

Home (1917) Department.
(Education)

Ordinary SERIES.

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INDEXED

[Despatch Abstract.]

Industrial Commission.

Forwarding to the Secretary, Indian ———, a statement
of the annual expenditure on industrial education in the Presidency
from 1911-12 to 1915-16 and also a list of scientific officers.

27
Telegraphic Address:
"INDUSCOM"

No. 3290.

C/No. 18534
23
Postal Address:

"Indian Industrial Commission,
Camp"

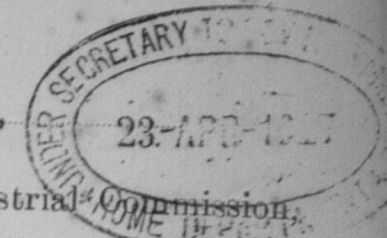
Dated Simla, 16th April 1917. 1917
17



From

R. D. BELL, Esq., I.C.S.,

Secretary, Indian Industrial Commission.



To

The Chief Secretary to the Government of Madras,
Fort St. George, Madras.

Sir,

I am directed to request that you will kindly furnish for the Indian Industrial Commission a complete statement of the annual expenditure on technical and industrial education (including grants-in-aid) in the Presidency of Madras, for each year, from 1911-12 onwards, for which figures are available.

2. I am requested also to ask you to supply a list of scientific officers (including professors of science in Government colleges) in superior service in the province. The term scientific officer includes chemists, botanists, bacteriologists and officers of similar qualifications performing similar duties. In the case of the Forest Department, it is not intended to include executive Forest officers, but includes, for example, botanists, if any attached to Local Governments. In the case of the Agricultural Department, it does not include Deputy Directors of Agriculture. The purely medical services are excluded. Public analysts, and chemists attached to the Customs or Excise Departments and Government factories should be included in the list.

3. Provincial Service officers should not be included in the list.

4. The form in which the information is required is appended to this letter. This has been filled in this office for the whole of India, as far as practicable.

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show the nature of the information required by the Commission.
This information may be revised for the Presidency of Madras
and submitted when complete in a fresh form.

I have the honour to be,

Sir,

Your most obedient servant,

K.D. Hill

Secretary, INDIAN INDUSTRIAL COMMISSION.

List of Scientific Officers in Government Service in India.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. Years.	Present pay. Rs.	
Botanical Survey of India.							
1	Major A. T. Gage, I.M.S., M.A., M.B., B. Sc., F. L. S., F.A.S.B.	Director, Botanical Survey of India.	...	...	19	1,300	Receives his pay from the Government of Bengal as Superintendent, Royal Botanic Gardens, Sibpur. He receives no remuneration as ex-officio Director of the Botanical Survey.
2	H. G. Carter, M.B., Ch. B. (Edin.)	Economic Botanist to the Survey of India.	...	...	4	640	Scale 600—20—800.
The following officers are associated in the Botanical Survey of India.							
1	W. Burns, B. Sc. (Edin.)	Economic Botanist, Bombay.	...	...	9	800	
2	F. R. Parnell	Economic Botanist, Madras.	...	...	4	700	
3	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist, United Provinces.	...	...	13	1,100	
Geological Survey of India.							
1	H. H. Hayden, C.I.E., D. Sc., F. R. S., F.A.S.B., F.G.S., F.A.S.B.	Director, Geological Survey of India.	...	...	22	2,000	
Superintendents Rs. 1,000—80—1,400.							
2	C. S. Middlemiss, B.A. (Cantab), F.G.S., F.A.S.B.	Superintendent	...	...	33	1,400	Charge allowance Rs. 60.
3	E. Vredenburg, B.L. B.Sc. (France), A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	22	1,400	
4	L. L. Fermor, A.R.S.M. D. Sc. (London), F.G.S.	Ditto	...	...	15	1,400	
Assistant Superintendents 18. For 5 years Rs. 350—30—500. Thereafter Rs. 500—50—1,000.							
5	G. E. Pilgrim, D. Sc. (Lond.), F.G.S.	Assistant Superintendent	...	...	15	900	
6	G. H. Tipper, M.A. (Cantab), F.G.S.	Ditto	...	...	14	850	
7	H. Walker, A.R.C.S., F.G.S., A.I. M.M.	Ditto	...	...	13	800	
8	E. H. Pascoe, M.A. (Cantab), D. Sc. (London).	Ditto	...	...	12	900	
9	K. A. H. Holloway, M.A. (Cantab), A.R.S.M., F.G.S., A.I.M.M.	Ditto	...	...	12	700	
10	G. de Purcell Cotter, B.A. (Dub.), F.G.S.	Ditto	...	...	12	950	(Includes Rs. 150 allowance for Curator.)
11	J. G. Brown, M. Sc. (Dunelm), F.G.S., M.I.M.E.	Ditto	...	...	12	950	(Includes Rs. 150 allowance as Palaeontologist.)
12	H. C. Jones, A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	11	700	
13	A. M. Heron, B. Sc. (Edin.), F. G. S., A.I.C.E.	Ditto	...	...	11	700	
14	M. Stuart, D. Sc. (Birm.), F.G.S., B. Sc. (Tech. Lond.), F.C.S.	Ditto	...	...	10	650	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

ADMINISTRATION OF							REMARKS.
No.	Names of Officers.	Designation.	Qualifications.	Terms of employment.	Length of service. years.	Present pay. Rs.	
Geological Survey of India—con'd.							
15	N. D. Daru, B. Sc., B. A., B. Sc. (Lond.), A. B. S. M., Bar-at-Law.	Professor, Madras Presidency College.	...	...	10	700	
16	C. S. Fox, B. Sc., M. I. M. E., F. G. S.	Assistant Superintendent	...	...	6	470	
17	R. C. Burton, B. Sc., F. G. S.	Ditto	...	...	5	470	
18	R. W. Palmer, M. Sc (Manch.) ...	Ditto	...	...	4	380	
19 & 20	Vacant.						
Chemist (I)—Rs. 500—50—1,000							
21	W. A. K. Christie, B. Sc. (Edin.), Ph. D.	Chemist ...	...	...	11	900	
Imperial Department of Agriculture.							
1	M. W. Sayer, B. A. ...	Assistant to the Agricultural Adviser to the Government of India.	...	...	3	700	
2	G. A. Gammie, F. L. S.	Imperial Cotton Specialist	...	...	33	1,200	
3	Vacant ...	Imperial Agricultural Chemist.	...	...	...	...	Rs. 500—50—1,000.*
4	E. J. Butler, M. B., F. L. S.	Imperial Mycologist ...	...	...	16	1,400	
5	A. H. Ward, C. I. E., M. A., F. L. S., A. R. C. S.	Imperial Economic Botanist.	...	...	12	1,200	
6	F. J. Freshwater Shaw, B. Sc., (London), A. R. C. S. F. L. S.	2nd Imperial Mycologist	...	...	7	750	
7	Mrs. G. L. C. Howard, M. A., Kaiser-i-Hind (Gold Medallist).	2nd Imperial Economic Botanist.	...	...	7	950	Special appointment.
8	G. S. Henderson, N. D. A., N. D. D.	Officiating Imperial Agriculturist.	...	...	10	1,100	
9	F. M. Howlett, B. A., F. E. S.	Imperial Pathological Entomologist.	...	...	10	1,100	
10	C. M. Hutchinson, B. A., M. A. E. B.	Imperial Agricultural Bacteriologist.	...	...	8	1,100	
11	T. B. Fletcher, R. N., F. L. S., F. E. S., F. Z. S.	Imperial Entomologist ...	...	...	7	800	
12	Vacant ...	Supernumerary Entomologist.	...	...	...	...	
13	J. H. Walton, B. A. (Cantab.), B. Sc. (Dunelm), Diploma in Agriculture (Cantab).	Supernumerary Agricultural Bacteriologist.	...	...	5	500	
14	J. N. Sen, M. A., F. C. S.	Supernumerary Agricultural Chemist.	...	...	12	460	Offg. in No. 3.
15	W. A. Davis, B. Sc., A. C. G. I., F. C. S.	Indigo Research Chemist.	...	...	1	1,250	Special appointment.

Officers of the Indian Agricultural Service serving under Local Governments.

MADRAS.							
1	R. W. B. C. Wood, M. A. (Cantab.).	Professor of Agriculture & Superintendent of Central Agricultural Station; also Principal, Agricultural College, and Research Institute.	...	...	12	1,000	
2	W. H. Harrison, D. Sc. (Victoria University).	Agricultural Chemist	...	...	11	1,000	
3	W. McRae, M. A., B. Sc. (Edin.)	Mycologist	...	...	9	750	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

No.	Names of Officers,	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service (years.)	Present pay. Rs.	
Officers of the Indian Agricultural Service Serving under Local Governments—contd.							
MADRAS.—contd.							
4	F. R. Parnell ...	Economic Botanist ...	...	...	4	800	
5	Edward Ballard ...	Entomologist ...	...	...	3	550	
6	C. A. Barber, M. A. (Cantab), D. Sc., F. L. S.	Government Sugarcane Expert.	...	...	9	1,500	
BOMBAY.							
7	Harold H. Mann, D. Sc. (Leeds) ...	Principal, Agricultural College, and Professor of Chemistry.	...	...	10	1,500	
8	J. B. Knight, M. Sc. (Mass.) ...	Professor of Agriculture	...	...	14	1,000	
9	W. Butler, B. Sc. (Edin.) ...	Economic Botanist ...	...	...	9	900	
10	Vacant ...	2nd do. ...	...	...	...	...	Sanctioned for 5 years only.
UNITED PROVINCES.							
11	George Clarke, F. I. C. ...	Agricultural Chemist ...	...	...	10	950	
12	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist. Offi- ciating Principal, Agri- cultural College.	...	...	13	1,100	
13	Vacant ...	Assistant Botanist ...	...	...	...	...	
BENGAL.							
14	R. S. Finlaw, B. Sc. (Bangor), F. C. S.	Fibre Expert ...	...	...	12	1,000	
15	George Pittendrigh Hector, M.A., B. Sc. (Aberdeen).	Economic Botanist ...	...	...	9	750	
16	Harold E. Annett, B. Sc., F.C.S., M.S.E.A.C., F.I.C., (Dip.)	Agricultural Chemist ...	...	...	10	750	
BIHAR AND ORISSA.							
17	R. J. Woodhouse, M.A., F.L.S., Diploma in Agriculture (Canter- bury).	Principal, Agricultural College and Economic Botanist.	...	...	10	800	
18	C. S. Taylor, B.A. (Cantab) ...	Agricultural Chemist, and Officiating Principal, Agricultural College.	...	...	10	950	
19	G. C. Sierrard ...	Professor of Agriculture ..	...	...	8	700	
PUNJAB.							
20	J. H. Barnes, B. Sc. (Birm.), F.I.C. F.C.S.	Principal, Agricultural Col- lege, and Agricultural Chemist.	...	...	11	1,100	
21	W. Roberts, B. Sc. ...	Professor of Agriculture	...	...	10	800	
22	David Milne, B. Sc. (Aberd.) ...	Economic Botanist ...	...	...	10	950	
23	Vacant ...	Entomologist ...	...	...	...	...	Sanctioned for 5 years only.
BURMA.							
24	F. J. Warth, B. Sc. M. Sc. (Birm.).	Agricultural Chemist ..	...	...	11	950	B. A. Rs. 100.
25	Vacant ...	Economic Botanist ...	...	...	...	...	
CENTRAL PROVINCES.							
26	F. J. Plyman, A.C.G.I. (London) ..	Agricultural Chemist ..	...	...	12	1,000	
27	R. J. D. Graham, M.A., B. Sc. (St. Andrews).	Economic Botanist ...	...	...	10	800	
ASSAM.							
28	A. A. Meggitt, B. Sc. (London), F.C.S.	Agricultural Chemist ...	...	...	12	950	

* The Scale Rs. 500—50—1,000 is not the initial Scale. Officers are Supernumeraries for three years on Rs. 400—30—460 (see Nos. 12, 13 and 14).

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service Years.	Present pay. Rs.	
Officers at the Forest Research Institute and College, Dehra Dun.							
1	B. B. Osmaston, F.C.H., M.B.O.U.	President. Forest Research Institute and College.	...	...	29	1,900	
2	R. S. Hole, F.C.H., F.L.S, F.E.S.	Forest Botanist	...	...	21	1,250	
3	R. S. Pearson, F.L.S. ...	Forest Economist	...	...	19	1,150	
4	R. E. Marsden ...	Sylviculturist	...	...	17	1,050	
5	Puran Singh, F.C.S. ...	Chemical Adviser	...	...	10	560	560-20-800.

Department of Public Instruction.

BENGAL.							
1	E. R. Watson, M.A., D.Sc.	Professor of Chemistry, Dacca College.	...	...	13	950	On furlough.
2	E. P. Harrison, Ph.D.	Professor of Physics, Presidency College.	...	...	9	900	On military duty.
3	D. B. Meek, M.A., B.Sc.	Professor of Physics, Dacca College.	...	...	6	700	Services placed at the disposal of Government of India. See page 70 No 5.
4	W. Saunders, M.Sc.	Professor of Chemistry, Civil Engineering College.	...	...	2	500	
5	W. A. Jenkins, M.Sc.	Professor of Physics, Dacca College.	...	...	1	500	
BOMBAY.							
6	H. N. Allen, B.Sc., Ph.D.	Principal and Professor of Physics, and Electrical Engineering, College of Engineering, Poona.	...	...	17	1,000	P. A. Rs. 250.
7	C. J. J. Fox, Ph.D., B.Sc.	Professor of Chemistry, College of Engineering, Poona.	...	...	8	850	
8	A. N. Meldrum, D.Sc.	Professor of Physics, and Chemistry, Madhar-lal Ranchodlal Science Institute, Ahmedabad.	...	...	5	950	
9	W. T. Saxton, M.A., F.L.S.	Professor of Botany, Madhar-lal Ranchodlal Science Institute, Ahmedabad.	...	...	4	...	On military duty.
MADRAS.							
10	R. L. Jones, M.A.	Professor of Physics, Presidency College. Also Meteorologist and Deputy Director, Madras Observatory.	...	...	28	1,000	P. A. Rs. 500; O. A. Rs. 300.
11	P. F. Fyson, B.A., F.L.S.	Professor of Botany, Presidency College.	...	...	13	1,000	
12	W. E. Smith, M.A.	Professor of Chemistry, Presidency College.	...	...	10	800	On military duty.
13	J. L. Simonsen, D.Sc.	Additional Professor of Chemistry, Presidency College.	...	...	7	800	
14	H. B. Mathews	Professor of Higher Electrical Engineering, College of Engineering.	...	...	2	750	On probation.
BIHAR AND ORISSA.							
15	V. H. Jackson, M.A.	Professor of Physics, and Officiating Principal, Patna College.	...	...	17	1,000	A. A. Rs. 200, P. A. 200.
16	K. S. Callwall, B.Sc., M.A., Ph.D.	Professor of Chemistry.	...	...	7	800	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifica- tion.	Terms of employ- ment.	Length of service. (Years)	Present pay. Rs.	
Department of Public Instruction—contd.							
BURMA.							
17	K. M. Ward, B.A. ...	Professor of Physics, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100. On leave from 4th February 1915.
18	A. E. Bellars, M.A. ...	Professor of Chemistry, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100.
CENTRAL PROVINCES.							
19	M. Owen, M.Sc. ...	Principal and Professor of Physics, Victoria College of Science, Nag- pur.	...	...	5	700	
20	L. J. Goldsworthy, B.A. ...	Professor of Chemistry, Victoria College of Science, Nagpur.	...	...	3	550	
PUNJAB.							
21	A. S. Hemmy, B.A., M.Sc. ...	Professor of Physics, Government College, La- hore.	...	...	19	1,000	P. A. Rs. 200.
22	B. H. Wilsdon, B.A. ...	Professor of Chemistry, Government College, La- hore.	...	...	4	650	
23	H. B. Dunncliffe, M.A., B. Sc. ...	Professor of Chemistry, Khalsa College, Amrit- sar.	...	...	3	560	
24	Lieutenant-Colonel J. Stephenson, M.B., F.R.C.S., I.M.S.	Principal and Professor of Biology, Government College, Lahore.	...	...	17	1,500	L. A. Rs. 150.
UNITED PROVINCES.							
25	P. P. Phillips, Ph.D., F.I.C. ..	Professor of Chemistry, Thomason College, Roork- hee.	...	...	13	850	There are probably 2 or 3 Pro- fessors of Physics, Chemistry etc. in the United Province but the details in the Civil Lists are insufficient to identify them.

