RHOPALOCERA NIHONICA:

A DESCRIPTION OF THE

BUTTERFLIES OF JAPAN.

BY

H. PRYER.

YOKOHAMA:

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COLLECTING.

Since publishing Part I. of this work, I have received suggestions that, as many of my readers have had little practical experience in Entomology, a few directions would be servicable, especially to my Japanese fellow workers.

The apparatus required is as follows :—

1. Net.
2. Cyanide Bottle.
3. Collecting Box.
4. Larva Box.
5. Chip Boxes.
6. Satchel.
7. Lantern.
8. Tin to hold Sugar.
9. Glass Tubes.
10. Setting House.
11. Glass Cylinders for rearing Larvæ.
12. Cabinets.
13. Pliers and Dissecting Scissors.
14. The following Chemicals : Potass. Cyanide, Napthaline, Acetic Acid dilut., Plumbi Precip., Calcis Carb.
15. Pins.

All apparatus used in the field should be as lightly made as possible. Specimens should be removed from the Net by means of the Cyanide Bottle, and when stupified by the fumes, should be pinned through the side in the Collecting Box. The Net should be not less than 2 feet across the mouth, and not too deep. The Umbrella Net is the most handy for use. The Cyanide Bottle should be of strong glass. I find the most servicable to be a smooth glass tumbler, with an India rubber stopper. The Cyanide is powdered and wrapped up in blotting-paper, and over this a piece of stout cardboard is placed. The Collecting Box should be 8 × 10 inches, lined with cork and double-bottomed, and have a strap by which to sling it over the shoulder. The Larva Box should be made of zinc with perforated sides ; this also should have a strap by which it can be slung over the opposite shoulder to that carrying the Collecting Box. The Chip Boxes should be made to fit one within the other, in nests. The Glass Tubes should have cork stoppers and should be from 1 to 1½ inches deep. The Satchel should be made so that it easily opens and shuts, with a flap to prevent the contents being jerked out when running. The Setting House is a very important item, and should contain

not less than 30 feet of setting boards; it should be very strongly made to withstand rough usage when travelling. The boards should be made of soft wood, with cork or pith in the groove, and when they are put away in the house, they should stand perpendicularly, to prevent the bodies of the specimens becoming distorted, while drying. They should be perfectly flat and all of the same depth, not less than one inch. The cages for rearing *larvæ* should be open Glass Cylinders, the tops being covered with net; they should stand on earthenware plates, each plate having a hole drilled in the middle, through which the stalk of the plant, on which the larva feeds, is immersed in a vessel holding water underneath. The Cabinet is, perhaps, the most important of all, as, unless it is a good one, the results of the collectors' time and trouble will be spoilt. After very many experiments, I find the best wood for the drawers to be the red wood of the cherry; any fancy wood not given to warping or giving off resin, may be used for the case, but camphor wood, keyaki, cedar, pine, &c., are most unsuitable. The drawers should be 14 in. long by 21 in. broad, and will then hold one dozen small size sheet-cork, as it is a great advantage to have as many as possible of a genus under observation at the same time. All drawers should have air-tight lids, and for butterflies it is useful to have both the tops and bottoms of glass. For the latter, a narrow strip of cork is fastened between thin pieces of wood; this is laid on the bottom and secured in position by means of a rack arrangement, which permits of the cork being shifted nearer or further apart, as required by the size of the specimens. For moths it is only necessary to have the *lid* of glass, the bottoms of the drawers being lined with cork and papered. The drawers should be of sufficient depth so that the heads of the pins do not touch the glass lid, or say 1¾ in. inside measurement. The sides should be double, and the lid have a deep flange fitting accurately into the cavity thus formed. The drawers should be supported on side runners, and all should be made exactly of the same gauge, so as to be interchangeable, if necessary. Only the very best workmanship should be employed, so that neither moisture nor insects can obtain access to the contents. The Pins for all Macro-lepidoptera should be of a uniform length, but of different degrees of thickness. Those for Micro-lepidoptera should be smaller. The Pliers should be turned up at the point and the inner sides provided with a pin and socket. The Scissors should have fine points—they are used for opening the abdomen of all large moths, the contents of which should always be extracted.

Only the best Cyanide should be used; it is generally in thin cakes, and when its action is sluggish, it can be freshened up by the addition of a few drops of vinegar. Napthaline placed in a pocket between the double sides of the drawers, is the best protection against the attacks of insects. Plumbi Precip. and Calcis Carb. sprinkled over the bottom of the drawers, although somewhat unsightly, will in damp climates keep away mould and *acari*. If, however, mould appears persistently, the drawers should be placed round a bright fire, some six feet distant, with the lids removed, for several hours, at intervals of a few days. As a substitute for this method, a small quantity of Calcis Chloride, placed in a small pan in each drawer, for a short time, should be sufficient to absorb all moisture. Camphor is worse than useless, as it only damages specimens, instead of acting as a

preservative. To kill specimens, a drop of table vinegar or Acetic acid dilut. (not too strong,) should be taken up on an ordinary pen. The insect is laid on its side, the pen is thrust into the under side of the thorax, and the acid allowed to flow into the wound. No freshly caught specimens, although apparently dead, should be set out, until this is done. In setting insects, I find from experience that what is known as the Continental system is the best; in fact the English system is a decided mistake. The advantages of the Continental system are, that the specimen is set high up the pin, perfectly flat, with the wings well forward. In this position it is easy to figure accurately, there is plenty of room underneath for labels recording references of date, place of capture, &c.; specimens so set are not liable to the attacks of mould and insects, and they can be moved with less risk of breakage. To keep the wings in position while drying, I use narrow silk ribbons, varying in width from $\frac{1}{8}$ to $\frac{1}{2}$ an inch, for the larger specimens, and a long stout horse hair for the smaller; this is pegged down by short stout pins which carry small fragments of cork.

To obtain specimens, the most satisfactory method is to rear them from the larval stage; better specimens are secured, and their life history and affinities can only thus be accurately studied. This method, moreover, will always prove of great interest and give much instruction to the observer.

In searching for *larvæ*, it should be remembered that every part of a plant supports them; some feed on the leaves, others on the stem, bark, flowers, seeds, roots, fungi, lichens (many lichen feeders mimic their food, or pile it on their backs), dead tissue, such as cloth, dried specimens, dead leaves, &c. A great many *Tineæ* pass their whole larval stage between the inner and outer cuticles of leaves. Many *larvæ* can only be obtained at night, by means of the sweeping net, which is strongly made of canvas and swept rapidly backwards and forwards, over low herbage. Beating the overhanging branches of trees into an umbrella, or beating net, is another effective way of obtaining *larvæ*.

Preserving Larvæ.—About twenty years ago, I first published instructions how to preserve *larvæ*, by inflating them over a spirit lamp until dry. This process has since been considerably improved, and with patience and practice, many beautiful specimens may be preserved. Roughly speaking, the process is as follows: the *larva*, which should be kept without food for a day, is immersed in a strong solution of alum water; the inside is pressed out on blotting paper and the empty skin inflated by means of a glass pipette, over a spirit lamp enclosed in a tin box, until perfectly hard. The tin box which encloses the spirit lamp, is open at the front; the flame is kept from scorching the skin by an inner protector of perforated zinc. The pipette must be bent almost at right angles and must have a round bulb in the middle.

Pupa-digging and *raking* should be prosecuted during the autumn and winter, when specimens cannot be obtained in the perfect state. Large isolated trees should be selected and the moss and earth from immediately round the base of the trunk, should be shaken over a sheet of paper.

Many moths mimic the bark of trees, and the trunks should therefore be carefully searched, it being often necessary to blow into the crevices before the insect can be dislodged and seen. An effective way

of dislodging moths from close low herbage, is by means of fumigators, similar to those employed in conservatories.

Light is also a very productive method of obtaining moths. Gas-lamps on the outskirts of towns yield an abundant harvest, and a light ladder should be carried, in order to take off the specimens by means of the Cyanide Bottle. I may mention that it is as well to inform the police what the collector is after, and to carry a box of matches to relight any lamps, that may be accidentally extinguished. A powerful lamp, enclosed in a glass house, elevated in a conspicuous position on a pole, under which is a white cotton cloth, will, on favorable nights, attract a host of specimens, many of which will be found seated on the cloth. There are many forms of moth traps constructed on the principle of eel traps, so that a moth once entering cannot escape; they are baited either with sugar or a light. Many species can usually only be taken at sugar, or the blossoms of certain flowers. Sugar is made by mixing black-sugar with Japanese saké, adding a little rum and beer. This is smeared on the trunks of trees just before dusk; the trees are visited, and the specimens taken off in the Cyanide Bottle, by the aid of the light of a lantern; on favourable nights immense numbers of insects of all orders, visit the sugar, but at other times hardly an insect is to be seen. Pine and cedar trees are generally unproductive. The evening primrose (*Œnothera*) is the best flower for hawk-moths, and is in blossom for a long time. The most attractive flower in the spring is the *Stachyurus præcox,* the branches of which should be gently shaken into a large flat umbrella. Ivy blossom should be similarly treated in the autumn. Sallow catkins are the favourite flowers, in the spring, in Great Britain, but are rarely visited by moths in Japan.

