

PROGRESS REPORT

OF THE

Imperial Forest College, Dehra Dun

*For the year 1922-1923*



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(Prescribed maximum limit of Report, 10 pages.)

## Progress Report of the Imperial Forest College, Dehra Dun, from 1st April 1922 to 31st March 1923.

### CHAPTER I.

The post of President, Forest Research Institute and College, was held by the writer of this report throughout the year.

The following officers held the posts of Instructors and Assistant Instructors :—

1. Mr. L. Mason, Deputy Conservator of Forests, Central Provinces, Instructor and House Tutor, Provincial Service Class, from 1st April 1922 to 26th March 1923.
2. Mr. C. E. Simmons, Deputy Conservator of Forests, Assam, Instructor, Provincial Service Class, throughout the year.
3. Mr. A. E. Osmaston, Deputy Conservator of Forests, United Provinces, Instructor and House Tutor, Rangers Class, throughout the year.
4. Mr. H. W. Starte, Deputy Conservator of Forests, Bombay, Instructor, Rangers Class, from 2nd April 1922 to 2nd July 1922.
5. Mr. D. R. S. Bourke, Deputy Conservator of Forests, Bombay, Instructor, Rangers Class, from 3rd July 1922 to 31st March 1923.
6. Mr. C. T. Trigg, Assistant Conservator of Forests, Bengal, Instructor, Rangers Class, from 1st November 1922 to 31st March 1923.
7. Mr. C. E. Parkinson, Extra Assistant Conservator of Forests, Burma, Assistant Instructor, Provincial Service Class, throughout the year.
8. Mian Mohd. Zia-ul-Haq, Extra Assistant Conservator of Forests, United Provinces, Assistant Instructor, Provincial Service and Rangers Classes, from 1st April 1922 to 2nd November 1922.
9. Mr. Rajendranath De, Extra Assistant Conservator of Forests, Assam, Assistant Instructor, Rangers Class, throughout the year.
10. Mr. Hakimuddin, Extra Assistant Conservator of Forests, United Provinces, Assistant Instructor, Rangers Class, throughout the year.
11. Mr. S. N. Mitra, Extra Assistant Conservator of Forests, Bengal, Assistant Instructor, Rangers Class, from 6th April 1922 to 31st October 1922.
12. Mr. T. K. Mirchandani, Extra Assistant Conservator of Forests, Bombay, Assistant Instructor, Rangers Class, from 7th April 1922 to 26th March 1923.
13. Pandit Keshab Dutt Joshi, Extra Assistant Conservator of Forests, United Provinces, Assistant Instructor, Provincial Service Class, from 3rd November 1922 to the end of the year.

Changes in the instructional staff during the year were more frequent than is good for education. It is essential that the utmost continuity be secured in order to ensure a proper relation between work in the field and work in the class room. During the year under report additions were made to the teaching staff owing to fact that Bombay Ranger students were again deputed to Dehra Dun consequent on the closure of the Bombay Forest College, Dharwar, but this arrangement has again been altered and it has been finally decided to train Bombay students at the Madras Forest College, Coimbatore, from 1st April 1923.

The following honoraria were granted during the year :—

	Rs.
To Mr. H. Cumming of the Thomason Civil Engineering College, Roorkee, for conducting the Final Survey Examination of the Provincial Service and Ranger Classes . . . . .	150
To Sergeant F. Randall, Rest Camp Sergeant, for Physical drill of the Rangers Class students during the rains term of 1922. . . . .	200
To Pandit Keshab Chander Naithani, Head Assistant of the President's Office, for giving a course of lectures and conducting final examination of the Rangers Class in Accounts . . . . .	90

### CHAPTER II.

A nominal roll of the students of the different classes as they originally entered the College is given in Appendix I.

## RANGER CLASS.

*(a) Class of 1921-23.*

Forty students joined this class in April 1921 and after the removal of seven students for incapacity and one student having resigned, as mentioned in last year's report, the class was made up as follows :—

1. Government stipendiary students . . . . .	11
2. Government non-stipendiary students . . . . .	13
3. Students deputed by Indian States . . . . .	8
TOTAL . . . . .	<u>32</u>

*(b) Class of 1922-24.*

Forty-six students joined this class in April 1922, of whom one was removed and one student left the College of his own accord during June 1922, while one student was again removed for incapacity in November 1922 and two students had to be dismissed for cribbing in March 1923, thus reducing the class to 41 as follows :—

1. Student already in Government Service . . . . .	1
2. Government stipendiary students . . . . .	23
3. Government non-stipendiary students . . . . .	8
4. Students deputed by Indian States . . . . .	9
TOTAL . . . . .	<u>41</u>

## PROVINCIAL SERVICE CLASS.

*(a) Class of 1921-23.*

Twenty-two students joined this class in April 1921. Two were removed in December 1921 for incapacity. Thus there were only twenty students in this class during the year 1922-23 as follows :—

1. Government stipendiary students . . . . .	13
2. Government non-stipendiary students . . . . .	2
3. Stipendiary students deputed by Indian States . . . . .	5
TOTAL . . . . .	<u>20</u>

*(b) Class of 1922-24.*

Twenty-two students joined this class in April 1922 as follows :—

1. Government stipendiary students . . . . .	14
2. Government non-stipendiary student . . . . .	1
3. Stipendiary students deputed by Indian States . . . . .	7
TOTAL . . . . .	<u>22</u>

The total attendance of the classes is summarised as follows :—

*On 1st April 1922.*

Ranger Class of 1921-23 . . . . .	32
Ranger Class of 1922-24 . . . . .	46
Provincial Service Class of 1921-23 . . . . .	20
Provincial Service Class of 1922-24 . . . . .	22
TOTAL . . . . .	<u>120</u>

*On 31st March 1923.*

Ranger Class of 1921-23 . . . . .	32
Ranger Class of 1922-24 . . . . .	41
Provincial Service Class of 1921-23 . . . . .	20
Provincial Service Class of 1922-24 . . . . .	22
TOTAL . . . . .	<u>115</u>

The following table shows the different Provinces and Indian States from which the students were drawn. Details of educational qualifications, etc., of individual students are given in Appendix I.

PROVINCES.	RANGERS CLASS.								PROVINCIAL SERVICE CLASS.									
	1921-23.				1922-24.				Total.	1921-23.				1922-24.				Total.
	Students in Government Service.	Stipendiary students.	Non-stipendiary students.	Private students.	Students in Government Service.	Stipendiary students.	Non-stipendiary students.	Private students.		Students in Government Service.	Stipendiary students.	Non-stipendiary students.	Students in Government Service.	Stipendiary students.	Non-stipendiary students.			
<i>British India.</i>																		
Bengal . . . . .	..	7	..	..	..	8	..	..	10	..	1	..	..	..	..	..	..	1
Assam . . . . .	..	6	..	..	..	6	..	..	12	..	..	..	..	8	..	..	..	8
Bihar and Orissa . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
United Provinces . . . . .	..	4	4	..	1	..	8	..	17	..	..	..	..	1	1	..	..	2
Punjab . . . . .	..	..	9*	..	..	10	..	..	19	..	..	1	..	2	..	..	..	8
Central Provinces . . . . .	..	..	..	..	..	..	..	..	..	..	8	..	..	4	..	..	..	7
Burma . . . . .	..	..	..	..	..	..	..	..	..	..	6	..	..	2	..	..	..	8
Madras . . . . .	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	..	2
Bombay . . . . .	..	..	..	..	..	8	..	..	8	..	8	..	..	2	..	..	..	6
<b>TOTAL</b> . . . . .	..	17	13	..	1	27	8	..	66	..	16	1	..	14	1	..	..	32
<i>Indian States and Colonies.</i>																		
Jammu and Kashmir . . . . .	..	3	..	..	..	3	..	..	6	..	2	..	..	5	..	..	..	7
Mandi . . . . .	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Patiala . . . . .	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Jubbah . . . . .	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Tharoach . . . . .	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..
Poonch . . . . .	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..
Nalagarh . . . . .	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..
Hyderabad . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	..	..	2
Kolhapur . . . . .	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..
Chamba . . . . .	..	1	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..
Rewa . . . . .	..	1	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..
Tehri . . . . .	..	1	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..
Bilaspur . . . . .	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	..	..
Jodhpur . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Dhar . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1
Trinidad . . . . .	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1
<b>TOTAL</b> . . . . .	..	10	..	..	..	10	..	..	20	..	5	..	..	7	..	..	..	12
<b>GRAND TOTAL</b>		40			46			80	22			22			44			

These were made stipendiary students from 1st April 1922.

The number of students in their different categories at the time of entry is compared with the figures of the previous five year in the table below :—

Year of Entry.	CLASS.	PRIVATE STUDENTS.		GOVT. NON-STIPENDIARY STUDENTS.		PAID STUDENTS.				Total students.	Percentage of private students.
		Europeans and Anglo-Indians.	Indians and Burmans.	Europeans and Anglo-Indians.	Indians and Burmans.	British India.		Stipendiary students from Indian and Foreign States.			
						Government stipendiary students.		Europeans and Anglo-Indians.	Indians.		
		Europeans and Anglo-Indians.	Indians.	Europeans and Anglo-Indians.	Indians.						
1917	Rangers Class	0	0	2	2	18	0	9	35	17	
	Provincial Service Class	1	1	2	2	6	4	15	..	..	
1918	Rangers Class	2	2	6	2	21	10	41	5	..	
	Provincial Service Class	..	..	9	3	5	6	20	..	..	
1919	Rangers Class	2	2	9	22	..	6	39	5	..	
	Provincial Service Class	..	..	4	6	7	2	19	..	..	
1920	Rangers Class	1	..	11	0	..	7	28	30	..	
	Provincial Service Class	..	..	2	5	13	4	24	..	..	
1921	Rangers Class	..	..	13	..	17	10	40	..	..	
	Provincial Service Class	..	..	1	7	0	4	22	..	..	
1922	Rangers Class	..	..	8	..	28	10	46	..	..	
	Provincial Service Class	..	..	1	2	12	7	22	..	..	