Miscellaneous Departments.

BENGAL.							
1	N. Annandale, D.Sc., C.M.Z.S., F.L.S.	Director, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
2	S. W. Kemp, B.A.	Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
3	B. L. Chaudhuri, B.A., B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
4	F. H. Gravely, B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
5	I. H. Burkill, M.A., F.L.S.	Officiating Reporter on Economic Products and Superintendent, Industrial Section, Indian Museum.	...	...	...	...	
6	Lieutenant-Colonel J. J. Bourke, I.M.S.	Assay Master, Calcutta	...	...	...	...	
7	Lieutenant-Colonel F. T. C. Hughes, I.A., F.C.S., M.I.M.M.	Deputy Assay Master, Calcutta.	...	...	...	...	
8	C. C. Calder	Curator of Herbarium, Royal Botanic Garden, Calcutta.	...	...	...	...	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service. (Years.)	Present pay. Rs.	
Miscellaneous Departments—contd.							
BENGAL—contd.							
9	G. E. Shaw	Quinologist to the Government of Bengal.	...	...	...	...	
10	R. L. Jenks, F.I.C., F.C.S. ...	Chemical Examiner to Government for Customs and Excise.	...	...	...	1,100	H. A. Rs. 175.
BOMBAY.							
11	Lieutenant-Colonel J. L. T. Jones, I.M.S., M.B., F.C.S., M.I.M.M., F.G.S.	Assay Master, Bombay ...	...	...	...	...	
12	Captain H. B. Drake, I.M.S. ...	Deputy Assay Master, Bombay.	...	...	...	...	On military duty.
MADRAS.							
13	C. E. McKenzie, Ph. D. ...	Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
14	N. L. Sheldon, Ph. D., F.I.C. ...	Manager and Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
15	L. L. Smith, M.A., F.I.C. ...	Chemist, Cordite Factory, Aruvankadu.	...	...	...	...	
16	C. J. O'Callaghan, B. Sc. ...	Chemical Examiner to Government for Customs and Excise, and Deputy Commissioner of Abkari, Madras.	...	...	...	700	On probation.
UNITED PROVINCES.							
17	A. Marshall, F.I.C., F.C.S. ...	Chemical Inspector, Indian Ordnance Department, Naini Tal.	...	...	...	...	
18	P. S. MacMahon	Public Analyst ...	...	...	...	...	

Medical Department.

BENGAL.							
1	Lt.-Col. F. N. Windsor, B.A., M.B., B. Sc., I.M.S.	Chemical Examiner to Government and Professor of Chemistry, Medical College, Calcutta	...	...	...	1,500	On deputation.
BOMBAY.							
2	Major W. H. Dickinson, M.B., I.M.S.	Professor of Chemistry, Grant Medical College, and Chemical Analyst to Government.	...	...	...	1,500	S. A. Rs. 300.
BACTERIOLOGICAL LABORATORY.							
3	Major W. H. Liston, M.D., D.P.H., I.M.S.	Director, Bombay Bacteriological Laboratory, and Consulting Bacteriologist, Grant Medical College, Bombay.	...	...	...	1,150	
4	Major T. H. Gloster, M.B., D.P.H., I.M.S.	.....	...	...	...	...	Surrendered on mobilisation.
5	Captain W. D. H. Stevenson, M.A., M.B., I.M.S.	.....	...	...	...	...	Ditto.
6	Captain C. R. Knowles, I.M.S. ...	.....	...	...	...	850	Doing duty at the Laboratory.
7	D. A. Turkhad, M.B. ...	.....	...	...	...	800	Ditto. I. A. Rs. 200.
MADRAS.							
8	Lieutenant-Colonel A. Miller, M.B., L.R.C.P., I.M.S.	Professor of Chemistry, Medical College, and Chemical Examiner. Also Principal, Medical College (sub. pro tem.). Also Professor of Medical Jurisprudence.	...	...	...	1,200	H. A. Rs. 125. S. A. Rs. 150.

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. (years.)	Present pay Rs.	
Medical Department—contd.							
BURMA.							
9	Major T. F. Owens, I.M.S. ...	Chemical Examiner, and Bacteriologist; Police Surgeon, General Hospital, Rangoon (in addition.)	...	...	...	1,080	C. A. Rs. 370. L. A. Rs. 100.
PUNJAB							
10	Lieutenant-Colonel J. A. Black, M.B., I.M.S.	Chemical Examiner to Government, Lahore.	...	...	...	1,500	
UNITED PROVINCES.							
11	Lieutenant-Colonel W.D. Sutherland	Chemical Examiner to Government, United Provinces.	...	...	...	...	
UNITED PROVINCES AND CENTRAL PROVINCES.							
12	E. H. Hankin, M.A., Sc. D. ...	Chemical Examiner to Government. Analyst and Bacteriologist for the United Provinces and Central Provinces.	...	...	...	...	
Meteorological Department.							
SIMLA.							
1	W. G. Thomas Walker, C.S.I., M.A., Sc.D., F.R.S.	Director-General of Observatories.	...	...	15	2,000	
2	G. C. Simpson, D. Sc., F.R.S. ...	Imperial Meteorologist...	...	...	11	1,000	
3	C. W. B. Normand, M.A., B.Sc. ...	Ditto	...	...	4	600	
4	Hem Raj, Rai Bahadur ...	Ditto	...	...	30	600	
5	D. B. Meek, M.A., B. Sc. ...	Professor, Dacca College	...	...	6	900	See Department of Public Instruction, page 4, No. 3.
AGRA.							
6	J. H. Field, M.A., B.Sc. ...	Director, Aerological Observatory.	...	...	13	1,200	
7	W. A. Harwood, M.Sc. ...	Assistant Aerological Observatory.	...	...	7	550	
KODAIKANAL.							
8	John Evershed, F.R.S. ...	Director, Kodai kanal and Madras Observatory.	...	...	11	1,250	
9	T. Royds, D.Sc. ...	Assistant Director, Kodai kanal Observatory.	...	...	6	750	
BOMBAY (COLABA).							
10	N. A. F. Moos, D.Sc. (Edin.) F.R.S.E.	Director, Bombay and Alibagh Observatories, Bombay.	...	...	38	950	
CALCUTTA.							
11	C. W. Peake, M.A. ...	Meteorologist, Calcutta...	...	...	22	500	

Rev 7

List of Scientific Officers in Government Service in India.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. Years.	Present pay. Rs.	
Botanical Survey of India.							
1	Major A. T. Gage, I.M.S., M.A., M.B., B. Sc., F. L. S., F.A.S.B.	Director, Botanical Survey of India.	...	...	19	1,300	Receives his pay from the Government of Bengal as Superintendent, Royal Botanic Gardens, Sibpur. He receives no remuneration as ex-officio Director of the Botanical Survey.
2	H. G. Carter, M.B., Ch. B. (Edin.)	Economic Botanist to the Survey of India.	...	...	4	640	Scale 630-20-800.
The following officers are associated in the Botanical Survey of India.							
1	W. Burns, B. Sc. (Edin.)	Economic Botanist, Bombay.	...	...	9	800	
2	F. R. Parnell	Economic Botanist, Madras.	...	...	4	800 700	
3	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist, United Provinces.	...	...	13	1,100	
Geological Survey of India.							
1	H. H. Hayden, C.I.E., D. Sc., F. R. S., F.A., F.A.I. (T. D.), F.G. S., F.A.S.B.	Director, Geological Survey of India.	...	...	22	2,000	
Superintendents Rs. 1,000-80-1,400.							
2	C. S. Middlemiss, B.A. (Cantab), F.G.S., F.A.S.B.	Superintendent	...	...	33	1,400	Charge allowance Rs. 60.
3	E. Vredenburg, B.L. B.Sc. (France), A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	22	1,400	
4	L. L. Fermer, A.R.S.M. D. Sc. (London), F.G.S.	Ditto	...	...	15	1,400	
Assistant Superintendents 16. For 5 years Rs. 350-30-500. Thereafter Rs. 500-50-1,000.							
5	G. E. Pilgrim, D. Sc. (Lond.), F.G.S.	Assistant Superintendent	...	...	15	900	
6	G. H. Tipper, M.A. (Cantab), F.G.S.	Ditto	...	...	14	850	
7	H. Walker, A.R.C.S., F.G.S., A.I. M.M.	Ditto	...	...	13	800	
8	E. H. Pascoe, M.A. (Cantab), D. Sc. (London).	Ditto	...	...	12	900	
9	K. A. H. Hallows, M.A. (Cantab), A.R.S.M., F.G.S., A.I.M.M.	Ditto	...	...	12	700	
10	G. de Purcell Cotter, B.A. (Dub.), F.G.S.	Ditto	...	...	12	950	(Includes Rs. 150 allowance for Curator.)
11	J. G. Brown, M. Sc. (Dunelm), F.G.S., M.I.M.E.	Ditto	...	...	12	950	(Includes Rs. 150 allowance as Palaeontologist.)
12	H. C. Jones, A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	11	700	
13	A. M. Heron, B. Sc. (Edin.), F. G. S., A.I.C.E.	Ditto	...	...	11	700	
14	M. Stuart, D. Sc. (Birm.), F.G.S., B. Sc. (rech. Lond.), F.C.S.	Ditto	...	...	10	650	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—cont'd.

No	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service, years.	Present pay. Rs.	
Geological Survey of India—con'd.							
15	N. D. Daru, B. Sc., B. A., B. Sc. (Lond.), A. R. S. M., Bar-at-Law.	Professor, Madras Presidency College.	...	...	10	700	
16	C. S. Fox, B. Sc., M. I. M. E., F. G. S.	Assistant Superintendent	...	...	6	470	
17	R. C. Burton, B. Sc., F. G. S. ..	Ditto	...	...	5	470	
18	R. W. Palmer, M. Sc (Manch.) ...	Ditto	...	...	4	380	
19 } & 20 }	Vacant.						
Chemist (1)—Rs. 500—50—1,000							
21	W. A. K. Christie, B. Sc. (Edin.), Ph. D.	Chemist	...	...	11	900	
Imperial Department of Agriculture.							
1	M. W. Sayer, B. A.	Assistant to the Agricultural Adviser to the Government of India.	...	...	3	700	
2	G. A. Gammie, F. L. S.	Imperial Cotton Specialist	...	...	23	1,200	
3	Vacant	Imperial Agricultural Chemist.	...	...	...	...	Rs. 500—50—1,000.*
4	E. J. Butler, M. B., F. L. S. ...	Imperial Mycologist	...	...	16	1,400	
5	A. Howard, C. I. E., M. A., F. L. S., A. R. C. S.	Imperial Economic Botanist.	...	...	12	1,200	
6	F. J. Freshwater Shaw, B. Sc., (London), A. R. C. S. F. L. S.	2nd Imperial Mycologist	...	...	7	750	
7	Mrs. G. L. C. Howard, M. A., Kaiser-i-Hind (Gold Medallist).	2nd Imperial Economic Botanist.	...	...	7	950	Special appointment.
8	G. S. Henderson, N. D. A., N. D. D.	Officiating Imperial Agriculturist.	...	...	10	1,100	
9	F. M. Howlett, B. A., F. E. S. ...	Imperial Pathological Entomologist.	...	...	10	1,100	
10	C. M. Hutchinson, B. A., M. A. E. B.	Imperial Agricultural Bacteriologist.	...	...	8	1,100	
11	T. B. Fletcher, R. N., F. L. S., F. E. S., F. Z. S.	Imperial Entomologist ...	...	...	7	800	
12	Vacant	Supernumerary Entomologist.	...	...	...	...	
13	J. H. Walton, B. A. (Cantab.), B. Sc. (Dunelm), Diploma in Agriculture (Cantab.).	Supernumerary Agricultural Bacteriologist.	...	...	5	500	
14	J. N. Sen, M. A., F. C. S.	Supernumerary Agricultural Chemist.	...	...	12	460	Offg. in No. 3.
15	W. A. Davis, B. Sc., A. C. G. I., F. C. S.	Indigo Research Chemist.	...	...	1	1,250	Special appointment.

Officers of the Indian Agricultural Service serving under Local Governments.