An accurate register of all specimens obtained should be carefully kept. This is easily effected by means of numbers. A key or reference number is given to each species, and a subsidiary number to each specimen captured; the first number gives the page of the register, and against the second is written, in the register, a record of the time and place of capture, together with any notes concerning the habits of the insect. I have seen many collections, which have been made with great expenditure of time and trouble, but without a register being kept by the collector, the specimens of which, might, so far as their practical value was concerned, have been so many pieces of painted paper. Mere specimens have no intrinsic value; it is the facts concerning them which are of instruction and value.

NOMENCLATURE.

I have a few remarks to make concerning Nomenclature. In theory a combination of the generic and specific name should denote a particular species, but unfortunately in practice exactly the opposite, in very many instances, is the case. This is owing to the misdirected zeal of "species makers" who multiply genera and species out of all reason. The evil is an ever increasing one, and it is no unusual thing for twenty or more names to be applied to a single species, necessitating the use of formidable lists of

synonyms. Mr. Strickland many years ago attempted to remedy the evil in the Stricklandian Code, approved of by the British Association, but one of the results of his well-meant endeavour, has been the revival of obsolete names, together with those of the long forgotten 'godfather.' The only true test for a name is its general use, and no regard should be given to any sentimental consideration of the so-called 'law of priority' if it interferes with the name known to the 'greatest number.' A greater evil arises from the action of certain learned individuals who, engaged in the Sisyphean labors of 'hair splitting,' obtain single specimens from little known localities, to which they hasten to tag new names, without sufficient investigation or material. This leads me to speculate why people of this class are so exceedingly anxious to 'name new species.' It seems to me they attach some particular honor or self glorification to the performance, as if they thought they were thereby erecting a monument to perpetuate their own puerile work—a strangely false idea!—a name being once established, no further interest is felt in the 'godfather.' I will venture the statement that, 100 years hence, no one will trouble their heads whether 'But.' or 'Tub.' is the abbreviation of the describer's name of any insect from Japan or elsewhere. No doubt the mere museographist is a necessity, as, without his aid, the naturalist's time would be too greatly taken up in the purely mechanical work of classification and description, but that a describer should attempt to arrogate to himself any particular scientific honour is absurd. It is as if the mechanic who makes the brass tube for a telescope, should, in consequence, consider himself equal to the Herschel who uses it.

NOTES BY PUBLISHERS.

A.—An eleventh Plate had evidently been contemplated by the Author, with the view of making the work still more complete, and of embracing two species given in Mr. J. H. Leech's paper—"On the Butterflies of Japan and Corea (Proc. Z.S. I May 3rd, 1887.) But as the delineation of the species had not been completed by the Author, his Executors do not feel justified in producing the intended Plate.

The sketch plan of the intended plate as left by the author is as follows :—

9 *Papilio Memnon*, Linn. male.—Pl. 2, fig. 1 is the female.

9A *Papilio Mikado*, Leech (P.Z.S., 1887, Pl. 35, fig. 1).

Regarding this new species Mr. Leech writes l.c. p. 406 :—"I took a specimen about 20th May near Kagoshima, in the province of Satsuma. The nearest allied species is *P. Empylus*."

10 *Luehdorfia puziloi*, Ersch.

Already figured (Pl. 1, fig. 10), but apparently not to the author's satisfaction.

30 *Nephanda fusca*, Brem or Grey. Male.

The female is figured (Pl. 4, fig. 2).

53 *Lycæna argus*, Linn. Violet-colored male.

Three figures have already been given of this species (Pl. 5, figs. 1A, 1B, 1C).

59 *Lycæna iburiensis*, But.

Already figured (Pl. 5, fig. 5).

72 *Neptis lucilla*, Schiff. Southern form.

Northern form figured already (Pl. 6, fig. 5).

95 *Argynnis sagana*, Doubl. Female.

The male is figured Pl. 8, fig. 3.

118A *Plesioneura curvifascia*, Feld.

Mr. Leech writes as follows, P.Z.S. l.c. p. 427 :—"This species which is new to Japan, occurs plentifully in a small ravine close to the sea, near the port for Kumamoto in Kiushu. I found the specimens just out in May."

Regarding *Pterygospedea sinica*, Feld., of which Mr. Leech, l.c. p. 428, says there are specimens from Nikko in the British Museum : there is a note in the author's handwriting stating that if the specimens in question are from Mr. Maries, they are probably Chinese, and not Japanese.

B.—Below is given an extract from a letter by Mr. Oliver Janson in reply to the Author's enquiries, which was received by the Executors after his death :—

I received your skippers * * *. The following is a list of them with the corrected names:—

No. 1 (Pl. 10, fig. 13A.) = *herculea*, But. (male.)
No. 1 (Pl. 10, fig. 13B.) = *herculea*, But. (female.)
No. 2 (Pl. 10, fig. 14A.) = *ochrana*, Brem. (male.)
No. 2 (Pl. 10, fig. 14B.) = *rikuchina*, But. (female.)
No. 3 (Pl. 10, fig. 16A.) = *florinda*, But. (male.)
No. 3 (Pl. 10, fig. 16B.) = *florinda*, But. (female.)
No. 4 (Pl. 10, fig. 18) = *sylvatica*, Brem. (male.)
No. 4 (Pl. 10, fig. 18) = *sylvatica*, Brem. (female.)
No. 5 (Pl. 10, fig. 15) = *leonina*, But. (male.)

ERRATA.

Page.	Line.	
1	18	For *primarilly* read *primarily*.
3	11	From bottom. For *Men.* read *Mén.*
—	10	From bottom. For *dehaani* read *dehaanii*.
4	2	For (Pl. 3, fig. 2), read (Pl. 3, fig. 1).
4	17	For *alicinous* read *alcinous*.
4	17	For (Pl. 3, fig. 8), read (Pl. 3, fig. 3).
4	6	From bottom. For *fine rapid*, read *fine, rapid*.
5	8	For *Z.* and *L.* read *S.* and *Z.*
5	12	For *Luedorfia* read *Luehdorfia*.
5	17	For *Parnassus* read *Parnassius*.
6	12	For *Men.* read *Mén.*
6	7	From bottom. For *Sink* read *Link*.
7	3	For *Men.* read *Mén.*
7	15	From bottom. For *Spring* read *Spring*,
8	16	From bottom. For *Men.* read *Mén.*
8	14	From bottom. For *maresi* read *mariesi*.
8	11	From bottom. For *Men.* read *Mén.*
9	7	For *immutuality* read *immutability*.
9	16	For *realy* read *really*.
10	7	For *Men.* read *Mén.*
11	6	For fig. 1. 2. read fig. 1A, 1B.
21	5	For *on* read *in*.
24	15	After the word *year* add *i.e. 1886*.
30	13	Add (Pl. 10, fig. 24).

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RHOPALOCERA NIHONICA.

Order LEPIDOPTERA.

Sub-order RHOPALOCERA.

The order Lepidoptera is divided into two sub-orders, Rhopalocera and Heterocera. The former includes all the butterflies and the latter all the moths. Butterflies can be roughly distinguished from moths by the following points:—They are almost without exception day flyers, and always have more or less clubbed antennæ. Moths fly day and night, and generally have simple or pectinated antennæ. This is not, however, an invariable rule, as we have many families of moths with antennæ thickened towards the point.

This book treats of the butterflies only, and is the result of sixteen years' constant attention to the group in every part of these islands.

The butterflies of Japan are a particularly interesting study, not alone to the Entomologist, but also to the general student. We have in this country direct evidence of the *transmutation of species*, many Japanese butterflies appearing under perfectly distinct alternate forms at different times of the year; these forms of the same insect are often more distinct than undoubted species of the same family. I have proved, by breeding, that this multiplicity of form is caused by temperature affecting the insect during its larval stage, and I have produced them artificially. I have styled them *temperature forms*. The reason of these strange temperature forms appearing naturally, in Japan, is primarily owing to the exceptional amount of change in climate which takes place during the year, and also to the geographical position and conformation of this country. It is, and has been for long ages, a veritable battlefield in the *struggle for existence* for the species inhabiting it. At a not very remote period, geologically considered, these islands appeared above the waves as a chain of high mountain peaks, relics of an ancient continent, similar in appearance to what we see the Kurile Islands now are on the map; the spaces between these old peaks have been filled in principally by recent volcanic agency.