### CHAPTER III.

#### THE COLLEGE COURSES.

#### I.—THE PROVINCIAL SERVICE CLASS.

##### (a) Class of 1921-23.

During April and May 1921 the students received practical instruction in Forestry and Botany from Mr. L. Mason, Instructor, assisted by Mr. C. E. Parkinson, Assistant Instructor in the forests of the Chakrata Division. June was a vacation. The class again assembled at Dehra on the 1st July 1922 and received theoretical instruction in the lecture rooms up to the end of October in Forestry, Botany, Engineering, Zoology, Law. During November and December practical instruction was given in Working Plans in the Tirsal Forest of the Dehra Dun Division. During January and February 1923 the class toured in the Forests of Kurseong, Jalpaiguri and Buxa Divisions of Bengal in charge of Mr. L. Mason assisted by Mr. Parkinson and received practical instruction in Forestry and Botany. The month of March 1923 was as usual taken up by final-examinations.

##### (b) Class of 1922-24.

This class was formed at Dehra Dun in April 1922 and after receiving elementary lectures in Silviculture, Engineering and Botany for about 10 days was taken by stages through the forests of the Dehra Dun Division to Chakrata where it remained until the end of May receiving practical instruction in Silviculture, Botany and Engineering.

During the period July to October 1922 the students received theoretical instruction in Forestry, Engineering, Drawing and Surveying, Physical Science, Botany and Geology.

During November and December the class was taken out to Jhabrawala in the Dun where practical instruction was imparted in Surveying by Mr. C. E. Simmons, assisted by Pandit Keshab Dutt Joshi.

The months of January and February were spent in the forests of Dehra Dun Division where practical instruction in Silviculture, Botany and Engineering was given by the above officers.

The month of March was utilised in the preparation of final survey plate, in camp, under the supervision of Messrs. Simmons and Joshi.

#### II.—THE RANGER CLASS.

##### (a) Class of 1921-23.

During April and May 1922 this class toured in the forests of Chakrata Division in charge of Mr. H. W. Starte, Instructor, assisted by Messrs. R. N. De and T. K. Mirehandani,

Assistant Instructors, receiving instruction in Forestry, Engineering and Botany. The month of June was observed as a vacation.

The rains term period, *i.e.*, July to October, was devoted as usual to theoretical instruction at headquarters in Botany, Engineering, Drawing, Mathematics, Physical Science, Forestry; Accounts and Forest Law. The months of November and December were spent in the Tirsal Forest where practical instruction in Silviculture, Forest Management and Mensuration was given by Mr. A. E. Osmaston, Instructor, assisted by Mr. Hakimuddin, Assistant Instructor.

During January and February the class toured in the forests of Ramnagar Division receiving practical instruction in Silviculture and Engineering from Mr. A. E. Osmaston, assisted by Mr. Hakimuddin. The month of March was taken up by final examinations.

(b) *Class of 1922-24.*

This class was formed early in April 1922 when after receiving lectures on elementary principles of Silviculture and Botany it was taken into the Hill forests of Kumaun where it toured during April and May in charge of Mr. A. E. Osmaston, Instructor, assisted by Messrs. S. N. Mitra and Hakimuddin, Assistant Instructors, receiving instruction in Silviculture, Botany and Engineering.

The month of June was observed as a vacation.

During the rains term (July to October) the class as usual received theoretical instruction in Silviculture, Botany, Drawing, Mathematics, Surveying and Engineering.

In November and December the class was engaged in Surveying in two parties on the bank, of Song and Suswa Rivers in charge of Messrs. Bourke and Trigg assisted by Messrs. R. N. De and T. K. Mirchandani respectively.

During January and February the class was again divided in 2 parties at Thanu and Lachiwala where the students interchanged camps receiving instruction in Silviculture, Botany and Engineering from Messrs. Bourke and Trigg, Instructors, assisted by Messrs. R. N. De and T. K. Mirchandani, Assistant Instructors.

The month of March was spent in the preparation of the final survey plate at Lachiwala, under the supervision of Messrs. Bourke and Trigg assisted by Messrs. R. N. De and T. K. Mirchandani.

## CHAPTER IV.

### RESULT OF THE FINAL EXAMINATIONS.

#### *Provincial Service Class.*

The written examinations of the above class of 1921-23 were held from the 5th to 9th March 1923 and the oral examinations from the 15th to 21st March 1923.

Certificates as shown below were awarded to all the students on the 26th March 1923.

#### *Honours Certificate.*

1. Sher Singh Sahni, Kashmir State.

#### *Pass Certificate.*

2. F. A. B. Caelho, Bombay.
3. B. A. Cariapa, Madras.
4. W. N. Sharma, Central Provinces.
5. L. O'D. Nestor, Burma.
6. M. S. Rangaswamy, Madras.
7. F. M. Kewalramani, Bombay.
8. Louis Felix Melizan, Trinidad.
9. F. V. Webster, Burma.
10. L. E. Edgerley, Burma.
11. Naranjan Singh Jaspal, Punjab.
12. Vasudev Rao Nakhare, Hyderabad State.
13. Satya Pal, Central Provinces.
14. Narendranath Som, Bihar and Orissa.
15. M. E. R. Taylor, Burma.

16. V. A. N. Sausman, Bombay.
17. Kahlon Dalip Singh, Central Provinces.
18. Jitendranath Sen Gupta, Bengal.
19. Shugan Chand Kothari, Jodhpur State.
20. Sant Ram Modi, Kashmir State.

*Medals and Prizes.*

Gold Medal for highest marks <i>with honours</i> . . . . .	Sher Singh Sahni.
Silver Medal for Forestry . . . . .	Sher Singh Sahni.
" " " Botany . . . . .	L. O'D. Nestor.
" " " Engineering . . . . .	F. M. Kewalramani.
" " " Surveying . . . . .	Louis Felix Melwan.
Hon'ble Member's Prize for general proficiency in all branches of Forestry . . . . .	F. A. B. Caelho.
Hill Memorial Prize for Silviculture . . . . .	Sher Singh Sahni.
McCrie Memorial Prize for the best student in Working Plans . . . . .	W. N. Sharma.
Indian Forester Prize for general proficiency (Best student who has not received any other prize) . . . . .	B. A. Cariapa.
Inspector General's Cup for the best all round athlete . . . . .	Leo Frank Edgerley.
Prox. acc. . . . .	M. E. R. Taylor.

*Rangers Class.*

The written examinations of the Rangers Class of 1921-23 were held from the 5th to 10th March 1923 and the oral examinations from the 15th to 20th March 1923.

Certificates and prizes were awarded to all the students on the 26th March 1923 in the following order :—

*Honours Certificate.*

1. Shiv Das Mengi, Kashmir State.
2. Mahi Mohan Sirkar, Bengal.
3. Makhan Singh, Punjab.
4. Mulkh Raj Bali, Punjab.
5. Shambhu Nath Koul, Kashmir State.
6. Jang Bahadur Lal, United Provinces.

*Higher Standard.*

7. Nazar Mohammed, Punjab.
8. Sukh Deo Prasad, Rewa State.
9. Priyanath Ker, Assam.
10. Jog Dhian Sharma, Punjab.
11. Samson Sitling, Bengal.
12. Raghubar Datt Nauriyal, United Provinces.
13. Achyutananda Baruah, Assam.
14. Gurdit Singh, Patiala State.
15. Muni Lal, Punjab.
16. Tejendra Mohan Ghosh, Bengal.
17. Bharat Chandra Datta, Assam.
18. Sant Ram Chaula, Punjab.
19. Hira Singh Bist, United Provinces.
20. Babu Ram, United Provinces.
21. Narpal Ram, Mandi State.
22. Laiq Ram, Jubbal State.
23. Birindranath Roy, Bengal.
24. Hakim Rai, Punjab.
25. Chandra Singh Chand, United Provinces.
26. Azizullah Shah, Punjab.
27. Asghar Hussain, United Provinces.
28. Harnam Singh, United Provinces.
29. Hals Raj, Kashmir State.



*Lower Standard.*

30. Sashi Bhusan Das Gupta, Assam.  
 31. Paripurnanand Sakhani, Tehri State.  
 32. Karam Singh Katuch, Punjab.

*Medals and Prizes.*

Gold Medal for Highest Marks with honours . . . . .	Shiv Das Mengi.
Fernandez Gold Medal for Utilization . . . . .	Mulkh Raj Bali.
Silver Medal for Forestry . . . . .	Mahi Mohan Sirkar.
„ „ „ Botany . . . . .	Makhan Singh.
„ „ „ Engineering . . . . .	Mulkh Raj Bali.
McDonnell Silver Medal (Best Punjab or Kashmir Student) . . . . .	Shiv Das Mengi.
William Prothero Thomas' Prize for the best practical Forester . . . . .	Samson Sitling.
Indian Forester Prize for the best student who has not received any other prize . . . . .	Shambhu Nath Koul.

A copy of the speeches delivered by the President and the Inspector General of Forests on the 26th March last on the occasion of the distribution of prizes and certificates to the successful students of both the Provincial Service and Ranger Classes will be found in Appendices VI and VII respectively.