MADRAS.							
1	R. W. B. C. Wood, M. A. (Cantab.)	Professor of Agriculture & Superintendent of Central Agricultural Station, also Principal, Agricultural College and Research Institute.	...	...	12	1,000	
2	W. H. Harrison, D. Sc. (Victoria University), F. L. S.	Agricultural Chemist	...	...	11	1,000	
3	W. McRae, M. A., B. Sc. (Edin.)	Mycologist	...	...	9	750	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—cont'd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service (Years.)	Present pay. Rs.	
Officers of the Indian Agricultural Service Serving under Local Governments—contd.							
MADRAS.—contd.							
3	F. R. Parnell B.A. (Cantab.)	Economic Botanist	...	...	4	800	
4	Edward Ballard B.A. F.E.S.	Entomologist	...	...	2	550	on military duty
5	C. A. Barber, M. A. (Cantab), B. Sc., F. L. S.	Government Sugarcane Expert.	...	...	18	1,500	
BOMBAY.							
7	Harold H. Mann, D. Sc. (Leeds) ...	Principal, Agricultural College, and Professor of Chemistry.	...	...	10	1,500	
8	J. B. Knight, M. Sc. (Mass.) ...	Professor of Agriculture	...	...	14	1,000	
9	W. Barra, B. Sc. (Edin.) ...	Economic Botanist	...	...	9	900	
10	Vacant ...	2nd do.	...	...	...	...	Sanctioned for 5 years only.
UNITED PROVINCES.							
11	George Clarke, F. I. C. ...	Agricultural Chemist	...	...	10	950	
12	H. M. Leake, M. A. (Cantab). F. L. S.	Economic Botanist. Offi- ciating Principal, Agri- cultural College.	...	...	13	1,100	
13	Vacant ...	Assistant Botanist	...	...	...	...	
BENGAL.							
14	R. S. Finkw., B. Sc. (Bangor), F. C. S.	Fibre Expert	...	...	12	1,000	
15	George Pittendrigh Hector, M.A., B. Sc. (Aberdeen).	Economic Botanist	...	...	9	750	
16	Harold E. Annett, B. Sc., F.C.S., M.S.E.A.C., F.I.C. (Dip.)	Agricultural Chemist	...	...	10	750	
BIHAR AND ORISSA.							
17	E. J. Woodhouse, M.A., F.L.S., Diploma in Agriculture (Canter- bury).	Principal, Agricultural College and Economic Botanist.	...	...	10	800	
18	C. S. Taylor, B.A. (Cantab) ...	Agricultural Chemist, and Officiating Principal, Agricultural College.	...	...	10	950	
19	G. C. Sterrard ...	Professor of Agriculture	...	...	8	700	
PUNJAB.							
20	J. H. Barons, B. Sc. (Birm.), F.I.C. F.C.S.	Principal, Agricultural Col- lege, and Agricultural Chemist.	...	...	11	1,100	
21	W. Roberts, B. Sc. ...	Professor of Agriculture	...	...	10	800	
22	David Milne, B. Sc. (Aberd.) ...	Economic Botanist	...	...	10	950	
23	Vacant ...	Entomologist	...	...	...	...	Sanctioned for 5 years only.
BURMA.							
24	F. J. Warth, B. Sc. M. Sc. (Birm.).	Agricultural Chemist	...	...	11	950	B. A. Rs. 100.
25	Vacant ...	Economic Botanist	...	...	...	...	
CENTRAL PROVINCES.							
26	F. J. Plyman, A.C.G.I. (London) ..	Agricultural Chemist	...	...	12	1,000	
27	R. J. D. Graham, M.A., B. Sc. (St. Andrews).	Economic Botanist	...	...	10	800	
ASSAM.							
28	A. A. Meggitt, B. Sc. (London), F.C.S.	Agricultural Chemist	...	...	12	950	

* The Scale Rs. 500—50—1,000 is not the initial Scale. Officers are Supernumeraries for three years on Rs. 400—30—460 (see Nos. 12, 13 and 14).

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service Years.	Present pay. Rs.	
Officers at the Forest Research Institute and College, Dehra Dun.							
1	B. B. Osmaston, F.C.H., M.B.O.U.	President, Forest Research Institute and College.	...	...	29	1,900	
2	R. S. Hole, F.C.H., F.L.S., F.E.S.	Forest Botanist	...	...	21	1,250	
3	R. S. Pearson, F.L.S. ...	Forest Economist	...	...	19	1,150	
4	R. E. Marsden ...	Sylviculturist	...	...	17	1,050	
5	Puran Singh, F.C.S. ...	Chemical Adviser	...	...	10	500	560-20-800.

Department of Public Instruction.

BENGAL.							
1	E. R. Watson, M.A., D.Sc.	Professor of Chemistry, Dacca College.	...	...	13	950	On furlough.
2	E. P. Harrison, Ph.D.	Professor of Physics, Presidency College.	...	...	9	900	On military duty.
3	D. B. Meek, M.A., B.Sc.	Professor of Physics, Dacca College.	...	...	6	700	Services placed at the disposal of Government of India. See page 70 No 5.
4	W. Saunders, M.Sc.	Professor of Chemistry, Civil Engineering College.	...	...	2	500	
5	W. A. Jenkins, M.Sc.	Professor of Physics, Dacca College.	...	...	1	500	
BOMBAY.							
6	H. N. Allen, B.Sc., Ph.D.	Principal and Professor of Physics, and Electrical Engineering, College of Engineering, Poona.	...	...	17	1,000	P. A. Rs. 250.
7	C. J. J. Fox, Ph.D., B.Sc.	Professor of Chemistry, College of Engineering, Poona.	...	...	8	850	
8	A. N. Meldrum, D.Sc.	Professor of Physics, and Chemistry, Madhar-lal Ranchodlal Science Institute, Ahmedabad.	...	...	5	950	
9	W. T. Saxton, M.A., F.L.S.	Professor of Botany, Madhar-lal Ranchodlal Science Institute, Ahmedabad.	...	...	4	...	On military duty.
MADRAS.							
10	R. L. Jones, M.A.	Professor of Physics, Presidency College. Also Meteorologist and Deputy Director, Madras Observatory.	...	...	28	1,000	P. A. Rs. 500; O. A. Rs. 300.
11	P. F. Fyson, B.A., F.L.S.	Professor of Botany, Presidency College.	...	...	13	1,000	
12	W. E. Smith, M.A.	Professor of Chemistry, Presidency College.	...	...	10	800	On military duty.
13	J. L. Simonsen, D.Sc.	Additional Professor of Chemistry, Presidency College.	...	...	7	800	
14	H. B. Mathews	Professor of Higher Electrical Engineering, College of Engineering.	...	...	2	750	On probation.
BIHAR AND ORISSA.							
15	V. H. Jackson, M.A.	Professor of Physics, and Officiating Principal, Patna College.	...	...	17	1,000	A. A. Rs. 200, P. A. 200.
16	K. S. Caldwell, B.Sc., M.A., Ph.D.	Professor of Chemistry.	...	...	7	800	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifica- tion.	Terms of employ- ment.	Length of service. (Years)	Present pay. Rs.	
Department of Public Instruction—contd.							
BURMA.							
17	K. M. Ward, B.A. ...	Professor of Physics, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100. On leave from 4th February 1915.
18	A. E. Bellars, M.A. ...	Professor of Chemistry, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100.
CENTRAL PROVINCES.							
19	M. Owen, M.Sc. ...	Principal and Professor of Physics, Victoria College of Science, Nag- pur.	...	...	5	700	
20	L. J. Goldsworthy, B.A. ...	Professor of Chemistry, Victoria College of Science, Nagpur.	...	...	3	550	
PUNJAB.							
21	A. S. Hemmy, B.A., M.Sc. ...	Professor of Physics, Government College, La- hore.	...	...	19	1,000	P. A. Rs. 200.
22	B. H. Wilsdon, B.A. ...	Professor of Chemistry, Government College, La- hore.	...	...	4	650	
23	H. B. Dunncliffe, M.A., B. Sc. ...	Professor of Chemistry, Khalsa College, Amrit- sar.	...	...	3	560	
24	Lieutenant-Colonel J. Stephenson, M.B., F.R.C.S., I.M.S.	Principal and Professor of Biology, Government College, Lahore.	...	...	17	1,500	L. A. Rs. 150.
UNITED PROVINCES.							
25	P. P. Phillips, Ph.D., F.I.C. ...	Professor of Chemistry, Thomason College, Roor- kee.	...	...	13	850	There are probably 2 or 3 Pro- fessors of Physics, Chemistry etc. in the United Province, but the details in the Civil Lists are insufficient to identify them.

Miscellaneous Departments.

BENGAL.							
1	N. Annandale, D.Sc., C.M.Z.S., F.L.S.	Director, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
2	S. W. Kemp, B.A.	Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
3	B. L. Chandhuri, B.A., B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
4	F. H. Gravely, B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
5	I. H. Burkill, M.A., F.L.S.	Officiating Reporter on Economic Products and Superintendent, Industrial Section, Indian Museum.	...	...	...	...	
6	Lieutenant-Colonel J. J. Bourke, I.M.S.	Assay Master, Calcutta	...	...	...	...	
7	Lieutenant-Colonel F. T. C. Hughes, I.A., F.C.S., M.I.M.M.	Deputy Assay Master, Calcutta.	...	...	...	...	
8	C. C. Calder	Curator of Herbarium, Royal Botanic Garden, Calcutta.	...	...	...	...	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—*contd.*

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service. (Years.)	Present pay. Rs.	
Miscellaneous Departments—contd.							
BENGAL—contd.							
9	G. E. Shaw ...	Quinologist to the Government of Bengal.	...	...	...	...	
10	R. L. Jenks, F.I.C., F.C.S. ...	Chemical Examiner to Government for Customs and Excise.	...	...	...	1,100	H. A. Rs. 175.
BOMBAY.							
11	Lieutenant-Colonel J. L. T. Jones, I.M.S., M.B., F.C.S., M.I.M.M., F.G.S.	Assay Master, Bombay ...	...	...	...	...	
12	Captain H. B. Drake, I.M.S. ...	Deputy Assay Master, Bombay.	...	...	...	...	On military duty.
MADRAS.							
13	C. E. McKenzie, Ph. D. ...	Chemist, Cordite Factory, Aruvankadu (sub. <i>pro tem.</i>).	...	...	...	...	
14	N. L. Sheldon, Ph. D., F.I.C. ...	Manager and Chemist, Cordite Factory, Aruvankadu (sub. <i>pro tem.</i>).	...	...	...	...	
15	L. L. Smith, M.A., F.I.C. ...	Chemist, Cordite Factory, Aruvankadu.	...	...	...	...	
16	C. J. O'Callaghan, B. Sc. ...	Chemical Examiner to Government for Customs and Excise, and Deputy Commissioner of Abkari, Madras.	...	...	...	700	On probation.
UNITED PROVINCES.							
17	A. Marshall, F.I.C., F.C.S. ...	Chemical Inspector, Indian Ordnance Department, Naini Tal.	...	...	...	...	
18	P. S. MacMahon ...	Public Analyst	...	...	...	...	

Medical Department.

BENGAL.							
1	Lt.-Col. F. N. Windsor, B.A., M.B., B. Sc., I.M.S.	Chemical Examiner to Government and Professor of Chemistry, Medical College, Calcutta	...	...	...	1,500	On deputation.
BOMBAY.							
2	Major W. H. Dickinson, M.B., I.M.S.	Professor of Chemistry, Grant Medical College, and Chemical Analyst to Government.	...	...	...	1,500	S. A. Rs. 300.
BACTERIOLOGICAL LABORATORY.							
3	Major W. H. Liston, M.D., D.P.H., I.M.S.	Director, Bombay Bacteriological Laboratory, and Consulting Bacteriologist, Grant Medical College, Bombay.	...	...	...	1,150	
4	Major T. H. Gloster, M.B., D.P.H., I.M.S.	.....	...	...	...	...	Surrendered on mobilisation.
5	Captain W. D. H. Stevenson, M.A., M.B., I.M.S.	.....	...	...	...	...	Ditto.
6	Captain C. R. Knowles, I.M.S. ...	.....	...	...	...	850	Doing duty at the Laboratory.
7	D. A. Turkhud, M.B. ...	.....	...	...	...	800	Ditto. I. A. Rs. 200.
MADRAS.							
8	Lieutenant-Colonel A. Miller, M.B., L.R.C.P., I.M.S.	Professor of Chemistry, Medical College, and Chemical Examiner. Also Principal, Medical College (sub. <i>pro tem.</i>). Also Professor of Medical Jurisprudence.	...	...	...	1,290	H. A. Rs. 125. S. A. Rs. 150.

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—*contd.*

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. (years.)	Present pay Rs.	
Medical Department—<i>contd.</i>							
BURMA.							
9	Major T. F. Owens, I.M.S. ...	Chemical Examiner, and Bacteriologist; Police Surgeon, General Hospital, Rangoon (in addition.)	...	...	...	1,090	C. A. Rs. 370. L. A. Rs. 100.
PUNJAB							
10	Lieutenant-Colonel J. A. Black, M.B., I.M.S.	Chemical Examiner to Government, Lahore.	...	...	...	1,500	
UNITED PROVINCES							
11	Lieutenant-Colonel W.D. Sutherland	Chemical Examiner to Government, United Provinces.	...	...	...	...	
UNITED PROVINCES AND CENTRAL PROVINCES.							
12	E. H. Hankin, M.A., Sc. D. ...	Chemical Examiner to Government. Analyst and Bacteriologist for the United Provinces and Central Provinces.	...	...	...	...	
Meteorological Department.							
SIMLA.							
1	W. G. Thomas Walker, C.S.I., M.A., Sc.D., F.R.S.	Director-General of Observatories.	...	...	15	2,000	
2	G. C. Simpson, D. Sc., F.R.S. ...	Imperial Meteorologist...	...	...	11	1,000	
3	C. W. B. Normand, M.A., B.Sc. ...	Ditto	...	...	4	600	
4	Hem Raj, Rai Bahadur ...	Ditto	...	...	30	600	
5	D. B. Meek, M.A., B. Sc. ...	Professor, Dacca College	...	...	6	900	See Department of Public Instruction, page 4, No. 3.
AGRA.							
6	J. H. Field, M.A., B.Sc. ...	Director, Aerological Observatory.	...	...	13	1,200	
7	W. A. Harwood, M.Sc. ...	Assistant Aerological Observatory.	...	...	7	550	
KODAIKANAL.							
8	John Evershed, F.R.S. ...	Director, Kodai kanal and Madras Observatory.	...	...	11	1,250	
9	T. Royds, D.Sc. ...	Assistant Director, Kodai-kanal Observatory.	...	...	6	750	
BOMBAY (COLABA).							
10	N. A. F. Moos, D.Sc. (Edin.) F.R.S.E.	Director, Bombay and Alibagh Observatories, Bombay.	...	...	33	950	
CALCUTTA.							
11	C. W. Peake, M.A. ...	Meteorologist, Calcutta...	...	...	22	500	

