabrics,
 292
 Amphictyones, law of, 251
 Amphipolis, capture by Brasidas, 281
Amphitapos, 183
 Amphora, liquid measure, 243
 Amyntas, of Macedonia, shipbuild-
 ing supplies from, 282
 Anactorium, cleruchy of Corinth,
 224
 Anatolia, wine, leather and wool
 from, 218 f.
 Anaxibius, a pirate, 309
 Anchialus, salt from, 124
 Andocides, orator, obtains timber
 from Archelaus, 282; on piracy,
 308; trade of Piraeus, 386
 Andreades, G., on taxation, 352 ff.;
 antidosis, 381; *eisphora*, 382; tri-
 bute of allies, 388
 Andros, iron in, 122; Athenian
 garrison in, 262, 267
 Animal husbandry, 59 ff.
 Annealing, 208
 Antheia, cattle in, 65
Anthrakes, coal, 123
Antidosis, 107, 380
 Antigonus Gonatas and Athenian
 mint, 320 n. 4
Antigraphus, 360
 Antipater of Macedon, timber from,
 282
 Antiphanes, poet, on baths, 188
 Antiphon, orator, on murder of
 slave, 156 f.
 Anytus, a tanner, 272, 293

- Apidanus, river, stud farm on, 64
Apodectae, 358
Apoikiai, 224
 Apollodorus, son of Pasion, 336
 Apollonia, Corinthian cleruchy, 219, 224; timber from, 280
 Apollonius Rhodius, quest of Argonauts, 214
 Apples, 58; from Euboea, 233
 Apprenticeship, 139
 Apulia, grain from, 246
 Arabia, trade with, 300
 Arcadia, grain raising, 48; cattle, 61; horses, 63, 65; sheep, 68, 291; asses and mules, 72
 Archelaus of Macedon, timber from, 282
 Arcestratus, Athenian banker, 344
 Archiletes, sells gold to Hiero, 90
Architekton, 201
 Archons, pay of, 359
 Ardaillon, E., mines of Laurium, 95 ff., 104; cement, 203.
 Argali, sheep, 67
 Arganthonius of Tartessus, 221
 Argonauts, 67, 213, 217
 Argos, wheat from, 49; cattle, 61; horses, 63; famine in, 277; fishing, 289
 Arimaspians, gold producers, 213
 Aristides, assesses tribute of allies, 388
 Aristophanes, attacks on Cleon, 11; *Plutus*, 13; *Wasps*, 15, 390; pig-keeping, 72; price of salt, 124; torture of slaves, 156; wheat from Euboea, 261; fish as military rations, 289; debased coinage, 326; silver obols, 328; *demasia trapeza*, 350; taxation, 387, 390
 Aristotle, limitation of citizenry, 8; gainful occupations, 11; infanticide, 23; population of Crete, 24; economic theory, 25 ff.; private property, 27; money, 29 f.; poverty and wealth, 32; slavery, 33, 149, 161; Thessalian oligarchy, 64; care of animals, 68; swine, 71; poultry keeping, 74 f.; *Poletae*, 104; revenue from mines, 106; corner in Sicilian iron, 122; silk, 186; tin, 209; *sitophylakes*, 273; Cleomenes, 276; Solon's monetary reforms, 317; embezzlement, 341; Athenian civil service, 357, 361; payments to citizens, 370; condemnns fines, 374; useless liturgies, 376; *eisphora* at Potidaea, 384
 Armenia, horses and mules from, 300
 Armourers, 206
 Army, cost of upkeep of Athenian regular, 362
 Asbestos, 115
 Asemotrumpai, 92
 Asphalt, bitumen, 114
 Asses and mules, 72
 Assos, isthmus route, 247
 Assyrians, iron armed, 119
 Astacus, Athenian post in Propontis, 266
Astynomi, 138, 143, 358
 Astypalaea, famine at, 277
 Asyra, gold from, 90
Asyilia, 227
 Asylum, right of slaves to, 158
 Atarneus, gold from, 91
Ateleia, 227
 Athenaeus, *Deipnosophistae*: census of Demetrius of Phalerum, 20; wheat from Thessaly, 47 n. 2; *briza*, 51 n. 3; vegetables, 58; flax ropes, 59; roasting an ox, 62 n. 1; cheese, 62 n. 6; Attic wool, 68 n. 5; Milesian wool, 69; Poly-crates of Samos, 73 n. 8; eggs in diet, 75 n. 1; bantam fowls, 75 n. 10; geese, 76; squills, 78; Hiero of Syracuse, 90; women ribbon sellers, 135; Aglais, a trumpeter, 138; Phocian slaves, 155 n. 2; slave rebellion at Samos, 158; treatment of slaves, 160; wall digger, 174; encaustic, 176; weaving, 182 f.; felt, 183; *trichaptos*, 186; *kalasireis*, 187; Menedemus and Asclepiades, 194; bread, 194; Anaxarchus, 195; cookery books, 196; forty-bank ships, 199; *Syracusia*, 200, 209, 280; hempen ropes, 202; Glaucus, 206; glass, 209; Hermippus, 234; perfumes, 236; Milesian wool, 241; flour from Phoenicia, 264; wheat preferred to barley, 275; Harpalus, 277; sycophant, 284; Amitraghata, 284; fish, 287 f.; tapestries, 292; pottery from Naucratis, 297
 Athens, cloaca, 53; trade of, 235, 252; grain trade, 271; gold coinage, 326 f.; banking in, 335 ff.

- Athlothetae*, 359
Atimia, 350
 Atrageioi, in Thessaly, famine, 277
 Attica, farming in, 4, 48, 50, 84, 88;
 grain crop, 21; land problem, 41;
 sheep, 68; honey, 73; olives, 77;
 deforestation, 82; loss of popula-
 tion, 87; brine springs, 124; wax,
 202; figs, 284; marble, 290; pottery,
 296 ff.
 Augeas, cattle of, 65
Aurichalcum, 118
Autorgos, 43
 Azov, Sea of, fishing in, 287

 Babylonia, agriculture in, 52; bank-
 ing in, 334
 Badakshan, lapis lazuli from, 215
 Bakers, 144
Banauasia, 13
 Banking, 254, 333 ff.
 Barley, 51, 84
 Barrels, wooden, not used, 191
 Bashan, oak from, 300
 Baskets, 198
 Baths, 188
 Battos of Cyrene, road builder, 250
 Becker, W. A., *Charicles*, 289, 333
 n. 1
 Bedsteads from Miletus, 233
 Bees, beekeeping, honey, wax, 73
 Beloch, J., population of Greece, 21;
 Greek commerce, 224; avoidance
 of Adriatic, 244
 Bérard, V., Isthmic theory, 247
 Bermius, Mt., gold from, 91
 Bill of Exchange, 340
 Bimetallism, 329
 Binai, coal at, 123
 Bithynia, timber from, 244
 Bitumen, asphalt, 201
 Black Sea, see Euxine
 Blakeway, A., quoted, 223, 323
 Bleaching, 185
 Boeckh, A., mining laws, 106 f.;
 cost of living, 133; upkeep of
 slaves, 164; bottomry bonds, 349;
 fines on citizens, 374; *xemikon*, 375;
 liturgies, 378
 Boeotia, inaccessibility to sea, 4;
 market gardening, 51, 128; wheat,
 55, 260; cattle, 61; horses, 63 f.;
 fowls from Tanagra, 75 f., 233;
 run of, 87; helmets from, 207;
 sheep, 291