The fauna is decidedly Palæarctic, but we have a good many wanderers from the Oriental region. We have in Japan an admixture of tropical, temperate, and arctic species meeting together in the same area, many of which still continue to find their way here by different routes, this being doubtless the cause of another peculiarity in the Japanese fauna, to which I have called attention under the heading of "dual" or twin species. That communication is continuous, is evident from the fact that we find some species presenting no points of difference, while in others it is most marked; the former are able to breed true to their ancestral type, owing to frequent immigration, and those which differentiate most strongly have been isolated longest. Butterflies exhibit forms in process of transmutation in greater numbers than perhaps any other class of organizations, for, from their structure and wandering habits, they are able to spread over large areas, and, during the space of a single year, many species pass through several generations. They are thus constantly subjected, in the never-ceasing battle of life, to ever-varying conditions of existence.

I have met with some amount of opposition to my views on this subject from the hands of closet naturalists, who are accustomed to "museum series" only, the dispute between the field observer and the book-making describer being, even yet, very keen.

So many new systems of classification having been proposed of late years, I think I need not apologize for using in this book an old one, which, notwithstanding many defects, is at any rate the most convenient for my purpose.

My specimens have all been named by Messrs. Butler and O. Janson, and I am therefore not accountable for any errors in nomenclature, but at the same time I must call attention to the fact that many specimens named as distinct by Mr. Butler have afterwards proved to be forms of long known species, and, where I have been able to detect these errors, I have included them in the list of synonyms.

The following Families are represented in Japan :—

Papilionidæ	11	species.
Pieridæ	12	,,
Lycænidæ	36	,,
Lemoniidæ	1	,,
Nymphalidæ	38	,,
Danaidæ	1	,,
Satyridæ	18	,,
Hesperidæ	20	,,

Family PAPILIONIDÆ.

Genus PAPILIO.

1. **Papilio machaon, L.** (Pl. 1, fig. 1-A, 1-B.)

asiatica, But.
hippocrates, Feld.

Localities—Main Island, Yezo.
Food plants—Cultivated umbelliferæ, carrot, fennel, &c.
Time of appearance—From March until the end of summer.

The first imago appear in March from larva which have fed up late in the preceding autumn. These March specimens are invariably small and light colored (fig. 1-B), and are the *machaon* form. As the summer advances the successive broods increase in size and depth of coloration until August, when the *hippocrates* (fig. 1-A) form appears. It is a very abundant insect, and often strips fields of carrots of their leaves.

2. **Papilio xuthus, L.** (Pl. 1, fig. 2-A, 2-B.)

xuthulus, Brem.

Localities—Main Island.
Food plants—Ægle sepiaria D.C., Xanthoxylon schinnifolium S. & Z.
Time of appearance—From March until the end of summer.

Like the preceding species, we have an early spring form, *xuthulus* (fig. 2-A), and a summer form, *xuthus* (fig. 2-B). *Machaon* is a plant feeder, *xuthus* a tree feeder. The larva of the two species are very different in appearance, the difference being greater even in the larval stage than in the imago. The female of *xuthus* is dimorphic, one form being light yellow and the other much darker.

3. **Papilio maacki, Men.** (Pl. 1, fig. 3.)

dehaani, Feld.
bianor var japonica, But.
tutanus, Fenton.

Localities—Yokohama, Yezo, and the mountains of the Main Island generally.
Food plant—Ægle sepiaria and other kinds of orange trees.
Time of appearance—From April until the end of summer.

This beautiful insect varies greatly, from green to purple blue; some specimens have a row of red spots on the hind wing which is absent on others. It also varies greatly in size and markings. This species extends furthest north of any of the black Papilios. It is an extremely difficult insect to figure. The larva very much resembles that of *P. xuthus*, although the perfect insect differs so greatly.

4. **Papilio demetrius, Cr.** (Pl. 3, fig. 1.)

Localities—Main Island.
Food plant—Ægle sepiaria, D.C.
Time of appearance—From April until the end of summer.

The larva is very similar to those of the two preceding species, exactly reversing the case of *machaon* and *xuthus*. The hind wing of the male is ornamented with an oval greenish-white patch concealed below the fold of the fore wing. This is, as a rule, hardly visible, but is displayed by the male when courting his mate. *Demetrius* and *macilentus* are perhaps "dual" species.

5. **Papilio macilentus, Janson.** (Pl. 3, fig. 2.)

Localities—Rare about Yokohama, but more abundant in the mountains of the Main Island.
Time of appearance—From May and during summer.

The female is very seldom to be obtained. The male, which is ornamented exactly as in the preceding species, is, in its first brood, often very diminutive, and I have captured them less than half the size of the female specimen figured. I have not yet found the larva. This species is specially adapted to fertilizing Lilies, the pollen from the flowers, which it frequently visits, adhering to its long hind wings and tails.

6. **Papilio alicinous, Klug.** (Pl. 3, fig. 3.)

Localities—Main Island.
Food plant—Cocculus thunbergii, D.C.
Time of appearance—From April until the end of summer.

The female of this species is dimorphic in China and the Ryukyu Islands, being sometimes nearly as black as the male, and sometimes buff, but I have never seen any but the last-named form in Japan. The male emits a peculiarly sweet, musky odour when alive. The female also emits a fainter odour, but to me this is as unpleasant as that of the male is pleasant. It is one of the most abundant Papilios, and is easily caught. The larva resembles a partially ripe mulberry, and the pupa is most beautifully sculptured.

7. **Papilio helenus, L.** (Pl. 2, fig. 2.)

Localities—Nagasaki and Tosa.
Time of appearance—May and summer.

This is a southern insect, and I have not seen it further north than the Island of Shikoku. The large white patch on the hind wing makes it a very conspicuous object. It has a fine rapid, bold flight, and constantly returns to the same spot. The female is rare.

8. **Papilio memnon, L.** (Pl. 2, fig. 1.)

Localities—Nagasaki.
Time of appearance—May and summer.

This is the largest Japanese butterfly. I have not seen it, in Japan, north of the Island of Kyushyu.

The male is much less ornamented than the female, and is generally jet black, with a faint red patch at the base of the fore wing. The female is very conspicuous, and, from the contrast of its colours, appears much larger than it really is when on the wing. A tailed form is found in China, but I have not seen it in Japan. Those females I have seen here are also darker than Chinese specimens.

9. **Papilio sarpedon, L.** (Pl. 1, fig. 9.)

Localities—Main Island.
Food plant—Machilus thunbergii Z. and S.
Time of appearance—April until the end of summer.

Very abundant. The larva feeds on the young leaves of the evergreen Machilus, their colour resembles very closely that of the young green leaves of this tree.

10. **Luedorfia puziloi, Ersch.** (Pl. 1, fig. 10.)

Localities—Yezo, Gifu.
Time of appearance—Early in April.

This is a rare insect, and I have not yet seen a perfect specimen. It is found early in the year on high mountains.

11. **Parnassus glacialis, But.** (Pl. 3, fig. 5.)

Localities—Nikko, Yezo.
Time of appearance—June, July.

This is a mountain insect. Some specimens are suffused with smoky black, and it varies greatly in markings. The female often has a horny sheath to the abdomen, but I do not think the use of this has yet been discovered.

Family PIERIDÆ.

12. **Aporia cratægi, L.** (Pl. 3, fig. 7.)

Locality—Yezo.
Food plant—Apple trees.
Time of appearance—Summer.

This is abundant in Yezo, but I have not seen it south of that Island.

13. **Pieris rapæ, L.** (Pl. 3, fig. 6.)

crucivora, But.

Localities—All Japan.
Food plants—Cultivated cruciferæ, such as daikon (radish), cabbages, &c.
Time of appearance—March to November.

Varies much in size. The Japanese specimens have been mistaken for *Pieris brassicæ, vide* Mr. Elwes, P.Z.S., Nov. 15th, 1881, but this latter species does not occur in Japan. I noticed immense swarms of *P. rapæ* flying across the Bay of Kagoshima this year, but did not see any further south.

14. **Pieris napi, L.** (Pl. 3, fig. 8-A., 8-B.)

megamera, But.
melete, Men.

Localities—Main Island, Yezo.
Food plant—An uncultivated crucifer, Arabis hirsuta, Scop.
Time of appearance—March to October.

The imago first appears in March, form *megamera;* it is then a very different looking insect from the succeeding broods (form *melete*). It varies in size from 1¾ inches to 3 inches.

For many years after I first commenced collecting here, I was surprized to find that what was then known as *megamera*, only appeared once in the year, March and April, after which it entirely disappeared; nearly all the other Pieridæ being many brooded. I was therefore very anxious to ascertain what became of the larva from April until the next autumn, or whether it remained for the whole summer, autumn, and winter in the pupa state. To obtain the unknown larva of a butterfly is a particularly difficult task; the food plant has to be discovered and the females induced to lay their eggs. By spending many days in early spring watching the females, I was at last rewarded by seeing one busily depositing its eggs on Arabis hirsuta, and from these I reared the entirely different form, *melete*. I was not unprepared for this result from my discoveries of a like change of form in *Papilio xuthus* and *xuthulus*, &c.