Sep. Rev

List of Scientific Officers in Government Service in India.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. Years.	Present pay. Rs.	
Botanical Survey of India.							
1	Major A. T. Gage, I.M.S., M.A., M.B., B. Sc., F. L. S., F.A.S.B.	Director, Botanical Survey of India.	...	...	19	1,300	Receives his pay from the Government of Bengal as Superintendent, Royal Botanic Gardens, Sibpur. He receives no remuneration as ex-officio Director of the Botanical Survey.
2	H. G. Carter, M.B., Ch. B. (Edin.)	Economic Botanist to the Survey of India.	...	...	4	640	Scale 600—20—800.
The following officers are associated in the Botanical Survey of India.							
1	W. Burns, B. Sc. (Edin.)	Economic Botanist, Bombay.	...	...	9	800	
2	F. R. Parnell	Economic Botanist, Madras.	...	...	4	700	
3	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist, United Provinces.	...	...	13	1,170	
Geological Survey of India.							
1	H. H. Hayden, C.I.E., D. Sc., F. R. S., B.A., B.A.I. (T. D.), F.G. S., F.A.S.B.	Director, Geological Survey of India.	...	...	22	2,000	
Superintendents Rs. 1,000—80—1,400.							
2	C. S. Middlemiss, B.A. (Cantab), F.G.S., F.A.S.B.	Superintendent	...	...	33	1,430	Charge allowance Rs. 60.
3	E. Vredenburg, B.L. B.Sc. (France), A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	22	1,400	
4	L. L. Fermor, A.R.S.M. D. Sc. (London), F.G.S.	Ditto	...	...	15	1,400	
Assistant Superintendents 18. For 5 years Rs. 350—30—500. Thereafter Rs. 500—50—1,000.							
5	G. E. Pilgrim, D. Sc. (Lond.), F.G.S.	Assistant Superintendent	...	...	15	900	
6	G. H. Tipper, M.A. (Cantab), F. G.S.	Ditto	...	...	14	850	
7	H. Walker, A.R.C.S., F.G.S., A.I. M.M.	Ditto	...	...	13	800	
8	E. H. Pascoe, M.A. (Cantab), D. Sc. (London).	Ditto	...	...	12	900	
9	K. A. H. Holloway, M.A. (Cantab), A.R.S.M., F.G.S., A.I.M.M.	Ditto	...	...	12	700	
10	G. de Purcell Cotter, B.A. (Dub.), F.G.S.	Ditto	...	...	12	950	(Includes Rs. 150 allowance for Curator.)
11	J. G. Brown, M. Sc. (Dunelm), F. G.S., M.I.M.E.	Ditto	...	...	12	950	(Includes Rs. 150 allowance as Palaeontologist.)
12	H. C. Jones, A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	11	700	
13	A. M. Heron, B. Sc. (Edin.), F. G. S., A.I.C.E.	Ditto	...	...	11	700	
14	M. Stuart, D. Sc. (Birm.), F.G.S., B. Sc. (rech. Lond.), F.C.S.	Ditto	...	...	10	650	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

No	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service, years.	Present pay. Rs.	
Geological Survey of India—con'd.							
15	N. D. Daru, B. Sc., B. A., B. Sc. (Lond.), A. R. S. M., Bar-at-Law.	Professor, Madras Presidency College.	...	...	10	700	
16	C. S. Fox, B. Sc., M. I. M. E., F. G. S.	Assistant Superintendent	...	...	6	470	
17	R. C. Burton, B. Sc., F. G. S. ..	Ditto	...	...	5	470	
18	R. W. Palmer, M. Sc (Manch.) ...	Ditto	...	...	4	380	
19 & 20	Vacant.						
Chemist (1)—Rs. 500—50—1,000							
21	W. A. K. Christie, B. Sc. (Edin.), Ph. D.	Chemist	...	...	11	900	
Imperial Department of Agriculture.							
1	M. W. Sayer, B. A.	Assistant to the Agricultural Advisor to the Government of India.	...	...	3	700	
2	G. A. Gammie, F. L. S.	Imperial Cotton Specialist	...	...	33	1,200	
3	Vacant	Imperial Agricultural Chemist.	...	...	...	...	Rs. 500—50—1,000.*
4	E. J. Butler, M. B., F. L. S. ...	Imperial Mycologist ...	...	...	16	1,400	
5	A. Howard C. I. E., M. A., F. L. S., A. R. C. S.	Imperial Economic Botanist.	...	...	12	1,200	
6	F. J. Freshwater Shaw, B. Sc., (London), A. R. C. S. F. L. S.	2nd Imperial Mycologist	...	...	7	750	
7	Mrs. G. L. C. Howard, M. A., Kaiser-i-Hind (Gold Medallist).	2nd Imperial Economic Botanist.	...	...	7	950	Special appointment.
8	G. S. Henderson, N. D. A., N. D. D.	Officiating Imperial Agriculturist.	...	...	10	1,100	
9	F. M. Howlett, B. A., F. E. S. ...	Imperial Pathological Entomologist.	...	...	10	1,100	
10	C. M. Hutchinson, B. A., M. A. E. B.	Imperial Agricultural Bacteriologist.	...	...	8	1,100	
11	T. B. Fletcher, R. N., F. L. S., F. E. S., F. Z. S.	Imperial Entomologist ...	...	...	7	800	
12	Vacant	Supernumerary Entomologist.	...	...	...	...	
13	J. H. Walton, B. A. (Cantab.), B. Sc. (Dunelm), Diploma in Agriculture (Cantab.).	Supernumerary Agricultural Bacteriologist.	...	...	5	500	
14	J. N. Sen, M. A., F. C. S.	Supernumerary Agricultural Chemist.	...	...	12	460	Offg. in No. 3.
15	W. A. Davis, B. Sc., A. C. G. I., F. C. S.	Indigo Research Chemist.	...	...	1	1,250	Special appointment.

Officers of the Indian Agricultural Service serving under Local Governments.

MADRAS.							
1	R. W. B. C. Wood, M. A. (Cantab.).	Professor of Agriculture & Superintendent of Central Agricultural Station; also Principal, Agricultural College, and Research Institute.	...	...	12	1,000	
2	W. H. Harrison, D. Sc. (Victoria University).	Agricultural Chemist	...	...	11	1,000	
3	W. McRae, M. A., B. Sc. (Edin.)	Mycologist	...	...	9	750	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service (Years.)	Present pay. Rs.	
Officers of the Indian Agricultural Service Serving under Local Governments—contd.							
MADRAS.—contd.							
4	F. R. Parnell	Economic Botanist	...	...	4	800	
5	Edward Ballard	Entomologist	...	...	3	550	
6	C. A. Barber, M. A. (Cantab.), D.Sc., F. L. S.	Government Sugarcane Expert.	...	...	9	1,500	
BOMBAY.							
7	Harold H. Mann, D. Sc. (Leeds) ...	Principal, Agricultural College, and Professor of Chemistry.	...	...	10	1,500	
8	J. B. Knight, M. Sc. (Mass.) ...	Professor of Agriculture	...	...	14	1,000	
9	W. Burrs, B. Sc. (Edin.) ...	Economic Botanist ...	...	...	9	900	
10	Vacant	2nd do. ...	...	...	...	...	Sanctioned for 5 years only.
UNITED PROVINCES.							
11	George Clarke, F. I. C. ...	Agricultural Chemist ...	...	...	10	950	
12	H. M. Leake, M. A. (Cantab.) F. L. S.	Economic Botanist. Officiating Principal, Agricultural College.	...	...	13	1,100	
13	Vacant	Assistant Botanist ...	...	...	...	...	
BENGAL.							
14	R. S. Finkw., B. Sc. (Bangor), F. C. S.	Fibre Expert ...	...	...	12	1,000	
15	George Pittendrigh Hector, M.A., B. Sc. (Aberdeen).	Economic Botanist ...	...	...	9	750	
16	Harold E. Annett, B. Sc., F.C.S., M.S.E.A.C., F.I.C. (Dip.)	Agricultural Chemist ...	...	...	10	750	
BIHAR AND ORISSA.							
17	E. J. Woodhouse, M.A., F.L.S., Diploma in Agriculture (Canterbury).	Principal, Agricultural College, and Economic Botanist.	...	...	10	800	
18	C. S. Taylor, B.A. (Cantab) ...	Agricultural Chemist, and Officiating Principal, Agricultural College.	...	...	10	950	
19	G. C. Slerrard	Professor of Agriculture ..	...	...	8	700	
PUNJAB.							
20	J. H. Barnes, B. Sc. (Birm.), F.I.C., F.C.S.	Principal, Agricultural College, and Agricultural Chemist.	...	...	11	1,100	
21	W. Roberts, B. Sc.	Professor of Agriculture	...	...	10	800	
22	David Milne, B. Sc. (Aberd.) ...	Economic Botanist ...	...	...	10	950	
23	Vacant	Entomologist ...	...	...	...	...	Sanctioned for 5 years only.
BURMA.							
24	F. J. Warth, B. Sc. M. Sc. (Birm.).	Agricultural Chemist ..	...	...	11	950	B. A. Rs. 100.
25	Vacant	Economic Botanist ...	...	...	...	...	
CENTRAL PROVINCES.							
26	F. J. Plyman, A.C.G.I. (London) ..	Agricultural Chemist ..	...	...	12	1,600	
27	R. J. D. Graham, M.A., B. Sc. (St. Andrews).	Economic Botanist ...	...	...	10	800	
ASSAM.							
28	A. A. Meggitt, B. Sc. (London), F.C.S.	Agricultural Chemist ...	...	...	12	950	

* The Scale Rs. 500—50—1,000 is not the initial Scale. Officers are Supernumeraries for three years on Rs. 400—30—460 (see Nos. 12, 13 and 14).

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service Years.	Present pay. Rs.	
Officers at the Forest Research Institute and College, Dehra Dun.							
1	B. B. Osmaston, F.C.H., M.B.O.U.	President, Forest Research Institute and College.	...	...	29	1,900	
2	R. S. Hole, F.C.H., F.L.S., F.E.S.	Forest Botanist	...	...	21	1,250	
3	R. S. Pearson, F.L.S. ...	Forest Economist	...	...	19	1,150	
4	R. E. Marsden ...	Sylviculturist	...	...	17	1,050	
5	Puran Singh, F.C.S. ...	Chemical Adviser	...	...	10	500	560-20-800.

Department of Public Instruction.

BENGAL.							
1	E. B. Watson, M.A., D.Sc.	Professor of Chemistry, Dacca College.	...	...	13	950	On furlough.
2	E. P. Harrison, Ph.D.	Professor of Physics, Presidency College.	...	...	9	900	On military duty.
3	D. B. Meek, M.A., B.Sc.	Professor of Physics, Dacca College.	...	...	6	700	Services placed at the disposal of Government of India. See page 70 No. 5.
4	W. Saunders, M.Sc.	Professor of Chemistry, Civil Engineering College.	...	...	2	500	
5	W. A. Jenkins, M.Sc.	Professor of Physics, Dacca College.	...	...	1	500	
BOMBAY.							
6	H. N. Allen, B.Sc., Ph.D.	Principal and Professor of Physics, and Electrical Engineering, College of Engineering, Poona.	...	...	17	1,000	P. A. Rs. 250.
7	C. J. J. Fox, Ph.D., B.Sc.	Professor of Chemistry, College of Engineering, Poona.	...	...	8	850	
8	A. N. Meldrum, D.Sc.	Professor of Physics, and Chemistry, Madharlal Ranchodal Science Institute, Ahmedabad.	...	...	5	950	
9	W. T. Saxton, M.A., F.L.S.	Professor of Botany, Madharlal Ranchodal Science Institute, Ahmedabad.	...	...	4	...	On military duty.
MADRAS.							
10	B. Ll. Jones, M.A.	Professor of Physics, Presidency College. Also Meteorologist and Deputy Director, Madras Observatory.	...	...	28	1,000	P. A. Rs. 500; O. A. Rs. 300.
11	P. F. Fyson, B.A., F.L.S.	Professor of Botany, Presidency College.	...	...	13	1,000	
12	W. E. Smith, M.A.	Professor of Chemistry, Presidency College.	...	...	10	800	On military duty.
13	J. L. Simonsen, D.Sc.	Additional Professor of Chemistry, Presidency College.	...	...	7	800	
14	H. B. Mathews	Professor of Higher Electrical Engineering, College of Engineering.	...	...	2	750	On probation.
BIHAR AND ORISSA.							
15	V. H. Jackson, M.A.	Professor of Physics, and Officiating Principal, Patna College.	...	...	17	1,000	A. A. Rs. 200, P. A. 200.
16	K. S. Caldwell, B.Sc., M.A., Ph.D.	Professor of Chemistry.	...	...	7	800	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

		ADMINISTRATION OF					REMARKS.
No.	Names of Officers.	Designation.	Qualification.	Terms of employment.	Length of service. (Years)	Present Pay. Rs.	
Department of Public Instruction—contd.							
BURMA.							
17	K. M. Ward, B.A. ...	Professor of Physics, Government College, Rangoon.	...	...	6	700	B. A. Rs. 100. On leave from 4th February 1915.
18	E. Bellars, M.A. ...	Professor of Chemistry, Government College, Rangoon.	...	...	6	700	B. A. Rs. 100.
CENTRAL PROVINCES.							
19	M. Owen, M.Sc. ...	Principal and Professor of Physics, Victoria College of Science, Nagpur.	...	...	5	700	
20	L. J. Goldsworthy, B.A. ...	Professor of Chemistry, Victoria College of Science, Nagpur.	...	...	3	550	
PUNJAB.							
21	A. S. Hemmy, B.A., M.Sc. ...	Professor of Physics, Government College, Lahore.	...	...	19	1,000	P. A. Rs. 200.
22	B. H. Wilson, B.A. ...	Professor of Chemistry, Government College, Lahore.	...	...	4	650	
23	H. B. Danncliffe, M.A., B.Sc. ...	Professor of Chemistry, Khalsa College, Amritsar.	...	...	3	560	
24	Lieutenant-Colonel J. Stephenson, M.B., F.R.C.S., I.M.S.	Principal and Professor of Biology, Government College, Lahore.	...	...	17	1,500	L. A. Rs. 150.
UNITED PROVINCES.							
25	P. P. Phillips, Ph.D., F.I.C. ...	Professor of Chemistry, Thomason College, Roorkhee.	...	...	13	850	There are probably 2 or 3 Professors of Physics, Chemistry etc. in the United Province, but the details in the Civil Lists are insufficient to identify them.

Miscellaneous Departments.

BENGAL.							
1	N. Annandale, D.Sc., C.M.Z.S., F.L.S.	Director, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
2	S. W. Kemp, B.A.	Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
3	B. L. Chaudhuri, B.A., B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
4	F. H. Gravely, B.Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
5	I. H. Burkill, M.A., F.L.S.	Officiating Reporter on Economic Products and Superintendent, Industrial Section, Indian Museum.	...	...	...	...	
6	Lieutenant-Colonel J. J. Bourke, I.M.S.	Assay Master, Calcutta	...	...	...	...	
7	Lieutenant-Colonel F. T. C. Hughes, I.A., F.C.S., M.I.M.M.	Deputy Assay Master, Calcutta.	...	...	...	...	
8	C. C. Calder	Curator of Herbarium, Royal Botanic Garden, Calcutta.	...	...	...	...	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation..	Qualifications	Terms of employment.	Length of service. (Years.)	Present pay. Rs.	
Miscellaneous Departments—contd.							
BENGAL—contd.							
9	G. E. Shaw ...	Quinologist to the Government of Bengal.	...	...	...	...	
10	R. L. Jenks, F.I.C., F.C.S. ...	Chemical Examiner to Government for Customs and Excise.	...	...	...	1,100	H. A. Rs. 175.
BOMBAY.							
11	Lieutenant-Colonel J. L. T. Jones, I.M.S., M.B., F.C.S., M.I.M.M., F.G.S.	Assay Master, Bombay ...	...	...	...	...	
12	Captain H. B. Drake, I.M.S.	Deputy Assay Master, Bombay.	...	...	...	...	On military duty.
MADRAS.							
13	C. E. McKenzie, Ph. D.	Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
14	N. L. Sheldon, Ph. D., F.I.C.	Manager and Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
15	L. L. Smith, M.A., F.I.C.	Chemist, Cordite Factory, Aruvankadu.	...	...	...	...	
16	C. J. O'Callaghan, B. Sc.	Chemical Examiner to Government for Customs and Excise, and Deputy Commissioner of Abkari, Madras.	...	...	...	...	On probation. Combined out of India for six months from 2.3.1917. Jd
UNITED PROVINCES.							
17	A. Marshall, F.I.C., F.C.S.	Chemical Inspector, Indian Ordnance Department, Naini Tal.	...	...	...	...	Trained Analytical Chemist with theoretical and practical knowledge of the chemistry of dyes and pigments.
18	P. S. MacMahon ...	Public Analyst	...	...	...	...	

