Revenue (1887) Department.

PRESS SERIES.

G.O., No. 1046

Dated 13th December

[Despatch Abstract.]

Communicating to His Excellency the Governor a letter from the Secretary to the Treasury of the Indian Museum, Calcutta, forwarding copy of a letter from the Superintendent of the Indian Museum, reporting the completion of the enlargement of the Lady Lincoln Natural Curiosity Cabinet for the Madras Exhibition.

BACK PAPERS.

No.	Enclosure	Date.	Ref.	Date.

SUPERIOR PAPERS.

No.	Enclosure	Date.	Ref.	Date.

7C833/98

O
18 4,000—19-7-97.

Revenue (189 /) Department.

CURRENT No. 1078

1° The Hon'ble J. Gore
~~2 The Hon'ble H. Wallis~~
2 H.E. the Governor

From The Honorary Secretary to the Trustees of the Indian Museum, Calcutta.

In Order

The accompanying report from the Entomologist attached to the Indian Museum at Calcutta upon the subject of the introduction of Ladybirds & other natural enemies of the insect pests in this Presidency.

With reference to that Barlow describes several species of Ladybirds & also several species of parasites which are said to prey on various insect pests. The Deputy of the Indian Museum forwards the opinion

No. 161
D. Revn

Dated 12 Nov
Received 20 "
Registered 22 "
Enclosures /.
Spare copies.

SUBJECT.

Reporting on the subject of the importation of Lady Birds and other natural enemies of insect pests into the Madras Presidency.

C. 25/11/97.

the introduction of one or two more species with not make much difference. On the other hand it may just conceivably turn out by a lagniap that the list of known enemies does not include the Cryptolaemus Montrouzieri or the —?— Ventralis which were found in Honolulu to be particularly efficacious in exterminating Dactylopius

It is submitted that the present report may be communicated to Mr Hodgson but that it contains nothing which ~~would~~ renders it desirable for the Govt to abandon its usual decision to [illegible] help the planters in importing the two species referred to above which are the particular enemies of the Scale pests from which S. India suffers.

25.11.97.

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

The papers are in circulation & I regret I cannot remember the full name of the other species the Govt has decided which the planters to introduce

H.H.

The reports may be communicated to Mr Hodgson the Govt has probably no desire to go back upon the arrangement which I understand has been made: but it seems to me that the explanation should be sent whether the ladybird insects will [illegible]

26/11/97

25/11/97

Telegraphic Address:—
TRUSTEES' MUSEUM.
Calcutta.

Indian Museum (Trustees' Office).
27, CHOWRINGHEE CALCUTTA,

No. 161, dated 12th November 1897.
D. Proc.

FROM

THE HONORARY SECRETARY TO THE
TRUSTEES OF THE INDIAN MUSEUM,

To

The Acting Secretary to the Government of Madras
Ootacamund.

SIR,

With reference to the request contained in paragraph 2 of letter No. 1427/39-2, dated the 18th September 1897, from the Government of India in the Revenue and Agricultural Department, I have the honor by direction of the Trustees to enclose copy of letter No. 234, dated 15th October 1897, from the Superintendent of the Indian Museum, reporting on the subject of the importation of Lady Birds and other natural enemies of insect pests into the Madras Presidency.

Accompaniment: One

CHIEF SECRETARY
19 NOV 1897
GOVERNMENT OF MADRAS

C G. P.—No. 1 I M—21-2-96—180.

I am also directed to state that the Trustees will be very pleased to give any further information and assistance they can on the subject.

I have the honor to be,

Sir,

Your most obedient servant,

C. Litth.

Honorary Secretary.

No. 234

From

The Superintendent,

Indian Museum.

To

The Hon. Secretary to the Trustees,

Indian Museum.

Calcutta, 15th October 1897.

Sir,

With reference to your Endorst. No. 187/R.R. dated 27th ultimo, forwarding a letter No. 1427/39-2, dated 18th September 1897, from the offg. Under Secretary to the Government of India, together with copies of correspondence from the Government of Madras Nos. 634 and 635, dated 27th July 1897, relating to the very promising subject of utilizing Lady-birds and other natural enemies of the insect pests of the country. I have the honor to submit the following report by Mr. E. Barlow, the Assistant in charge of Entomology.

In India there is already known a good number of indigenous insectivorous insects belonging to the three orders of Coleoptera (beetles), Diptera

(flies), and Hymenoptera (Ichneumon flies), which are proved to be more or less beneficial to agriculture by keeping down insect-pests.