 Bohemia, tin from, 116, 246
Bombycina, silk, 186
Bora, wind, 245
 Borysthenes, salt from, 124; fish, 288
 Bosphorus, hides, 293
 Bottomry, 228, 242, 274, 345 ff.
Bouturon, 62
 Boxwood, 129, 300
 Brasidas, capture of Amphipolis, 281
 Brass, 112, 118
 Bread, sellers, 136; ovens and baking,
 193
 Bricks, 129, 132, 173
 Britain, Phoenicians in, 115, 301
Briza, 51
Bromos, 51
 Bronze, 112 ff.
 Budget in Athenian finance, 355
 Budini, furs, 293
 Bug, river, 241
 Building construction, 202
 Butades of Corinth, 236
 Butter, 62, 285
 Byblos, calkers from, 300
 Byssos, 184, 202
 Byzantium, Greek colony, 219;
 seizure of grain ships, 269, 270,
 308, 336; fish, 287; banking
 monopoly, 338

Cadmia, 103
 Caicus, river, Aeolian colony, 217
 Calamus, Cassia, 300
 Calking, 201, 300
 Callistratus, income from harbour
 dues, 256
 Calymnus, wine from, 294
 Capital, lack of liquidity, 31, 333;
 insecurity of, 230, 380
 Capitalism, 7, 79
 Cappadocia, mules from, 72; bitu-
 men from, 201
 Caprification, 78
 Cardamom from Miletus, 233
 Caria, preserved figs from, 284
 Carpentry, 196
 Carpets, 184, 291 f.; from Carthage,
 304
 Carthage, flax from, 202; trade, 219,
 244, 249, 303 f.; sulphium, 233;
 flour, 233, 264; pottery, 298
 Carystus, famine, 277; fish from,
 289; marble, 290
 Casting, metal, 208
 Catalan furnace, 204

- Cato on size of farms, 88
 Cattle, 60 ff.
 Caulonia, timber from, 282
 Cavalry, use in war, 63 f., 66, 361
 Cayster, river, 217
 Cedar for shipbuilding, 278 f.
 Celtiberia, iron from, 205
 Cement, 203
 Ceos, *miltos* from, 103, 122, 262, 277
 Cephallenia, rainfall in, 46
 Cephisus, river and plain of, 48, 53
 Cerameicus, 178
 Cercinites, 219
 Cerne, Attic pottery at, 297
 Cersobleptes of Thrace, taxes on commerce, 256
 Chaerophilus, a fishmonger, 289
 Chalcedon, copper, 113; colony, 219; seizure of grain ships, 269; fishing, 287
 Chalcidice, wheat from, 265; timber, 281
 Chalcis, in Euboea, 113; helmets from, 207; vases, 209; fishing, 288
Chalkeis, copper coins, 321
Chalkeus, *chalkos*, 112
 Chalybes, iron, 119, 233; fishing, 287
 Charcoal burning, 198, 205, 244
 Charidemus of Oreus, a pirate, 309
 Chasing, steel, 206
 Cheese, cheesemaking, 62, 171
 Chersonesus, Tauric, 240
 Chersonesus, Thracian, colony, 219, 224; blocked exchange, 228; wheat from, 265
 Chesterton, G. K., definition of poverty, 17
 Childe, V. G., Minoan jewellery, 216
 China, silk from, 196; furs, 293; cf. also Seres
 Chios, vase from, 209; wine, 218, 294; payment for convoys, 268; oil, 285; marble, 290; capture by Histiaeus, 308; monetary standard, 320
Chlamys, 187
Chlamis, 187
Choregia, 147
Chutreus, 177
 Cilicia, timber from, 279
 Cimmerian Bosphorus, in Homer, 213; Pericles' visit to, 266; grain from, 269
 Cimolian earth, 183
 Cimon, 268; suppression of piracy, 308
 Cinadon of Sparta, iron weapons, 207
 Cinnabar, *Kinnabari*, 102, 119, 190
 Cinnamon, 300
 Circe, swine of, 71
Cire perdue method of casting, 208
 Citizens of Athens as workers, 125 ff.
 Cius, Milesian colony, 219, 240
 Clauda, island, copper in, 114
 Clay products, 173
 Clazomenae, olive oil, 285; famine in, 270
 Cleaners, garment cleaning, 188
 Cleanthes, the philosopher, prosecuted for idleness, 12
 Cleomenes of Naucratis, corner in wheat, 260, 264, 275 ff.
 Cleomenes of Sparta, 86
 Cleon, a tanner, 171, 293, 388
 Cleruchies, 224
 Clothing, cost of slave's, 163; industry, 187 f.
 Cnidus, seizure of Spartans, 264; wine, 294
 Cnossus, famine, 277; borrowers at, 337
Coa, silk, 186
 Coal, 122, 205
 Cochineal, 190
 Cock fighting, 75
 Coele-Syria, forests, 278
 Coenyra, gold, 91
 Coins, coinage, 97, 304 ff.
 Colaeus of Samos, voyage of, 221, 301
 Colchis, cinnabar, 190; gold, 213; timber, 279; flax, 291
 Colonisation, 217 ff.
 Colosseni, wool, 292
 Columella, on use of manure, 54; poultry, 75; viticulture, 80
 Commagene, bitumen, 201
 Commerce, 224 ff.
 Communism, Greek view of, 26
 Confectionery, 195
 Construction industry, labour in, 128 ff.
 Convoys, 268
 Cooks, women, 137; apprenticeship, 140; famous, 196
 Copais Lake, spring wheat, 55; eels and poultry from, 48, 289
 Coral, 300

- Corcyra, Corinthian cleruchy, 224; fishing, 288; wine, 294
- Corfu, rainfall, 46; Scheria, 212
- Corinth, population of, 20; bronze, 208; colonies, 224; trade, 236, 255, 317; pottery, 277, 295 f.; piracy, 309; silver staters, 325
- Corsica, Phocaeans in, 221; timber, 283, 305
- Cos, dyers in, 135; silk, 186; wheat, 277; sheep, 291; wine, 294; taxes, 387
- Cosa, tunny fishing, 289
- Cost of living, 132 ff.
- Cotton, 187, 291
- Courts, mining, 110; commercial, 145; Athenian, 254
- Crete, rainfall, 46; sheep, 69, 292; iron, 120; whetstones, 206; cypress wood, 234
- Critias, elegy of, 233
- Croesus, wealth of, 91, 313, 323
- Crop rotation, 57
- Croton, colony of Magna Graecia, 220
- Cumae, 220, 247; pottery, 295; gold coins of, 326
- Cupellation, 102
- Customs duties, 255, 386
- Cyclops, a cheesemaker, 63
- Cydonia, famine at, 277
- Cyprus, copper, 113, 211, 214; asbestos, 115; iron, 120; shipbuilding, 201; gypsum, 203; trade, 212, 217; mustard from, 233; wheat, 262, 275; timber, 280; sheep, 291; carpets, 292; Attic pottery in, 297; Phoenicians in, 302
- Cyrenaica, Cyrene, rainfall, 46; silphium, 233; hides, 234, 293; road in, 250; grain from, 270, 277; oil, 285; pottery, 298
- Cythera, owned by Eurycles, 87; expedition of Nicias to, 264; famine at, 277
- Cythnos, iron in, 122
- Cyzicus, shipbuilding, 201; colony of Miletus, 219, 240; staters of, 228, 327, 330; seizure of grain ships, 269; taxation, 387
- Dactyli, iron from, 119
- Damascus, wine and wool from, 300
- Damastium, silver, 94, 245
- Daric, gold coin, 329
- Darnel, 52
- Dates from Phoenicia, 233
- Daton in Thrace, shipbuilding, 201
- Davies, O., quoted on mining, 89, 115
- Dead Sea, bitumen from, 201
- Debt, slavery for, 41 f., 333
- Declea, seizure by Spartans, 22, 49, 76, 109, 163, 229, 261, 326, 373
- Deforestation, 82
- Deinarchus, accuser of Demosthenes, 274
- Delian League, 11, 15, 18, 236, 319
- Delos, trade emporium, 237, 240; banking, 254, 334; oil, 286
- Delphi, wages at, 131; famine at, 277
- Demades, Athenian financier, 370, 373
- Demeter, rites of, 4
- Demetrius of Phalerum, 20, 98, 203, 355
- Demetrius Poliorcetes, 183, 283
- Demioprata*, 373
- Demosia trapeza*, 350
- Demosthenes, grain controller, 274, 277; Harpalus incident, 373; Cases: agst. Lacritus, 232, 242, 287, 294, 346; agst. Eubulides, 12, 127; *de Corona*, 12, 261, 265, 269; agst. Zenothemis, 260; agst. Dionysodorus, 260, 276 f., 340, 346; agst. Theoclines, 269; agst. Neaera, 136, 274; agst. Timotheus, 202, 282; Treaty with Alexander, 282; agst. Phormio, 232, 293; for Phormio, 336, 341, 348; agst. Pantaenetus, 100, 106, 111; agst. Leptines, 20; agst. Phaenippus, 86, 107, 111; agst. Aphobus, 153, 198; agst. Euergus and Mnesibulus, 338; agst. Polycles, 345; agst. Androtion, 357, 382; on the Navy Boards, 379, 383; Philippic iv, 390
- Deposit Banking, 341
- Diagogion*, 257
- Diapulia*, 256, 387
- Dibaphos*, 189
- Dicaearchus on Spartan money, 322
- Dicasts, pay of, 369
- Dio Chrysostom, decadence of Euboea, 87
- Diodorus Siculus, Sun State of Iambulus, 29; Nubian gold mining, 92, 160; metic tax, 147