15. **Anthocaris scolymus, But.** (Pl. 3, fig. 4-A., 4-B.)

Localities—Yokohama, Nikko.
Food plant—Cardamine sylvatica, Sink.
Time of appearance—March, April.

This insect undoubtedly only appears once during the year. There are no allied forms, and it is the only representative of the genus in Japan. I know little or nothing concerning its life history beyond the fact that it feeds upon a bitter cress, common in marshy situations.

16. **Leucophasia sinapis, L.** (Pl. 2, figs. 7 and 8.)

amurensis, Men.
vilibia, Janson.

Localities—Fujisan, Asama-yama, Yezo.
Time of appearance—July, August.

In the southern parts of the Main Island this is only found on the mountains, but in Nambu and Yezo I believe it inhabits the plains. It is an open question whether *vilibia* is distinct from *amurensis*, and this can only be determined by breeding. As it is not found in the Yokohama district, I have no opportunity of testing this, and must leave it to entomologists more favourably situated. It is probable that *vilibia* and *amurensis* are "dual" forms, if not species. I have figured the two most dissimilar specimens I could find.

17. **Rhodocera maxima, But.** (Pl. 2, fig. 5.)

Localities—Yokohama, Ohoyama, Asama-yama.
Time of appearance—May, July.

This has a much more robust appearance than the following, and contrary to the opinion I have expressed elsewhere (Trans. Asiatic Society of Japan, May 9th, 1883), I now believe it to be perfectly distinct, as, during the year 1885, I captured both *maxima* and *acuminata* freshly emerged at Asama-yama, and was then able to compare them under a favourable aspect, which I had not had the opportunity of doing before. I have frequently obtained males only, in the spring about Yokohama, but never saw a female here, and think they must be strays from the lower mountains in the vicinity. It undoubtedly hybernates.

18. **Rhodocera acuminata, Feld.** (Pl. 2, fig. 6.)

Localities—Nikko, Asama-yama, Yezo.
Time of appearance—July.

This species is only found, where I have collected, at a considerable elevation, but it inhabits the plains in Yezo. Many insects in South Japan are confined to the mountains, but are found lower down the further we go north. I have seen none of the preceding species from Yezo, where it appears to be wholly replaced by the present. In the case of *maxima* and *acuminata* we have an excellent example of the "duality" of species.

19. **Colias palæno, L.** (Pl. 2, fig. 3.)

Localities—Asama-yama.
Time of appearance—July.

This butterfly has a most extensive range, from Iceland to Central Japan, where it has its habitat at an elevation of over 6,000 feet. I have seen it commonly at the Yu-no-taira on Asama-yama. Owing to

the irregular nature of the ground, which is composed of loose, volcanic scoriæ, it is most difficult to capture. It never seems able to stray far from this place, and may be seen beating up and down, but never descending below this bleak and cold locality.

20. **Colias hyale, L.** (Pl. 2, fig. 4-A., 4-B.)

simoda, Del Orza.
erate, Esp.
subaurata, But.
elwesii, But.

Localities—Main Island, Yezo.
Food plant—Leguminous plants.
Time of appearance—February to November.

This is one of the most abundant butterflies about Yokohama, and is the first harbinger of spring. It may often be seen flying about a warm sunny bank by the middle of February, when the snow is still on the ground. These are not hybernated specimens, but freshly emerged, as I have often taken them then with their wings hardly dry. The female is dimorphic, having a yellow and a white form. The difference between a summer and a winter specimen is most marked, both in colour and size. It is found commonly both on the plains and mountains. I have figured an exceptionally large female of the late summer brood, and a male of that appearing in February.

21. **Terias multiformis, H. Pryer.** (Pl. 2, fig. 9A, 9B.)

hecabe, L.
mandarina, Del Orza.
hecabeoides, Men.
sinensis.
maresi, But.
anemone, Fel.
connexiva, But.
æsiope, Men.
brenda.
sari, Hors.

Localities—Central and South Japan.
Food plant—Lespedeza juncea, Pers.
Time of appearance—March (hybernated specimens) to December.

To the naturalist, this is the most interesting of all the butterflies of Japan, and therefore demands a careful account of its very extraordinary life history, which I will give as fully as I have been able to elucidate it.

In the first place, I find, from observations of my own and fellow workers, that no species of the genus Terias have as yet crossed the Straits of Tsugaru, between Yezo and the Main Island. *Multiformis* is

found southward from Japan to Australia, and westward as far as Africa, but the Main Island of Japan is probably its most northern limit. It is not known in Amurland.

Many years ago, I observed a hybernated female, of the form *mandarina*, depositing its eggs on Lespedeza juncea. From these eggs I was greatly astonished by breeding several of the form *hecabe*, which had been described by Linnæus, and well known for over 100 years. This was so unexpected and contrary to all the then accepted ideas concerning the immutability of species, that I suspected some eggs or larva of *hecabe* had strayed into my breeding cages, and hesitated to publish my discovery without further corroboration. In following years I again and again tried the same experiment, with the same results, and then sent an account to the London Entomological periodicals, where the statement was, and still is, received with incredulity; but, as I am sure, it is a positive fact, and it will be easy for any one who may doubt it to undertake the task of investigation. I know that several eminent describers have spent a lifetime in separating the forms of this species, and they naturally feel annoyance that I should have so outrageously upset their pet theories and proved that they have been engaged in a useless letting down of "bottomless buckets into empty wells and drawing nothing up." A fine illustration of this sort of work is Mr. Butler's paper on the Japanese Terias, published in Trans. Ent. Soc. London, 1880, Part 4, the only really useful part of which is the coloured plate accompanying the paper; it gives a series of forms, all *multiformis*.

By placing half of a brood of larva in a cool place and half in a warm one, I have simultaneously produced a mixture of the two forms, some perfect *hecabe* (hot), and some *mandarina* (cold), at a time of year when naturally only *hecabe* is found. With reference to Mr. Butler's remarks concerning hybrids, Trans. Ent. Soc. London, 1880, Pt. 4, genuine hybrids do actually occur between *hecabe* and *mandarina* naturally. *Mandarina* appears on the cold mountains much earlier than on the plains, and these fly down and mix with *hecabe*, producing one or more broods late in the autumn, of numberless intermediate varieties, showing all transitions between the two parent forms.

This insect is a most excellent illustration of the transmutation of species. If it could be transported to a cold, even climate like England, only the *mandarina* form would be found, and its connection with *hecabe* would not even be suspected, as they differ in every respect as much as any two species of the family; with an increase in temperature in Japan, *mandarina* would disappear, and only the *hecabe* form would be found, as at Singapore and other tropical places where I have collected. The *hecabe* form is one of the butterflies the males of which are supposed to be more numerous than the females, but this is not a fact, as I find, when breeding them, that both sexes are about evenly represented. The males are fond of settling in numbers on damp spots in pathways, or flying about in the open, and are easily captured in large numbers. The females have to be sought after among the herbage and undergrowth, and are much less easily found, and this is the reason of the apparent disproportion of the sexes; the result of the difference in habits of the sexes is seen in the different colour of the males and females, the males are always a bright yellow and the females much lighter, the latter being much less exposed to the action of light. These remarks apply only to the *hecabe* form, and not to *mandarina*. The latter appears during

the colder period, when the habits of the two sexes are more alike, and there is, in the *mandarina* form, less difference in the coloration of the two sexes, a number of specimens then collected at random will be found to show a greater proportion of both.

In the figures, I have given the two extreme forms of *mandarina* and *hecabe*.

22. **Terias læta, Boisd.** (Pl. 2, fig. 10.)

Terias jægeri, Men.

Localities—Main Island.
Time of appearance—March to November.

A very rare variety of this, wholly yellow, is sometimes found, a counterpart of *mandarina* to the *hecabe* form of *multiformis*. Although a very common species, I know nothing concerning its life history, and in this respect there is, in Japan, an exhaustless field of most interesting research for the naturalist. The few species that I have, with the limited time at my disposal, been able to study, always yield most interesting and unexpected results.

23. **Terias bethesba, Janson.** (Pl. 2, fig. 11.)

Localities—Main Island.
Time of appearance—Summer.

A very interesting and unvariable species, only appearing during the hot weather. Nothing is yet known of its economy. It is peculiar to Japan.

LYCÆNIDÆ.

24. **Miletus hamada, Druce.** (Pl. 2, fig. 12.)

Localities—Yokohama, Nikko.
Time of appearance—Summer to October.

About Yokohama this is generally a very local species, being confined to isolated spots. Some specimens are quite black, and others from the mountains have a patch of greyish white on the fore wing. It varies from $\frac{3}{4}$ inch to $1\frac{1}{4}$ inch.