I Some beetles known to be destructive to Pests.

a. Among the Lady-birds I may mention,

(i) Chilocorus circumdatus, Schonh. which is said to prey upon the brown bug Lecanium Coffeae of coffee plants in Ceylon.

(ii) Seymnus rotundatus, Motsch., which is parasitic upon the white bug (Pseudococcus adonidum) of coffee bushes in Ceylon.

(iii) Platynaspis villosa, Mulsant, attacks the scale insect Icerya aegyptiacum, in Calcutta.

iv. Vedalia fumida, var. roseipennis, Mulst., which preys upon the Coccid Icerya aegyptiacum in Calcutta.

The last named was submitted to Mr. L.O. Howard, United States Entomologist for identification who wrote regarding it, (see Indian Museum Notes, vol. IV, 1896, No. 1, p. 28) It is interesting to find that this Coccinellid is not distantly related to the well-known Vedalia cardinalis, Mulsant, which Mr. Albert Koebele of this department brought from Australia some years ago, and which destroyed Icerya purchasi on our western Coast. It is Mulsant's Rodolia roseipennis, which according to Crotch's revision of the Coleopterous family Coccinellidae, is a colour variety of R. fumida, Muls. Accepting the nomenclature given by Crotch, the name of the insect is therefore Vedalia fumida var. roseipennis, Muls. It may be mentioned that the Vedalia cardinalis here referred to is an Australian species of Lady-bird which on introduction into America is said to have at once cleared thousands of orange trees of destructive scale-insects of the species Icerya purchasi.

b. Among beetles other than Lady-birds are.

(v) A Tiger beetle of the species Cicindela sexpunctata, Fabr., which devours the Rice-sapper (Leptocorisa acuta) in Chumparun.

(vi) A Carabid beetle Calosoma orientale, Hope, which destroys the young

young locusts of the species Acridium peregrinum, Oliver.

II. Some Diptera (flies) known to be destructive to Insect Pests.

(VII-VIII.) Syrphus nietneri, Schinr., and S. splendens, Bolesch., the larvae of these two flies are said to prey on the Coffee Aphis (Aphis Coffeae) in Ceylon.

(IX) Anthomyia peshawarensis, Bigot. Parasitic upon the eggs of the locust in India.

(X) Masicera subnigra, Wulp., parasitic upon the larvae of the moth Olene mendosa, Hubn., which attacks tea plants in Darjeeling.

(XI) Masicera Castanea, Wulp., said to prey upon caterpillars of the moth Leucania extranea, Guen, which attacks the young paddy plants in Bengal.

(XII) Masicera Dasychirae, Wulp., parasitic upon caterpillars of the moth Dasychira thwaitesii which does much damage to tea plant and sal tree in Assam.

(XIII-XIV) Demoticus strigipennis, Wulp.; and Calodexia Lasiocampae, Wulp.

The larvae of these two flies are parasitic upon a hairy Lasiocampid caterpillar destructive to rice in the Central Provinces.

(XV) Miltogramma 12-punctata, Wulp, which preys on the locust in India

III. Some Hymenoptera (Family Chalcididae) known to be destructive to Insect-pests.

(XVI). Chalcis (Brachymeria) euplaeae, Westw., preys on the Doars tea and Sal caterpillar (Dasychira thwaitesii).

(XVII). Cotesia flavipes, Cameron, parasitic upon the Sorghum-borer (Diatraea saccharalis).

(XVIII) Aphelinus theae, Cameron, A minute fly-like insect that attacks the tea scale bug (Chionaspis theae, Mask.)

(XIX-XXVI) Cirrhospilus Coccivorus, Motsch., Encyrtus nietneri, Motsch, E. paradisicus, Motsch., Scutellista cyanea, Motsch., Marietta leopardina, Nietner, Cephaleta purpureiventris, Motsch. C. brunneiventris, Motsch., and C. fusciventris, Motsch., are said to be parasitic upon the brown bug. (Lecanium coffeae) of Coffee plant in Ceylon.

(XXVII) Chartocerus muciformis, Motsch. said to attack the white bug (Pseudococcus adonidum) of Coffee plant in Ceylon.

