

**A TREATISE ON THE ORIGIN,  
PROGRESSIVE IMPROVEMENT  
AND PRESENT STATE OF THE  
SILK MANUFACTURE**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649067978

A Treatise on the Origin, Progressive Improvement and Present State of the Silk Manufacture  
by G. R. Porter

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**G. R. PORTER**

**A TREATISE ON THE ORIGIN,  
PROGRESSIVE IMPROVEMENT  
AND PRESENT STATE OF THE  
SILK MANUFACTURE**



A  
TREATISE  
ON THE  
ORIGIN, PROGRESSIVE IMPROVEMENT,  
AND  
PRESENT STATE  
OF THE  
SILK MANUFACTURE.

*G. R. Porter*  
"

---

Philadelphia:  
CAREY & LEA—CHESTNUT STREET.

1832.

"The Arts may be said to imitate Nature, or to help, or to overcome and advance Nature: nor are they therefore to be esteemed less noble because more practical, since our best and most divine knowledge is intended for action; and those may justly be counted barren studies, which do not conduce to practice as their proper end."

BISHOP WILKINS.

---

STEREOTYPED BY J. HOWE.

TS 1665  
P 8  
1832

LIST OF WOOD ENGRAVINGS.

	Page
1. Silkworms .....	98
2. Cocoons .....	100
3. Chrysalis .....	101
4. Moths .....	104
5. Frame with Slides or Drawers for Worms .....	117
6. Arbors for Silkworms to spin .....	120
7. Reeling-machine .....	155
8. Winding-machine .....	167
9. Throwing-machine .....	169
10. Doubling-machine .....	173
11. Silk-loom .....	180
12. Part of Do. (Batten) .....	182
13. Shuttle .....	185
14. Diagram descriptive of the Method of giving "a Pearl edge" to Ribands .....	191
15. Movable Shuttle-boxes .....	195
16. Diagram descriptive of plain Weaving .....	196
17. Ditto of twilled Weaving .....	ib.
18. Jacquard-machine, fig. 1. ....	202
19. Needle of ditto .....	203
20. Revolving Bar of ditto .....	ib.
21. Perforated Card-slips of ditto .....	204
22. Jacquard-machine, fig. 2. ....	206
23. Jennings's Improvement on the Jacquard-machine .....	210
24. Part of ditto (perforated board) .....	211
25. Design Paper for Figure-Weaving .....	212
26. Diagram to show the Structure of Velvet .....	226
27. Section of Wire used in weaving Velvet .....	227
28. Diagram descriptive of Gauze Weaving .....	230

It is impossible to fix the period when man first divested the chrysalis of its dwelling, and discovered that the little yellow ball, which adhered to the leaf of the mulberry tree, could be evolved into a slender filament, and thence be made to form tissues of endless beauty and variety. From a certain point, we can trace the progressive improvements of the silk manufacture, but seek in vain for authentic information respecting its earliest origin; and, while compelled to assign the merit of this to the Chinese, we cannot account for the degree of excellence which the art had attained previous to the time when even the existence of the material became known in the West. This proficiency alone, however, affords sufficient proof that the manufacture was of no recent origin. The manual arts arrive at perfection by very slow degrees. Improvements resulting from invention, as distinguished from imitation, are seldom rapid; and if this position hold good as a general principle, it is more especially applicable to labors unassisted by any save the rudest machinery, and practised by a people who, so far at least as we are informed, could derive little aid from science.

Notwithstanding these disadvantages, the Chinese, in the remotest ages, produced sugar, silk, and many other manufactures, with a degree of excellence which even now is scarcely surpassed. Yet while other nations have been rapidly advancing in knowledge, they have remained stationary. Debarred from intercourse with their kind, less by the obstructions which they raised to the ingress of strangers, than by the vanity which led them to make so false an estimate of other nations, this extraordinary people drew upon the resources of their own intelligence for discoveries the most important, and pursued them to an useful end with industry the most persevering. Their industry remains, but the intelligence to which it owed its principal value appears to have been arrested.\* In the faculty of imitating, they are still considered unrivalled; but this is a quality which would seem to place them in the train of other nations, rather than as taking the lead in discovery and civilization.

The first introduction of Indian luxuries to the knowledge of the ancients, was accompanied by the most fabulous accounts of the regions of their production, and gave occasion for many absurd speculations. This state of ignorance was, no doubt, in a great part owing to the peculiar policy of the Chinese, who, habitually and exceedingly jealous of all other

---

\* Note A.



people, enveloped the practice of their various arts in so much mystery, that stratagem was often baffled in the endeavor to unravel it, leaving us indebted for the disclosure to fortuitous circumstances.

In the attempt here made to trace, from the dark ages of antiquity to the present time, the progress of a trade and manufacture so widely diffused over the civilized world as those of silk, chronological order is followed as closely as the nature of the inquiry will permit.

Reasons already stated lead us to consider it probable that the inhabitants of China enjoyed the use of silk from a period greatly anterior to its introduction elsewhere. By the written records of that country, we are told that the art of converting to their own advantage the labors of the silkworm was known and practised among them 2700 years before the commencement of the Christian era. Their most ancient authorities represent the empresses of China as surrounded by their women, engaged in the occupations of hatching and rearing silkworms, and in weaving tissues from their produce. To the empress See-ling-shee, the consort of Hoang-tee, is ascribed the honor of having first observed the silk produced by the worms, of unravelling their cocoons, and of working the fine filament into a web of cloth.