- Diogenes Laertius, sheep at Megara, 68; debasement of coinage at Sinope, 332
- Dionysius of Phocaea, a tyrant, 308
- Dionysius of Syracuse, 306; debasement of coinage, 332
- Dioscorides, on quicksilver, 119; perfumery, 193
- Dioscurias, colony in Colchis, 219; fish curing, 287
- Diphilus, confiscation of property, 97, 374
- Diploe*, 205
- Distillation, 192 f.
- Division of labour, 25, 128, 130
- Dnieper, river, trade, 241 f.; fishing, 288
- Dokimasia*, 376
- Dole, payment to citizens, 15
- Dolines*, or *poljens*, 45
- Dolopian pirates, 268, 308
- Dorians, 210, 217
- Dowry, 44
- Drangae, tin from, 117
- Dressmakers, 135
- Dry farming, 46
- Ducks, 76
- Dyeing, 135, 189
- Dyrrhachium, asphalt, 114
- Dysorum, silver at, 95
- East wind, dangerous, 300
- Economic interpretation of history by Plato, 25
- Economic theory of Greeks, 24, 33
- Education, cost of, 363
- Eels from Boeotia, 5
- Egibi Sons, bankers, 334
- Egypt, horses from, 65; olives, 77; byssos, 202; trade, 212; gold, 214; grain, 235, 263; timber trade, 278; linen, 300; copper, 329
- Eisagogeis*, 359
- Eisphora*, 107, 352, 381
- Ektropai*, 250
- Elba (Aethalia), copper, 113; tin, 117 n. 5; iron, 122
- Elea, colony of Magna Graecia, 220
- Electrum, 118; from Sardes, 233; money, 312
- Eleusinian Mysteries, 4
- Eleusis, rent of farm at, 44; building accounts, 126, 130 f.; slave labour at, 161
- Elis, farming in, 48; mid-winter ploughing, 54; pastures, 61; horses, 63, 65; mules, 72; coal, 123; byssos, 184; famine in, 277
- Elisha, isles of, purple from, 300
- Ellimemia*, 257
- Elyros in Crete, famine, 277
- Emeralds, 300
- Emporium, 221
- Emporos*, 141, 216, 231
- Encaustic, 176
- Encyclia*, 377, 387
- Enuphaino*, 182
- Ephesus, Demetrius of, 142; artificial cinnabar, 190; supplants Miletus, 241
- Epidamnus, asphalt, 114; Corinthian cleruchy, 224, 245; timber from, 280
- Epidaurus, building at, 129
- Epidosis*, 385
- Epimeletai*, 200
- Epinetron*, 180
- Epirus, cattle, 60; horses, 63; famine, 277
- Epizephyrion, colony of Magna Graecia, 220
- Eponion*, 375, 386
- Erechtheum, building accounts, 126, 164
- Eretria, fishing, 288 f.
- Erineas, asphalt, 114
- Erioplutes*, 179
- Erythrians, Athenian protection to, 268
- Etesian winds, 6, 243
- Ethiopia, gold mining, 93
- Etna, Mount, forests of, 280
- Etruria, Attic pottery in, 297
- Etruscans, hostile to Greeks, 245; pottery, 295
- Euboea, granary of Athens, 49; wheat, 55; *hippobotae*, 63; cattle and horses, 64, 68; decay of, 87; supposed copper in, 113; asbestos, 114; iron, 122; apples, 233; lost to Athens, 261; monetary standard, 317
- Eubulus, Athenian financier, 355, 390
- Euemerus, the Fortunate Isle, 29
- Eupatrids, 41
- Euripides, humane views on slavery, 150, 152
- Euripus, river, 48

- Euthuni*, 358
 Euxine, tunny, 6; fish, 146; colonies in, 240 f., 303
 Evagoras of Cyprus, 262
 Exchange, blocked, 228; money-changing, 338 f.
 Ezekiel, prophet, 182; trade of Tyre and Sidon, 299

 Faience, 238
 Fallow, 54
 Farms, size of, 43
 Felt, 183
 Fertiliser, use of, 53
 Festivals, number in Athens, 364
 Feudal aristocracy in Attica, 42
 Fiftieth, tax, 256, 274
 Figs, 5, 41; sellers, 77, 136; from Rhodes, 233; trade in, 284
 Firewood, 198
 Fish, trade in, 286 f.
 Fishing nets, 136
 Fishmongers, 136, 146, 289
Flagellum, flail, 57
 Flax, cultivation of, 58; hackling, 185; ropes, 202; from Phasis and Colchis, 233; trade in, 291
 Fleet, cost of upkeep of, 362
 Flour sellers, 136; milling, 193; fine, from Carthage, 233, 264
 Folds, sheep, 69 f.
 Francotte, H., building in Athens, 130; pottery, 178; small-scale production, 165; industry in Corinth, 237
 Free trade, in ancient world, 255
 Fulling, 135; fuller's earth, 183
 Furs, 293

 Gades, fish, 289; Phoenicians at, 302
 Gargaliani, asphalt at, 114
 Garlands, weavers of, 136
 Garlic from Megara, 58, 233
 Gaul, fir forests, 280; wool, 291
 Gazelonitis, wool from, 291
 Gebal, or Byblos, calkers from, 300
 Gela, colony in Sicily, 220
Gelgopolis, 137
 Gelon of Syracuse, 259
 Geographic factor in Greek culture, 2
 Geology of Greece, 45
Geoponica, on poultry, 75
 Geraestus in Euboea, 262
 Gerancia, Mount, 5

