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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

Revenue

DEPARTMENT

G.O. No.
B.P. No.

1200

Press
Mis.

Dated

23.3.1877 197

Not to be folded or roughly handled

Read the following papers:—

No. 744. From J. E. O'CONOR, Esq., Assistant Secretary to the Government of India, Department of Revenue, Agriculture, and Commerce (Fibres and Silk), to the Secretary to the Government of Madras, dated Calcutta, 5th March 1877, No. 17.

I AM directed to request that you will be so good as to cause this office to be furnished with a copy of Dr. Bidie's report together with a set of the colored plates, referred to in paragraph 3 of the enclosure of your letter, No. 662, dated the 13th ultimo, on the subject of the development of an industry in the tassar and other undomesticated silkworms.

No. 745. Proceedings of the Board of Revenue, dated 20th March 1877, Miscellaneous No. 4,144.

Read Official Memorandum from the Secretary to Government, Revenue Department, dated 13th March 1877, No. 1.

ABSTRACT.—Requesting to be furnished with a copy of Dr. Bidie's report and a set of colored plates, referred to in Board Proceedings on subject of tassar silk industry, for transmission to Government of India.

ORDERED accordingly.

(A true Copy and Extract.)

(Signed) C. A. GALTON,
Sub-Secretary.

ENCLOSURE No. 1.

From Surgeon-Major G. BIDIE, M.B., Superintendent, Government Central Museum, to the Secretary to the Board of Revenue, Madras, 15th August 1876, No. 179.

I HAVE the honor to acknowledge receipt of the Board's Proceedings, No. 1,157, of 3rd May 1876, and, in explanation of the delay in replying, to state that I have been endeavoring to get specimens of the cocoons of a wild silk moth and in the western parts of the Peninsula, but failed at present.

2. So far as I know there are only three important species of undomesticated silk-producing moths in Southern India, viz., *Antheraea paphia*, *Actias selene*, *Cricula trilineata*.

3. *ANTHERAEA PAPHIA*.—The first of these, tassar silk moth, is very generally distributed all over the Presidency, but is nowhere very abundant, and the cocoons occur in such small numbers as to be hardly worth the trouble of collecting. In the suburbs of Madras, as elsewhere, the larva feeds and deposits its cocoons on the Bharee fruit tree (*Zizyphus jujuba*), but it affects other trees, and in the Museum there is a specimen, presented by Mr. Thornhill, in which the cocoons are attached to a branch of a casuarina tree. In Plate I, Fig. 1, will be found a colored drawing of the moth of this species. As the sketches were not, perhaps, quite so deep as they are in the living insect, but at the same time must be added that the colors of this

Proceedings of the Madras Government, Revenue Department,
23rd March 1877.

moth vary a good deal in their intensity. I quite understand the remarks in paragraph 15 of the Resolution of the Government India contained in the Board's Proceedings under reply. It is observed "it must be remembered that the thread of the tassah silk-worm is spun from a double spinnaret, and the filaments are not parallel, lying close side by side, but are spirally touching each other at the exterior points of their curves, but united by the natural gum in and with which they are exuded." A microscopic examination of the filaments taken direct from the cocoon fails to detect any such duality in structure, as will be seen by a reference to Fig. 2, Plate I, which gives the appearance of the fibre as spun by the worm. In Fig. 3 same plate a representation of the microscopic appearance of the China worm's silk from a cocoon is given for the sake of comparison, and it will be observed that the filaments of tassah silk are much stronger and coarser than those of the exotic insect. It will also be noticed that while the filaments of the latter are smooth, those of the tassah insect are striated longitudinally. There is a further striking difference in the structure of tassah fibre in that it is somewhat flattened like cotton, instead of being cylindrical like the fibre of the cocoon of the China worm. As regards the utilization of the tassah cocoons, the reeling of the silk is of course the great difficulty, but this ought to be overcome by the application of some cheap and simple solvent which is certain I think, to be discovered if the attention of practical chemists is directed to the subject. It is not only that the filaments are gummed together, but, as an inspection of cocoon will show, they are actually plastered together so as to form an efficient protection for the pupa against changes of temperature, rain, and birds. I pointed out by the Government of India, there can be no doubt as to the practicability of treating the tassah insect, but whether this treatment would prove profitable in this Presidency must be solved by experiment, which might be entrusted to some practical officer like Mr. Werburn, who takes an interest in silk culture. It may be expected that if the worm be domesticated the structure of the cocoon will in course of time become less gummy and the fibre of better texture; and there can be no doubt that these results would be expedited by judicious crossing with allied species.

