

REPORT  
ON AN INQUIRY INTO  
The Silk Industry in India

BY  
H. MAXWELL-LEFROY,  
*Imperial Silk Specialist and*  
E. C. ANSORGE, I.C.S.

VOLUME I

The Silk Industry  
BY  
H. MAXWELL-LEFROY.



1916

CALCUTTA  
SUPERINTENDENT GOVERNMENT PRINTING, INDIA  
1917

Price Rs. 2 or 3s.

**Agents for the Sale of Books Published by the  
Superintendent of Government Printing, India, Calcutta.**

**IN EUROPE.**

Constable & Co., 10, Orange Street, Leicester Square,  
London, W.C.  
Kegan Paul, Trench, Trübner & Co., 68-74, Carter  
Lane, E.C., and 25, Museum Street, London, W.C.  
Bernard Quartich, 11, Grafton Street, New Bond  
Street, London, W.  
P. S. King & Sons, 2 & 4, Great Smith Street, West-  
minster, London, S.W.  
H. S. King & Co., 65, Cornhill, and 9, Pall Mall,  
London.  
Grindlay & Co., 54, Parliament Street, London, S.W.  
Luzac & Co., 46, Great Russell Street, London, W.C.

W. Thacker & Co., 2, Creed Lane, London, E.C.  
T. Fisher Unwin, Ltd., 1, Adelphi Terrace, London,  
W.C.  
Wm. Wesley & Son, 28, Essex St., Strand, London.  
B. H. Blackwell, 50 & 51, Broad Street, Oxford.  
Deighton Bell & Co., Ltd., Cambridge.  
Oliver and Boyd, Tweeddale Court, Edinburgh.  
E. Ponsonby, Ltd., 116, Grafton Street, Dublin.  
Ernest Leroux, 28, Rue Bonaparte, Paris, France.  
Martinus Nijhoff, The Hague, Holland.

**IN INDIA AND CEYLON.**

Thacker, Spink & Co., Calcutta and Simla.  
Newman & Co., Calcutta.  
R. Cambray & Co., Calcutta.  
S. K. Lahiri & Co., Calcutta.  
B. Banerjee & Co., Calcutta.  
The Indian School Supply Depot, 309, Bow Bazar,  
Street, Calcutta, and 228, Nawabpur, Dacca.  
Butterworth & Co. (India), Ltd., Calcutta.  
Rai M. C. Sarcar Bahadur & Sons, 75-1-1, Harrison  
Road, Calcutta.  
The Weldon Library, 18-5, Chowringhee, Calcutta.  
Standard Literature Company, Limited, Calcutta,  
Lal Chand & Sons, Calcutta.  
Higginbotham & Co., Madras.  
V. Kalyanarama Iyer & Co., Madras.  
G. A. Natesan & Co., Madras.  
S. Murthy & Co., Madras.  
Thompson & Co., Madras.  
Temple & Co., Madras.  
P. R. Rama Iyer & Co., Madras.  
Vas & Co., Madras.  
E. M. Gopalakrishna Kone, Madura.  
Thacker & Co., Ltd., Bombay.  
A. J. Combridge & Co., Bombay.  
D. B. Taraporevala, Sons & Co., Bombay.  
Radhabai Atmaram Sagoon, Bombay.