24. **Lycæna (?) ogasawaraensis, H. Pryer.** (Pl. 2, fig. 13.)

Locality—Ogasawara.
Time of appearance—March.

In the month of March, 1878, I visited the isolated Ogasawara Islands (Bonins) on a collecting expedi-

tion. The only butterflies I saw there were *Papilio xuthus*, form *xuthulus*, *Lycæna bætica*, and the present, of which latter I was fortunate enough to obtain five specimens, and, so far as is yet known, the species is confined to this small group of islands. It is very peculiarly coloured, being deep blue above and shining green on the under side of the hind wing, and has very long antennæ.

26. **Curetis acuta, Moore.** (Pl. 4, fig. 1, 2.)

Localities—Tonosawa, Tosa, Atami, Yokohama.
Time of appearance—September.

I have only twice seen this in the Yokohama district, but it is common in the mountains. The under side is a complete contrast to the upper side, being a beautiful shining silvery white. The contrast between the male and female is also very marked on the upper surface, the former being coppery red and the latter blue.

27. **Amblypodia japonica, Murray.** (Pl. 2, fig. 14.)

Locailty—Yokohama.
Time of appearance—September to December and April.

I have sometimes seen this in warm corners in very cold weather, and it undoubtedly hybernates.

28. **Amblypodia turbata, But.** (Pl. 2, fig. 16.)

Locality—Nagasaki.

I owe the example from which the specimen is figured, of this very rare species, to the generosity of Mr. H. Loomis. At present it is almost unique, the only other specimen extant being in the collection of the British Museum.

29. **Amblypodia loomisi, H. Pryer.** (Pl. 2, fig. 15.)

Locality—Kanozan, in Kadzusa.

I have much pleasure in naming this interesting species after my friend Mr. Loomis, who has been very successful in capturing one new and one very rare species of this very restricted genus.

The plate almost renders a description unnecessary, but for the sake of uniformity I will give a short *précis* of the species.

Expanse $1\frac{1}{8}$ in.; can at once be distinguished from *japonica* and *turbata* by its much smaller size and grey under side. Upper side, basal half of the fore and hind wing bright blue, remainder of the wing black; fringe of the fore wing dark, hind wing grey; under side, on both the fore and hind wings, the spots characteristic of the Lycænidæ, are united, forming four bands.

30. **Niphanda fusca, Brem. and Grey.** (Pl. 4, fig. 2.)

N. dispar. Brem.

Localities—Nikko, Fujisan.
Time of appearance—June, September.

The specimen figured is the female; the male has more sharply pointed wings, and the coloration of the upper surface is dull purple. It frequents high lands and mountain slopes.

31. **Dipsas sæpestriata, Hew.** (Pl. 4, fig. 3.)

Localities—Yokohama, Tokyo.
Time of appearance—May and June.

32. **Dipsas lutea, Hew.** (Pl. 4, fig. 4.)

Localities—Yokohama, Nikko, Yezo, Asama yama.
Time of appearance—May and June.

33. **Dipsas jonasi, Janson.** (Pl. 4, fig. 5.)

Localities—Yezo, Yokokawa, Asama-yama.
Time of appearance—June, July.

These three species form a very beautiful and exceptional group of the Japanese Lycænidæ, and I therefore treat them together. In the case of *Dipsas lutea* and *D. jonasi*, we have an undoubted case of "duality." *D. lutea* is found both on the mountains and on the plains, but is more abundant in the mountains. *D. jonasi*, so far as my experience goes, is a mountain insect only. *D. sæpestriata*, on the contrary, is found on the low land only, and I have not yet seen it from Yezo. The coloration of the females of all three species is very remarkable—in every instance they have almost completely assumed the coloration of the males, contrary to the rule in most of the Japanese Lycænidæ. The Lycænidæ, we know positively, are descended from ancestors, both sexes of which were originally dull-colored, and the majority of the females retain this characteristic, while the males are in many instances gaily colored; but in this group both sexes are almost exactly alike in point of beauty, the females still, however, generally showing a trace of their original dull color, in the black tip to the wing. All three species are most active from about two hours before sunset until dusk, and during this time the males are to be seen flying about the tops of the trees and engaging, often three or four at a time, in an aërial contest.

34. **Thecla smaragdina, Brem.** (Pl. 4, fig. 6A, 6B.)

Localities—Nikko, Asama-yama, Yezo.
Time of appearance—July, August.

35. **Thecla japonica, Murray.** (Pl. 4, fig. 7A, 7B, 7C, 7D.)

T. fasciata. Janson.
T. regina. Butler.

Localities—Yokohama, Asama-yama, Nikko, Yezo.
Time of appearance—on the plains, May to July; on the mountains, July and August.

36. **Thecla orientalis, Murray.** (Pl. 4, fig. 8A, 8B.)

Localities—Yokohama, Nikko, Asama-yama, Yezo.
Time of appearance—Exactly the same as the preceding species.

37. **Thecla saphirina, Stdgr.** (Pl. 4, fig. 9A, 9B.)

Locality—Yezo.

These four form another very distinct group. The males of all four are a most vivid iridescent green. The females of two, *T. orientalis* and *T. sapharina* are dull brown. The female of *T. smaragdina* has, in all the specimens I have seen, a patch of yellowish brown on the fore-wing, while the female of *T. japonica* is polymorphic and very variable. One polymorphic form of the latter is entirely brown, another has a large patch of shining blue on the fore-wing, a third has a yellowish brown patch on the fore-wing, whilst a fourth has both the blue and yellowish brown; specimens showing a mixture, in every degree of variation, can often be found. Coloration of the female, however, depends greatly upon temperature, as the further north we go, or the greater altitude the specimens are obtained at, the more blue they will, as a rule, exhibit. Mr. Butler has been led from this cause into naming a boreal form, as a distinct species; a very uncalled for proceeding, only tending to produce further confusion, in an already complicated group. *T. orientalis* has also a boreal form, with smaller and sharper outline, which so far has escaped the lust of this insatiable 'species maker.' The males of *T. japonica* are very pugnacious; the Alder is their favourite tree, and they sit on its leaves waiting for any passing rival. With regard to *T. smaragdina*, I was of opinion that it might possibly be a hybrid, but I now think this can hardly be the case, although I have had as yet, no means of testing the point by breeding: but if it be not a hybrid, we have here another case of 'duality' between it and *T. japonica*. The best proof that *T. smaragdina* is probably not a hybrid, is that it is never found about Yokohama, where both *T. orientalis* and *T. japonica* are abundant. The *normal* form of the females of all the four species retains the ancestral dull color, but in *T. japonica* there are *abnormal* forms, particularly boreal, having many degrees of bright coloration, although perfectly distinct from the color of the male, which is *green*, the female being *blue*. This last species is therefore evidently in a state of transition. The females of the *Dipsas* group have attained the same amount of coloration as the males. The females of *Thecla japonica* are undergoing the same process, although the 'species maker' has done his worst to obscure this important fact.

38. **Thecla arata, Brem.** (Pl. 4, fig. 10.)

Localities—Nikko, Fujisan, Gifu, Yezo.
Time of appearance—May to July.

This is a very beautiful mountain insect. Both sexes are nearly alike.

39. **Thecla attilia, Brem.** (Pl. 4, fig. 11)

Locality—Yokohama.
Time of appearance—May to July.

This is the most abundant *Thecla* about Yokohama. The markings on both the upper and under sides vary considerably. In many specimens there is no trace of the greyish white spots on the upper side of the hind wing, and the markings on the under side differ considerably.

40. **Thecla enthea, Janson.** (Pl. 4, fig. 12.)

Localities—Nikko, Yezo, Asama-yama.
Time of appearance—July.

This is not uncommon at Nikko, and is abundant at Asama-yama.

41. **Thecla w-album, Knoch.** (Pl. 4, fig. 14.)

Strymon fentoni, But.

Locality—Yezo.

This *Thecla* is common in Yezo, and varies considerably in size. Mr. Butler has unfortunately obtained a rather large specimen, which he has named *Strymon fentoni*. It is figured in the "Aid," Part. 14, pl. 115. I have several female specimens of *T. w-album* which correspond with the figure, and find that the white line on the under side is very variable.

42. **Thecla pruni, Linn.** (Pl. 4, fig. 15.)

Locality—Yezo.

I have a single example, taken by my collector in Yezo.

43. **Thecla mera, Janson.** (Pl. 4, fig. 16.)

Localities—Nikko, Asama-yama.

This is a dull-colored and somewhat rare species.

44. **Thecla orsedice, But.** (Pl. 4, fig. 17.)

Localities—Nikko, Ontaki-san.
Time of appearance—July.