Medical Department.

BENGAL.							
1	Lt.-Col. F. N. Windsor, B.A., M.B., B. Sc., I.M.S. ...	Chemical Examiner to Government and Professor of Chemistry, Medical College, Calcutta	...	...	...	1,500	On deputation.
BOMBAY.							
2	Major W. H. Dickinson, M.B., I.M.S. ...	Professor of Chemistry, Grant Medical College, and Chemical Analyst to Government.	...	...	...	1,500	S. A. Rs. 300.
BACTERIOLOGICAL LABORATORY.							
3	Major W. H. Liston, M.D., D.P.H., I.M.S. ...	Director, Bombay Bacteriological Laboratory, and Consulting Bacteriologist, Grant Medical College, Bombay.	...	...	...	1,150	
4	Major T. H. Gloster, M.B., D.P.H., I.M.S. ...	.....	...	...	...	...	Surrendered on mobilisation.
5	Captain W. D. H. Stevenson, M.A., M.B., I.M.S. ...	.....	...	...	...	...	Ditto.
6	Captain C. R. Knowles, I.M.S. ...	.....	...	...	...	850	Doing duty at the Laboratory.
7	D. A. Turkhad, M.B. ...	.....	...	...	...	800	Ditto. I. A. Rs. 200.
MADRAS.							
8	Lieutenant-Colonel A. Miller, M.B., L.R.C.P., I.M.S. ...	Professor of Chemistry, Medical College, and Chemical Examiner. Also Principal, Medical College (sub. pro tem.). Also Professor of Medical Jurisprudence.	...	...	...	1,290	H. A. Rs. 125. S. A. Rs. 150.

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. (years.)	Present pay Rs.	
Medical Department—contd.							
BURMA.							
9	Major T. F. Owens, I.M.S. ...	Chemical Examiner, and Bacteriologist; Police Surgeon, General Hospital, Rangoon (in addition.)	...	...	...	1,080	C. A. Rs. 370. L. A. Rs. 100.
PUNJAB							
10	Lieutenant-Colonel J. A. Black, M.B., I.M.S.	Chemical Examiner to Government, Lahore.	...	...	...	1,500	
UNITED PROVINCES.							
11	Lieutenant-Colonel W.D. Sutherland	Chemical Examiner to Government, United Provinces.	...	...	...	...	
UNITED PROVINCES AND CENTRAL PROVINCES.							
12	E. H. Hankin, M.A., Sc. D. ...	Chemical Examiner to Government. Analyst and Bacteriologist for the United Provinces and Central Provinces.	...	...	...	...	
Meteorological Department.							
SIMLA.							
1	W. G. Thomas Walker, C.S.I., M.A., Sc.D., F.R.S.	Director-General of Observatories.	...	...	15	2,000	
2	G. C. Simpson, D. Sc., F.R.S. ...	Imperial Meteorologist...	...	...	11	1,000	
3	C. W. B. Normand, M.A., B.Sc. ...	Ditto	...	...	4	600	
4	Hem Raj, Rai Bahadur ...	Ditto	...	...	30	600	
5	D. B. Meek, M.A., B. Sc. ...	Professor, Dacca College	...	...	6	900	See Department of Public Instruction, page 4, No. 3.
AGRA.							
6	J. H. Field, M.A., B.Sc. ...	Director, Aerological Observatory.	...	...	13	1,200	
7	W. A. Harwood, M.Sc. ...	Assistant Aerological Observatory.	...	...	7	550	
KODAIKANAL.							
8	John Evershed, F.R.S.	Director, Kodai kanal and Madras Observatory.	...	...	11	1,250	
9	T. Royds, D.Sc. ...	Assistant Director, Kodai kanal Observatory.	...	...	6	750	
BOMBAY (COLABA).							
10	N. A. P. Moos, D.Sc. (Edin.) F.R.S.E.	Director, Bombay and Alibagh Observatories, Bombay.	...	...	33	950	
CALCUTTA.							
11	C. W. Peake, M.A. ...	Meteorologist, Calcutta...	...	...	22	500	

List of Scientific Officers in Government Service in India.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS
		Designation.	Qualifications.	Terms of employment.	Length of service. Years.	Present pay. Rs.	
Botanical Survey of India.							
1	Major A. T. Gage, I.M.S., M.A., M.B., B. Sc., F. L. S., F.A.S.B.	Director, Botanical Survey of India.	...	...	19	1,300	Receives his pay from the Government of Bengal as Superintendent, Royal Botanical Gardens, Sibpur. He receives no remuneration as ex-officio Director of the Botanical Survey.
2	H. G. Carter, M.B., Ch. B. (Edin.)	Economic Botanist to the Survey of India.	...	...	4	640	Scale 630—20—800.
The following officers are associated in the Botanical Survey of India.							
1	W. Barns, B. Sc. (Edin.)	Economic Botanist, Bombay.	...	...	9	800	
2	F. R. Parnell	Economic Botanist, Madras.	...	...	4	700	
3	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist, United Province.	...	...	13	1,170	
Geological Survey of India.							
1	H. H. Hayden, C.I.E., D. Sc., F. R. S., B.A., P.A.I. (T. D.), F.G. S., F.A.S.B.	Director, Geological Survey of India.	...	...	22	2,000	
Superintendents Rs. 1,000 - 80 - 1,400.							
2	C. S. Middlemiss, B.A. (Cantab), F.G.S., F.A.S.B.	Superintendent	...	...	33	1,430	Charge allowance Rs. 60.
3	E. Vredenburg, B.L. B.Sc. (France), A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	22	1,400	
4	L. L. Fermor, A.R.S.M. D. Sc. (London), F.G.S.	Ditto	...	...	15	1,400	
Assistant Superintendents 16. For 5 years Rs. 350 - 30 - 500. Thereafter Rs. 500 - 50 - 1,000.							
5	G. E. Pilgrim, D. Sc. (Lond.), F.G.S.	Assistant Superintendent	...	...	15	900	
6	G. H. Tipper, M.A. (Cantab), F.G.S.	Ditto	...	...	14	850	
7	H. Walker, A.R.C.S., F.G.S., A.I. M.M.	Ditto	...	...	13	800	
8	E. H. Pascoe, M.A. (Cantab), D. Sc. (London).	Ditto	...	...	12	900	
9	K. A. H. Holloway, M.A. (Cantab), A.R.S.M., F.G.S., A.I.M.M.	Ditto	...	...	12	700	
10	G. de Purcell Cotter, B.A. (Dub.), F.G.S.	Ditto	...	...	12	950	(Includes Rs. 150 allowance for Curator.)
11	J. G. Brown, M. Sc. (Dunelm), F.G.S., M.I.M.E.	Ditto	...	...	12	950	(Includes Rs. 150 allowance as Palaeontologist.)
12	H. C. Jones, A.R.S.M., A.R.C.S., F.G.S.	Ditto	...	...	11	700	
13	A. M. Heron, B. Sc. (Edin.), F. G. S., A.I.C.E.	Ditto	...	...	11	700	
14	M. Stuart, D. Sc. (Birm.), F.G.S., B. Sc. (rech. Lond.), F.C.S.	Ditto	...	...	10	650	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

No	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service, years.	Present pay, Rs.	
Geological Survey of India—con'd.							
15	N. D. Daru, B. Sc., B. A., B. Sc. (Lond.), A. R. S. M., Bar-at-Law.	Professor, Madras Presidency College.	...	...	10	700	
16	C. S. Fox, B. Sc., M. I. M. E., F. G. S.	Assistant Superintendent	...	...	6	470	
17	R. C. Burton, B. Sc., F. G. S. ..	Ditto	...	...	5	470	
18	R. W. Palmer, M. Sc (Manch.) ...	Ditto	...	...	4	380	
19 } & 20 }	Vacant.						
Chemist (1)—Rs. 500—50—1,000							
21	W. A. K. Christie, B. Sc. (Edin.), Ph. D.	Chemist	...	...	11	900	
Imperial Department of Agriculture.							
1	M. W. Sayer, B. A.	Assistant to the Agricultural Adviser to the Government of India.	...	...	3	700	
2	G. A. Gammie, F. L. S.	Imperial Cotton Specialist	...	...	33	1,200	
3	Vacant	Imperial Agricultural Chemist.	...	...	...	...	Rs. 500—50—1,000.*
4	E. J. Butler, M. B., F. L. S. ...	Imperial Mycologist ...	...	...	16	1,400	
5	A. Howard C. I. E., M. A., F. L. S., A. R. C. S.	Imperial Economic Botanist.	...	...	12	1,200	
6	F. J. Freshwater Shaw, B. Sc., (London), A. R. C. S. F. L. S.	2nd Imperial Mycologist	...	...	7	750	
7	Mrs. G. L. C. Howard, M. A., Kaiser-i-Hind (Gold Medallist).	2nd Imperial Economic Botanist.	...	...	7	950	Special appointment.
8	G. S. Henderson, N. D. A., N. D. D.	Officiating Imperial Agriculturist.	...	...	10	1,100	
9	F. M. Hewlett, B. A., F. E. S. ...	Imperial Pathological Entomologist.	...	...	10	1,100	
10	C. M. Hutchinson, B. A., M. A. E. B.	Imperial Agricultural Bacteriologist.	...	...	8	1,100	
11	T. B. Fletcher, R. N., F. L. S., F. E. S., F. Z. S.	Imperial Entomologist ...	...	...	7	800	
12	Vacant	Supernumerary Entomologist.	...	...	...	...	
13	J. H. Walton, B. A. (Cantab), B. Sc. (Dunelm), Diploma in Agriculture (Cantab).	Supernumerary Agricultural Bacteriologist.	...	...	5	500	
14	J. N. Sen, M. A., F. C. S. ...	Supernumerary Agricultural Chemist.	...	...	12	460	Offg. in No. 3.
15	W. A. Davis, B. Sc., A. C. G. I., F. C. S.	Indigo Research Chemist.	...	...	1	1,250	Special appointment.

Officers of the Indian Agricultural Service serving under Local Governments.

MADRAS.							
1	R. W. B. C. Wood, M. A. (Cantab.).	Professor of Agriculture & Superintendent of Central Agricultural Station; also Principal, Agricultural College and Research Institute.	...	...	12	1,000	
2	W. H. Harrison, D. Sc. (Victoria University).	Agricultural Chemist	...	...	11	1,000	
3	W. McKee, M. A., B. Sc. (Edin.)	Mycologist	...	...	9	750	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA.—*contd.*

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications	Terms of employment.	Length of service (years.)	Present pay, Rs.	
Officers of the Indian Agricultural Service Serving under Local Governments—contd.							
MADRAS.—contd.							
4	F. R. Parnell ...	Economic Botanist ...	...	...	4	800	
5	Edward Ballard ...	Entomologist ...	...	...	3	550	
6	C. A. Barber, M. A. (Cantab), B. Sc., F. L. S.	Government Sugarcane Expert.	...	...	9	1,500	
BOMBAY.							
7	Harold H. Mann, D. Sc. (Leeds) ...	Principal, Agricultural College, and Professor of Chemistry.	...	...	10	1,500	
8	J. B. Knight, M. Sc. (Mass.) ...	Professor of Agriculture	...	...	14	1,000	
9	W. Burle, B. Sc. (Edin.) ...	Economic Botanist ...	...	...	9	900	
10	Vacant ...	2nd do. ...	...	...	...	...	Sanctioned for 5 years only.
UNITED PROVINCES.							
11	George Clarke, F. I. C. ...	Agricultural Chemist ...	...	...	10	950	
12	H. M. Leake, M. A. (Cantab), F. L. S.	Economic Botanist, Offi- ciating Principal, Agri- cultural College.	...	...	13	1,100	
13	Vacant ...	Assistant Botanist ...	...	...	...	...	
BENGAL.							
14	R. S. Finlow, B. Sc. (Bangor), F. C. S.	Fibre Expert ...	...	...	12	1,000	
15	George Pittendrigh Hector, M.A., B. Sc. (Aberdeen).	Economic Botanist ...	...	...	9	750	
16	Harold E. Annett, B. Sc., F.C.S., M.S.E.A.C., F.I.C. (Dip.)	Agricultural Chemist ...	...	...	10	750	
BIHAR AND ORISSA.							
17	E. J. Woodhouse, M.A., F.L.S., Diploma in Agriculture (Canter- bury).	Principal, Agricultural College and Economic Botanist.	...	...	10	800	
18	C. S. Taylor, B.A. (Cantab) ...	Agricultural Chemist, and Officiating Principal, Agricultural College.	...	...	10	950	
19	G. C. Sterrard ...	Professor of Agriculture ..	...	...	8	700	
PUNJAB.							
20	J. H. Barnes, B. Sc. (Birm.), F.I.C. F.C.S.	Principal, Agricultural Col- lege, and Agricultural Chemist.	...	...	11	1,100	
21	W. Roberts, B. Sc. ...	Professor of Agriculture	...	...	10	800	
22	David Milne, B. Sc. (Aberd.) ...	Economic Botanist ...	...	...	10	950	
23	Vacant ...	Entomologist ...	...	...	...	...	Sanctioned for 5 years only.
BURMA.							
24	F. J. Warth, B. Sc. M. Sc. (Birm.).	Agricultural Chemist ..	...	...	11	950	B. A. Rs. 103.
25	Vacant ...	Economic Botanist ...	...	...	...	...	
CENTRAL PROVINCES.							
26	F. J. Plyman, A.C.G.I. (London) ..	Agricultural Chemist ..	...	...	12	1,000	
27	R. J. D. Graham, M.A., B. Sc. (St. Andrews).	Economic Botanist ...	...	...	10	800	
ASSAM.							
28	A. A. Meggitt, B. Sc. (London), F.C.S.	Agricultural Chemist ...	...	...	12	950	

* The Scale Rs. 500—50—1,000 is not the initial Scale. Officers are Supernumeraries for three years on Rs. 400—30—460 (see Nos. 12, 13 and 14).

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service Years.	Present pay. Rs.	
Officers at the Forest Research Institute and College, Dehra Dun.							
1	B. B. Osmaston, F.C.H., M.B.O.U.	President, Forest Research Institute and College.	...	...	29	1,900	
2	R. S. Hole, F.C.H., F.L.S., F.E.S.	Forest Botanist	...	...	21	1,250	
3	R. S. Pearson, F.L.S. ...	Forest Economist	...	...	19	1,150	
4	R. E. Marsden ...	Sylviculturist	...	...	17	1,050	
5	Puran Singh, F.C.S. ...	Chemical Adviser	...	...	10	500	500-20-800.