Since the foundation of the College (formerly known as the Forest School) the number of Ranger students who have been granted the higher (including honours) and the lower standard certificate stands at 1,099 and 256 respectively. In addition 3 Sub-Assistant Conservators and 119 Provincial Service Class Certificates have been awarded.

The results of the year compared with those of the previous five years are as follows :—

YEAR.	NUMBER OF STUDENTS ATTENDING FINAL EXAMINATION.			RESULT OF THE FINAL EXAMINATION.												REMARKS.	
				HONOURS.			HIGHER STANDARD CERTIFICATES.			LOWER STANDARD CERTIFICATES.			FAILED.				
	Non-stipendiary and Private.	Paid.	Total.	Non-stipendiary and Private.	Paid.	Total.	Non-stipendiary and Private.	Paid.	Total.	Non-stipendiary and Private.	Paid.	Total.	Percentage.				
1918	10	8	18	..	3	3	10	5	15	..	..	..	..	..	..	..	..
1919	2	12	14	..	1	1	2	10	12	..	..	..	..	1	1	7	7
1920	5	14	19	..	..	..	5	12	17	..	..	..	..	2	2	10	10
1921	3	5	8	..	..	..	3	4	7	..	..	..	..	1	1	12	12
1922	1	20	21	..	1	1	1	19	20	..	..	..	..	..	..	..	..
1923	1	19	20	..	1	1	1	18	19	..	..	..	..	..	..	..	..

*Provincial Service Class.*

1918	10	8	18	..	3	3	10	5	15	..	..	..	..	..	..	..	..
1919	2	12	14	..	1	1	2	10	12	..	..	..	..	1	1	7	7
1920	5	14	19	..	..	..	5	12	17	..	..	..	..	2	2	10	10
1921	3	5	8	..	..	..	3	4	7	..	..	..	..	1	1	12	12
1922	1	20	21	..	1	1	1	19	20	..	..	..	..	..	..	..	..
1923	1	19	20	..	1	1	1	18	19	..	..	..	..	..	..	..	..

*Rangers Class.*

1918	8	25	33	5	2	7	3	20	23	..	3	3	..	..	..	..	..
1919	8	25	33	1	3	4	7	18	25	..	4	4	..	..	..	..	..
1920	9	28	37	2	1	3	6	22	28	..	4	4	1	1	2	5	5
1921	6	22	27	..	2	2	2	15	17	2	4	6	1	1	2	7	7
1922	12	15	27	3	1	4	7	12	19	2	2	4	..	..	..	..	..
1923	13	10	32	3	3	6	9	14	23	1	2	3	..	..	..	..	..

A summary of the subsequent careers of certificated students, as far as information is available, is given below :—

	No.	Provincial Service Course Certificate.	RANGERS CLASS.		REMARKS.
			Higher Standard Certificate.	Lower Standard Certificate.	
Deputy Conservators . . . . .	30	6	24	...	
Assistant Conservators . . . . .	3	1	1	1	
Extra Deputy Conservators . . . . .	11	...	10	1	
Extra Assistant Conservators . . . . .	198	99	95	4	
Probationary Extra Assistant Conservators.	35	35	...	...	
Rangers . . . . .	380	...	319	61	
Deputy Rangers . . . . .	13	...	2	11	
Foresters. . . . .	3	...	1	2	
Police, etc., Department (other than Forest Department).	7	...	3	4	
Forest Department (Indian States, Colonies, etc.).	253	23	196	44	
Retired . . . . .	128	1	101	26	
Left the service or dismissed . . . . .	148	6	109	33	
Deceased. . . . .	206	9	151	46	
Upper Grade Assistants . . . . .	1	...	1	...	
No information available . . . . .	81	4	52	25	
<b>TOTAL</b> . . . . .	<b>1,497</b>	<b>184</b>	<b>1,055</b>	<b>258</b>	

## CHAPTER V.

### GENERAL REMARKS.

#### *College Curriculum.*

*Tours of Classes.*—The difficulties enumerated in last year's report have not yet ceased to exist. Transport is still deficient and rates are very high. Steps are being taken to build quarters for students in the Chakrata Division in order to avoid carriage of tents and furniture, thereby making touring easier and cheaper for the students.

*Manuals.*—Mr. R. S. Hole, C.I.E., Forest Botanist, was engaged in the preparation of the Manual of Botany until the beginning of December when his health necessitated his departure on long leave but it is hoped that he will complete it during his absence on leave.

*Building.*—No new building was undertaken during the year but existing buildings were kept in repair.

*Health.*—The health of the students was below normal, many students having to be admitted to the Coronation Hospital for short periods. There was one case of enteric fever.

*Games and Sports.*—These were conducted with commendable enthusiasm and the House Tutors of both the Ranger and Provincial classes and other officers deserve all credit for making them a success.

*Conduct and Discipline.*—These were as usual satisfactory during the year with the exception of a case of cribbing which resulted in the dismissal of 2 students of the Rangers Class of 1922-24.

*Office Establishment.*—The Office staff worked as usual with interest and energy in educational matters.

*Services rendered.*—Members of the Research Institute and Instructors and Assistant Instructors of the College rendered every possible help to the President as usual in carrying

out the instructional work of the Provincial Service and Ranger classes. The thanks of the President are also due to the Chief Conservators and Conservators and Divisional Forest Officers of the United Provinces and Bengal for the cordial assistance offered in connection with the tours of the students without which such tours would have been impossible to arrange.

W. F. PERRÉE,  
*President, Forest Research Institute and College.*

## APPENDIX I.

NOMINAL LIST OF STUDENTS WHO ATTENDED THE COLLEGE DURING 1922-23.

*Rangers Class of 1921-23.*

No.	Names.	Rank.	Province or State.	University and other tests passed.	REMARKS.
1	Phauldhar Baruah . . .	Stipendiary . . .	Assam . . . . .	Matriculation . . . . .	Removed.
2	Pharoah Gohain . . .	" . . . . .	" . . . . .	" . . . . .	"
3	Achyntananda Baruah . . .	" . . . . .	" . . . . .	Intermediate of Science.	
4	Bharat Chandra Datta . . .	" . . . . .	" . . . . .	Matriculation.	
5	Priyanath Ker . . . . .	" . . . . .	" . . . . .	Intermediate of Science.	
6	Sashi Bhusan Das Gupta . . .	" . . . . .	" . . . . .	Matriculation.	
7	Amulya Kumar Bose . . . . .	" . . . . .	Bengal . . . . .	" . . . . .	Removed.
8	Tejendra Mohan Ghosh . . .	" . . . . .	" . . . . .	" . . . . .	
9	Somson Sitling . . . . .	" . . . . .	" . . . . .	" . . . . .	
10	Hrishikesh Diswas . . . . .	" . . . . .	" . . . . .	" . . . . .	Removed.
11	Birindra Nath Roy . . . . .	" . . . . .	" . . . . .	Intermediate of Arts.	
12	Mahi Mohan Sirkar . . . . .	" . . . . .	" . . . . .	Intermediate of Science.	
13	Jagat Kishor Roy . . . . .	" . . . . .	" . . . . .	Matriculation . . . . .	Removed.
14	Raghubar Datt Nauriyal . . .	" . . . . .	United Provinces . . .	School Leaving Class.	
15	Chandra Singh Chand . . .	N. Stipendiary . . .	" . . . . .	" . . . . .	
16	Ashghar Hussain . . . . .	Stipendiary . . . . .	" . . . . .	Intermediate in Persian.	
17	Razi Haider . . . . .	" . . . . .	" . . . . .	" . . . . .	Removed.
18	Jang Bahadur Lal . . . . .	N. Stipendiary . . .	" . . . . .	School Leaving Class.	
19	Harnam Singh . . . . .	Stipendiary . . . . .	" . . . . .	Matriculation.	
20	Hira Singh Bist . . . . .	N. Stipendiary . . .	" . . . . .	Intermediate of Science.	
21	Babu Ram . . . . .	" . . . . .	" . . . . .	School Leaving Class.	
22	Makhan Singh . . . . .	" . . . . .	Punjab . . . . .	Matriculation.	
23	Nazar Mohammad . . . . .	" . . . . .	" . . . . .	" . . . . .	
24	Mulh Raj Bali . . . . .	" . . . . .	" . . . . .	" . . . . .	
25	Azizullah Shah . . . . .	" . . . . .	" . . . . .	Faculty in Science.	
26	Muni Lal . . . . .	" . . . . .	" . . . . .	" . . . . .	
27	Karam Singh Katuch . . . . .	" . . . . .	" . . . . .	Matriculation.	
28	Sant Ram Chawla . . . . .	" . . . . .	" . . . . .	" . . . . .	
29	Jog Dhian Sharma . . . . .	" . . . . .	" . . . . .	" . . . . .	
30	Hakim Rai . . . . .	" . . . . .	" . . . . .	" . . . . .	
31	Shiv Das Mengi . . . . .	Stipendiary . . . . .	Kashmir . . . . .	Intermediate of Arts.	
32	Shambhu Nath Koul . . . . .	" . . . . .	" . . . . .	" . . . . .	
33	Hans Raj . . . . .	" . . . . .	" . . . . .	Matriculation.	
34	Paripurnanand Sakhiani . . .	" . . . . .	Tehri . . . . .	School Leaving Class.	
35	Chint Ram Mahdudia . . . . .	" . . . . .	Tbezooch . . . . .	Intermediate of Arts . . .	Resigned.
36	Narpat Ram . . . . .	" . . . . .	Mandi . . . . .	Matriculation.	
37	Kunud Chandra Banerji . . . . .	" . . . . .	Chamba . . . . .	" . . . . .	Removed.
38	Gurdit Singh . . . . .	" . . . . .	Patiala . . . . .	Intermediate of Arts.	
39	Laiq Ram . . . . .	" . . . . .	Jubbal . . . . .	Matriculation.	
40	Sukh Deo Prasad . . . . .	" . . . . .	Rewa . . . . .	" . . . . .	