 Gernet, L., on taxation of wheat imports, 274
 Ghi, clarified butter, 62
 Gilding, 137
 Giro, 340
 Glass, 209, 304
 Glaze on pottery, 176
 Glotz, G., size of farms, 43; manumissions, 159; iron in Homer, 121; cost of living, 133
 Glue, 197
 Goats, 41, 61; goat's hair, 184
 Gold, 89; from Egypt, 214
 Golden Fleece, 213
 Gomme, A. W., Isthmic theory, 248; population, 21 f.
 Gortyna, famine, 277
 Grain, imports from Pontus, 20, 228; raising in Greece, 47 f.; production, 50; price of, 132 f.; public distribution, 147; trade in, 258 ff.
 Granicus river, 217
 Gresham's Law, 329
 Grundy, G. B., on population, 21; vine and fig culture, 82; Greek farming, 83
 Guilds, trade, 140
 Guiraud, P., division of labour, 130; cost of living, 133
 Gyaros, iron in, 122
 Gyges, wealth of, 91
Gymnasiarchia, 378
Gynaikonomi, 360
 Gypsum, in stucco, 203; used in fulling, 183

 Haliartus, pastures in, 64
Halonetos, a salt slave, 124
 Hamaxia, cedar from, 279 n. 5
 Hanno, *Periplus* of, 301
 Hanse merchants, 212, 225
 Harpalus distributes famine relief, 277
 Harvest, women workers in, 137
 Hasebroek, J., use of *miltos*, 103; Greek trade, 222 ff.; expedition to Cythera, 264; Sardes, 313; Pheidon, 316; management of money, 332
Haute-lisse, weaving, 181 n. 2
Hecatoste, 386
Hectemori, 41
 Heketyrioi, famine at, 277
 Hellenistic era, 8
Hellenotamiae, 358

- Hellespont, route to tunny fisheries, 6; mackerel, 234; trade route, 244; isthmian theory, 247; command of, by Athens, 265
Hellespontophylakes, 268
 Helmets, 207
 Helots, 158
 Hemeroskopeion, Spanish colony, 221
Hemitetartemorion, 328
 Hemp, 202, 283, 291
 Heraclea, colony on Propontis, 219; grain from, 275; fish from, 287
 Heracleides, Athenian banker, 344
Herakleia, 185
 Hermione, famine at, 277
 Hermippus, comic poet, 234
 Hermon, Mount, fir from, 299, 305
 Hermus, river, 217
 Hero of Alexandria, screw press of, 192
 Herodes, mime, 173
 Herodotus, on manual labour, 11; flax growing, 58; fat-tailed sheep, 67; gold, 90 f.; mines of Dysorum, 95; cotton, 185; silent trading, 211; Gelon of Syracuse, 259
 Hesiod, conditions in Boeotia, 40; fallow, 54; sowing, 54; *oreichalkos*, 118; Hercules and Cynus, 250
Hetairae, 135, 138
Heteromallus, 183
 Hides, 293; from Carthage, 304; sale of, 172
Hieropoei, 62, 359
 Hinges, 197
Hippeis, 361
 Hippias, debasement of coinage, 331
 Hippobotae of Euboea, 63
 Hiram of Tyre, lumbering in Lebanon, 278 n. 4; timber transport, 283
 Hire, pastures in, 64
 Histiaca, trade route round, 261
 Histiaeus of Miletus, 280, 308
 Hittites, 119, 218
Hodopoei, 251, 359
 Holidays, number in Athens, 131
 Hollow casting, 208
 Homer, irrigation, 56; winnowing fan, 57; cattle, 60; cheese, 62; horses, 64 f.; sheep, 67 f.; swine, 71; goats, 73; poultry, 76; olives, 76; vintage, 81; bronze, 112; tin, 115; iron, 120, 205, 212; ivory, 137; slavery, 150; potter, 174; loom, 180; weaving, 185; hand mills, 194; shipbuilding, 198; commerce, 210; geography of *Odyssey*, 213; siege of Troy, 213, 239; fish, 286; manual labour, 10; landownership, 40; Argos, 49; gold, 89, 314; tanning and leather, 171; net of Hephaestus, 206; Phoenicians, 302; piracy, 307; money standards, 313
 Homosexuality, effect on population, 24
 Honey, 73; sellers of, 136
 Horses, breeding, 63 ff.; from Armenia, 300
Hubris, 157
 Hume, David, 20, 152
 Hyacinth, dye, 190
Hydrargyros, quicksilver, 119
 Hymettus, honey, 73; marble, 290
 Hyperbius, reputed inventor of potter's wheel, 237
 Hyrtake, famine at, 277

 Iambulus, Sun state, 29
 Iberia, hemp from, 59
Ichthyopolis, 136
 Ida, Mount, iron, 119; tar from, 201; timber, 279
 Idalium, Phoenician colony, 302
 Imbros, crops in, 50; Athenian cleruchy, 224; capture by Miltiades, 265; occupied by Athens, 267
 Incense, sellers of, 136; from Syria, 234
 India, copper, 113; iron, 205; trade with, 212 n. 1
 Indigo, 190
 Infanticide, 23
 Inflation of coinage, 327
 Insurance, of runaway slaves, 164; marine, 349
 Interest on money, Aristotle on, 29; Plutarch, 337; rates, 342; on shipping loans, 347
 Ionia, settlements in, 217; timber from, 280; pottery trade, 297; revolt of Greek colonies, 303; invention of money, 311
 Ionian Islands, 212
 Iphicrates, a pirate, 309
 Iris, orris root as dye, 245
 Iron, 119 f., 204 f., 315; as money, 321 f.
 Irrigation, 56

- Isaeus, interest rate, 342; Sumathes a banker, 344; liturgies, 376
Isatis, woad, 190
 Ischomachus, Athenian farmer, 38 f., 79, 86, 137, 139, 156, 301, 378
 Isocrates, orator, on craftsmen, 178; on Athens, 253; on Megara, 255; piracy, 309; *Trapeziticus*, 340 f.; fees for teaching, 364; liturgies, 376; on Antidosis, 384, 392
 Ister, Istros, Milesian colony, 219, 241; fisheries, 288
 Isthmic theory, 247 f.
 Ithaca, 65, 214 n. 9
 Iton, mother of sheep, 67
 Ivory, in Homer, 137; Libya, 234; Carthage, 304
 Jardé, A., rye, 51; vine and fig culture, 82; Greek farming, 83
 Javan, 300
 Joel, prophet, barking of fig trees, 78; palmer worm, 81
 Joint Stock system of finance, 31
 Juvenal on Greeks, 9
Kadopoios, potter, 176
Kalametrides, 137
Kalasireis, 187
 Kalche, murex from, 113
Kapelos, 230
 Karystos, asbestos at, 114
 Kassiterides, 115
Kermes, dye, 190
 Kertch, Straits of, fisheries, 287
 Kiln, pottery, 177
Kinnabari, cinnabar, 190
 Kittim (Cyprus), boxwood from, 300
Kothonopoios, 177
 Krenides, gold mines, 92
Kuanos, lapis lazuli, 205, 215
 Kurdistan, copper from, 113
 Labour, 125 ff.; in mines, 107; state interference with, 142; forced, 144
 Laconia, early art in, 3; iron, 121; women in, 139; vases from, 209
 Lade, battle of, 239
 Laestrygonians, 213
Lampadarchia, 376
 Lampsacus, electrum coinage, 327
 Land, ownership problem, 7, 40; division of, 44; holding in Plato, 28; Metics on, 147; leases of, 44; trade on, 5; transport, 249 f.
 Lanoline, 193
 Laodicea, sheep in, 292
 Laos, isthmian theory, 247
 Lapethus, Phoenician colony, 302
 Lapis lazuli, *kuanos*, 205, 215
 Large-scale production, lack of, 179
 Larissa, famine, 277
 Larnaka, Phoenician colony, 302
 Latium, timber, 280
Laurai, 99
 Laurium, mining district, 4, 235; beekeeping, 74; silver mines, 95 ff., revenue from, 106, 372; iron, 121; Metics working at, 146; slave revolt, 158; slave labour, 164 f.; cinnabar, 190; silver for coinage from, 319 f., 326
 Law courts, revenue from, 372
 Lead, price of, 102
 Leaf, W., on Corinth, 237
 Leases, land, 44; mining, 104
 Leather working, 170 f.
 Lebanon, timber from, 278, 299, 305
 Legumes, 54
 Lemnos, grain from, 49, 224, 265, 267 f.; *sphragis*, 103
 Leptis Magna, Phoenician colony, 302
 Lesbos, Achaean settlement, 217; wine, 218, 232, 294; famine, 277; marble, 290
 Leucas, Corinthian cleruchy, 224; famine, 277; timber from, 280; wine, 294
 Leucon and the grain trade, 266, 269
 Libya, horses from, 64; copper, 113; trade, 212; furs, 293
 Liguria, amber, 123; coal, 123; timber, 280; Attic pottery in, 297
Liknon, 57
 Linen, 184 f., 290
Lithostrotos, 250
Litra, Syracusan coin, 325
 Liturgies, 18, 107, 146, 375 ff.
 Lixus, Phoenician colony, 302
 Loans, security for, 342
 Locris, grain, 48; horses, 64
 Lodging houses for seamen, 145
Logistae, 358
 Loom, weaving, 180 ff.
 Lycaonia, asses of, 72
Lychmites, Parian marble, 290
 Lycurgus, Attic statesman, 97, 355, 373, 390