Silk is described by the ancients as coming first from *Serica* or *Sereinda*, that part of India which lies beyond the Ganges. *Seres* is the designation given by the Greeks and Romans to the people who inhabited those remote regions, and *Sereinda* is, apparently, a compound of *Seres* and *Indi*. The latter is a general term, applied by the ancients to all distant nations, with as little precision as *India* is now used by modern Europeans.

It is now so generally admitted that the *Seres* of the ancients are the Chinese of the moderns, that it is unnecessary to enter into any discussion in proof of this belief. *Se* is the name for silk in the Chinese language; this, by a faulty pronunciation, not uncommon in their frontier provinces, acquired the final *r*, thus changing the word into *Ser*, the very name adopted by the Greeks. We can, therefore, hardly doubt that these obtained the name, as well as the material itself, first from China.

The labors of the silkworm, whose produce holds so important a place among the luxuries of modern life, were, until the time of the emperor Justinian, wholly confined to China. Long before that period, however, not only were manufactures of silk introduced among the nations which then en-

gaged in commercial pursuits, but the raw material gave employment to extensive manufactories in Persia, Tyre, Berytus, and elsewhere.

The celebrated historian Ammianus Marcellinus describes the Seres as a sedate and gentle people, who avoid all contentions with neighboring nations, and are therefore exempt from the miseries and alarms of war. Being without the necessity for using offensive weapons, they are even unacquainted with them. Blessed with a fertile soil, and a delicious and salubrious climate, they are represented as passing their happy days in the most perfect tranquillity and delightful leisure, amid shady groves fanned by gentle breezes, and producing fleeces of downy wool, which, after being sprinkled with water, is combed off in the finest threads and woven into *sericum*.\*

Marcellinus proceeds to describe the Seres as being content with their own felicitous condition, and so reserved in their intercourse with the rest of mankind, that when foreigners venture within their boundaries for wrought and unwrought silk, and other valuable articles, they consider the price offered in silence, and transact their business without exchanging a word; a mode of traffic which is still practised in some eastern countries.

In the island of Kos, situated in the Archipelago, silk was manufactured at a very early period. Aristotle relates, that *bombykia*, or the stuff produced from the *bombyx* (the silkworm), was respun and reweave by the industrious women of this island. Pamphila is celebrated as the inventress of this process. She unwove the precious material to recompose it in her loom into fabrics of a more extended texture; thus converting the substantial silks of the Seres into thin transparent gauze, obtaining in measure what was lost in substance. Attempts have been made to rob the inventress of all the merit belonging to this process, by identifying the *bombykia* with the raw material, which, it is said, Pamphila and her nymphs procured from Seres, and spun and wove into *sericum* or silk. But the fact of the reweaving rests upon too good authority to be doubted. It will be seen that the Roman ladies subsequently adopted this Pamphilian process.

Pliny asserts that the *bombyx* was a native of Kos; but it is not probable that the women of that island would, in such case, have recourse to the laborious operation of converting foreign finished goods into threads for their own weaving. It is, therefore, only reasonable to suppose, that whatever manu-

\* Note B.

facture was carried on from the raw material, was, like that of Tyre or Berytus, composed of unwrought silk imported from the East. It is mentioned both by Theophanes and Zonaras, the Byzantine historians, that before silkworms were brought to Constantinople in the middle of the sixth century, no person in that capital knew that silk was produced by a worm; a tolerably strong evidence that none were reared so near to Constantinople as Koa.\*

Among all the rich materials gathered from various countries for the embellishment of the celebrated temple of Solomon, no mention is made of silk. The costly cloths used at its dedication, and appropriated to the service of the priesthood, are described as being of the finest linen. In Jerome's translation of the Bible, we find *sericum* enumerated among other articles of commerce sent to Tyre from Syria, 588 years before Christ. The supply must, however, have been exceedingly scanty, since, on the rebuilding of the temple, which was completed sixty-four years after the last-mentioned period, the records of the Jews make no mention of the substitution of silken for linen fabrics, as might reasonably be expected among a people who introduced so much magnificence into their religious rites.

The victorious army of Alexander the Great brought home, among other eastern luxuries, wrought silks from Persia. This ambitious conqueror, while eagerly intent upon adding to his dominions, was desirous also of extending the boundaries of knowledge; not forgetting, amid his insatiable lust of empire, the more rational counsels of his learned preceptor, Aristotle, that he should explore the arcana of nature. To facilitate this object, Alexander took with him, in his Asiatic expedition, 1000 men, whose sole employment it was to collect animals, either by fishing, hunting, or hawking: these were, from time to time, carefully transmitted for the inspection of the philosopher; and for his further encouragement in the prosecution of his inquiries, Alexander presented him with the sum of 800 talents. So well did Aristotle avail himself of these opportunities afforded by his royal pupil, that although his writings on natural history are the most ancient extant, they are yet found to be more correct than those of many who wrote at later periods on that branch of science.

Aristotle certainly gives the best account of the silkworm that is to be found in any ancient author, describing it as a horned worm, which passes through several transformations,

---

\* Note C.