*Rangers Class of 1922-24.*

1	Nandi Singha Monipuri . . .	Stipendiary . . . . .	Assam . . . . .	Matriculation.	
2	Krishna Chandra De Purkayastha . . .	" . . . . .	" . . . . .	Intermediate of Arts.	
3	Suresh Chandra Nath . . . . .	" . . . . .	" . . . . .	Matriculation.	
4	Deveswar Neog . . . . .	" . . . . .	" . . . . .	" . . . . .	
5	Mohammed Abdul Hamid . . .	" . . . . .	" . . . . .	Intermediate of Science.	
6	Mangal Chandra Brahma . . .	" . . . . .	" . . . . .	Matriculation . . . . .	Removed.
7	Khirode Chandra Roy Chaudhuri . . .	" . . . . .	Bengal . . . . .	Intermediate of Science and of Arts.	
8	Dhirendra Chandra Chaudhuri . . .	" . . . . .	" . . . . .	Bachelor of Arts.	
9	Indu Bhusan Sircar . . . . .	" . . . . .	" . . . . .	Intermediate of Arts.	
10	Bhudeva Prasad Sharma . . .	N. Stipendiary . . .	United Provinces . . .	School Leaving Certificate.	

## APPENDIX I—contd.

## NATIONAL LIST OF STUDENTS WHO ATTENDED THE COLLEGE DURING 1922-23—contd.

## Rangers Class of 1922-24—contd.

No.	Names.	Rank.	Province or State.	University and other tests passed.	REMARKS.
11	Kailash Chandra Rode	N. Stipendiary	United Provinces	Matriculation.	
12	Mohammed Jalil Ahmed	"	"	"	
13	Raghu Bans Sahai	"	"	School Leaving Certificate.	
14	Shiva Prakash Sharma	"	"	Intermediate of Science.	
15	Kharag Singh	"	"	Matriculation.	
16	Sultan Sinha	"	"	School Leaving Certificate.	
17	Hari Shankar	"	"	" " "	
18	Damodar Joshi	Government	"	" " "	
19	Nazir Ahmed	Stipendiary	Punjab	Matriculation.	
20	Gian Chand Rawla	"	"	....	
21	Miraj-ud-Din	"	"	Matriculation.	
22	Kailash Chandra	"	"	"	
23	Mohamad Ali	"	"	"	
24	Mohammed Sulaiman Khan	"	"	"	
25	Lal Chand	"	"	"	
26	Ranjit Singh	"	"	"	
27	Dalip Singh	"	"	....	Removed.
28	Raghib Singh	"	"	Matriculation.	
29	Janardan Bapurao Shelke	"	Bombay	Matriculation and School Leaving Certificate.	
30	Govind Narain Oka	"	"	Matriculation.	
31	Sitaram Narayan Sangle	"	"	Intermediate of Arts.	
32	P. C. Kurien	"	"	School Leaving Certificate.	
33	Prabhakar Venkatarao Dharshwar.	"	"	Matriculation	Dismissed.
34	Pradhan Kashinath Sakharam	"	"	"	
35	Pandurang Bhikaji Vanjari	"	"	"	Dismissed.
36	Allah Uddin Ahmad	"	"	"	
37	Shanti Sarup Puri	"	Kashmir	Bachelor of Arts.	
38	Shambo Nath Razdan	"	"	Faculty of Arts.	
39	Mohamad Yusuf	"	"	Matriculation.	
40	Prem Chand	"	Poonch	"	
41	Hira Nand Puri	"	Chamba	Intermediate of Arts.	
42	Thakur Sundar Singh	"	Tehri	School Leaving Certificate	Left the College.
43	Shankar Lal	"	Rewa	Matriculation.	
44	Amar Chand	"	Nalagarh	"	
45	Tukaram Baji Mohite	"	Kolhapur.	Previous Examination.	
46	Hari Singh Sodhi	"	Bilaspur	Matriculation.	

## Provincial Service Class of 1921-23.

1	Jitendra Nath Sen Gupta	Stipendiary	Bengal	Bachelor of Arts.	
2	Narendra Nath Som	"	Bihar and Orissa	Master of Arts.	
3	Naranjin Singh Jaspal	N. Stipendiary	Punjab	Bachelor of Arts.	
4	Kahlou Dalip Singh	Stipendiary	Central Provinces	Bachelor of Science.	
5	Satya Pal	"	"	Bachelor of Arts.	
6	Waishnowa Nand Sharma	"	"	" "	
7	V. A. N. Sausman	"	Bombay	Senior Cambridge Local and High School.	
8	F. A. B. Caetho	"	"	Intermediate of Arts and Senior Cambridge Local.	
9	Fatchchand Mulchand Kewalraani.	"	"	Sind Engineering.	
10	M. S. Rangaswami	N. Stipendiary	Madras	Bachelor of Arts.	
11	B. A. Cariapa	Stipendiary	"	Intermediate of Science.	
12	John Charles Graham	"	Burma	Intermediate of Arts	Removed.

## APPENDIX I—concl'd.

NATIONAL LIST OF STUDENTS WHO ATTENDED THE COLLEGE DURING 1922-23—concl'd.

## Provincial Service Class of 1921-23—concl'd.

No.	Names.	Rank.	Province or State.	University and other tests passed.	REMARKS.
13	Maung Ohn . . . .	Stipendiary . . . .	Burma . . . .	Intermediate of Science	Remo.cd.
14	F. V. Webster . . . .	" . . . .	" . . . .	Senior Cambridge Local.	
15	Leslie O'Dwyer Nestor . . . .	" . . . .	" . . . .	" " "	
16	M. E. R. Taylor . . . .	" . . . .	" . . . .	" " "	
17	Leo Frank Edgerley . . . .	" . . . .	" . . . .	High School.	
18	Louis Felix Mellizan . . . .	" . . . .	Trinidad, B. W. I. . . .	Surveyor (Ghent).	
19	Sher Singh Sahni] . . . .	" . . . .	Kashmir . . . .	Master of Science.	
20	Sant Ram Modi . . . .	" . . . .	" . . . .	Bachelor of Arts.	
21	Vasudev Rao Nakhare . . . .	" . . . .	Hyderabad . . . .	Intermediate of Arts.	
22	Shugan Chand Kuthari . . . .	" . . . .	Jodhpur . . . .	Bachelor of Arts.	

## Provincial Class of 1922-24.

1	Ramesh Chandra Datta . . . .	Stipendiary . . . .	Assam . . . .	Bachelor of Science.	
2	Kamana Krishna Biswas . . . .	" . . . .	" . . . .	" "	
3	Rajani Mohan Das . . . .	" . . . .	" . . . .	" "	
4	Manzur Ahmed Kakazai . . . .	N. Stipendiary . . . .	United Provinces . . . .	" "	
5	Baghubans Sarup Agarwal . . . .	Stipendiary . . . .	" . . . .	" "	
6	Prithi Nath Deogan . . . .	" . . . .	Punjab . . . .	Bachelor of Arts.	
7	Khem Chand Malhotra . . . .	" . . . .	" . . . .	" "	
8	D. G. Grange . . . .	" . . . .	Central Provinces . . . .	Senior Cambridge Local.	
9	Vishnu Prasad Mathur . . . .	" . . . .	" . . . .	Intermediate of Arts.	
10	Kashi Prasad Tewary . . . .	" . . . .	" . . . .	Bachelor of Science.	
11	Bibhuti Bhusan Sircar . . . .	" . . . .	" . . . .	" "	
12	Abdul Rahim . . . .	" . . . .	Bombay . . . .	Bachelor of Arts.	
13	C. G. Abichandani . . . .	" . . . .	" . . . .	Intermediate of Science.	
14	Mg. Tun Ngwe . . . .	" . . . .	Burma . . . .	" "	
15	C. J. Ferdinands . . . .	" . . . .	" . . . .	" "	
16	Shadi Lal Vadhera . . . .	" . . . .	Kashmir . . . .	Bachelor of Arts.	
17	Harnam Singh Pathania . . . .	" . . . .	" . . . .	" "	
18	Feroz-ud-Din Rajput . . . .	" . . . .	" . . . .	" "	
19	Shridhar Dhar . . . .	" . . . .	" . . . .	" "	
20	Indu Bhusan Biswas . . . .	" . . . .	" . . . .	Intermediate of Science.	
21	Syed Ahsan Abbas Zaidi . . . .	" . . . .	Hyderabad . . . .	Bachelor of Arts.	
22	Har Govind Prasad Saksena . . . .	" . . . .	Dhar . . . .	Matriculation.	

## APPENDIX II.

Statement showing the number of students who have been granted certificate since the establishment of the Imperial Forest College.