This *Thecla* resembles in the coloration of its sexes a widely different member of the Lycænidæ, *Lycæna argiolus*. The male is a plain blue, the female is blue with a heavy border of black. The latter is excellently figured in the "Aid," Part 13, p. 107. This resemblance of coloration is very remarkable, and is an example of the recurrence of similarity in the ornamentation of the sexes in two widely separated species of the same group of insects.

45. **Thecla ibara, But.** (Pl. 4, fig. 18.)

Locality—Nikko.

I have a single specimen from Nikko. This species is excellently figured in the "Aid," Part 14, pl. 113.

46. **Thecla butleri, Fent.** (Pl. 4, fig. 13.)

Locality—Yezo.

This is also a rare species, and I have only a single example from Yezo.

47. **Thecla signata, But.** (Pl. 4, fig. 19.)

Locality—Yezo.

This species is not uncommon in Yezo. I have several specimens; they all vary considerably in the markings on the under side.

48. **Thecla frivaldszkyi, Led.** (Pl. 4, fig. 20.)

Locality—Yokohama.
Time of appearance—March.

This is one of the earliest butterflies to appear. It is far from an uncommon species, but owing to its habits is very likely to be unnoticed by the collector. It has a very rapid flight, and always perches on a high spray, generally having a favourite leaf from which it makes excursions, chasing any passing object until tired, and then returning to its original perch. Only one brood appears during the year, and this very often when the snow is on the ground.

49. **Polyommatus phlæas, Linn.** (Pl. 4, fig. 21.)

P. chinensis, Feld.
P. elens, Fab.

Locality—Yokohama.
Time of appearance—March to November.
Food plant—Rumex acetosa, Linn.

This species varies greatly in size and coloration according to the time of year that it emerges in the

perfect state ; early spring forms are small and brightly colored, often with a row of blue spots on the back margin of the hind wing, but as the temperature increases they become larger and darker until they reach a size nearly twice that of English specimens. During the hot months the males are often *quite* black, and this continues until the last brood in November ; a difference of 20 miles is, however, sufficient to account for small light-colour males appearing in one locality and black males in another. Some years ago, in this month, *i.e.* November, I collected the small light-colour males in the neighbourhood of Yokohama, and the next day took black males in Boshiu not more than twenty miles from Yokohama, but by working from Boshiu toward the north, through Kadzusa, I found the dark form to be less abundant until at Kanosan they were entirely replaced by the pale form.

50. **Lycæna bætica, Linn.** (Pl. 4, fig. 22.)

Localities—Yamato, Ogasawara, Yokohama, Ryukyu.
Food-plant—a cultivated Leguminous plant like the scarlet runner, but with pinkish-white flowers, *Dolichos cultratus* (Jap. Fuji-mame).
Time of appearance—March (Ogasawara); August, September (Yamato, Ryukyu); October, (Yokohama).

This butterfly has a most extensive range, and I have taken it in every Eastern country in which I have collected. It is abundant on the Island of Labuan, and also in Ogasawara, and is therefore probably to be found in all the intervening islands wherever its food-plant is cultivated. It is also found in Europe, and is one of the great prizes for the English collector, a few specimens having been taken on the south coast near Brighton. I believe, however, it would soon be no great rarity there if its food-plant were cultivated in suitable localities. It is a very local insect, and seldom voluntarily flies far from its food-plant, to which it is very destructive, the *larva* eating the unfolded leaves and flowers also burrowing into the young pods. It only appears about Yokohama late in the year, at which time its food-plant is in bearing, and as this is not much cultivated it is a scarce species there.

51. **Lycæna argiades, Pall.** (Pl. 4, fig. 23A, 23B.)

L. hellotia, Mén.

Locality—Yokohama.
Time of appearance—March to October.

This species is very abundant, and a succession of broods appears during the year ; they vary much in size, and female specimens are often to be found with more or less blue on the upper side.

52. **Lycæna argia, Mén.** (Pl. 4, fig. 24A, 24B.)

L. japonica, Murray. (Pl. 4, fig. 24C.)

Locality—Yokohama.
Time of appearance—March to November.

It is not without considerable hesitation that I quash the Rev. Mr. Murray's species. I have not yet been able to rear either *L. argia* or *L. japonica*, and do not even know their food-plant, although the species is most abundant; in uniting them I am guided by the fact that *L. japonica* only appears during the spring and autumn, *L. argia* during the intervening warm months.

53. **Lycæna argus, Linn.** (Pl. 5, fig. 1A, 1B, 1C.)

Localities—Fuji-san, Nikko, Asama-yama, Kuriles (?)
Time of appearance—August.

In Japan this is a most variable insect according to locality, and there are many forms; some are blue, others almost puce and again others are distinctly greenish-blue. This last form is most interesting, as the males are always nearly as dark as the females, the greenish scales being sparsely scattered towards the base and margin of the fore and hind wings. I have a damaged specimen from the Kurile Islands, which I believe to be this species, captured by Mr. H. J. Snow. I have noticed at Asama-yama three forms within a few hundred feet elevation, but although individual specimens are very distinct, I am forced to the conclusion, on examination of a large series, that they are all one species.

54. **Lycæna ægon, Schiff.** (Pl. 5, fig. 2.)

L. micrargus, But.

I have a single specimen from the north of the main island.

55. **Lycæna argiolus, Linn.** (Pl. 4, fig. 25A, 25B.)

Locality—Yokohama.
Time of appearance—spring and summer.

There are several broods of this insect. While the male is constant, there are two very dissimilar temperature forms of the female; one has a large amount of black on the upper side, the other, which appears generally later, is much brighter. The second brood often exhibits both forms.

56. **Lycæna lycormas, But.** (Pl. 5, fig. 3A, 3B.)

Locality—Yezo.

I have only seen this species from Yezo where it is abundant. Some male specimens are almost as dark as the females.

57. **Lycæna pryeri, Murray.** (Pl. 5, fig. 16.)

Localities—Yokohama, Yezo.
Time of appearance—May and June.

This is the finest of the blue section of the Japanese Lycænidæ. Unlike the rest it only appears once in the year.

58. **Lycæna euphemus, Hb.** (Pl. 5. fig. 4A, 4B.)

L. kazamoto, Druce.

Localities—Fuji-san, Nikko, Asama-yama, Yezo.
Time of appearance—August.

This is a mountain insect, and is very variable. Some specimens are all brown, in others blue predominates.

59. **Lycæna iburiensis, But.** (Pl. 5, fig. 5.)

Localities—Nambu, Asama-yama.

I have only two very worn specimens from Nambu, and one good specimen from Asama-yama.

Concerning the LYCÆNIDÆ, there are some very interesting points which may be here mentioned. The first is the remarkable difference between the colour of the sexes of many of the species, forming this group, and I have drawn up a table under the following headings illustrating this fact :—

1. Both sexes alike dull.
   - *Miletus hamada* (2)
   - *Thecla attilia* (1)
   - *Thecla enthea* (1)
   - *Thecla w-album* (1)
   - *Thecla pruni* (1)
   - *Thecla mera* (1)
   - *Thecla ibara* (1)
   - *Thecla butleri* (1)
2. Male slightly colored, female dull.
   - *Niphanda fusca* (?)
   - *Lycæna euphemus* (?)
3. Male bright, female dull.
   - *Curetis acuta* (1)
   - *Lycæna argiades* (2)
   - *Lycæna argia* (2)
   - *Lycæna argus* (2)
   - *Lycæna ægon* (?)
   - *Lycæna iburiensis* (?)
4. Male very brilliant, female dull.
   - *Thecla sapharina* (1)
   - *Thecla japonica* (1)
   - *Thecla orientalis* (1)
   - *Thecla smaragdina* (1)
5. Male bright, female also bright, but in a less degree.
   - *Thecla orsedice* (?)
   - *Lycæna argiolus* (2)
   - *Lycæna lycormas* (?)
   - *Lycæna bætica* (2)
6. Female brighter than the male.
   - *Lycæna pryeri* (1)
7. Both sexes nearly equal amount of color.
   - *Lycæna ogasawaraensis* (?)
   - *Amblypodia japonica* (1)
   - *Amblypodia turbata* (?)
   - *Amblypodia loomisi* (?)
   - *Thecla signata* (?)
   - *Thecla arata* (1)
   - *Thecla frivaldszkyi* (1)
   - *Polyommatus phlæas* (2)
8. Both sexes equally beautiful.
   - *Dipsas saepestriata* (1)
   - *Dipsas lutea* (1)
   - *Dipsas jonasi* (1)

Some of the species do not always conform to their respective headings. There are bright and dull female polymorphic forms of *Thecla japonica,* and temperature forms of others, such as *Polyommatus phlæas,* the male of which becomes nearly black in the summer, and *Lycæna euphemus,* specimens of which from Yezo are bright, especially the males.

