British Museum (Natural History)

EXOTIC HOMOPTERA

SERIES No. 2

5 Cards in Colour

Set E 18

One Shilling

a

b

c

EXOTIC HOMOPTERA

(a) *Scamandra daphne* (b) *Euphria relata* (c) *Scamandra arcuigera*
Natural size

BRITISH MUSEUM (NATURAL HISTORY)

POST CARD.

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STAMP.

EXOTIC HOMOPTERA

- (a) *Aphaena farinosa* (b) *Lycorma delicatula* (c) *Aphaena atomaria*
 (d) *Lycorma imperialis* (e) *Saiva gemmata* (f) *Aphaena neura*

4/5 natural size

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a

b

c

EXOTIC HOMOPTERA

(a) *Euphria amabilis* (b) *Amantia imperatoria*

(c) *Scamandra polychroma*

Natural size

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EXOTIC HOMOPTERA

(a) *Ityraca speciosa* (b) *Ityraca gregoryi* (c) *Phromnia rubra*
(d) *Phromnia marginella*

Natural size

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EXOTIC HOMOPTERA

- (a) *Bythopsyrna tineoides* (b) *Hansenia glauca* (c) *Nephesa suffusa*
 (d) *Colobesthes falcata* (e) *Bythopsyrna circulata*
 (f) *Cerynia maria* var. *rosea* (g) *Doria haenschii*

Natural size

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EXOTIC HOMOPTERA.

Series No. 2.

The insects figured in this series all belong to the Fulgoroidea, a very large super-family of the sub-order Homoptera. This super-family exhibits extraordinary variety of form, and is now considered by authorities on the group to be made up of no less than fifteen distinct families. All these families agree, however, in the structure and position of the antennæ, which are placed on the cheeks below the eyes.

Although many of the Fulgoroidea are quite large insects, some measuring as much as six inches across the wings, large numbers of them are small and inconspicuous with the wings only partially developed. The majority, however, have the hind legs long and adapted for jumping. Nearly all the Fulgoroidea possess the power of secreting wax, but it is extraordinarily developed in the family Fulgoridæ. One Central American species, *Cerogenes auricoma*, has an enormous mass of tufted wax round the abdomen with several long strands more than four inches in length, trailing behind. In some cases the wax forms the food of the maggot-like larvæ of certain moths, and these larvæ may be found living amongst the wax secreted by the live Fulgorid. According to some writers the wax of certain Fulgoridæ is collected by the Chinese and used for making candles, but the wax more commonly used is that of the Chinese white wax scale insect, *Ericerus*. In many Fulgoroidea a yeast-like fungus is present, growing in the tissues of the insect, even the eggs becoming infected by invasion of the ovaries. The fungus is thus inherited from the parents. It is believed that fungus and insect derive mutual benefit, the fungus helping to digest the sugary food of the insect.

Very little is known of the life history of the Fulgoroidea, and it is probable that it varies very considerably in different genera. In some cases the eggs are inserted in small clusters into the tissues of leaves and stems and are covered with a waxy flocculence. After some time the young larvæ hatch out and are very active hoppers. They are usually gregarious and are covered with numerous sensory organs in the form of round punctured granules. They live on the leaves and stems, and feed by sucking the plant

sap through their jointed beaks. Many species are serious pests of cultivated plants in tropical countries. The Fulgoroidea are of world-wide distribution, about eighty species inhabiting Britain, but the majority of the families are confined to the tropics. Only two families are represented on these cards, the Fulgoridæ or "Lantern flies" (cards E106-108) and the Flatidæ (cards E109-110). The last card of the previous series depicts three beautiful species in this group.

E 106 (a) *Scamandra daphne*

In common with most of the insects represented in this set nothing is known about this "lantern fly" except that it comes from Celebes. This group of "lantern flies" is remarkable for the weird colour schemes and for the waxy spots on the wings.