Year.	PROVINCIAL SERVICE.			NUMBER OF STUDENTS WHO HAVE QUALIFIED.				Total certificated students.	Students who attended only a portion of the course.	Students who failed to obtain certificate.
	Sub-Assistant Conservators' certificate.	EXTRA ASSISTANT CONSERVATORS' CERTIFICATE AND PROVINCIAL SERVICE COURSE CERTIFICATE.		RANGERS' OR HIGHER STANDARD CERTIFICATE.		FORESTER'S OR LOWER STANDARD CERTIFICATE.				
		With honours.	Ordinary.	With honours.	Ordinary.	With honours.	Ordinary.			
1	2	3	4	5	6	7	8	9	10	11
1881	..	..	..	..	2	..	..	2	6	2
1882	3	..	..	..	4	..	..	4	10	..
1883	..	..	..	..	12	..	..	12	2	..
1884	..	..	..	2	11	..	5	18	3	1
1885	..	..	..	1	9	..	3	13	1	4
1887	..	..	..	4	23	..	18	45	..	6
1888	..	..	..	1	13	..	4	18	..	1
1889	..	..	..	2	23	1	4	30	..	..
1890	..	..	..	..	13	..	4	17	..	..
Upper class Lower class.										
1889-1891	..	..	..	3	21	1	10	35	..	7
1890-1892	..	..	..	..	20	..	7	27	..	4
1891-1893	..	..	..	..	34	..	4	38	..	7
1892-1894	..	..	..	3	20	..	..	23	..	2
1893-1895	..	..	..	..	50	..	21	71	..	8
1894-1896	..	..	..	..	29	..	5	34	..	11
1895-1897	..	..	..	1	18	..	8	27	..	1
1896-1898	..	..	..	2	23	..	9	34	..	8
1897-1899	..	..	..	1	20	1	5	27	..	1
1898-1900	..	..	..	..	24	1	6	31	2	10
1899-1901	..	..	..	1	32	..	8	41	10	4
1900-1902	..	..	..	2	38	1	6	47	2	3
1901-1903	..	..	..	4	27	2	5	38	4	4
1902-1904	..	..	..	1	28	2	7	38	5	3
1903-1905	..	..	..	..	22	..	9	31	4	1
1904-1906	..	..	..	..	31	..	8	39	2	2
1905-1907	..	..	..	1	22	..	8	31	6	2
Rangers class.										
1906-1908	..	..	..	..	22	..	9	31	6	6
1907-1909	..	..	5†	..	..	..	..	..	2	..
1907-1909	..	..	3	3	29	..	8	40	2	1
1908-1909	..	..	6†	..	..	..	..	..	..	..
1908-1910	..	..	9	9	36	..	5	50	7	..
1909-1910	..	..	7†	..	..	..	..	..	..	..
1909-1911	..	..	8	8	36	..	7	51	4	1
1910-1911	..	..	15†	..	..	..	..	..	..	..
1910-1912	..	..	7	7	31	..	12	50	7	..
1911-1912	..	..	14†	..	..	..	..	..	..	..
1911-1913	..	..	4	4	29	..	5	38	16	1
1912-1913	..	..	4	4	23	..	4	31	5	3
1912-1914	..	..	13	..	..	..	..	..	3	..
1913-1914	..	..	6	6	27	..	2	35	2	1
1913-1915	..	4	6	..	..	..	..	..	3	3
1914-1915	..	..	7	7	23	..	4	34	3	..
1914-1916	..	4	4	..	..	..	..	..	..	..
1915-1917	..	4	8	6	30†	..	3	30	1	1
1916-1918	..	3	15	7	23	..	3	33	6	..
1917-1919	..	1	12	4	25	..	4	33	2	1
1918-1920	..	..	17	3	28	..	4	35	3	4
1919-1921	..	..	7	2	18†	..	6	26	23	2
1920-1922	..	1	20	4	19	..	4	27	4	..
1921-1923	..	1	19	6	23	..	3	32	10	..
TOTAL	3	18	168	109	991	9	247	1,356	106	116

† Includes 47 Extra Assistant Conservators, who underwent the Third year course of training for admission to the Provincial Service.

‡ Includes 3 students who failed to obtain the Provincial Service class certificate but were granted Ranger's higher standard certificates.

## APPENDIX III.

FOREST DEPARTMENT, INDIA, FOREST RESEARCH INSTITUTE AND COLLEGE.

*Statement of total expenditure on the Imperial Forest College since its establishment to the end of March 1923.*

Items.	Expenditure to end of March 1922.	Expenditure from 1st April 1922 to 31st March 1923.	TOTAL	REMARKS.
	Rs.	Rs.	Rs.	
Buildings . . . . .	99,877	5,840	1,05,717	
Observatories . . . . .	4,337	..	4,337	
TOTAL .	1,04,214	5,840	1,10,054	
Salaries and travelling allowance of officers and establishment.	23,33,029	1,25,267	24,58,296	
Local allowance of President, Instructors and Assistant Instructors.				
Allowance to Civil Surgeon . . . . .	17,918	1,200	19,118	
Allowance of Sub-Assistant Surgeon . . . . .	4,184	180	4,364	
Honoraria . . . . .	36,135	618	36,753	
Prizes . . . . .	12,844	308	13,152	
Stipends . . . . .	3,587	..	3,587	
Surveying and Drawing Instruments . . . . .	27,880	3,659	31,539	
Chemical and Apparatus . . . . .	5,029	..	5,029	
Books, Periodicals and Diagrams . . . . .	13,291	..	13,291	
Miscellaneous (including furniture tools, museum, herbarium, laboratory, gardens, rent of houses, clearing of camping grounds, carriage of tents, records, stationery, official postage, medicines, sundries, etc., etc.),	3,96,797	39,056	4,35,853	
TOTAL .	28,50,694	1,70,288	30,20,982	
GRAND TOTAL INCLUDING CAPITAL EXPENDITURE.	29,54,908	1,76,128	31,31,036	

W. MAYES,

*President, Forest Research  
Institute and College.*



## FORM No. 24 (Prescribed).

## FOREST DEPARTMENT, INDIA, FOREST COLLEGE DIVISION.

## Summary of Revenue and Expenditure for the Forest year 1922-23.

BUDGET HEADS.	Estimate for 19 -19 .	Revenue to end of — —19 .	Revenue during the Forest year 1922-23.	Total expenditure to end of 19 .
1	2	3	4	5
REVENUE.				
R a. p.      R a. p.      R a. p.      R a. p.				
<b>I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—</b>				
a. Timber . . . . .	..	..	..	..
b. Firewood and charcoal . . . . .	..	..	..	..
c. Bamboos . . . . .	..	..	..	..
d. Sandal-wood . . . . .	..	..	..	..
e. Brass and other minor produce . . . . .	..	..	..	..
<b>II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—</b>				
a. Timber . . . . .	..	..	..	..
b. Firewood and charcoal . . . . .	..	..	..	..
c. Bamboos . . . . .	..	..	..	..
d. Grazing and fodder grass . . . . .	..	..	..	..
e. Other minor produce . . . . .	..	..	..	..
f. Other items . . . . .	..	..	..	..
g. Communication fees . . . . .	..	..	..	..
<b>III.—DRIFT AND WAIF WOOD AND CONFISCATED FOREST PRODUCE—</b>				
<b>IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—</b>				
a. Duty on foreign timber and other forest produce.	..	..	..	..
b. Revenue from shared and private forests	..	..	..	..
<b>V.—MISCELLANEOUS—</b>				
a. Fines and forfeitures . . . . .	..	..	..	..
b. Refunds . . . . .	..	..	..	..
c. Other sources . . . . .	..	..	1,83,533 6 5	..
TOTAL REVENUE .	..	..	1,83,533 6 5	..

## FORM No. 24 (Prescribed)—contd.

## Summary of Revenue and Expenditure for the Forest year 1922-23—contd.

BUDGET HEADS.	Estimate for 19 19 .	Revenue to end of ——— ———19 .	Expenditure during the Forest year, 1922-23.	Total expenditure to end of ———19 .
1	2	3	4	5
EXPENDITURE.				
<i>A.—Conservancy and Works.</i>				
I.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY GOVERNMENT AGENCY—				
a. Timber . . . . .	..	..	..	..
b. Firewood and charcoal . . . . .	..	..	..	..
c. Bamboos . . . . .	..	..	..	..
d. Sandal-wood . . . . .	..	..	..	..
e. Brass and other minor produce . . . . .	..	..	..	..
II.—TIMBER AND OTHER PRODUCE REMOVED FROM THE FORESTS BY CONSUMERS OR PURCHASERS—				
III.—DRIFT AND WASTE WOOD AND CONFISCATED FOREST PRODUCE—				
IV.—REVENUE FROM FORESTS NOT MANAGED BY GOVERNMENT—				
a. Duty on foreign timber and other forest produce. . . . .	..	..	..	..
b. Revenue from shared and private forests. . . . .	..	..	..	..
V.—RENT OF LEASED FORESTS AND PAYMENTS TO SHARE-HOLDERS IN FORESTS MANAGED BY GOVERNMENT—				
VI.—LIVE-STOCK STORES, TOOLS AND PLANT—				
a. Purchase of cattle . . . . .	..	..	..	..
b. Feed and keep of cattle . . . . .	..	..	..	..
c. Purchase of stores, tools and plant . . . . .	..	..	6,097 12 5	..
VII.—COMMUNICATIONS AND BUILDINGS—				
a. Roads and bridges . . . . .	..	..	70 0 0	..
b. Buildings . . . . .	..	..	5,839 13 0	..
c. Other works . . . . .	..	..	1,014 15 6	..
VIII.—ORGANIZATION, IMPROVEMENT AND EXTENSION OF FORESTS—				
a. Demarcation . . . . .	..	..	..	..
b. Cost of Forest Settlements, compensation for land and rights. . . . .	..	..	..	..
c. Surveys . . . . .	..	..	..	..
d. Working-plans . . . . .	..	..	..	..
e. Sowing and planting . . . . .	..	..	..	..
f. Protection from fire . . . . .	..	..	..	..
g. Other works . . . . .	..	..	..	..
IX.—MISCELLANEOUS—				
a. Grain compensation allowance . . . . .	..	..	..	..
c. Other charges . . . . .	..	..	7,666 13 4	..
TOTAL A.—CONSERVANCY AND WORKS . . . . .	..	..	20,689 6 3	..