Department of Public Instruction.

BENGAL.							
1	E. R. Watson, M. A., D. Sc.	Professor of Chemistry, Dacca College.	...	...	13	950	On furlough.
2	E. P. Harrison, Ph. D.	Professor of Physics, Presidency College.	...	...	9	900	On military duty.
3	D. B. Meek, M.A., B. Sc.	Professor of Physics, Dacca College.	...	...	6	700	Services placed at the disposal of Government of India. See page 70 No 5.
4	W. Saunders, M. Sc. ...	Professor of Chemistry, Civil Engineering College.	...	...	2	500	
5	W. A. Jenkins, M. Sc.	Professor of Physics, Dacca College.	...	...	1	500	
BOMBAY.							
6	H. N. Allen, B. Sc., Ph. D.	Principal and Professor of Physics, and Electrical Engineering, College of Engineering, Poona.	...	...	17	1,000	P. A. Rs. 250.
7	C. J. J. Fox, Ph.D., B.Sc.	Professor of Chemistry, College of Engineering, Poona.	...	...	8	850	
8	A. N. Meldrum, D.Sc.	Professor of Physics, and Chemistry, Madharlal Ranchodlal Science Institute, Ahmedabad.	...	...	5	950	
9	W. T. Saxton, M.A., F.L.S.	Professor of Botany, Madharlal Ranchodlal Science Institute, Ahmedabad.	...	...	4	...	On military duty.
MADRAS.							
10	R. L. Jones, M.A. ...	Professor of Physics, Presidency College. Also Meteorologist and Deputy Director, Madras Observatory.	...	...	28	1,000	P. A. Rs. 500; O. A. Rs. 300.
11	P. F. Fyson, B.A., F.L.S.	Professor of Botany, Presidency College.	...	...	13	1,000	
12	W. E. Smith, M.A. ...	Professor of Chemistry, Presidency College.	...	...	10	800	On military duty.
13	J. L. Simonsen, D.Sc.	Additional Professor of Chemistry, Presidency College.	...	...	7	800	
14	H. B. Mathews ...	Professor of Higher Electrical Engineering, College of Engineering.	...	...	2	750	On probation.
BIHAR AND ORISSA.							
15	V. H. Jackson, M.A. ...	Professor of Physics, and Officiating Principal, Patna College.	...	...	17	1,000	A. A. Rs. 200, P. A. 200.
16	K. S. Caldwell, B.Sc., M.A., Ph.D.	Professor of Chemistry.	...	...	7	800	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifica- tion.	Terms of employ- ment.	Length of service. (Years)	Present pay. Rs.	
Department of Public Instruction—contd.							
BURMA.							
17	K. M. Ward, B.A. ...	Professor of Physics, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100. On leave from 4th February 1915.
18	A. E. Pellars, M.A. ...	Professor of Chemistry, Government College, Ran- goon.	...	...	6	700	B. A. Rs. 100.
CENTRAL PROVINCES.							
19	M. Owen, M.Sc. ...	Principal and Professor of Physics, Victoria College of Science, Nag- pur.	...	...	5	700	
20	L. J. Goldsworthy, B.A.	Professor of Chemistry, Victoria College of Science, Nagpur.	...	...	3	550	
PUNJAB.							
21	A. S. Hemmy, B.A., M.Sc.	Professor of Physics, Government College, La- hore.	...	...	19	1,000	P. A. Rs. 200.
22	B. H. Wilsdon, B.A.	Professor of Chemistry, Government College, La- hore.	...	...	4	650	
23	H. B. Dunncliffe, M.A., B. Sc.	Professor of Chemistry, Khalsa College, Amrit- sar.	...	...	3	560	
24	Lieutenant-Colonel J Stephenson, M.B., F.R.C.S., I.M.S.	Principal and Professor of Biology, Government College, Lahore.	...	...	17	1,500	L. A. Rs. 150.
UNITED PROVINCES.							
25	P. P. Phillips, Ph.D., F.I.C.	Professor of Chemistry, Thomason College, Roor- kee.	...	...	13	850	There are probably 2 or 3 Pro- fessors of Physics, Chemistry etc. in the United Province, but the details in the Civil Lists are insufficient to identify them.

Miscellaneous Departments.

BENGAL.							
1	N. Annandale, D. Sc., C.M.Z.S., F.L.S.	Director, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
2	S. W. Kemp, B.A. ...	Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
3	B. L. Chaudhuri, B.A., B. Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
4	F. H. Gravely, B. Sc.	Assistant Superintendent, Zoological Survey of India, Indian Museum, Calcutta.	...	...	...	...	
5	I. H. Burkill, M.A., F.L.S.	Officiating Reporter on Economic Products and Superintendent, Industrial Section, Indian Museum.	...	...	...	...	
6	Lieutenant-Colonel J. J. Bourke, I.M.S.	Assay Master, Calcutta ...	...	...	...	...	
7	Lieutenant-Colonel F. T. C. Hughes, I.A., F.C.S., M.I.M.M.	Deputy Assay Master, Calcutta.	...	...	...	...	
8	C. C. Calder ...	Curator of Herbarium, Royal Botanic Garden, Calcutta.	...	...	...	...	

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. (Years.)	Present pay. Rs.	
Miscellaneous Departments—contd.							
BENGAL—contd.							
9	G. E. Shaw ...	Quinologist to the Government of Bengal.	...	...	...	...	
10	R. L. Jenks, F.I.C., F.C.S. ...	Chemical Examiner to Government for Customs and Excise.	...	...	...	1,100	H. A. Rs. 175.
BOMBAY.							
11	Lieutenant-Colonel J. L. T. Jones, I.M.S., M.B., F.C.S., M.I.M.M., F.G.S. ...	Assay Master, Bombay ...	...	...	...	...	
12	Captain H. B. Drake, I.M.S. ...	Deputy Assay Master, Bombay.	...	...	...	...	On military duty.
MADRAS.							
13	C. E. McKenzie, Fh. D. ...	Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
14	N. L. Sheldon, Ph.D., F.I.C. ...	Manager and Chemist, Cordite Factory, Aruvankadu (sub. pro tem.).	...	...	...	...	
15	L. L. Smith, M.A., F.I.C. ...	Chemist, Cordite Factory, Aruvankadu.	...	...	...	...	
16	C. J. O'Callaghan, B. Sc. ...	Chemical Examiner to Government for Customs and Excise, and Deputy Commissioner of Abkari, Madras.	...	...	...	700	On probation.
UNITED PROVINCES.							
17	A. Marshall, F.I.C., F.C.S. ...	Chemical Inspector, Indian Ordnance Department, Naini Tal.	...	...	...	...	
18	P. S. MacMahon ...	Public Analyst ...	...	...	...	...	

Medical Department.

BENGAL							
1	Lt.-Col. F. N. Windsor, B.A., M.B., B. Sc., I.M.S. ...	Chemical Examiner to Government and Professor of Chemistry, Medical College, Calcutta.	...	...	...	1,500	On deputation.
BOMBAY.							
2	Major W. H. Dickinson, M.B., I.M.S. ...	Professor of Chemistry, Grant Medical College, and Chemical Analyst to Government.	...	...	...	1,500	S. A. Rs. 300.
BACTERIOLOGICAL LABORATORY.							
3	Major W. H. Liston, M.D., D.P.H., I.M.S. ...	Director, Bombay Bacteriological Laboratory, and Consulting Bacteriologist, Grant Medical College, Bombay.	...	...	...	1,150	
4	Major T. H. Gloster, M.B., D.P.H., I.M.S. ...	.....	...	...	...	...	Surrendered on mobilisation.
5	Captain W. D. H. Stevenson, M.A., M.B., I.M.S. ...	.....	...	...	...	...	Ditto.
6	Captain C. R. Knowles, I.M.S. ...	.....	...	...	...	850	Doing duty at the Laboratory.
7	D. A. Turkhad, M.B. ...	.....	...	...	...	800	Ditto. I. A. Rs. 200.
MADRAS.							
8	Lieutenant-Colonel A. Miller, M.B., L.R.C.P., I.M.S. ...	Professor of Chemistry, Medical College, and Chemical Examiner. Also Principal, Medical College (sub. pro tem.). Also Professor of Medical Jurisprudence.	M.B., F.I.C., M.R.C.S. (Eng.), L.R.C.P. (Lond.).	...	20	(a) 1,200 1,260	H. A. Rs. 125. S. A. Rs. 150. I. A. Rs. 200. (a) Pay Rs. 800 to Rs. 1,500 by annual increments of Rs. 70 each, Rs. 1,550 after completing 20 years service, Rs. 1,650 after advancement to the next scale of pay.

LIST OF SCIENTIFIC OFFICERS IN GOVERNMENT SERVICE IN INDIA—contd.

No.	Names of Officers.	ADMINISTRATION OF					REMARKS.
		Designation.	Qualifications.	Terms of employment.	Length of service. (years.)	Present pay Rs.	
Medical Department—contd.							
BURMA.							
9	Major T. F. Owens, I.M.S. ...	Chemical Examiner, and Bacteriologist; Police Surgeon, General Hospital, Rangoon (in addition.)	...	...	...	1,080	C. A. Rs. 370. L. A. Rs. 100.
PUNJAB							
10	Lieutenant-Colonel J. A. Black, M.B., I.M.S.	Chemical Examiner to Government, Lahore.	...	...	...	1,500	
UNITED PROVINCES.							
11	Lieutenant-Colonel W.D. Sutherland	Chemical Examiner to Government, United Provinces.	...	...	...	...	
UNITED PROVINCES AND CENTRAL PROVINCES.							
12	E. H. Hankin, M.A., Sc. D. ...	Chemical Examiner to Government. Analyst and Bacteriologist for the United Provinces and Central Provinces.	...	...	...	...	
Meteorological Department.							
SIMLA.							
1	W. G. Thomas Walker, C.S.I., M.A., Sc.D., F.R.S.	Director-General of Observatories.	...	...	15	2,000	
2	G. C. Simpson, D. Sc., F.R.S. ...	Imperial Meteorologist...	...	...	11	1,000	
3	C. W. B. Normand, M.A., B.Sc. ...	Ditto	...	...	4	600	
4	Hem Raj, Rai Bahadur ...	Ditto	...	...	30	600	
5	D. B. Meek, M.A., B. Sc. ...	Professor, Dacca College	...	...	6	900	See Department of Public Instruction, page 4, No. 3.
AGRA.							
6	J. H. Field, M.A., B.Sc. ...	Director, Aerological Observatory.	...	...	13	1,200	
7	W. A. Harwood, M.Sc. ...	Assistant Aerological Observatory.	...	...	7	550	
KODAIKANAL.							
8	John Evershed, F.R.S. ...	Director, Kodai kanal and Madras Observatory.	...	...	11	1,250	
9	T. Royds, D.Sc. ...	Assistant Director, Kodai kanal Observatory.	...	...	6	750	
BOMBAY (COLABA).							
10	N. A. F. Moos, D.Sc. (Edin.) F.R.S.E.	Director, Bombay and Alibagh Observatories, Bombay.	...	...	38	950	
CALCUTTA.							
11	C. W. Peake, M.A. ...	Meteorologist, Calcutta...	...	...	22	500	

19
Home (ESA)

CN-1853A.

Memo. 1853A-1 27.4.17

The officer in charge
of the Department
of Industries is requested
to furnish for transmission
to the Indian Industries
Commission a complete
statement of the
annual expenditure
on technical + industrial
education (including
grants-in-aid) in this
Presidency from the
year 1911-12 onwards.

SA
24.4.17.

18
25.4.17

Elk
27.4.17

2/20
The officer in ch.
The Dept. of Industries.
(Memo only)

Home (Est.) Dept.

CN-1853. From the Secy, Ind. Div.

Commission, No 32903/16-4

Memo. No. 1853A-2, dt. 27.4.17

(paras 2 to 4 of current. page 1 + 2 of 1st)

An extract from a letter, ^{No 32903} dated the 16th April 1917, from the Secretary, Indian Industrial Commission, ~~with~~ ^{a list} of scientific officers in Govt service received therewith, ~~is~~ ^{are} forwarded to the S.P.I. and he is requested to revise the list as desired by the Commission ~~and~~ ⁱⁿ ~~the~~ ^{as far as} the officers in the Dept. of Public Instruction in this Presidency are concerned + submit it to Govt.

SA
24.4.17
25/4/17

27.4.17

27/4/17

The S.P.I.

With copy of current (except para 1) + encl. list

12 D

Home (25th) Sept

Letter No 1853A-3, dt 27.4.17

To The General Officer
Commanding 9th (Separate)
Division,
Ootacamund.

gives substance
27/4/17

Sir,

I am directed to forward an extract from a letter ^(dated the 16th April 1917) from the Secretary, Indian Industrial Commission ~~to~~ together with a copy of a list of Scientific officers in Govt service received therewith, and to request that the list may be revised as desired by the Commission so far as it relates to officers in the cordite Factory, Arunankadu, + ~~that it may be~~ returned to this Govt. at an early date.

I have re.

SK
24/4/17. EW
27.4.17

13
C.M. 1994 A 29
C.F. - 29
9.5.17
- 22
DEPARTMENT.

Received 6 MAY 1917 191 . Registered 191 .

Subject.

Industrial Education. Submitting a statement of
annual expenditure on ----- from 1911-12 to 1915-16.

ENCLOSURES
No. 1
Spare copies

G. cur No. 47.

Station Madras. , Dated the 5th May 1917. 191

From (Name) C.A. Innes Esq., I.C.S.
(Designation) Director of Industries.

To The Secretary to the Government of Madras,
Home (Educational) Department.

Sir,

7.10 Supra
With reference to Government Memorandum No.
1853 A-1 dated the 27th April 1917 I have the honour to
submit herewith a statement of annual expenditure on
industrial education in this Presidency from 1911-12 to
1915-16.

2. The statement refers only to schools under my
control and does not include the ~~list~~ of such institutes
as the Civil Engineering College.

I have the honour to be,
Sir,

Your most obedient servant,

Chambers

Director of Industries.

G.H. 8

14

23

Statement of expenditure on Industrial Education.

Year.	Expenditure from			Remarks.
	General revenues.	Other sources	Total	
1	2	3	4	5
1911-12	39,441 1,69,052 26,374	192,367 71665	231,808	Column (2) includes grants, scholarships, expenditure on Madura Technical Institute, Leather Trade School &c.
1912-13	69,073 1,57,023 15,285	194,062 68392	263,135	Column (3) includes expenditure from sale proceeds of manufactured articles, fees &c.
1913-14	109,044 497,632 6,620	260,950 59509	369,994	
1914-15	80,851 2,37,507 1,04,087	224,644 69192	305,495	
1915-16	82,651 2,08,028 11,874	260,684 66899	343,335	

Chinn

Director of Industries.

The statement does not ^(include) the cost of the Civil Engineering College.

G.H.

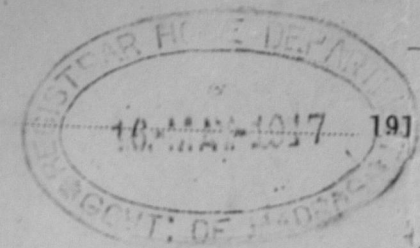
A

15/ C.No. 20618-22
16-5-17

C.F.-20.