- Lycurgus of Sparta, 321, 357
 Lydia, gold, 91; wool, 291; invention of coins, 311
 Lysander, 309
 Lysias, orator, case agst. Diogeiton, 133, 265; agst. wheat dealers, 262, 271 ff.; expense of liturgies, 376
 Lysicles, a sheep dealer, 13

 Macedonia, 8; timber from, 197, 202, 235, 279, 282; tar, 201; trade of, 212; flax, 291
 Machinery and slave labour, 4, 167
 Madder, dye, 190
 Maeander, river, 217
 Magna Graecia, 220; grain from, 259; sheep, 291
 Mago, writer on farming, 304
 Mainake, Phocaeen colony in Spain, 221
 Malaria, 85
 Malcia, Cape, stormy, 237, 242; pirates, 249
 Malthus, Thomas R., 8, 23
 Mantinea, grain growing, 49
 Manual labour, prejudice against, 10, 127
 Manure, fertiliser, 47
 Marble, 290
 Marjoram from Tenedos, 233
 Market, labour at Athens, 161; women's, 135; slave at Sunium, 153 n. 1; sacred, 212
 Maroneans join in convoy system, 268
 Maroneia, silver from, 95
 Marshall, Alfred, 1
 Masonry, iron dowels for, 209
 Massalia, tin trade, 116; shipbuilding, 201; Phocaeen colony, 221, 248; pottery trade, 298
 Mauri, A., on cost of living, 133
 Mediterranean, rainfall in, 46
 Megara, agrarian revolt, 40; deep working of soil, 53; sheep, 68, 291; slaves, 163; garlic and cheese, 233; wealth of, 255; famine, 277; fishing, 288; clothing industry, 292; return interest, 343
 Megarian decrees, 253
Meleagrides, poultry, 75
 Meliboea, famine, 277
 Melic poultry, 75
 Melos, agriculture, 50; stone from, 101; iron, 122; marble, 290
 Mende, wine, 294, 347
 Mentes of Taphos, 113, 120, 212
 Merchant class, 231 f.
 Merino sheep, 67
 Mermnadae of Lydia, 313
 Meroe, island, copper in, 113
 Mesembria, salt from, 124, 219
 Meshech, in Euxine, 300
 Mesopotamia, treeless, 278
 Messina, Greek colony in Sicily, 220
 Messina, Straits of, 247; tunny fisheries, 288
 Messenia, cattle in, 61; horses, 63; sheep, 68
 Methone, 253; imports of wheat from Pontus, 268
 Metics, 10, 17, 22, 126, 144 ff.; potters, 297; bankers, 336
Metokion, 147, 375
Metronomi, 359
 Mictis, unidentified, 116
 Midas, reputed first to mint money, 312
 Milesian fort in Egypt, 212, 237
 Miletus, 69, 238 ff., 241, 292; viticulture, 81; vases from, 209, 212, 248, 296; merchants at Naucratis, 237; oil, 285; fish, 288
 Milk, in diet, 62; production of, 63; cream sellers, 136
 Mill, milling, 193; water and wind-mills, 194
 Millet, 51, 55
 Miltiades coloniser, 246, 259
 Miltiades fined, 373
Miltos, 103, 176, 296
 Mining, 89 ff.; Metics, 146
 Minium, 102
 Minoan Age, commerce in, 211, 223
 Minos suppresses piracy, 306 f.
Mischos, 53
 Mithradates, war with Rome, 9; water mill, 194
Molybdena, 103
 Money, coined, 219, 311 ff.
 Monometallism in Greece, 323
 Monthly suits, 349
 Mosaics, 203
 Mossynoeci, brass, 118
 Mouflon sheep, 67
 Mules, 65, 72
 Murassu, bankers, 334
 Murex, purple, 189, 220, 233, 302
 Muslin from India, 185
 Mycenae, gold, 90; copper, 112; trade, 223

- Myrcinus, on Strymon, 280
 Myrmidons, 53
 Mysia, mules, 72; wheat, 264;
 timber, 279
 Mytilene, obtains grain from Bos-
 porus, 267; electrum coinage, 327

 Nails, 206
 Naples, 220
 Natron, constituent of glass, 215
 Naucratis, market for wine, 232;
 trading centre, 237 f.; connection
 with Miletus, 241; grain from,
 263; wine from, 294; pottery,
 296 ff.
Naukleros, 141, 230
 Naupactus, 281
 Nausinicus, Archon, 382
 Navigation, in summer, 242; laws,
 253
 Naxos, goats, 73; emery, 206, 290
 Nearchus, voyage of, 186
 Newbiggin, Miss M. I., *Geography of*
Mediterranean Lands, 3 ff., 57
 New Comedy, 24
 Nicias, 108, 164
 Nitre, fertiliser, 54
 Nurses, 127, 137
 Nymphæum, on Straits of Kertch,
 266

 Oakum, Eucrates a dealer in, 13
 Oats, 51
Obeloi, 316
 Objets d'art, trade in, 234, 295
 Ochre, yellow, 190
 Octroi, *diapulia*, 256
 Odomanti, gold and silver from, 92
 Odrysians, wheat from, 265
 Oetaea, famine at, 277
Okodomos, 197
 Oil, olive, in commerce, 5, 284 f.;
 extraction, 192 f.; from Taras,
 220; imports into S. Russia, 241
Oisupe, 193
 Olbia, Greek colony, 219; blocked
 exchange, 228, 239; Milesian
 trade with, 241; fish, 288
 Olive, cultivation of, 3, 41, 76, 218
 Olympia, coal at, 123; Philippeum,
 174
 Olynthian war, 327
 Olynthus, mosaic floors, 203; wealth
 of, 255; timber from, 282
Olyra, 51

 Onions, 58; from Samothrace, 233
Onos, 180
 Opis, famine at, 277
 Opous, plain of, 64
 Orchil, litmus, 190
 Orchomenus, sheep, 68
Oreichalkos, 118
 Oropus, 229, 261 f.
 Orpiment, 190
 Orris root, perfume, 246
Othone, 184
 Over-population, 7
 Owls of Athens, 95
Oxyrhynchus, fish glue from, 197