## FORM No. 24 (Prescribed)—concl'd.

## Summary of Revenue and Expenditure for the Forest year 1922-23—concl'd.

BUDGET HEADS.	Estimate for 19 19 .	Expendi- ture to end of ————19 .	Expenditure during the Forest year, 1922-23.	Total expenditure to end of ———19 .
1	2	3	4	5
EXPENDITURE—cont'd.				
BROUGHT OVER TOTAL A.—CONSERVATORY AND WORKS.	..	..	20,689 6 3	..
B.—Establishments.				
I.—SALARIES—				
Non-voted—				
a. Chief Conservators . . . . .	..	..	17,700 0 0	..
b. Superior Officers . . . . .	..	..	66,482 12 0	..
Voted—				
b. Superior Officers . . . . .	..	..	29,377 10 0	..
c. Subordinate forest and depôt establish- ments.	..	..	..	..
d. Office establishments . . . . .	..	..	11,706 12 8	..
e. Deputation and special allowances . .	..	..	1,195 3 0	..
f. Compensation for dearness of food . .	..	..	..	..
g. House-rent and other allowances . . .	..	..	251 11 0	..
II.—TRAVELLING ALLOWANCES—				
a. Conservators . . . . .	..	..	971 3 6	..
b. Superior Officers . . . . .	..	..	13,744 9 0	..
c. Subordinate forest and depôt establish- ments.	..	..	..	..
d. Office establishments . . . . .	..	..	1,740 11 0	..
III.—CONTINGENCIES—				
a. Stationery . . . . .	..	..	205 9 0	..
b. Carriage of tents and records . . . .	..	..	3,646 11 10	..
c. Rents, rates and taxes . . . . .	..	..	396 0. 8	..
d. Menial charges . . . . .	..	..	1,505 8 2	..
e. Grain allowances to Menials . . . . .	..	..	..	..
f. Official postage . . . . .	..	..	503 14 6	..
g. Office expenses and miscellaneous . .	..	..	5,239 6 3	..
h. Uniform and clothing . . . . .	..	..	577 6 6	..
i. Telephone charges . . . . .	..	..	193 4 0	..
TOTAL B.—ESTABLISHMENTS . . . . .	..	..	1,55,438 5 1	..
GRAND TOTAL OF ALL EXPENDITURE . . .	..	..	1,76,127 11 4	..

M. N. GUPTA,  
Assistant Accounts Officer.

CALCUTTA ;  
The 4th September 1923.

Certified that the totals of this form as printed in the Forest College and Forest Research Institute Reports for 1922-23 when added together agree with those entered in the forms for the combined offices as supplied by the Accountant-General, Central Revenues, under Article 78 (ii) of the Forest Department Code.

W. MAYES,  
President, Forest Research  
Institute and College.

## ANNUAL FORM No. 27.

## FOREST DEPARTMENT INDIA, FOREST COLLEGE.

*Outstanding and Liabilities on account of Contractors and Disbursers for the Forest year 1922-23.*

Division.	DEPARTMENT DEBTOR.			DEPARTMENT CREDITOR.			BALANCE DUE.		REMARKS.
	Opening balance.	Recoveries in cash and value of supplies and work done during the year 1922-23.	TOTAL.	Opening balance.	Payments made during the year 1922-23.	TOTAL.	To Department (Outstandings).	By Department (Liabilities).	
1	2	3	4	5	6	7	8	9	10
	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	Rs. A. P.	
Forest College.	..	30,943 0 8	30,943 0 8	1,871 7 1	30,787 7 5	32,658 14 6	1,715 13 10	..	
<b>TOTAL .</b>	..	30,943 0 8	30,943 0 8	1,871 7 1	30,787 7 5	32,658 14 6	1,715 13 10	..	

M. N. GUPTA,

*Assistant Accounts Officer.*

CALCUTTA;

*The 4th September 1923.*

Certified that the totals of this form as printed in the Forest College and Forest Research Institute Reports for 1922-23 when added together agree with those entered in the forms for the combined offices as supplied by the Accountant-General, Central Revenues, under Article 78 (ii) of the Forest Department Code.

W. MAYES,

*President, Forest Research  
Institute and College.*

## APPENDIX IV.

## FOREST DEPARTMENT, INDIA, FOREST RESEARCH INSTITUTE &amp; COLLEGE.

*Annual Expenditure debited to Provincial etc. Budget.*

Province or Circle.	Expenditure to the end of March 1922.	Expenditure during the year 1922-23.	Grand Total of expenditure to the end of March 1923.
Government of—			
Bengal . . . . .	94,112	21,855	1,15,967
Assam . . . . .	1,18,492	30,001	1,48,493
Bihar & Orissa . . . . .	25,276	3,462	28,738
United Provinces . . . . .	1,25,137	31,799	1,56,936
Punjab . . . . .	1,27,725	43,216	1,70,941
Central Provinces . . . . .	2,25,681	16,144	2,41,825
Coorg . . . . .	3,366	—	3,366
Ajmere . . . . .	664	—	664
Burma . . . . .	1,76,529	20,268	1,96,797
Madras . . . . .	3,73,319	6,010	3,79,329
Bombay . . . . .	1,34,376	36,209	1,70,585
Ceylon . . . . .	40,604	—	40,604
Federated Malay States . . . . .	10,736	—	10,736
Siam . . . . .	36,710	—	36,710
Total . . . . .	14,92,727	2,08,964	17,01,691
Indian States—			
Mysore State . . . . .	54,820	—	54,820
Baroda „ . . . . .	8,190	—	8,190
Jai pur „ . . . . .	6,811	—	6,811
Patiala „ . . . . .	9,926	642	10,568
Rewa „ . . . . .	8,387	2,690	11,077
Alwar „ . . . . .	925	—	925
Partabgarh „ . . . . .	3,049	—	3,049
Sirmoor „ . . . . .	2,183	—	2,183
Jubbal „ . . . . .	7,029	642	7,671
Bahawalpur „ . . . . .	2,001	—	2,001
Kolhapur „ . . . . .	1,664	770	2,434
Hyderabad „ . . . . .	18,336	4,229	22,565
Travancore „ . . . . .	14,371	—	14,371
Jodhpur „ . . . . .	4,907	1,284	6,191
Kashmir „ . . . . .	66,320	13,932	80,252
Tehri „ . . . . .	4,725	2,392	7,117
Cochin „ . . . . .	11,127	—	11,127
Kotah „ . . . . .	717	—	717
Malkpur „ . . . . .	1,172	—	1,172
Carried over . . . . .	2,26,660	26,581	2,53,241

APPENDIX IV—*contd.*FOREST DEPARTMENT, INDIA, FOREST RESEARCH INSTITUTE & COLLEGE—*contd.**Annual Expenditure debited to Provincial etc. Budget—contd.*

Province or Circle.	Expenditure to the end of March 1922.	Expenditure during the year 1922-23.	Grand Total of expenditure to the end of March 1923.
Brought forward	2,26,660	26,581	2,53,241
Indian States— <i>contd.</i>			
Mourbhanj State	1,929	—	1,929
Burwani "	1,325	—	1,325
Bharatpur "	663	—	663
Mandi "	2,175	1,392	3,567
Dhar "	1,206	1,093	2,299
Panna "	179	—	179
Indore "	11,101	—	11,101
Nalagarh "	1,265	550	1,815
Sirohi "	885	—	885
Nepal "	4,306	—	4,306
Chamba "	8,952	1,352	10,304
Gwalior "	6,134	—	6,134
Vishalgarh "	1,175	—	1,175
Bilaspur "	1,199	550	1,749
Mailog "	1,200	—	1,200
Sikkim "	2,554	—	2,554
Bhopal "	5,200	—	5,200
Keonthal "	1,200	—	1,200
Tharoch "	2,400	—	2,400
Kapurthala "	360	—	360
Rajpipla "	2,400	—	2,400
Rampur "	1,200	—	1,200
Jhabua "	1,106	—	1,106
Trinidad "	1,347	3,611	4,958
Peonch (Kashmir)	—	540	540
Total	2,88,121	35,660	3,23,790
GRAND TOTAL	17,80,848	2,44,633	20,25,481

W. MAYES, *President,*  
*Forest Research Institute and College.*

## APPENDIX V.

List of passed students who have been awarded the "Brandis" Prize since 1890.