4. *ACTIAS SELENE*.—This moth is also very common than the tassah. It feeds in Madras on the Odina wodi tree, and in constructing its cocoon, which is somewhat irregular in shape, appropriates a leaflet which it folds over so as to form a sort of thatch for the structure. When the leaflet is removed an accurate impression of its surface markings will be found on the cocoon. A figure of this cocoon is given in Plate III, Fig. 2, and along with it one of the tassah worm for the sake of comparison. In Plate II will be found a drawing of the moth. Judging from the structure of the cocoon, I should think there would not be any serious difficulty experienced in reeling the silk, and I have heard that it has been reeled at Pondicherry. This insect also has no doubt be domesticated.

5. *CRICULA TRIPINESTRA*.—Of this moth I have not a specimen in the Museum, but I have copied a figure of it from Westwood's Cabinet of Oriental Entomology, which will be found in Plate IV. I have not seen this insect in the Carnatic, but it is very common in Southern Coorg, and possibly extends into North Wynaad. In Coorg the larva feeds on the leaves of *Careya arborea*, and are gregarious, constructing their cocoons in clusters closely interwoven. I am doubtful if the silk of this insect could ever be turned to any practical purpose, as it would be impossible to reel it. Captain Hutton, in his memoir on Bombycidae, says that in some parts of the country the cocoons are carded, so it is just that some manufacturers might be able to make something of them if sent to them in the Carnatic.

6. Although the above remarks in the Southern India known to me, it is quite possible that there may be other species, and, should the Board be issuing any further instructions, I will esteem it a great favor if they will ask them to forward specimens of the perfect insect of any other species they may meet with, together with

Proceedings of the Madras Government, Revenue Department,
23rd March 1877.

No. 746.

ORDER THEREON, 23rd March 1877, No. 1,200.

Miscellaneous.

received
paid
of 1

(True Extra)
(Signature)

D. F. CARMICHAEL,
Officiating Chief Secretary.

DEED that the report and plates
d with the second of the foregoing
be forwarded to the Government

To the Board of Revenue.

Exd. A. F. Goodall.

12744 From

No. 17.

J. E. Honor, Esquire,
Assistant Secretary to the Govt. of India,
Department of Rev. Agri. Commerce.

To

The Secretary to the
Government of Madras.

Fibres and Silk.

Calcutta, the 5th March 1877.

Sir,

I am directed to request that you
will be so good as to cause this office to be
furnished with a copy of Dr. Bidie's report
together with a set of the coloured plates,
referred to in paragraph 3 of the enclosure
of your letter No. 662 dated the 13th ultimo, on
the subject of the development of an industry
in the Tassar and other undomesticated silk-
worms.

I have the honour to be,
Your most obedient servant,

J. E. Honor
Asst. Secretary to the Govt. of India

Revenue 1877 Septh

N^o. 1712

From

Gov^t of India

Rev. Secyth Depth

Dated 5th March
Rev. 12

N^o. 17
Pb 22-2-77 N^o. 1200

Requesting to
be furnished with copy of
a report by Dr. Bidie
on the subject of deve:
lopment of an industry
in the Jassar &
other undomesticated
silkworms.

Vice Com 1872-73-77

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N^o 1200 of 23-3-77

Rev. Secyth

Proceedings of the Madras Government
Under date the March 1877

Read the following

Letter from Gov^t of India

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Dr. Bidie on the subject of de:
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the Jassar & other undomestic:
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H. E. S. March 1877 N^o. 17.

Pro: B^d of Revenue.

Forwarding copy of
Dr. Bidie's Report & a set
of colored plates on subject
of Jassar silk industry -

— 20 — N^o. 2-4-144

Ordered that the
Report and plates received
with the second of the
foregoing papers be for:
warded to the Gov^t of India

cc To the B^d of Revenue 28-3-77

1877/1/3

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