 Paeonia, gold in, 92
 Paerisades, Crimean king, 267
 Pagasae, export of Thracian wheat
 through, 47, 217, 234, 260
 Palestine, salt as fertiliser, 53; mid-
 winter ploughing, 54; flax, 58;
 olives, 285; wheat and honey, 300
Palinkapelos, 230
 Panchaea, the fortunate isle of
 Eumerus, 29
 Pandarus, bow of, 73
 Pangaeus, Mt., gold from, 90, 372
 Panic grass, millet, 55
 Panticapaeum, Milesian colony in
 Crimea, 219, 240; salt fish from,
 232, 287; Athenian pottery at,
 297
Pantopolis, 137
 Paphlagonia, acorns and almonds
 from, 58, 233
 Papyrus for ropes, 59, 234
Parastasis, 373
Paredri, 358
 Paros, copper, 114; labour disputes
 in, 143; wheat imports, 277;
 marble, 290; wine, 294
 Parthenon, building of, 130
 Pasion, Athenian banker, 146, 335,
 339, 343
 Pastures, summer and winter, 59
 Patavium, wool from, 291
 Patent, monopoly, 196
 Patros, rainfall, 46
 Paul, St, on manual labour, 14
 Pausanias, cattle in Laconia, 61;
 mules in Elis, 72; poultry, 74 f.;
 burned bricks, 173 f.; Cerameicus,
 178; byssos, 184; island of Seria,
 186; trade with India, 212 n. 1;
 roads in Greece, 251

- Pearls, 300
 Peisistratus, Athenian tyrant, 63, 95, 265, 318
Pelatae, 41
 Pellene, wool from, 292
Pelles, furs and hides, 293
 Peloponnesian war, effect on agriculture, 85
 Peloponnesus, farming in, 48, 61
 Peneus, river in Thessaly, pastures by, 63
Pentecoste, tax of fiftieth, 256, 274, 386
 Pentelicus, marble, 290, 372
 Peparethus, wine, 294; capture by pirates, 309
 Perdicas of Macedonia, 233, 287
 Perfumes, makers and sellers of, 136, 193, 245
 Pergamum, gold, 91
 Pericles, 16, 128, 234, 261, 266, 269, 373, 388
Periplus, Maris Erythraei, 62, 186, 293; of Scylax, 297; of Hanno, 301
 Persia, rugs and tapestries, 182; monetary system, 325
 Petra, long fertility of seed at, 56
 Petrie, Sir F., quoted, 120, 212
 Phaeacians, 214
 Phaenippus, Attic landowner, 72, 88, 107, 111, 198
 Phalanthos, a coloniser, 220
 Phanagoria, relief from famine at, 219
 Phasis, flax from, 202, 219; fishing nets, 287
 Pheasants, 76
 Pheidias, the sculptor, 145, 178
 Pheidon, currency system, 316, 329
 Pherae, pastures in, 65
 Phiditia, payments to, 322
 Philip of Macedon, 90, 269, 309, 327
 Philostephanus of Corinth, early banker, 335
 Phlius, fertility of, 48; famine at, 277
 Phocaeans, 221, 248; monetary standard, 320
 Phocis, grain in, 47; cattle, 61; horses, 64; slaves, 155
 Phoenicia, Phoenicians, traders, 5; discoverers of Laurium, 95; bitumen, 201; gypsum, 203; in Homeric Age, 211, 299 ff.; com-
 mand Atlantic, 220, 222; flour from, 264; shipbuilding, 280 f.; pottery, 297
 Phormio, Athenian banker, 146, 232, 336 ff., 343
Phoros, 389
 Photius mentions silk, 186
 Phrygia, wool from, 291
Phylarch, 359
 Pieria, gold, 92
 Pigeons, 54, 76
Pilema, felt, 183
 Pilots of Tyre, 300
 Pindar, Corinthian inventions, 236
 Pindus Mts., rainfall, 46
 Pine, timber for shipbuilding, 278 f.
 Piracy, pirates, 5, 90, 227, 229, 253, 269, 306 ff.
 Piraeus, trade of, 254
 Pisa, shipbuilding, 280
Pissasphaltos, 114
 Pitch, see Tar
 Pit props, 198
 Plague at Athens, 22
 Plaster of Paris, 203
 Plataea, famine at, 271
 Plato, limitation of citizenry, 8; gainful occupations, 11; payment to citizens, 16; *Republic*, 25 ff.; communism, 26; position of women, 26, 138; acquisitive instinct, 27; land system, 28; money, 29 f.; poverty and wealth, 32; slavery, 33, 49, 157 f.; *Phaedrus*, 36; irrigation, 56; deforestation of Attica, 82; *oreichalkos*, 118; women cooks, 137; apprenticeship, 140; *astynomi*, 143; *metoikion*, 147; shoemakers, 172; potters, 178; vision of Er, 180; traffic in arms, 207; glass, 209; colonisation, 224; merchants, 231
 Pliny, *Nat. Hist.*, *secale*, 51; 3-year crop rotation, 57; *miltos*, 103; copper from India, 113; *plumbum*, 117; *aurichalcum*, 118; Salpe, a female doctor, 138; sheep-shearing, 179; felt making, 183; silk, 186; wooden barrels, 191; workers in bronze, 208; pottery, 236; Italian wheat, 259 f.; timber, 279 f.; marbles, 290; *pelles*, 293
 Plough, Greek, 56
 Ploughing, seasons for, 54
Plumbum, 117

- Plutarch, building of Parthenon, 130; iron money, 321; custom of Cnossians, 337; Demades, 370; Lycurgus of Athens, 390
- Po, river valley, 246
- Poletae*, 104, 106, 358, 372
- Police, in Athens, Scythian archers, 161, 360
- Pollux, leather working, 171; clay working, 175; weaving, 185; weight of talent, 332
- Polybius, wealth of Attica, 383
- Polycrates of Samos imports Attic sheep, 69
- Polymitos*, 182
- Pompey, suppression of piracy, 229
- Pontus, grain from, 20, 235, 261, 265; honey, 74; timber from, 197, 279, 327; fishing, 289
- Population of Attica and Greece, 19 f.
- Porcelain, 177
- Pornikon*, 375
- Porridge, sellers of, 136
- Poseidonius, Spartan customs, 322
- Potidaea, Corinthian cleruchy, 224
- Pottery, industry, 174 ff.; women in, 137
- Pottery, trade in, 5, 294 ff.
- Poultry, 74 f.
- Poverty, Aristotle and Plato on, 32
- Precious stones, jewellery, 300, 304
- Press, oil, 192; corner of Thales in, 285
- Proconnesus, marble from, 290
- Prodromos*, *Protropos*, 191
- Proeisphora*, 385
- Profit motive, 27
- Propylaeum, building of, 129
- Prostactic*, 378
- Proxenos*, 141, 231, 242
- Pruning, 81
- Prytaneia*, 373
- Psammetichus of Egypt, gift of wheat to Athens, 263
- Pseudargyros*, zinc, 118
- Psilos*, 183
- Ptolemies of Egypt, 8, 143; Philopator, shipbuilding, 200; monopolies, 285
- Public finance, 37, 352 ff.
- Pump unknown in Greece, 101
- Purple dye, see Murex
- Pylos, wheat in, 49
- Pyrrhus of Epirus, 306
- Pythian games, 63
- Quicksilver, 119
- Rain system, of Greece, 46; of Adriatic, 245
- Raisin, introduced by Turks, 87; from Rhodes, 233
- Ratio of monetary metals, 328
- Reaping, 56
- Red Sea, *Periplus* of, 62, 186, 293
- Rennet, 63
- Rents of farm lands in Attica, 44
- Resin, 220, 244
- Respondentia, 346
- Rhabdotos*, 182
- Rhaecelus, colony on Thermaic gulf, 224
- Rhegium, sacred market at, 212, 219
- Rhodes, iron working, 120; earthquake, 198; shipbuilding, 201 f., 244, 256; piracy, 229, 310; banking, 254; revolt from Athens, 264, 277; seizure of grain ships, 269; wine, 294; monetary standard, 320; bottomry bonds, 349
- Rhoecus of Samos, inventor of hollow casting, 208
- Rhone, river, hemp from, 59
- Richter, Miss G., pottery technique, 103, 175, 187
- Ridgeway, Sir W., Phaeacians, 212
- Roads, 249 f.
- Rock crystal, 215 f.
- Roman Empire, slavery in, 151
- Ropes, 59, 202, 291
- Rose, J. Holland, quoted, 6, 305
- Roth, H. Ling, Greek looms, 180
- Rubies, 300
- Rumania, trade with, 241
- Rut roads, 250
- Rye, 51
- Saddle unknown in Greece, 66
- Saffron, dye, 190
- Sails, sailcloth, 202, 234, 300
- Salamis, crops in, 50; battle of, 280 f.; Salamis in Cyprus, 275
- Salt, as fertiliser, 53; for animals, 69; production of, 124; sellers of, 136
- Samos, raid on Siphnos, 92; wine, 218, 248; sheep, 291
- Samurai of Japan, 27
- Sand-box casting, 208
- Sardes, 203, 313