Year.	Name.	Rank.	Where employed.	Amount.	REMARKS.
				Rs.	
1891	Pandit Kesavanand	Extra Assistant Conservator.	United Provinces . . .	40	For his article on Kharshu Oak, published in the "Indian Forester" of January-March 1891.
	Babu Upendranath Kanjilal.	Vernacular Instructor, Forest School.	Dehra Dun . . .	20	For his reports on Bhalkua Bamboo, published in the "Indian Forester" of January-March 1891.
1892	Mr. S. C. Moss . . .	Extra Assistant Conservator.	Madras . . .	50	For his article on Forest Treatment in South Tinnevely, published in the "Indian Forester" of November 1892.
	Babu Upendranath Kanjilal.	Vernacular Instructor, Forest School.	Dehra Dun . . .	50	For his article on the Date Sugar Industry of Bengal, published in the "Indian Forester" of December 1892.
1894	Mian Moti Singh . . .	Forest Ranger . . .	Punjab . . .	85	For his article on the "Deodar," published in the "Indian Forester" of May 1893.
	Mr. E. M. Buchanan . . .	Extra Assistant Conservator.	Andamans . . .	35	For his article on the Andamans, published in the "Indian Forester" of November 1892.
1895	No award . . .	..	..	..	
	Mr. M. Rama Rao, . . .	Extra Assistant Conservator.	..	80	For his article on Demarcation, published in the "Indian Forester" of May 1895.
	Mr. A. M. Sawyer . . .	..	Travancore State . . .	60	For his article on Taplocs cultivation and the Caryota Palm, published in the "Indian Forester" of April and August 1895.
1896	Mian Moti Singh . . .	Forest Ranger . . .	Kashmir State . . .	25	For his article on the Deodar, etc., in Kulu, published in the "Indian Forester" of March 1894.
	Mr. Narain Rao . . .	Do. . .	Mysore State . . .	25	For his article on the Herikal-godda Forest, published in the "Indian Forester" of June 1894.
1896 to 1899	No award . . .	..	..	..	
1900	Mr. J. P. Gregson . . .	Forest Ranger . . .	Chittagong . . .	32	For his article on an injurious beetle in the Chittagong Division, published in the "Indian Forester" of October 1899.
	Babu Birbal . . .	Assistant Instructor and Curator, Forest School.	Dehra Dun . . .	40	For his article on the manufacture of Resin and Turpentine, published in the "Indian Forester" of October 1900.
1901	Mr. Ram Chandra Krishna.	Extra Assistant Conservator.	Nagpur, Central Provinces.	30	For his article on the Drought and Forests in the Central Provinces, published in the "Indian Forester" of November 1900.
	Mr. E. A. f. Radcliffe . . .	Forest Officer . . .	Kashmir State . . .	20	For his article on the Bamboo Forests of the Jammu and Kashmir State, published in the "Indian Forester" of April 1900.

## APPENDIX V—contd.

List of passed students who have been awarded the "Brandis" Prize since 1890—contd.

Year.	Name.	Rank.	Where employed.	Amount.	REMARKS.
				Rs.	
1902	Mr J. G. F. Marshall	Extra Deputy Conservator.	Burma . . . .	80	For his article of the Mahongson Forests in Siam, published in the "Indian Forester" of September 1901.
	Pandit Sunder Lal Pathak.	Chief Forest Officer	Patiala State . . . .	40	For his article on the utilization of the Wild Date Palm.
	Raj Sahib Upendranath Kanjilal, F.L.S.	Vernacular Instructor, Forest School.	Dehra Dun . . . .	20	For his article on Swamp Forests in Dehra Dun, United Provinces of Agra and Oudh, published in the "Indian Forester" of May 1901.
1903	Mr. S. G. Pranjpe	Extra Assistant Conservator.	Central Provinces . . . .	50	For his article on Tasser Silk-worm, published in the "Indian Forester" of May 1902.
	Raj Sahib Upendranath Kanjilal, F.L.S.	Vernacular Instructor, Forest School.	Dehra Dun . . . .	80	For his article of the Forests of Jubhal State, published in the "Indian Forester" of September 1902.
1904	Mr. M. Rama Rao	Extra Assistant Conservator.	Madras . . . .	100	For his article on Root Parasitism of the Sandal tree.
1905	Mr. M. Rama Rao	Ditto . . . .	Ditto . . . .	80	For his article on Sandal, published in the "Indian Forester."
	Babu Birbal	Assistant Instructor and Curator, Forest School.	Dehra Dun . . . .	20	For his article on Chir Cones, published in the "Indian Forester."
1906 to 1908	No award . . . .	..	..	..	
1909	Mr. V. Subramania Iyer, M.A.	Instructor, Imperial Forest College.	Dehra Dun . . . .	150	For his article on Sand-binding Plants, published in the "Indian Forester."
1910	No award . . . .	..	..	..	
1911	No award . . . .	..	..	..	
1912	Mr. Rama Rao	Conservator, Travancore	Travancore State . . . .	100	For his article on Host plants of Sandal tree.
1913	No award . . . .	..	..	..	
1914	Mr. C. Balayya Nayudu.	Forest Ranger . . . .	Madras . . . .	50	For his article on Reclamation of Kollurpadu Reserve.
	Mr. A. J. Butterwick	Extra Assistant Conservator.	Burma . . . .	50	For his article on the Bamboo Forest of the Pegu Forest Division and the method of extraction.
1915	No award . . . .	..	..	..	
1916	No award . . . .	..	..	..	
1917	Mr. W. H. Craddock	Extra Deputy Conservator.	Burma . . . .	75	For his article on "Forest Surveying with Veneer's sketching Board," published in the "Indian Forester" for June 1916.
1918	No award . . . .	..	..	..	
1919	Mr. F. A. Wright	Extra Assistant Conservator.	Burma . . . .	100	For his article entitled "A further note on Thuisi with special reference to the oleoresin obtained from it in the Lawhsawak and Myeik States, Southern Siam States, Forest Division."
1920	No award . . . .	..	..	..	
1921	No award . . . .	..	..	..	
1922	No award . . . .	..	..	..	
1923	No award . . . .	..	..	..	



## APPENDIX VI.

*Speech delivered by the President on the 26th March 1923, on the occasion of the distribution of certificates and prizes to the successful students of both the Provincial Service and Ranger classes.*

MR. CLUTTERBUCK, LADIES AND GENTLEMEN,

The following brief report analyses the work and results of the classes who have now completed their period of training.

The Provincial class opened in April 1921 with 22 students. It was unfortunately necessary to remove two for incapacity during the first year and the class therefore closed with 20 students. With the exception of one student, who contracted enteric fever and was therefore unable to complete his working plan in the field, all have attended the full course.

In order to qualify for a pass certificate a student is required to obtain a minimum of 60 per cent. in each of the major subjects of Forestry, Botany, Surveying and Engineering and 60 per cent. in the total number of marks. For Honours, 70 per cent. is required in major subjects and 80 per cent. in the total. All have qualified in totals and in Forestry but it has been necessary, again on this occasion as was the case last year, to exercise my prerogative and to help six students with grace marks in Engineering. In the minor subjects comprising Zoology, Physical Science, Geology and Law the work as a whole cannot be said to have been altogether satisfactory.

The insect collections have been in some cases carelessly and in others actually improperly prepared. It would be preferable to omit unknown information rather than invent it. In Chemistry only those who had attained a certain standard prior to admission were able to qualify. We have no means of teaching Chemistry and the results are the natural outcome of our present policy. As I shall explain later we are endeavouring to remove the present disabilities under which we suffer in this respect.

The practical work of the class was carried out in the forests of the Chakrata and Dehra Dun Divisions during the first year. In the second year the students again worked in the Dehra Dun Division and concluded with a tour in the forests of Northern Bengal. Short visits were paid to Bareilly and Clutterbuckganj, and to the afforestation work in Etawah. From a perusal of the working plans and of the final papers, and also from my own interpretation of the oral examination in Silviculture, the class appears to have made good use of its opportunities in studying the basic principles of silviculture and also those problems which now confront the practical forester in the conversion of irregular to regular forests. The limitation of the regeneration work in Northern Bengal to that amount which can be successfully accomplished forms a valuable object lesson in thoroughness and accurate silvicultural practice. The students have all appreciated these important points.

The teak forests of Malabar, which are the nearest approach in India to regular forests, could not again be visited this year owing to the damages to communications and buildings caused in the Moplah rebellion.

The class on the whole may be judged as closely analogous to last year's. We have again one student who has attained honours and the rest have been awarded pass certificates.

The Ranger class mustered 40 students at the outset. Unfortunately eight had fallen so far behind during the first year as to preclude their retention, so the class ended with 32.

The qualifications for a Higher Standard Certificate require a minimum of 50 per cent. each in Forestry, Botany, Surveying and Engineering and 60 per cent. of the total, while Honours require the same minima with a total of 75 per cent. of the maxima. For the Lower Standard Certificate the same minimum in Forestry only is prescribed with a reduction to 45 per cent. in totals.

It is therefore relatively rare that a student who qualifies in his first year fails to reach the last category.

During the early part of the course the results were somewhat disappointing but the work of this class, during its second year, has shown considerable improvement. The warning issued on this occasion last year in regard to examinations has borne some fruit and the answers have borne a closer relation to the questions. I must, however, reiterate the warning then issued as there is still a tendency to write at length on irrelevant points. It has been necessary to authorise examiners to deduct up to 10 per cent. of the marks allotted to any paper for untidiness and bad handwriting.

In practical work an attempt is being made to understand and apply main principles correctly but it must be admitted that the present is a difficult time for ranger students, who have to apply new methods and theories in irregular natural forests, and some confusion is perhaps inevitable. A desire to learn, coupled with keen observation, must form the main

equipment of the practical forester and if we have succeeded, which I hope we have, in developing habits of careful observation and the avoidance of hasty conclusions I feel that we have gone a long way in preparing probationers for our executive staff, whose responsibilities and duties are steadily increasing in importance.

The results of the examinations prove that the class is well up to the average of the last few years. We have six students who have attained honours, 23 have higher standard certificates and 3 have lower standard certificates.

The practical work was done in the hill forests of Kumaon and of the Dun during the first year; and again in the Dun and in the Ramnagar Division during the second year.

I shall now deal with matters of general interest and which are common to both classes.