(XXVIII) Pteromalus oryzae, Cameron, a minute coppery green coloured Ichneumon-fly believed to be parasitic upon the wheat

wheat-and rice weevil (Calandra oryzae) in India"

The above are some of the indigenous species of insect-parasites of insect-pests that have come to light without any special inquiry, and no doubt systematic research (which certainly ought at some day to be undertaken) would reveal many more.

In the face of Mr Barlow's report it can hardly be hoped that the introduction of a single foreign species of Lady-bird even if that species be able to hold its own against the native species, will have any very marked effect.

I have the honor to be,
Sir,
Your most-obedient servant.
C/S A. Alcock, Surg. Major,
Superintendent, Indian
Museum.

True Copy.
H. B. Lewis
Offg. Registrar
Indian Museum.

1897
GOVERNOR DEPARTMENT.
Letters No. 1

Read encl. 1006 of

P.S. Order No 10469 / 13th Dec 18

Communicated

Hon: the H.P. Hodgson

Lees (from order) continuation of 6-

1040 dy 11th Dec 1897

13/12/97

To

The Hon'ble the H.P. Hodg

Note

This current ha
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turn of the papers
the proposal to addre
Queensland Govt for a
signment of Lady birds
papers returned last
and the order is being

P.M. 12/XII.97

14/12/97

Government {1897} of Madras.

REVENUE.

Recd. } 1897. *Enclosures*

Regd. } *Spare copies*

G.O., No. 1046, 13th December 1897.

DECEMBER.

Lady Birds.

Communicating to the Honourable Mr. H. P. Hodgson letter from the Honorary Secretary to the Trustees of the Indian Museum, Calcutta, forwarding copy of a letter from the Superintendent of the Indian Museum reporting on the subject of the importation of — and other natural enemies of insect pests into the Madras Presidency.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following letter from the Honorary Secretary to the Trustees of the Indian Museum, to the Acting Secretary to the Government of Madras, Ootacamund, dated 12th November 1897, No. 161/D. Pests:—

With reference to the request contained in paragraph 2 of letter No. 1427/39-2, dated the 18th September 1897, from the Government of India in the Revenue and Agricultural Department, I have the honour, by direction of the Trustees, to enclose copy of letter No. 234, dated 15th October 1897, from the Superintendent of the Indian Museum, reporting on the subject of the importation of lady birds and other natural enemies of insect pests into the Madras Presidency.

I am also directed to state that the Trustees will be very pleased to give any further information and assistance they can on the subject.

ENCLOSURE.

From the Superintendent, Indian Museum, to the Honorary Secretary to the Trustees, Indian Museum, dated Calcutta, 15th October 1897, No. 234:—

With reference to your endorsement No. 187/R.R., dated 27th ultimo, forwarding a letter, No. 1427/39-2, dated 18th September 1897, from the Officiating Under Secretary to the Government of India, together with copies of correspondence from the Government of Madras, Nos. 634 and 635, dated 27th July 1897, relating to the very promising subject of utilizing lady birds and other natural enemies of the insect pests of the country, I have the honour to submit the following report by Mr. E. Barlow, the Assistant in charge of Entomology.

In India there is already known a good number of indigenous insectivorous insects belonging to the three orders of Coleoptera (beetles), Diptera (flies) and Hymenoptera (Ichneumon flies, &c.), which are proved to be more or less beneficial to agriculture by keeping down insect pests.

I.—SOME BEETLES KNOWN TO BE DESTRUCTIVE TO PESTS.

(*a*) Among the *lady birds* I may mention—

(i) *Chilocorus circumdatus*, Schonh., which is said to prey upon the brown bug *Lecanium Coffeæ* of coffee plants in Ceylon.

(ii) *Scymnus rotundatus*, Motsch., which is parasitic upon the white bug (*Pseudococcus adonidum*) of coffee bushes in Ceylon.

(iii) *Platynaspis villosa*, Mulsant, attacks the scale insect *Icerya ægyptiacum*, in Calcutta.

(iv) *Vedalia fumida*, var. *roseipennis*, Mulst., which preys upon the Coccid *Icerya ægyptiacum* in Calcutta.