- Sardinia, Phocaeans in, 221; Phoenicians in, 302, 305
 Sarmatia, furs from, 293
 Saronic Gulf, 5
 Satrae, gold and silver from, 92
 Satyrus, Bosphorian chief, 266
 Scamander, river, settlements by, 217
 Scape Hyle, gold from, 91
 Scheria, identified with Corfu, 212
 Scidros, isthmian route, 247
 Scione, wine from, 347
 Scironic road, 252
 Scylax, *Periplus* of, 297
 Scyros, goats in, 73; iron, 122; piracy, 267 f.
 Scythia, hemp from, 291
 Sea, influence on Greeks, 5
 Sea Oak, food of tunny, 289
Secale, 51
 Seed, selection of, 55
Seisachtheia, 42
 Seleucid dynasty of Asia, 8, 62
 Seltman, C. T., monetary debasement of Hippias, 331
 Selymbria forbids export of wheat, 270
 Semple, Miss E. C., influence of geographic environment, 2 ff.; ancient Mediterranean agriculture, 45 f.; stock-breeding, 59 f.
 Seneca, leather money of Sparta, 322
 Seres, Chinese, 186, 293
Serika dermatata, 293
 Sesame, a summer crop, 55; sellers of, 136
 Sestos, seizure of, 266
 Sheep, 41, 66 ff., 213 n. 6
 Sheeping-off, 52
 Shield-makers, 206
 Shingles, wooden, for roofing, 204
 Shipbuilding, 198; lumber used in, 279, 299
 Ships, size of, 243
 Shoemaking, 172 f.; female shoemaker, 137; felt shoes, 183
 Sicily, horses from, 65; iron, 122; wheat, 221, 259; timber, 280, 305; fisheries, 288; sheep, 291; Phoenicians in, 302
 Sicyon, 277; fish from, 288 f.
 Sigeum, Athenian cleruchy, 224, 265; isthmian theory, 247
 Siglos, silver, ratio to gold, 325
 Silent trading, 211 f.
 Silk, 186, 291
 Silphium, 298
 Silver, mining at Laurium, 95 ff.; from Damastium, 245; from Spain, 304
 Sinai, copper in, 113
Sindon, 185
 Sinope, Milesian colony, 219, 240; timber, 279; fish curing, 287; debasement of coins, 332
 Sinopic earth, 103
 Siphnos, gold, 91; copper, 114; iron, 122; revenues from mines, 372
 Siphon, use of, 101
Sitonae, 274
Sitophylakes, 359
Sitopolai, 271
Sitopompia, 268
Sitos, 51
 Slaves, Slavery, 14, 148 ff.; birthrate of, 24; desertion of, 27; taxes on, 32; Aristotle and Plato on Slavery, 33, 149; for debt, 42; in agriculture, 88; in mines, 108; torture of, 156; state slaves, 161; price of, 162; in Homer, 314
 Smelting, 94
 Smith, Adam, 32
 Smyrna, rainfall, 46; roads in, 251
 Soap, 188, 285
 Socrates, in the *Phaedrus*, 36; on farming, 38 f.
 Soil, study of, 52
 Solon, laws of, 10, 12, 41 ff., 72, 152, 193, 258, 284, 327, 342
 Sophocles, *Oedipus Rex*, 59; *Electra*, 63; *Triptolemus*, 259
 Sostratus, a pirate, 310
 Sowing, 55
 Spain, copper, 114; colonisation, 221; trade, 248; Greek pottery in, 298
 Sparta, isolationist policy, 2, 7, 27; iron money, 27, 321; army rations, 132; nurses from, 137; education of women, 139
 Spartocus, 266, 269
 Sparmaker, 206
 Spelt, 49
 Spengler, Oswald, 36
Sphragis, 103
 Spinning, 179
Spinus, 123
Spodos, 103
 Sporades, 6

- Stasis*, 37
 State socialism, 371
 Stater, gold, 323
 Steel, *Stomoma*, 204 f.
 Strabo, on Poseidonius, 2; Aeginetans, 53; wool of Thessaly, 67; Eurycles of Sparta, 87; wealth of former days, 90; gold of Pangaeus, 92; mines of Damastium, 94; of Laurium, 98; iron from Dactyli, 119; iron in Elba and Euboea, 122; water mill, 194; wheat in Cyprus, 263; timber from Colchis, 279
Strategi, 359
 Strikes, absence of labour, 143
Strouthion, 179
 Strymon, river, 92, 95
 Stucco, 203
 Sugar, 73
 Sumer, temple banks in, 334
 Sunium, slave market, 153 n. 1; revolt of slaves, 158; fortification of, 261
 Sweden, copper coins of, 322
 Swine, 70 f.
 Sword-makers, 206
 Sybaris, cooks at, 196; wealth of, 220, 222; connection with Miletus, 241, 248 f.
Sycophant, 284, 392
Symbolai, 227
Symmories, 379, 383
Syngraphe, 346
Syntaxeis, 389
Synteleia, 379
Syntrierarchy, 379
 Syra, iron in, 122
Syracosa, ship of Hiero, 200, 209, 280
 Syracuse, colony in Sicily, 220; pork and cheese from, 233; gold coinage, 326
 Syria, balm, 233; timber from, 280
 Syrtes, tunny fisheries, 289

Talanton, talent, in Homer, 315
 Tamassus, Temesa, 302
 Tanagra, 277
 Tanais, river Don, 219; fisheries, 288
 Tanning, 170
 Tapestry, loom, 181; from Persia, 182; from Carthage, 304
 Taphians, pirates, 212, 307
 Tar, pitch, 201, 244, 282 f.
 Taras, Tarentum, lamp parts from, 208; import of Attic vases, 297