HOME (EDUCATION) DEPARTMENT.

Received



Registered 191

Subject.

Submitting a list of scientific officers in Government Service in the Department of Public Instruction in the Madras Presidency.

ENCLOSURES.
No. _____
State copies _____

R. C. No. 3541/17

Station Madras, Dated the 14th May 191

From (Name) The Hon'ble Mr. J. H. Stone, M.A., F.R.H.S., C.I.E.,
(Designation) Director of Public Instruction, MADRAS.

To The Secretary to the Government of Madras,
HOME (EDUCATION) Department.

Sir,

With reference to Government Memorandum No. 1853 A-2 dated 27th April 1917, I have the honour to submit herewith a list of scientific officers in Government Service in the Department of Public Instruction in this Presidency.

I have the honour to be,

Sir,

Your most obedient Servant,

B. Krishnamoorti

for Director of Public Instruction

12-5-17.

Y V

No.	Names of Officers	Designation	Qualifications	Term of employment	Length of Service	Present Pay	Remarks
1	R. L.I. Jones, M.A., F.R.A.S.	Professor of Physics Presidency College		28 years		Pay: 1000 P.A.: 500 Temporary P.A.: 100	Also Meteorologist and Dy. Director, Madras Observatory. Allowance: Rs 500
2	P.F. Fyson, B.A., F.L.S.	Professor of Botany Presidency College		13		Rs Pay: 1000	
3	W.E. Smith, M.A.	Professor of Chemistry, Presidency College		10		On Mil- itary Service	
4	H.O. Kershaw, B.Sc.	Inspector of Schools, VIII Circle and Ag. Professor of Chemistry, Presidency College		8		Pay: 900 Rs	
5	J.L. Simonsen	Additional Professor of Chemistry, Presidency College		7		Pay: Rs 850	
6	H.B. Mathews	Professor of Higher Electrical Engineering, College of Engineering		2		Rs 800	

for Director of Public Instruction.

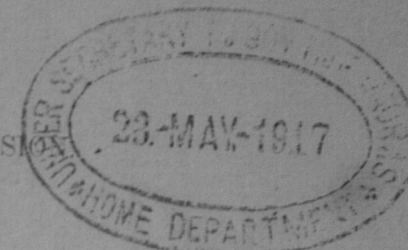
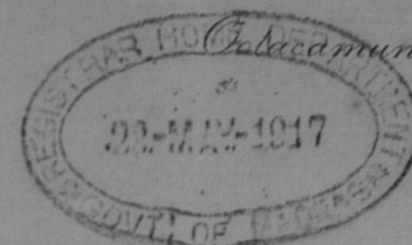
12.5.17.

Kindly address reply to:-

G. O. C., 9th Division, and not
to any officer by name.

No. 106/24/A

HEAD QUARTERS, 9TH DIVISION.



FROM

THE GENERAL OFFICER COMMANDING,
9TH (SECUNDERABAD) DIVISION

TO

THE Secretary to the Government of Madras,
Home (Education) Department,
Cotacamund.

Sir,

With reference to your No. 1853 A-3, dated 27th April
1917, I have the honour to forward 4 lists showing the names
of Scientific Officers in Government Service, attached to the
Gordite Factory, Aruvankadu, together with the printed list.

I have the honour to be,

Sir,

Your Obedient Servant,

C. H. Murray
Lieut. General,

Commanding, 9th (Secunderabad) Division.
9/22/17.

No. Names of Officers	Designation	Qualifications.	Terms of Employment.	Length of service. Years.	Present Pay Rs.	Remarks.
Dr. C.E. McKenzie, Ph. D.	Chemist, Cordite Factory, Aruvankadu.	Chemist. Doctor of Philosophy (Berlin) - Chemical lecturer, Royal Australian Military College. 5 years University course and has served in Chemical Laboratories, Defences and Customs Departments, Commonwealth of Australia - Services transferred by the Ministry of Munitions to Indian Ordnance Department and appointed Chemist, Cordite Factory on 7th December 1915.	Temporary On two years engagement from 16th November 1915.	1½	520.	

From Factory Office, Aruvankadu, 17th May 1917.

No. 408-E

B.H. Brown

Major, R.A.,

Asst. Superintendent in charge, Cordite Factory.

To

The Administrative Staff, 9th (Secunderabad) Division, Ootacamund, with reference to his No. 106/22/A. dated 11th May 1917. *Printed list returned*

1917. Head-Ofs. 9th Division, Recd. 19 MAY 1917

23

18

No. Names of Officers	Designation	Qualifications.	Terms of Employment.	Length of service. years.	Present Pay Rs.	Remarks.
L. Leigh Smith Esq., M.A., F.I.C.	Chemist, Cordite Factory, Aruvankadu.	M.A. of Cambridge (Jesus College) and member of the Senate of that University. Honours (2nd Class) in the Natural Science Tripos, Part I in 1894. Honours in Part II of that Tripos in 1895. Fellow of the Institute of Chemistry of Great Britain and Ireland. Considerable experience in the practice of scientific and applied Chemistry in the Laboratory of Mr. William Macnab, the Consulting Chemist and Expert on Explosives. Chemist to the British Aluminium Company at their factory at Milton in Staffordshire. Member of the Royal Institution of Great Britain. From February to July 1903 was attached to the Royal Gun Powder Factory, Waltham Abbey for special study of Cordite manufacture. Appointed Chemist, Cordite Factory, Aruvankadu, on 19-7-1903.	Permanent Superior Service.	14	650	Scale Rs. 500-20-580 thereafter 600-10-650

28 19

No.	Names of Officers	Designation	Administration of		Length of Service - Years.	Present Pay Rs.	Remarks.
			Qualifications.	Terms of Employment.			
	G.S. Butler Esq., B.A. (Oxon) A.I.C.	Chemist, Cordite Factory, Aruvankadu.	Senior Chemical scholar at Kemble College, Oxford, 1904-08. Holder of a Major scholarship in Natural Science from the North Riding Yorkshire County council. Holder of a leaving Exhibition from Sir William Turner's Grammar School, Coatham. 2nd Class Honours in the Final Honours School of Chemistry at Oxford with Mineralogy as a special subject. July 1908. Passed the final examination for the A.I.C. in Mineral Chemistry - July 1908. Entered the laboratory and experimental testing works of Mr. G.I. Holloway, A.R.S.M., M.I.M.M., F.I.C., Consulting Chemist and Metallurgist of 13 Emmett Street, London E, as a student - November 1908. With Mr. Holloway, latterly as principal assistant in charge of his laboratory - November 1908 - August 1910. Appointed Chemist, Cordite Fy. Aruvankadu on 2-9-1910. 5 years' engagement.	Temporary. On re-engagement for a period of one year from 2-9-17.	7	610.	Scale Rs. 500-20-580 thereafter 600-10-650.

20

29

106

List of Scientific Officers in Government Service in India.

No.	Names of Officers	Designation	Administration of			Remarks.
			Qualifications.	Terms of Employment.	Length of Service. Years.	Present Pay Rs.
	<u>Madras.</u>		<u>Miscellaneous Departments.</u>			
	Dr. N. L. Sheldon, Ph.D. (Heid), F.I.C.	Manager and Chemist, Cordite Factory, Aruvankadu (Sub protom)	Attended the Victoria University in 1895. Spent 5 years at Heidelberg University and took Degree there as Doctor of Philosophy. Spent 6 months in Hungary reporting on the Acetylene Industry of that country to Firms in England. Then one year as Assistant manager to the Milnsbridge Chemical Company. Then 2 years as Manager, of Jackson's Chemical works, Clayton. From March to August 1903 was attached to the Royal Gun Powder Factory Waltham Abbey for special study of Cordite manufacture. Appointed Chemist, Cordite Factory, Aruvankadu 16-8-03. In 1907 passed the examination for the fellowship of the Institute of Chemistry of Great Britain & Ireland. Appointed Manager (sub protom) of the Cordite Factory, Aruvankadu on 8-12-1915.	Permanent Superior service.	14	900 Scale Rs. 800-50-100

C. S. M.
15 MAY 1917

21
27

Again G.O., No. , dated 190 3
Current No. from the , No. , dated 191

Current No. 1853A from the Secy. Dorian, No. 3290, dated 16.4.1917.
Industrial Comm.

SUBJECT.

Information regarding technical
+ industrial education + about
scientific officers.

Submitted that the officer
in charge of the Dept. of Education
may be requested to furnish
the information required in
para 1 of the letter from the Secretary,
Dorian Industrial Commission. A
draft memo to him is sub^d for approval.
2. The statement received
from the Secretary to the Commission
contains the names of officers
in the Educational, Agricultural,
Medical + Separate Revenue Dept^s
+ also in the Kodaikanal Observatory
+ in the Cordite Factory, Aruvankadu.
A copy of the statement may
be sent to Revenue, Int. (Sep. Rev.),
+ dtm (Medical) Departments with
the request that ~~that~~ they will
furnish ^{as far as the officers under them are concerned} the information.

p. 1 of c.f.

p. 3 of c.f.

Approved
27.4.17.
E. H. M. 1853A-4
27.4.17

required by the Industrial
~~Exhibit from the current is~~ ^{the} ~~may be sent to each day~~
 Commission. ³² One copy
 of the statement may be
 sent to the D.P.I., and the General
 officer commanding 9th Division
 may be requested to furnish
 information so far as the
 officers in the Lodite factory
 are concerned. A draft
 memo to the D.P.I. and a draft
 letter to the G.O.C. are submitted
 for approval.

4. It is for ~~our~~ consideration
 whether the names of the Dyering
~~Exhibitor~~ Expert may be included
 in the list. If so, this may
 be done here. No reference
 to the officer in charge of the
 Dept. of Industries seems
 necessary on this point.

SK
 24.4.17.

1/11
 25/4/17

1/11

27.4.17

4/11
 27.4.17

to by Lea

Please see p. 1 enc.

The statement forwarded has been checked and necessary corrections have been made. The principal of the Combator agt. college is only an agriculturist, having been selected from the ranks of ag. dis. ^{Apparently} ~~the~~ the Commission do not want ^{him} to be included in the statement. The particulars concerning him may therefore be omitted.

The file may be returned to Home (Ede) through Revenue proper.

RR
1-5-17

Home (Ede) U.D.

RR
20-5-17

It is not quite clear whether the Principal of the College should be included or not.

25-17

Review 869c/17-1

2-5-17

C/no. 920A Ed

2-5-17

[Faint, mostly illegible handwritten notes on the left page, appearing to be bleed-through or very light writing.]

25-17

Sep. Rev. C. No. 1417

Home (Education) Department.

C.No.1853 A.

From the Secretary, Indian Industrial Commission
No.3290, dated the 16th April 1917.

Subject.

Information regarding technical and industrial
education and about scientific officers.

x

x

x

2. The statement received from the Secretary to the Commission contains the names of officers in the Educational, Agricultural, Medical and Separate Revenue Departments and also in the Kodaikanal Observatory and in the Cordite Factory, Aruvankadu. A copy of the statement may be sent to Revenue, Financial (Separate Revenue), and Local and Municipal (Medical) Departments with the request that they will furnish so far as the officers under them are concerned the information required by the Industrial Commission. Extract from the current and note may be sent to each department.

x

x

x

S.K.
24-4-17.

N.K.
25-4-17.

Issue

E.A.H.
27-4-17.

Revenue
Financial (Separate Revenue)
Local & Municipal (Medical)

u.o.

File (L.A.D.)

To Under Secy.

This Dept. is concerned only with Mr O'Sullivan, Akbari & Co. now on leave. Particulars regarding



Edn. u.o.1853 A-4
27-4-17.

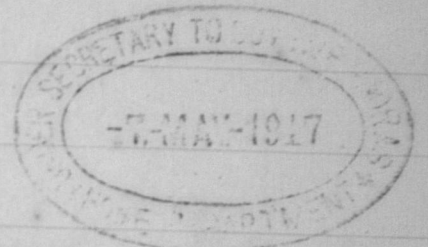
this officer are given on p. 6 of the Stat. below c.f. The file may now be returned to Home (Eoul) no.

LOK
3.5.17
1/10
4.5.17

Rel
5/5

Home (Eoul) no

Sep Rec. & O. 1417-1
5.5.17



Home (Eoul) Department

CR 1994 A. From the offices in charge of the Dept. of Industries; Gen 47 45.5.17

page 13 + 14 f.c.f.

Mr. Innes furnishes a statement showing the annual expenditure on industrial + technical schools ~~education~~ under his control.

He states that this statement does not include the expenditure on the civil engineering college similar institutions not under his control. It does not appear that the information about the college ~~should be~~ is required by the Industrial Committee as that institution did not come within the scope.

enquiries. There is ~~however~~³⁴ a mechanical engineering section in the College; but the expenditure on this section alone may not be separately shown. It ~~is~~^{does} therefore ~~for~~^{appear necessary to call for} ~~information~~ information as to the expenditure on this institution ~~which~~ ~~is~~ ~~not~~ ~~far~~ from the D.P.S.

2. Replies are still due from the L.R. (Medical) Dept., the D.P.S. and the General Officer Commanding 9th Div. They may be awaited.

SK
14.5.17.
AM
15/17

Yr. With reference to note on p 2 I have that Dr. Marsden has left the dept.

2.11.
16.5.17

The following is a list of scientific officers under this Dept in this Presidency.

No.	Name	Designation	Qualifications	Term of Employment	Length of Service	Present Pay	Remarks
1.	Mr. A. Miller, B.Sc.	Chem. Est. & Propr. of Chem. Mat. College; also Propr. of Ind. Jurisprudence.	M.B.(Med) F.S.C. M.R.C.S.(Eng) L.R.C.P.(Lond)	£4. 10. 6. 10. 1. 02. 2. 29. 12. 4. 07. S	20 yrs 9 mths.	£1360 H.R. 125 L.A. 200	
2.	Mr. J. W. Cornwell, B.Sc.	Director, Pasteur Institute, Calcutta.	M.A., M.D., B.C. (Calcutta), D.P.H., D.T.M. & H. (Calcutta), F.L.S.	£6. 13. 6. 1. 2. 06.	20 yrs 9 mths.	1500.	Transf. to the Bact. Dept.
3.	Mr. F. M. Gibson	Director, King Institute, Quilley	M.B., B.S. (Edin)	£4. 10. 7. 5. 12. 9. 08.	19 yrs 6 mths.	1450 + 50 (congrat. allowance)	Do -

The S.G. may it is subd. be requested to state if the above list requires any additions or alterations.

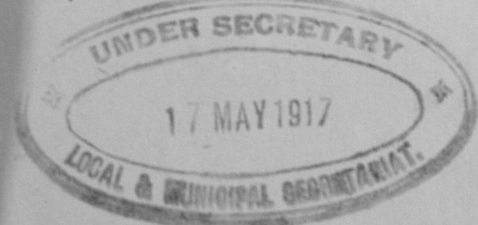
Km 8/5/17 V.TK 9.5 S.G. U.O.