The Examiner in Surveying kindly lent by the Thomason College, Roorkee, has reported a marked improvement in the Provincial class both in the written paper and in the handling of instruments. The Rangers on the other hand suffered by comparison, not so much perhaps in the written paper, as in lack of smartness and decision in the use of instruments.

In conduct and discipline both classes have maintained a good standard but I regret to have to report the expulsion of two junior ranger students during this month for cribbing. The consequences are well known and those who are prepared to take the risk must be equally prepared to accept the consequences. I feel so deeply in this matter, which is an indelible blot on our record, that I must again appeal to the students themselves to help me in suppressing a practice which the severest penalty has failed to stop. It may be that public opinion, within the College, will succeed where disciplinary measures have failed.

Games and physical drill are an essential part of our training. In the Marathon Race over the same course as last year, which covers more than 8 miles, 102 out of 103 who started actually finished. Eleven were unable to compete owing to illness. This is a tribute to the value of physical training and although I shall not announce the time taken by the last man, the first (Cariapa) established a record for the course of 49 minutes 1 second. The games were only moderately well attended by some of the Rangers and due notice has been taken of this in awarding marks for diligence and discipline.

The health of the students was not very satisfactory. We had one case of enteric and there were, during the rains and early cold weather, an unusual number of malaria cases. Some accidents to limbs have also made the attendance rolls less satisfactory than is usual but, thanks to the interest taken by the Civil Surgeon in our students, absence has rarely been of long duration.

The Inspector-General's Cup for the best all round athlete has been awarded to Edgerley, with Taylor in very close attendance.

The monitor system has continued in operation and is a proved success provided that students of the required stamp and personality are selected for these responsible offices. I must thank those students who have continued to help in the running of our educational work.

We are unfortunately losing one of our most efficient and popular instructors in Mr. Mason who is proceeding on leave and takes with him the best wishes and regrets at parting of all with whom he has come into contact. Mr. Mirchandani is also returning to his province after a year's work at the College. We shall also feel his loss. Messrs. Trigg and Joshi have joined during the year. To Research Officers and Instructors, I must express my thanks for the interest taken in our educational work. All forest officers in whose charges we have carried out our practical training have, as usual, rendered the most unselfish assistance and I must mention the names of Messrs. Bhola, Makins, Marriott and Herbert of the United Provinces and Messrs. Shebbeare, Homfray and Glasson of Bengal. The Principal of Roorkee College again most graciously spared Mr. Cumming to conduct the examinations in Surveying.

Some important changes in the rules of admission have been proposed during the year and these proposals have now been referred to Local Governments for opinion. It is intended to widen the basis of examination for entrance to the Provincial Forest Service Class so as to include Physics and Chemistry as compulsory subjects, thereby obviating the necessity of teaching these subjects, in an elementary form, during our course at the Research Institute. The entrance test for the College, which was abolished in 1907, will probably also be re-introduced so as to attain greater uniformity in our students. The present system of adopting University and other standards results in great difficulty in valuation of attainments on a common basis, and it is felt that we are justified in reverting to the entrance examination, which has the added advantage of testing the candidates in the different provinces on a competitive basis.

The Bombay ranger students who returned to Dehra last year, after a short severance of their long connection with us, will in future be trained at the Madras Forest College. The Burma Government has initiated a course of training for its provincial staff in connection with the Rangoon University and the probationers now joining will probably be the last batch to be trained here for Burma. In spite of these secessions I do not fear for our future work. There will be a temporary lull in recruitment during the next two or three years, owing to financial stress, but as soon as more normal conditions are restored the classes at Dehra will,

in my opinion, again be filled to the full limit of our capacity. The Department must progress, stagnation means retrogression and forestry must continue to expand with the general forward movement in this as in every country.

We had hoped to have the Hon'ble Mr. Sarma with us to-day but at the last moment he has been unable to come owing to other and more pressing work. It is fortunate therefore that the Hon'ble Mr. Mehta, Minister for Forests and Excise in Bombay, has been able to attend this function. He did not know when he arranged to visit Dehra, that he would be just in time for our annual convocation or he might have altered his dates. I hope therefore that he will favour us with a few of his impressions of Dehra and of our work and also with some words of encouragement and advice.

I shall now ask Mr. Clutterbuck kindly to present the certificates to the outgoing students.

## APPENDIX VII.

*Speech delivered by P. H. Clutterbuck, Esq., C.I.E., C.B.E., Inspector-General of Forests to the Government of India, on the occasion of distribution of certificates and prizes on the 26th March 1923.*

MR. PERRÉE, LADIES AND GENTLEMEN,

It is with great pleasure that we welcome here to-day the Hon'ble Mr. Mehta, Minister for Forests and Excise in the Bombay Presidency. His presence indicates the great interest he takes in the subject of forestry. We are not only greatly honoured by his having consented to give away the prizes instead of Mr. Sarma, the Hon'ble Member, who unfortunately was unable to come but also by his kindly consenting to address us with regard to his impressions of Dehra Dun.

Mr. Perrée, the President of the Forest Research Institute and College, has given us a detailed description of the year's results, so there is no need for me to say much on this subject. The junior students will, I trust, benefit by his remarks and endeavour not only to do better in their second year but will strive to set up a good example for the new students to follow. On the junior students, now about to become seniors, devolves the whole duty of carrying on the continuity of the high tradition of which Dehra Dun has always been so proud, and we rely on them to do this.

Last year we congratulated ourselves on the return of the Bombay students to Dehra Dun. This year we are sorry to know that we are to lose them again, but fortunately our loss will be Coimbatore's gain. The reason for this unexpected change is due to the necessity for giving Coimbatore Forest College an equal share of students.

As Mr. Perrée has told you Mr. Mason is now leaving us and going on a well earned holiday. His departure will be a great loss both to the staff and to the students, for by throwing his whole heart into both work and games he has earned the esteem and affection of all. We heartily wish him Godspeed and a very pleasant time at home. We are also sorry to lose Mr. Mirchandani, Assistant Instructor, from Bombay. He is leaving Dehra on account of the change in the place of training of the Bombay students, which I have already referred to, but we wish he could have stayed here a few years longer.

One of the greatest difficulties in forest education here is due to the lack of continuity in instructors. The number of changes in the teaching staff in recent years has been owing to a great extent to the shortage of officers after the war and to so many officers requiring leave. Now that the cadre of the service are gradually getting fuller, there is every likelihood of our being able in future to obviate such changes. In addition, however, to endeavours in this direction, we hope to gradually build up a permanent nucleus of instructors who will not be liable to transfer.

Now to you outgoing students of both classes I must say a few words.

I congratulate you all upon having finished your course of training and especially those of you who have won honours or prizes. I also congratulate you heartily on your choice of a career. If you will only keep up your energy and zeal, you will find that the forester's life is one of the happiest imaginable. In it you are always close to nature and to a great extent free from troubles and worries which are so often the lot of those who reside in towns. And at the same time what a wonderful scope you have for serving your country: your great aim has to be to produce the best forest crops and returns from non-agricultural land. Just think of it. From time immemorial every endeavour has been made to get the utmost out of agricultural land and up to about 50 years ago no one in this country thought of doing the same from non-agricultural land. This line of thought will show you at once what infinite scope there is for you to help to build up your nation. Nearly all the important countries of the world are important in direct proportion to their forest resources. Great Britain is the only exception due to her special climate and large resources of coal which latter enable her to purchase all her

timber requirements. If India is going to become a big nation, she cannot afford to neglect the development of her non-agricultural land. Under the management of the Forest Department there are 160 million acres equivalent to approximately one quarter of British India. Thus it is clear that if one anna profit is made from each acre each year, the total profit amounts to one crore of rupees. Actually the annual profits in all provinces aggregate to about two crores of rupees, that is an average of about two annas per acre. What a totally inadequate result you will say. We quite agree, especially since some of our best forests are already yielding 15 to 20 rupees per acre per annum.

I have mentioned these figures just to bring home to you the wonderful scope you have waiting for you in your careers. I need not emphasize the fact that revenue returns are not the whole goal to be aimed at. They are only an indication of the real value which properly managed forests are to the nation from the agricultural, industrial, economic and climatic point of view.

Then again, what a sphere you have for influencing good work in the waste lands not managed by Government. What can be done in this way, you have some of you seen in Etawah. There is much misunderstanding as to the objects and aims of the forest development, but you are all now aware that our sole aim is to advance India in every way and I want you here and now to make up your minds that you will do forest propaganda work for the department throughout your service. You can do immense good in this way. You will of course have an uphill fight as there are always existing conditions which are considered by those interested to be more important to themselves than the building up of the resources of the nation. But if you will steadily preach the gospel of forestry you will not have lived in vain and you will be, I feel sure, rewarded in time by seeing your country advancing steadily to a great nationhood.

Just a few words more to impress upon you the special importance of exercising your imagination. Don't go about the forests observing only what the state of the tree-crop now is, but all the time, and every time think of what the crop could be a rotation hence, if you do your job properly now. To the forester who so seldom sees the final results of his work, a vivid imagination is the most important asset.

Then I wish to warn you against thinking only of work. This I am afraid is a fault of which most of us foresters must plead guilty and is due to spending so much of our lives more or less alone in the forests. The great corrective is a hobby and I strongly advise all of you to definitely take up some hobby which will be a relaxation from your work especially when you are away in the jungles by yourselves. Finally I wish you all very successful, useful and happy careers.

And now with a hearty endorsement of the President's thanks to all members of the educational staff, to the research officers who have lectured to and instructed the students and to all the territorial officers who have so ungrudgingly given their assistance, I conclude my remarks.