The second peculiarity which is noteworthy is that the upper and undersides of the wings are utterly different, presenting a startling contrast. This is of great service to them as a protection from their numerous enemies. I have often watched a dragon-fly attempt to catch one of the Blues, but never saw a capture made; when in flight the Blue at a distance presents only the impression to the eye, of a blue substance moving along irregularly, but if viewed closer the rapid irregular flight of the insect brings alternately into view, greyish-white and blue (or brown in the female). The dragon-fly makes a succession of dashes at his prey, which, if hard pressed, will settle with closed wings, presenting an entirely new appearance, when the baffled pursuer almost invariably abandons the chase.

The third peculiarity is that some of the species are single-brooded, others many-brooded, during the year. In the foregoing table I have placed the figure (1) against the species which only appear once, the figure (2) against those that appear many times in the year, and (?) against those of which I have no information. I have obtained from the table the following result, namely, those that appear once are all without exception tree-feeders, and those that appear many times feed on low plants or creepers; after studying the structure and habits of the *larvæ* of many of the species, I find that they are very slow in their movements, and all have very small heads, with weak jaws, *and can only feed on young fresh leaves.* The trees they feed on only throw out new leaves regularly in the spring, but low plants and creepers grow all the year, from early spring until late in the autumn; therefore, the tree-feeding species can only obtain their food, in a fit stage for eating, *once* in the year, and are necessarily single-brooded; those which feed on lows plants can do so from March to October, and are therefore many-brooded. This law, however, cannot be applied to other genera which have powerful jaws, and appear only *once* in the year and the fact of such being only single-brooded depends upon other circumstances, namely, either the structure, coloration, or habits of the *imago*, which may render them especially liable to be captured by what I term "general enemies" such as bats, spiders, and dragon-flies. Thus with the Hyberniadæ, which always appear in the *imago*, and lay their eggs in the winter months. These eggs soon hatch, and the *larva* feeds up for a short time and then changes to *pupa*, remaining in this stage all the summer, autumn, and until the next winter. I think the reason is obvious. All the *female* Hyberniadæ are either apterous or only have wings incapable of flying, whilst the *males*, although they have very largely developed wings, are somewhat clumsy fliers, rendering them very liable to capture by dragon-flies, if disturbed in the day time, or to become entangled in the nets of spiders at night; *we therefore find them only appearing in the perfect state when it is too cold for any of these enemies.* Again Tæniocampæ, which are strong robust moths, only appear in the spring; these have the habit of buzzing about trees, and they would be rapidly exterminated if they appeared later on, when spiders' webs cover every bush and bats are abundant. I believe that when the life-history of any insect is attentively studied, we shall be able to assign the reason of its single or multiple appearance accurately.

Family PIERIDÆ—Continued (see Page 10.)

Terias biformis, H. Pryer.

T. bethesba. Janson. (Pl. 2, Fig. 11.)
T. læta. Boised. (Pl. 2, Fig. 10.)

Since publishing what is written in page 10, I have, on conjunction with Mr. Nawa, of Gifu, made an extremely interesting and important discovery. It is that *T. bethesba* is the summer form, and *T. læta* the winter form, of one and the same species. This was quite unexpected. Both Mr. Nawa and myself saw female *T. bethesbæ* depositing their eggs on *Cassia mimosoides.* From these eggs we reared many specimens of *T. læta*, but not a single individual bearing the most remote resemblance to the parent form *T. bethesba.* I have, however, reared a single specimen from these *bethesba* ova, which strongly resembles the *hecabe* form of *T. multiformis*, and it is therefore probably a hybrid. The outline of the wing of *T. læta* is pointed, that of *T. bethesba* rounded, and the former is a much larger insect than the latter. I have proposed the name of *Terias biformis* to unite these two forms. The form *T. læta* is only seven days in the *pupa*, but lives for eight months in the *imago* state, during which time it hybernates for from four to five months. On page 10 I state that *T. læta* appears from March to November; this I now see is an error, the reverse being nearer the truth. It appears last in the year in November-December and emerges from its hybernation first in March. I was misled by this fact, not knowing the insect's life-history, into making the statement that different broods of *T. læta* lived from March to November. The *læta* form emerges in the *imago* during the first week in September, or, exceptionally, during the last few days of August, from ova laid by the *bethesba* form in August, taking a remarkably short time to complete its metamorphosis. The *læta* form does not commence to hybernate before November. It hybernates during the cold winter months, but the first warm days in March awaken it; specimens may be seen flying about until May, when they deposit their ova, which produce the *bethesba* form in July. A most interesting problem concerning these two forms remains to be solved; what is the reason for or benefit gained by this extraordinary change, which is, I think, without parallel among Lepidoptera?

Family LEMONIIDÆ.

60. **Libythea lepita, Moore.** (Pl. 5, fig. 13)

Localities—Yokohama, Nikko, Yezo.
Food-plant—Celtis sinensis, Pers.
Time of appearance—July to May.

There is only one brood of this butterfly. It is the longest lived, in the perfect state, of any of the Lepidoptera. It emerges from the *pupa* early in July, and lives until the following May. It retires to its

hybernaculum soon after its emergence, and remains quiescent until the following March, when it is awakened by the first warm day and may then be seen depositing its eggs on the unopened buds of the Celtis. The *pupa* is suspended by the tail after the manner of a *Vanessa*. It varies considerably in markings and size.

Family NYMPHALIDÆ.

61. **Dichorragia nesimachus, Boisd.** (Pl. 5, fig. 10)

Localities—Nikko, Tosa, Niigata.
Time of appearance—June to July.

This is a mountain insect, and the male is not uncommon. The female is decidedly rare, and is somewhat larger than the male.

62. **Apatura ilia, Schiff.** (Pl. 5, fig. 9.)

Var. *clytie, Schiff. A. here*, Feld.
A. substituta, But.

Localities—Tokyo, Asama-yama, Ô-yama.
Food plant—Salix.
Time of appearance—July to September.

This most beautiful butterfly is very capricious, and, although not uncommon in Tokyo, is almost unknown in Yokohama. It delights in flying round the tops of tall willow trees, now and again descending to moist spots in the roadway or settling on the leaves of its favourite tree. The green *pupa* mimics a young willow leaf, both in shape and color. It varies greatly in intensity of color according to locality, and is more abundant on the mountains than in the plains.

63. **Euripus charonda, Hew.** (Pl. 5, fig. 6.)

Localities—Yokohama, Chichibu, Yamato.
Time of appearance.—July.

This grand insect is not uncommon, but is very difficult to obtain *perfect*. I have often seen several dozens in a day without being able to secure a single specimen. It is quite fearless, and the male has a favourite stand, often on the summit of a tall tree, from which it sallies forth and attacks any passing bird or insect, returning to its perch after it has chased the intruder away. Almost the only way to obtain it is to find an oak or chesnut which has been attacked by the boring *Cossus* or *Hepialus*, the fomenting sap from their burrows being very attractive to it. Each individual generally has its favourite tree to which it descends to suck the flowing sap and fight the other insects which also crowd such attractive spots. Within the space of a few feet on the bole of a tree it may often be seen in company with two or three enormous Hornets and a crowd of *Lethe sicelis*, Stag, and other Beetles, which it buffets with

its wings until its imperial claims are acknowledged. If capture be missed the first time patience is needed as it will in the course of an hour or so surely return. It has a very large flat *pupa*, of a beautiful light green color. I have had many broods of eggs, and have tried the newly hatched *larvæ* with every possible tree, but could never induce them to feed.

64. **Euripus japonica, Feld.** (Pl. 5, fig. 8.)

Locality—Yokohama.
Food-plant—Celtis sinensis, Pers.
Time of appearance—June, August, October.

This insect appears twice in the year, and may often be seen flying round trees, especially Celtis, on which it feeds. Like *E. charonda*, it is very fond of frequenting the mouths of the burrows of *Cossus* and other destructive internal feeding Lepidoptera and Coleoptera which so commonly attack the oak, chesnut, and willow trees in this country. The *larva* hybernates on the bark of the twigs of the tree, and is then grey, but as soon as the leaves appear in the spring it changes its skin and becomes green. It is of the usual *Apatura* tapering cylindrical shape, with strongly bifurcated head.

65. **Limenitis populi, Linn.** (Pl. 5, fig. 7.)

Locality—Yezo.

During the year 1882 my collector took several specimens in the Island of Yezo. I have not seen it since from any other locality.

66. **Limenitis sibylla, Linn.** (Pl. 5, fig. 15.)

Localities—Yokohama, Fuji-san, Nikko.
Food-plant—Lonicera japonica, Thun.
Time of appearance—June, August.

This species varies considerably in size and in the white markings of the upper side.

67. **Cyrestis thyodamas, Boisd.** (Pl. 5, fig. 14.)

Localities—Yamato, Satsuma.
Time of appearance—August.