The following officers now on military duty were employed under the St. of Madras Major W. S. Patton, Asst. Director, King Inst. " E. C. Hodgson, Spl. Malaria duty Madras Corporation

C 7/40/17

Recd no no 880-1 9-5-17

No. 100/J. 106 17.5.1917



XIV 2. P

11.0 12

The following officers were employed under the St. of Madras Major W. S. Patton, Asst. Director, King Inst. " E. C. Hodgson, Spl. Malaria duty Madras Corporation

36
Captain
Major R. E. Wright, Ag. Prof. of Pathology
B.A., M.B., B.Ch., B.A.O. (Dublin Univ.) - 9 yrs service
Captain C. H. Cross, Ag. Prof. of Chemistry & Ch. 242
M.B. (Edin.), D.P. (Edin.) - 10 yrs service - Rs. 800 + H.A. - Rs. 75
J. H. Horne, Spl. malaria investigation officer.
M.B., Ch.B. (Edin.) - 8 yrs service
These officers have all gone back to military duty, and some are not now in India.

W.H.D.
17.5.17

Com (med.) Dept.

The name of Major Patton may, it is submitted, be included in the list. It seems however unnecessary to include the names of the other officers therein, as they do not hold permanent appointments in this Presidency. Their services were placed at the disposal of this govt. for specific duties and they do not retain any lien on these appointments.

If this is accepted, the list as revised may be approved and forwarded up to Home (Education) Deptt.

21.5.17
22/5
V.T.K.



Enter these
explain

Done
23/5

McLus no 880-2
23-5-17

Notes in CR
23.5.17

Home (Edn) Dept.

The replies of the officers & departments consulted have been received. They have been consolidated & a statement giving particulars relating to the officers in this Presidency has been prepared & placed below. With reference to the Under Secy's note on page 6 supra it is submitted that no intimation has been received from Mr. Dunes about Dr. Haraden's leaving the department. Subject to approval - particulars relating to him have been included in the statement. A draft letter ~~to~~ is submitted.

He is much lent, 1/10/17
He is misinformed.
C. L. H.
1.6.17

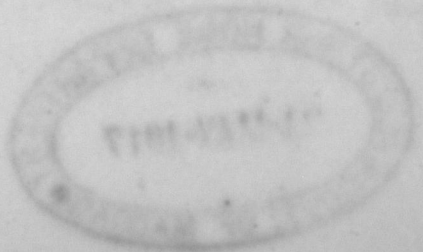
No 6 on p. 3 of the statement.

SK
26.5.17
M
21/5/17

The agricultural college at Coimbatore & others are within 5000 feet.

The Engineering College does not provide industrial education. Is it not necessary to state that this institution is excluded? No. ~~It is~~ issue.

C. L. H.
1.6.17



N. 7279 1. 6. 17

Sir,

$$\begin{array}{r} 8x \\ \hline 261517 \end{array}$$

2. 6. 17

Encls
to
S. G. W.

Lesp²

despatch
with copy of the list

+ with copies of
(i) Ho. No. 3665-S. R 9/17
+ (ii) copy of para 1 of
8/12. 9. 1908

p. 17cf.

p. 14 of c.f.

(placed below.)

Depd with
encls
CO
8/6/17

Madras Presidency.

41

Remarks

Was a Deputy Director of Agriculture
^{prior to his} ~~before~~ appointment to the present
post. (p. 3 of app.)

On military duty from 12. 2. 16

Also Meteorologist & Deputy
Director, Madras Observatory—
Allowance Rs 300 per mensem.

On military service.

Presidency

Thomas

220

Was a Deputy Director of Agriculture
before appointment to the Presidency

Scale Rs 200-20-580
thereafter 600-10-650

An auxiliary duty from 12.5.16

Also Director of Agriculture
Director, Madras Government
Allowance Rs 300 per annum

An auxiliary service

Scale Rs 200-20-580
thereafter 600-10-650

	Present pay	Remarks
1	520	Was a Deputy Director of Agriculture before appointment to the Presidency
4	650	Scale Rs 500-20-580 thereafter 600-10-650. An auxiliary duty from 12.5.16 Also Director of Agriculture Director, Madras Government Allowance Rs 300 per annum An auxiliary service 75% of the difference between the scale of Rs 500-20-580 and Rs 600-10-650 610 Scale Rs 500-20-580, thereafter 600-10-650.

10	800	Permanent Exp.
600	500	Res. no. for
6	750	appointments.
3	800	On military

20 1360
 20 1500
 19 1450
 14 1050
 13 1200
 9 600
 10 800
 8 850

H.A. Rs 125
 L.A. Rs 200
 (a) Pay. Rs 800 rising
 to Rs 1500 by annual
 increments of Rs 70 each.
 Rs 1500 after com-
 pleting 25 years' service.
 Rs 1650 after advan-
 cement to the selected
 grade of Lt. Col.

Belongs to the
 Bacteriological
 Dept. & draws pay
 & staff salary
 sanctioned for the
 conveyance allowance
 Rs 50.

House rent Rs 100.
 Belongs to the Bacterio-
 logical Dept. &
 draws pay & staff
 salary sanctioned
 for them.
 (Now on military duty)

Hold no permanent
 appointment in this
 Presidency. (on
 military duty.)

Local allowance
 Rs 200. H.R. Rs 75.
 Hold no permanent
 appointment in this Presi-
 dency - on military
 duty.

Honorary Rs 75.
 Hold no permanent
 appointment in
 this Presidency
 (on military duty)

Length of service	Present pay	Remarks
20	(a) 1,360	H.A. Rs 125 L.A. Rs 200. (a) Pay. Rs 800 rising to Rs 1,500 by annual increments of Rs 70 each. Rs 1,500 after com- pleting 25 years' service. Rs 1,650 after advan- cement to the selected grade of Lt. Col.
20	1500	Belongs to the Bacteriological Dept. & draws pay & staff salary sanctioned for the conveyance allowance Rs 50.
19	1450	
14	1050	House rent Rs 100. Belongs to the Bacterio- logical Dept. & draws pay & staff salary sanctioned for them. (Now on military duty)
13	1200	Hold no permanent appointment in this Presidency. (on military duty.)
9	600	Local allowance Rs 200. H.R. Rs 75. Hold no permanent appointment in this Presi- dency - on military duty.
10	800	Honorary Rs 75. Hold no permanent appointment in this Presidency (on military duty)
8	850	

J. Holloway
 chemist + mineralogist
 London E., as a student of
 the Mr. Holloway, latterly
 in charge of his laboratory
 at 1910. Appointed chemist,
 Aruvankadu on 2.9.1910
 int.

ria University in 1895.
 Heidelberg University &
 Doctor of Philosophy. Spent
 my reporting on the Acetylene
 industry to firms in England.
 Assistant Manager to the
 local company.
 Manager of Jackson's Chemical
 March to August 1903 was
 Gun Powder factory, Waltham
 Study of cordite manufacture
 cordite factory, Aruvankadu,
 passed the examination
 the Institute of Chemistry of
 and. Appointed Manager
 cordite factory, Aruvankadu,

chemist with theoretical
 of the chemistry of brewing
 best processes connected
 supervision for the protection

which concerned 2
 attached- 4
 pages 9-10
 of the Proceedings
 of the Madras
 Govt. No. 36853-R.
 of the 17th Decr
 1914
 (copy
 enclosed)

Sc. (Honours in Chemistry),
 Chester; Medal for dyeing &
 as on the staff of Bangor
 employed in Rubber, Cellulose
 Germany. Has passed

James of
Thomas of
and of

(Handwritten notes at bottom of page, partially illegible)

[illegible]

[Faint handwritten notes, possibly bleed-through from the reverse side.]

[illegible]

13
12th Nov 1918 (Wed) 9.59
Appointed to the
Presidency (on
military duty.)

(P) - [illegible] at [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

✓

	Terms of employment	Location
Department		

Temporary
engagement
from 16th Nov.
1915.

l. Laboratories, ^{Defense} Commonwealth of
transferred by the
to Indian Ordnance
mist. Cordite factory

Jesus College) + member Permanent
University. Honours Superior

Natural Science Service

94. Honours in BotII

895. Fellow of the
Royal Society of Great Britain
valuable experience in
theoretical & applied chemistry

Mr William Macnab,
mist & expert on
to the British Alu-
their factory at
shire.

l Exhibition of Great
July 1903 was attended
wales factory, Waltham
study of cordite manu-
chemist cordite factory

7.1903.	1'
Scholar at Kettle os. Holder of a Major	Temporary. on reengagement-

Rural Science from
 Ashire County Council.
 exhibition from
 Grammar School,

as Honours in
School of Chemistry
logy as a special subject.

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Handwritten notes in the middle of the left page, mentioning "university" and "department".

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Handwritten notes at the very bottom of the left page, mentioning "university" and "department".

Department		Pay
12	1000	
11	1000	
9	750	
4	800	
2	550	
18	1500	
28	Pay: 1000 P.A.: 500 Temporary 100 P.A.	
13	1000	
10		
8	9	
7	850	
2	800	

List of Scientific officers in G

No	Names of officers	Administration	
		Designation	Qualification
<u>Agriculture</u>			
1	R. W. B. C. Wood, M.A. (Cantab)	Professor of Agriculture + 8th post of Central Agricultural Station, also Principal, Agricultural College + Mount Institute.	
2	W. H. Harrison, D.Sc. (Victoria University)	Agricultural chemist.	
3	W. Mc Rae, M.A., B.Sc. (Edin)	Mycologist	
4	J. R. Parnell F.R.S. (Agric. dep. Cantab)	Economic Botanist	
5	Edward Ballard B.A. F.R.S.	Entomologist	
6	C. A. Barber, M.A. (Cantab), D.Sc., F.R.S.	Govt. Sugar cane Expert	
<u>Department</u>			
1	R. L. Jones, M.A.; F.R.A.S.	Professor of Physics Presidency College	
2	P. T. Tyson, B.A., F.R.S.	Prof. of Botany, Presidency College	
3	W. E. Smith, M.A.	Prof. of Chemistry, Presidency College	
4	H. O. Kershaw, B.Sc.	Inspector of Schools, VII Circle, and Acting Prof. of Chemistry, Presidency College	
5	J. L. Simonsen D.Sc.	Addl. Prof. of Chemistry, Presidency College.	
6	H. B. Matthews	Professor of Higher Electrical Engineering, C.M. of Engineering.	

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No	Names of Officers	Designation	Qualifications
			Miscellaneous
1	C. E. McKenzie, Ph. D., W. S. C. Wood M.A. (Canada)	Chemist, Gov- dite Factory, Aru- van Kadu	Chemist. Doctor of Chemical lecturer Military College 5 years Univ served in Ch + Customs & Australia - Sen Ministry of Munition Dept. & appointed che on 7 th December 1915.
2	L. Leigh Smith Esq, M.A., F.I.C. N. L. Sheldon Esq, Ph. D. (U.S.A.) J. H. Ball Esq, B.A. (U.S.A.) A. H. Barber Esq, M.A. (Canada) R. L. Jones, M.A., F.R.S. J. F. Tyson, Esq, Ph.D. W. B. Smith M.A. H. J. R. Hughes Esq, Ph.D.	Chemist, Govdite Factory, Aru Kadu	M.A. of Cambridge of the Senate of that (2 nd class) in the Tripoo, Part I in 18 of that Tripoo in 1 Institute of Chemis & Ireland. I conside the practice of scien in the laboratory of the consulting che Explosives. Chemis minium company at Milton in Stafford Member of the Royal Britain. From Feb 2 nd to to the Royal Gun & Abbey for special facture. Appointed Arumkadu, on 19
3	G. S. Butler B.A. (Oxon), A.I.C. J. Hargreaves H. B. Matthews	Chemist, Govdite factory, Arum- Kadu.	Senior Chemical College, Oxford, 1904- scholarship in the the North Riding of Holderness leaving Sir William Turner boatham. 2 nd cl the final Honours at Oxford with Highers

No.	Name of Officer	Designation	Qualifications
1	Lieut. Col. A. H. King, Ph. D. Lieutenant-Colonel A. H. King, Ph. D. R.O.P. J. H. S.	Chemist, Government Laboratory, Bangalore.	July 1908. Passed the f A.J.C. in mineral Entered the labor testing works of the F. J. C., consulting c 13, Emmett Street, do November 1908. Was as principal assistant November 1908 - Ang borsite factory, A 5 years' engagem
4	N. L. Sheldon Ph. D. (Heid), F. J. C.	Manager & chemist, Cordite factory, Arniyankah. (Sub. pro tem)	Attended the Viet spent five years as Food Degree there six months in the industry of that co Then one year as Hilmsbridge chem Then two years as works, Clayton. For attached to the Royal Abbey for special Appointed chemist 16. 8. 1903. In 1907 for the fellowship of Great Britain & Irel (Sub. pro tem) of the on 8. 12. 1915.
5	B. J. O'Ballaghan, B. Sc.,	Deputy Com- missioner of Abkari, Kaba, & chemical Examiner to Govt for Customs & Excise.	Trained Analytical & practical knowledge & distilling of the herewith of their of the revenue.
6	F. Marsden.	Dyeing Expert	Ph. D. (Heidelberg); Victoria University, Ma at Leeds University; University College; en & dye works in England in Tamil.

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No.	Names & Offices	Designation	Qualification
1	Lieutenant-Colonel A. Miller, M.B., L.R.C.P., J.M.S.	Professor of Chemistry, Medical College, + Chemical Examiner. Also Professor of Med- Jurisprudence.	Medical De M.B., F.J.C., M.R.C.
2	Lieutenant-Col. J.W. Cornwall J.M.S.	Director, Eastern Institute, Bombay.	M.A., M.D., B.C. (I) J.T.M. + H. (Cantab)
3	F.M. Gibson	Director, King Institute, Guindy.	M.B., B.Sc. (Edin)
4	Major W.S. Patton, J.M.S.	Assistant Director, King Institute, Guindy.	M.B., B.C. (Edin)
5	Major E.C. Hodgson, J.M.S.	Special malaria Office, Government of Madras.	M.R.C.S. (Eng) J.T.M. + H. (Cantab)
6	Captain R.E. Wright, J.M.S.	Acting Professor of Pathology, on Special duty in the Medical College	B.A., M.B., B.Ch., B
7	Captain G.H. Croes, J.M.S.	Asst Professor of Chemistry & Chemical Examiner	M.R.C.S. (Eng), L.
8	Captain J.H. Horne, J.M.S.	Special Malaria Investigation Office	M.B., Ch.B., (Ed)

given for copying
 copied PWT
 examined 86
 signed _____ 191

AGAIN G.O. No. _____ DATED _____
 191

CURRENT No. _____

ENCLOSURES TO C. No. _____

ORDER OF GOVERNMENT

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
 IN ORIGINAL.

N.B.—
 A = Copy in full.
 B = Not to be copied.
 P = Copy abstract only.
 Q = Copy heading only.

A A A A A A A

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