Sunder Pandurang, Bombay.  
Gopal Narayan & Co., Bombay.  
Ram Chandra Govind & Son, Bombay.  
A. H. Wheeler & Co., Allahabad, Calcutta and Bombay.  
N. B. Mathur, Supt., Nazir Kanun Hind Press,  
Allahabad.  
Rai Sahib M. Gulab Singh & Sons, Mufid-i-Am Press,  
Lahore.  
Rama Krishna & Sons, Lahore.  
Supt., American Baptist Mission Press, Rangoon.  
Manager, the "Hitavada," Nagpur.  
S. C. Talukdar, Proprietor, Students & Co., Cooch  
Behar.  
A. M. & J. Ferguson, Ceylon.  
Manager, Educational Book Depôts, Nagpur and  
Jubbulpore.\*  
Manager of the Imperial Book Depot, 63, Chandney  
Chauk Street, Delhi.  
Manager, "The Agra Medical Hall and Co-operative  
Association, Ltd." (Successors to A. John & Co.,  
Agra).  
Supt., Basel Mission Book and Tract Depository,  
Mangalore.\*  
P. Varadaachary & Co., Madras.\*  
H. Liddell, Printer, etc., 7, South Road, Allahabad.\*  
Ram Dayal Agarwala, 184, Katra, Allahabad.\*  
D. C. Anand & Sons, Peahawar.\*  
Manager, Newal Kishore Press, Lucknow.\*

\* Agents for the Sale of Legislative Department publications only.

REPORT  
ON AN INQUIRY INTO  
The Silk Industry in India

BY  
H. MAXWELL-LEFROY,  
*Imperial Silk Specialist and*  
E. C. ANSORGE, I.C.S.

VOLUME I

The Silk Industry  
BY  
H. MAXWELL-LEFROY.



1916

CALCUTTA  
SUPERINTENDENT GOVERNMENT PRINTING, INDI  
1917

## TABLE OF CONTENTS.

	PAGE.
PREFACE . . . . .	i—ii
Chapter I.—Introduction . . . . .	1
<b>PART I.—THE EXISTING PRODUCTION OF SILK.</b>	
Chapter II.—Bengal—	
(a) Historical . . . . .	9
(b) The Existing Industry . . . . .	16
(c) The Development of Sericulture . . . . .	27
Chapter III.—Mysore and Madras . . . . .	28
Chapter IV.—Kashmir and Jammu . . . . .	39
Chapter V.—The Punjab . . . . .	53
Chapter VI.—Assam and Burma . . . . .	61
<b>PART II.—NEW AREAS FOR SILK PRODUCTION.</b>	
Chapter VII.—Controlling Factors . . . . .	67
Chapter VIII.—Experiments . . . . .	74
Chapter IX.—Conclusions . . . . .	80
<b>PART III.—TECHNICAL.</b>	
Chapter X.—Technical . . . . .	85
<b>PART IV.—THE DEVELOPMENT OF SERICULTURE.</b>	
Chapter XI.—Influences . . . . .	101
Chapter XII.—The Methods of Development . . . . .	109
<b>PART V.—WILD SILKS.</b>	
Chapter XIII.—Tasar . . . . .	117
Chapter XIV.—Muga . . . . .	118
Chapter XV.—Eri . . . . .	125
<b>PART VI.—SILK PROCESSES.</b>	
Chapter XVI.—Silk Processes . . . . .	129
<b>PART VII.—THE SILK INDUSTRY.</b>	
Chapter XVII.—Burma . . . . .	134
Chapter XVIII.—Assam . . . . .	143
Chapter XIX.—Bengal . . . . .	150
Chapter XX.—Bihar and Orissa . . . . .	154
Chapter XXI.—The United Provinces . . . . .	158
Chapter XXII.—The Punjab and North-West Frontier Province . . . . .	162
Chapter XXIII.—Kashmir . . . . .	168
Chapter XXIV.—The Central Provinces . . . . .	170
Chapter XXV.—Bombay . . . . .	173
Chapter XXVI.—Madras . . . . .	175
<b>PART VIII.—RECOMMENDATIONS.</b>	
Chapter XXVII.—Development of the Silk Industry . . . . .	178
Chapter XXVIII.—Formation of a Silk Institute for India . . . . .	183
Chapter XXIX.—Legislation . . . . .	199
Chapter XXX.—Summary of Recommendations . . . . .	204

## PREFACE.

The inquiry into the Silk Industry in India, of which the following pages are a report, was commenced in India on December 1st, 1915. In proposing this inquiry in the first place, the Government of India pointed out that the industry had for many years been steadily declining: the figures attached illustrate this (Appendix I) and the following abstract from these figures is more definite:—