Tarichemporoi, *Tarichegoi*, *Tarichopolai*, 289
 Tarn, W. W., quoted, 8 n. 2, 24, 168, 243
 Tarshish, 300
 Tartessus, 114, 116, 221, 301
 Tauromenium, Greek colony, 220
 Taurus, silver from, 214
 Taxation, on slaves, 153; farming, 356; Athenian system, 371 ff.
Taxiarch, 359
Telonarches, 357
 Temesa, Tempsa, 113
 Temples used as banks, 324
 Tenant farming, 44
 Tenedos, marjoram from, 233
 Tents, 184
 Teos, metal vases, 209; curse on magistrates, 270, 308; taxes, 387
Terra rossa, 45
 Textiles, trade in, 290
 Thales of Miletus, 285, 313
 Thasos, gold, 91; shares in convoy, 268; marble, 290; wine, 294; revenues, 372
 Themistocles, 33, 76, 96, 308, 335
 Theocritus, *Idylls*, 54, 65, 70, 75
 Theodosia, Milesian colony on Sea of Azov, 219, 240; salt fish from, 232, 287; Leucon remits port dues, 267
 Theognis, revolution at Megara, 40
 Theophrastus, *Characters*: 62 n. 1; 124 n. 2; 135; 155 n. 1; 172; 182; 188; 203; 282; 318 n. 2; 325 n. 1; 343; 385 n. 4
 Theophrastus, *Hist. Plant.*: *de Causis Plant.*: degeneration of wheat into darnel, 52; ploughing, 54; fig culture, 77 f.; viticulture, 78 ff.; tanning, 170 f.; *strouthion*, 179; *herakleia*, 185; cotton, 187; cochineal, 190; timber and wood-working, 196 ff.; glue, 197; charcoal, 198; resin, 202; Pontic wheat, 265 n. 6; timber for ship-building, 279 ff.; olives of Cyrenaica, 285
 Theophrastus, *de Lapidibus*: minium, 102; copper from Chalcedon, 113; asphalt from Erineas, 114; quicksilver, 119; coal, 123, 205; slaves at Laurium, 160; cinnabar, 190; dyes, 196; rock crystal, 209; electrum, 246 n. 2

- Theophrastus, *de Odoribus*: goatskins, 171 n. 13; crocus, 190; lead as salve containers, 209; perfumes from Aegina, 236
- Theophrastus, *de signis tempest.*, 76 n. 9
- Theopompus, pirate of Miletus, 309
- Theoric fund, 369
- Thera, famine at, 277
- Thesmothetae, court of, 349
- Thessaly, farming in, 47; cattle, 61; horses, 63; sheep, 67, 291; depopulation, 87; wheat, 260; timber, 279, 281
- Thetes, 43
- Thomas Aquinas, St, 30
- Thrace, agriculture, 23, 55, 63; gold, 90; miners from, 95; asphalt, 114; wheat, 264; flax, 291; silver, 331
- Thranos*, 170
- Threshing, 56
- Thucydides on piracy, 307
- Thulakophoroi*, 100
- Thunniskopeia*, 289
- Thurii, gypsum from, 203
- Tiles, 204
- Timber, from S. Italy, 220; necessary to Athens, 235; from Black Sea ports, 244; trade in, 278 ff.; transport, 283
- Timemata*, 373, 383
- Timotheus of Athens, 282; issues copper coins, 327
- Tin, 115 f.; from Bohemia, 246; tin-plating, 209
- Tingis, Carthaginians at, 302
- Tiphe*, 51
- Tiryas, copper and bronze, 112
- Tod, M. N., on guilds, 140 f.
- Togarmah, horses and mules from, 300
- Token coins at Athens, 328
- Tokos*, use of word by Aristotle, 32
- Tomi, Greek colony, 219
- Tools, shoemaker's, 172; carpenter's, 197; blacksmith's, 206
- Torture of slaves, 156
- Tow, 201
- Trade, balance of, 354
- Trade money, 324
- Trade routes, 243
- Trade unions, 141
- Transport by land, 252
- Transylvania, gold from, 90
- Trapeza*, see Banking
- Trapeziticus*, speech of Isocrates, 340 f.
- Trapezus, 219; fishing, 287
- Tribute of Allies in Delian League, 387 f.
- Trichaptos*, silk, 186
- Trichonis, Lake, in Aetolia, 48
- Trierarchy, 378
- Trieropoiot*, 200
- Trinacria, Odysseus shipwrecked on, 286
- Troizen, famine at, 277
- Troy, Trojan war, 247
- Truck farming, 50, 57
- Tubal, in Euxine, 300
- Tunny fisheries, 6, 219, 287
- Turdetania, copper, 114; iron, 122; tar, 201; sheep, 291
- Turks in Greece, 87
- Tyranny and money economy, 313
- Tyras, Milesian colony, 219, 241
- Tyre and Sidon, sea trade, 211, 275, 299, 302, 305
- Underfiring in mining, 100
- Ural Mts., gold in, 213
- Ure, P. N., on tyranny, 95; Peisistratus and Phye, 319 n. 3
- Usury, 30
- Utopias, Greek, 29
- Varro, on Greek cheese, 62; Pyrrhic sheep, 68; poultry keeping, 75
- Vases, metal, 209
- Vectis, 116
- Vegetables, growing of, 127; sellers of, 136
- Verdigris, 190
- Vine, viticulture, 3, 41, 78 ff.
- Vineyards, women working in, 127, 137
- Vitruvius, wattle and daub, 203; dovetailing, 197
- Volaterrae, tunny fishing, 289
- Wages, 131 f., 164 f.
- Wappenmünzen, 319
- War munitions, export of, 207
- Water pipes, 209
- Wattle and daub, in construction, 203
- Wax, in shipbuilding, 202, 283; from Sybaris, 220
- Wealth, division of, 32
- Weaving, 179 f.

- Welding, 208
- Wheat, two months', 49; spring and winter, 55; rust, 56; Achillean, 56; prices, 133; control of trade in, 274, 277; preferred to barley, 274
- Wheel, potter's, 174
- Wind system of Mediterranean, 6, 242 f.; Etesian, 6, 243; "East wind", 300
- Windlass, 100
- Wine, 5; manufacture of, 136; trade in, 190, 218, 220, 293 ff.; from Damascus, 300
- Wire, 206
- Woad, *isatis*, 190
- Women, position of, in Greece, 36; labour of, 134 f.
- Woodworking, 196
- Wool, 220, 241; dressing, 127; washing, 179; trade in, 291 f.; from Damascus, 300
- Woollens and worsteds, 184
- Woolley, Sir L., quoted, 295
- Xantis*, 179
- Xenikon*, 147, 375
- Xenocrates of Chalcedon, 357
- Xenophantus, an itinerant potter, 295
- Xenophon, membership of Assembly, 12; *Oeconomicus*, 38; farming in Attica, 48; winnowing, 57; on *Horsemanship*, 66; *Revenues*, 97, 109, 389; *Memorabilia*, 134; apprenticeship, 139; *Metica*, 145, 148; slaves, 152 f.; Laurium, 160; shoemakers, 172; cooks, 195; colonisation, 224; *Resp. Athen.*, 227, 234; trade, 234, 260; docks at Piraeus, 252, 257; Chalcidice, 265; grain dealers, 271; Phoenician ships, 301; Alexander of Pherae, 309; value of gold, 324; local coinage, 325; moneylending, 336; commercial courts, 350; losses by war, 353; cost of cavalry, 362
- Xerxes, 59, 64, 266, 280
- Zacynthus, asphalt from, 114
- Zeia*, 51
- Zeno, philosopher, lends on bottomry, 337 n. 2
- Zenon, Egyptian bailiff, 294
- Zeugites*, 43
- Zimmern, Sir A., defence of slavery, 154; merchants' marks on pottery, 179; liturgies, 380 n. 1
- Zinc, 112 f., 117