The last-named was submitted to Mr. L. O. Howard, United States Entomologist, for identification, who wrote regarding it (see *Indian Museum Notes*, Volume IV, 1896, No. 1. p. 28). It is interesting to find that this coccinellid is not distantly related to the well-known *Vedalia cardinalis*, Mulsant, which Mr. Albert Koebele of this department brought from Australia some years ago, and which destroyed *Icerya purchasi* on our Western Coast. It is Mulsants *Rodolia roseipennis*, which, according to Crotch's revision of the coleopterous family coccinelledae, is a colour variety of *R. fumida*, Muls. Accepting the nomenclature given by Crotch, the name of the insect is therefore *Vedalia fumida*, var. *roseipennis*, Muls. It may be mentioned that the *Vedalia cardinalis* here referred to is an Australian species of lady bird, which on introduction into America, is said to have at once cleared thousands of orange trees of destructive scale insects of the species *Icerya purchasi*.

(*b*) Among beetles other than lady birds are—

(v) A tiger beetle of the species *Cicindela sexpunctata*, Fabr., which devours the rice-sapper (*Leptocorisa acuta*) in Chumparun.

(vi) A carabid beetle *Calosoma orientale*, Hope, which destroys the young locusts of the species *Acridium peregrinum*, Oliver.

II.—SOME DIPTERA (FLIES) KNOWN TO BE DESTRUCTIVE TO INSECT PESTS.

(vii & viii) *Syrphus nietneri*, Schinr., and S. *splendens*, Dolesch., the larvæ of these two flies are said to prey on the coffee *Aphis* (*Aphis Coffeæ*) in Ceylon.

(ix) *Anthomyia peshawarensis*, Bigot, parasitic upon the eggs of the locust in India.

(x) *Masicera subnigra*, Wulp., parasitic upon the larvæ of the moth *Olene mendosa*, Hubu., which attacks tea plants in Darjeeling.

(xi) *Masicera castanea*, Wulp., said to prey upon caterpillars of the moth *Leucania extranea*, Guen, which attacks the young paddy plants in Bengal.

(xii) *Masicera dasychiræ*, Wulp., parasitic upon caterpillars of the moth *Dasychira thwaitesii* which does much damage to tea plant and sal tree in Assam.

(xiii & xiv) *Demoticus strigipennis*, Wulp.; and *Calodexia lasiocampæ*, Wulp. The larvæ of these two flies are parasitic upon a hairy Lasiocampid caterpillar destructive to rice in the Central Provinces.

(xv) *Miltogramma 12-punctata*, Wulp., which preys on the locust in India.

III—SOME HYMENOPTERA (FAMILY CHALCIDIDAE) KNOWN TO BE DESTRUCTIVE TO INSECT PESTS.

(xvi) *Chalcis* (*Brachymeria*) *euplæa*, Westio., preys on the Doars tea and sal caterpillar (*Dasychira thwaitesii*).

(xvii) *Cotesia flavipes*, Cameron, parasitic upon the sorghum-borer (*Diatræa saccharalis*).

(xviii) *Aphelinus theæ*, Cameron, a minute fly-like insect that attacks the tea scale bug (*chionaspis theæ*, *Mask*).

(xix—xxvi) *Cirrhospilus coccivorus*, Motsch., *Eucyrtus nietneri*, Motsch., E. *paradisicus*, Motsch., *scutellista cyanea*, Motsch., *Marietta Copardina*, Nietner, *Cephaleta purpureiventris*, Motsch., *C. brunneiventris*, Motsch., and *C. fusciventris*, Motsch, are said to be parasitic upon the brown bug (*Lecanium coffeæ*) of coffee plant in Ceylon.

(xxvii) *Chartocerus museiformis*, Motsch., said to attack the white bug (*Pseudocœcus adonidum*) of coffee plant in Ceylon.

(xxviii) *Pteromalus oryzæ*, Cameron, a minute coppery green coloured Ichneumon fly believed to be parasitic upon the wheat and rice weevil (*Calandra oryizæ*) in India."

The above are some of the indigenous species of insect parasites of insect pests that have come to light without any special inquiry, and no doubt systematic research (which certainly ought at some day to be undertaken) would reveal many more.

In the face of Mr. Barlow's report it can hardly be hoped that the introduction of a single foreign species of lady bird even if that species be able to hold its own against the native species will have any very marked effect.

ORDER—No. 1046, Revenue, dated 13th December 1897.

Miscellaneous.

Communicated to the Honourable Mr. H. P. Hodgson in continuation of G.O., No. 1040, dated 11th December 1897.

(True Extract.)

(Signed) G. S. FORBES,
Ag. Secretary to Government.

To the Honourable Mr. H. P. Hodgson.

Exd. S. J. Pereira.

25 Copies.

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