E 106 (b) *Euphria relata*

The waxy secretion is very well shown in this species, the fore wings being thickly incrustated with wax, while the hind wings are spotted with it. This species is a native of Tenasserim.

E 106 (c) *Scamandra arcuigera*

This is another striking "lantern fly" from Celebes.

E 107 (a) *Euphria amabilis*

The contrast in colouring of the hind wings of this species is very striking. The small spots of white wax on the fore wings is distinctly seen. It is a native of Sikkim and Assam.

E 107 (b) *Amantia imperatoria*

This is a Central American "lantern fly." The beautiful reticulate venation of the fore wings is distinctly shown. The semicircular head is characteristic of this genus.

E 107 (c) *Scamandra polychroma*

This is a native of Borneo. Notice the wax covering the body.

E 108 (a) *Aphæna farinosa*

This insect, together with the others figured on this card, is typical of a group of strikingly coloured lantern flies, in which the head is not or only slightly produced in front. The powdered wax on the wings and body is always present in fresh specimens. This one is a native of Burma and Malaya.

E 108 (b) *Lycorma delicatula*

This species is a native of China, and has been doubtfully recorded from Assam.

E 108 (c) *Aphaena atomaria*

This is a widely distributed oriental species.

E 108 (d) *Lycorma imperialis*

A beautiful lantern fly from Sikkim and Assam. The blue bands on the purple hind wings are an example of the contrast in colouring common in this group.

E 108 (e) *Saiva gemmata*

This insect resembles the lantern flies depicted in the previous series of cards in having a forward prolongation of the head, but it is much shorter and finer. It comes from Sikkim and Assam.

E 108 (f) *Aphaena neera*

This is a native of Celebes.

E 109 (a) *Ityræa speciosa*

The insects figured on this and the following card belong to the Flatidæ, a family of Fulgorids strongly resembling butterflies in general appearance. They are remarkable for their delicacy of colouring, the tints in many ways resembling those exhibited by prize sweet peas. Many species possess two colour forms, a green and a pink form. When immature they are known as ivory hoppers, and possess a tuft of white waxen strands at the end of the abdomen. They are gregarious and are very active hoppers when disturbed. The adults are feeble fliers. In each case the insect is shown at rest and with the wings expanded. This species is from Kenya Colony.

E 109 (b) *Ityræa gregoryi*

This species was first discovered by Dr. Gregory in British East Africa, where he found the two colour forms settled together on stems to resemble flower spikes, the orange-coloured ones at the bottom resembling flowers and the green ones at the top resembling unopened buds. This wonderful arrangement, however, is apparently very rarely seen, the two forms being usually intermingled. Although this insect

was named after Dr. Gregory by Distant, it is probably synonymous with *Ityræa nigrocincta* Walk. from Natal.

E 109 (c) *Phromnia rubra*

The two forms of this species are red and pink. It is a native of Madagascar.

E 109 (d) *Phromnia marginella*

This insect inhabits N. India and has a green and a buff form. No special grouping of colours has been noticed.

E 110 (a) *Bythopsyra tineoides*

This Flatid and the next one are really dark brown, but the powdery white wax secretion gives them a bluish tinge and they resemble some of the small blue butterflies at the first glance. This species comes from the East Indies.

E 110 (b) *Hansenia giauca*

This is a common species on *Eugenia* trees in Ceylon.

E 110 (c) *Nephesa suffusa*

A handsome species from Java.

E 110 (d) *Colobesthes falcata*

This is one of the largest of the Flatidæ. The shape of the wings is peculiar. It comes from Burma and Malaya.

E 110 (e) *Bythopsyra circulata*

A strikingly marked species from Burma and Malaya.

E 110 (f) *Cerynia maria* var *rosea*

This is the most beautiful variety of this very variable species from India and W. China.

E 110 (g) *Doria hænschi*

A beautiful Flatid from Ecuador.

Set E 18.

February, 1924.