### *India's trade.*

Raw silk imports (net)	{ 1884-1900 average	. 2,000,000 lbs.	
	{ 1909-1914	.. 2,500,000 "	
Raw silk exports, Indian	{ 1884-1900	.. 1,706,000 "	(Kashmir 0)
	{ 1909-1914	.. 1,712,000 lbs.	(Kashmir 300,000 lbs.)
Silk manufactures imports (net)	{ 1884-1900	.. £ 900,000	
	{ 1909-1914	.. " 1,800,000	
Silk manufactures exports	{ 1884-1900	.. " 135,000	
	{ 1909-1914	.. " 49,000	

Raw silk imports—increase of 25 per cent.

„ „ exports—steady. Deduct Kashmir and there is 17 per cent decline.

Manufactures imports—Increase of 100 per cent.

„ exports—Decrease of 64 per cent.

#### Imports—Analysis of.

		£	
Silk piece goods	{ 1884-1900 average	.. 675,000	
	{ 1909-1914	.. 1,172,000	
Silk and cotton, etc., mixed	{ 1884-1900	.. 171,000	
	{ 1909-1914	.. 340,000	
Yarn, warps, noils, etc.	{ 1884-1900	.. 66,000	
	{ 1909-1914	.. 286,000	

Increases are:—Silk cloth 74 per cent.

Mixed cloth 100 per cent.

Yarn, etc. 333 per cent.

This decline was attributed to these causes: extension of the industry in Japan—inferior breeds of worms—disease—defective reeling—use of substitutes for silk—ignorance—dirt—want of organisation—introduction of more profitable crops. If these causes could be removed and the industry placed on a sound footing, “very substantial benefits both agricultural and industrial would result.”

2. Attempts had been made spasmodically to revive the industry, with no results save in Kashmir and Mysore: and it was certain that unless more was done, the position of India as a silk exporting country would be lost. After reviewing possible courses, it was pointed out that it was insufficient to rely on provincial efforts alone: “the revival throughout India of an industry which was formerly in a flourishing condition is a matter of more than merely local importance”: but before embarking on any scheme, it was necessary to have a comprehensive and scientific examination of the subject; the problem is not only sericultural but industrial: “the whole industry in its various stages must be brought into touch with modern methods, if it is to be developed on right lines”: the value of co-operative credit development needed to be examined: and the result of the inquiry might well be that the industry could not be saved, or that it had been replaced by more profitable industries, its extinction being then a matter that need cause no concern.

3. The above summarises and quotes from the despatch from the Government of India proposing this inquiry and the report below is the result of the inquiry now concluded.

4. In commencing the inquiry, it was proposed to include an investigation of the industry in Japan and China : and it was found that it was desirable to provide separately for an inquiry into the trade, with reference specially to statistics; accordingly Mr. E. C. Anson, I.C.S., was placed on special duty and toured with the Silk Specialist in Bombay, the Punjab and Mysore : at this point, the services of the Silk Specialist were required in Mesopotamia : Mr. Anson continued his inquiry and his report deals with the trade in the Punjab, Bombay and Madras, and in India generally : it was unfortunately impossible to depute him for a sufficient time to complete his inquiry in Burma : his deputation ended in June and shortly after the Silk Specialist returned from military duty. The inquiry in Japan and China had to be abandoned and this leaves the investigation to some extent incomplete.

5. The inquiry has been pursued in all parts of British India, in Mysore, Kashmir, Travancore, Indore, Gwalior and many Native States. It is impossible to enumerate the great number of persons, official and non-official, to whom the authors of this report are deeply indebted for assistance and for the supply of information : the co-operation of members of the Chambers of Commerce has been of very great value : Messrs. Anderson, Wright & Co. in Calcutta, have been closely associated with the inquiry in Bengal : and the investigation has been made easy and pleasant by the cordial assistance rendered by all who were approached for information.