In the year 1876, while descending the mountain Omine-san-jo, towards Kashiwagi, I was much surprised to see a solitary specimen of this species, which, with some difficulty, I secured. Last year my collector again saw this species, with which he is well acquainted, at Kagoshima, but unfortunately did not effect its capture. South of Japan, in the Ryukyu Islands, it is not uncommon.

68. **Neptis aceris, Lep.** (Pl. 6, fig. 1.)

N. intermedia, W. B. Pryer.

Localities—Yokohama, Nikko, Asama-yama.
Time of appearance—June, August.

This is the most abundant species of the group, and may often be seen gracefully sailing along with out-stretched wings in places where the sun does not strike too powerfully. Japanese specimens of this species can be generally recognized from those of the tropics by being darker-coloured on the underside.

69. **Neptis excellens, But.** (Pl. 6, fig. 2.)

Localities—Nikko, Asama-yama, Fuji-san, Yezo.
Time of appearance—July.

This is a rarity, and I have only seen single specimens from each of the above named localities.

70. **Neptis pryeri, But.** (Pl. 6, fig. 3.)

Localities—Fuji-san, Asama-yama, Nikko.
Time of appearance—July.

This is a mountain species, but this year I was somewhat surprised to see a solitary example in the neighbourhood of Yokohama.

71. **Neptis alwina, Brem and Grey.** (Pl. 6, fig. 4.)

Localities—Nikko, Asama-yama, Niigata.
Time of appearance—July.

This is the largest of the family, and is not uncommon in the mountains.

72. **Neptis lucilla, Schiff.** (Pl. 6, fig. 5.)

N. ludmilla, Herr.—Schäff.

Localties—Nikko, Asama-yama, Yezo.
Time of appearance—July.

The specimen from which the figure is drawn is from Yezo and has a greater amount of white than is usual with those from the South.

73. **Vanessa levana, Linn.** (Pl. 5, fig. 12.)

Localties—Nikko, Tosa, Yezo.
Time of appearance.—July.

This species is very variable in size, shape, color, and markings. Some specimens are black marked with white, others with both white and red. It has two or more broods in the course of year. In habits, marking, and flight, it resembles a *Limenitis*.

74. **Vanessa burejana, Brem.** (Pl. 5, fig. 11.)

V. strigosa, But.

Localities—Nikko, Yezo.
Time of appearance—May.

The remarks concerning the preceding species apply also to this; it is very variable in size, shape, colour, and markings. I have specimens from $1\frac{2}{5}$ to $1\frac{7}{10}$ inch.

75. **Vanessa c-album, Linn.** (Pl. 6, fig. 6A., 6B.)

V. fentoni, But.
V. hamigera, But.

Localities—Nikko, Asamayama, Yezo.
Time of appearance—August.

Very variable in shape, markings, and in the colour of the underside. I have a series of 21 specimens, no two of which are alike. The coloration of the underside varies from black to red. Some specimens resemble the autumn brood of *V. c-aureum*, Linn.

76. **Vanessa v-album, Hübn.?** (Pl. 6, fig. 9.)

V. l-album, Esp.

Localities—Nikko, Yezo.
Time of appearance—August.

I am rather doubtful about the name of this insect. In Mr. Elwes' list of the Butterflies of Amurland, North-China, and Japan (Proc. of the Zoo. Soc. Nov. 15, 1881), the following note is given on *V. l-album*. "Only seen from the Ussuri and from Japan, where it seems rare. The Japanese insect seems intermediate between the European and the American form known as *V. j-album*; but probably the latter is not really separable. Mr. Strecker says that the European and American forms cannot be separated."

77. **Vanessa c-aureum, Linn.** (Pl. 6, fig. 7A, 7B.)

V. angelica, Cr.
V. pryeri, Janson.

Localities—Yokohama, Yezo.
Food-plants—Hemp (Cannabis sativa, L.) and Wild Hop (Humulus japonicus, S. & Z.).
Time of appearance—

This species varies considerably according to temperature. *V. angelica* is the summer form, *V. pryeri* the winter form, which hybernates.

78. **Vanessa xanthomelas, Schiff.** (Pl. 6, fig. 10.)

Locality—Yokohama.
Food-plants—Willows and Celtis sinensis, Pers.
Time of appearance—August to April.

Very abundant about Yokohama. It feeds on Willows, but is more often found on the Celtis, large trees being frequently completely stripped of leaves by the *larvæ*. Only one brood appears during the year, and the perfect insect hybernates.

79. **Vanessa urticæ, Linn.** (Pl. 6, fig. 8.)

V. butleri, Fenton.

Locality—Yezo.
Time of appearance—

This species is common in Yezo; I have not yet found it on the main island.

80. **Vanessa io, Linn.** (Pl. 6, fig. 11.)

Localities—Yezo, Niigata Nikko, Usui-toge.
Time of appearance—June, July.

Mr. J. M. Leech remarks concerning this species (P.Z.S. 1887, p. 241): "Not very common in Central Japan, where it keeps to the mountains, but plentiful in Yesso and Korea."

81. **Vanessa antiopa, Linn.** (Pl. 7, fig. 1.)

Localities—Nikko, Yezo.
Time of appearance—August to May.

Common at Nikko and in Yezo; not found away from the mountains.

82. **Vanessa cardui, Linn.** (Pl. 7, fig. 2.)

Localities—Yokohama, Maibashi, Yezo.
Food-plant—Plume thistles (Cnicus).
Time of appearance—August, Septembr, November.

Rare in the neighbourhood of Yokohama.

83. **Vanessa callirhoë, Fab.** (Pl. 7, fig. 3.)

Papilio atalanta indica, Herbst.

Localities—Yokohama, Yezo.
Food-plant—Bœhmeria nivea, Hook and Arn.
Time of appearance—January, March, August, November.

Many broods appear in the course of the year. I have had them emerge from the *pupa* in January. It is very common about Yokohama.

84. **Vanessa charonia, Drury.** (Pl. 7, fig. 4.)

Var. *glauconia*, Motsch.

Localities—Yokohama, Yezo.
Food plant—Smilax China, L.
Time of appearance—August.

Very common about Yokohama. This species is variable in the size and colour of its markings.

85. **Melitæa phœbe, Schiff.** (Pl. 7, fig. 5.)

Var. *sibirica*, Stdgr.
Var. *ætheria*, Ev.
M. scotosia, But.

Locality—Asamayama.
Time of appearance—July.

Varies greatly in size and coloration.

86. **Melitæa athalia, Rott.** (Pl. 7, fig. 6.)

M. niphona, But.

Locality—Asamayama.
Time of appearance—July.

This species also varies much in size and coloration.

87. **Melitæa n. sp.?** (Pl. 7, fig. 7.)

Locality—Asamayama.
Time of appearance—August.

This may be only an extraordinary variety of *M. athalia*.

As Mr. Elwes well remarks, the genus Melitæa is an extremely puzzling one, and requires an immense series of specimens to illustrate it.

88. **Atella phalanta, Drury.** (Pl. 7, fig. 10.)

Locality—Sonogi, about 30 miles from Nagasaki.
Time of appearance—October.

The specimen figured was taken in 1880 by the Rev. W. Andrews. Mr. Hewitson's catalogue includes specimens from Calabar, Natal, Madagascar, and Mekian. The species is figured in the Rhopalocera Malayana (Pl. 9, fig. 4.)

89. **Argynnis niphe, Linn.** (Pl. 7, fig. 8A, 8B.)

Localities—Yokohama, Nagasaki, Tosa, Hachijo.
Time of appearance—March to July.

Rare in the vicinity of Yokohama, but seems to be common in South Japan.

90. **Argynnis daphne, Schiff.** (Pl. 7, fig. 9.)

A. rabdia, But.

Localities—Nikko, Asamayama, Yezo.
Time of appearance—July.

Varies greatly in size and coloration. It is common at Nikko and in Yezo.

91. **Argynnis aglaia, Linn.** (Pl. 7, fig. 11.)

A. fortuna, Janson.

Localities—Fujisan, Yezo.
Time of appearance—September.

This is not a common insect.

92. **Argynnis adippe, Linn.** (Pl. 7, fig. 12.)

A. pallescens, But.

Localities—Yokohama, Fujisan, Ôyama, Asamayama, Yezo, &c.

Common everywhere.

93. **Argynnis nerippe, Feld.** (Pl. 8, fig. 1-A, 1-B.)

Localities—Ôyama, Asamayama, Fujisan, Kanosan, Yezo.
Time of appearance—August.

Very abundant in the mountains.

94. **Argynnis anadyomene, Feld.** (Pl. 8, fig. 2.)

A. ella, Brem.

Localities—Yokohama, Yezo.
Time of appearance—July, August.

Very common about Yokohama.

95. **Argynnis sagana, Doubl.** (Pl. 8, fig. 3.)

A. paulina, Nordm.

Localities—Yokohama, Asamayama, Yezo.
Time of appearance—July.

This species is common about Yokohama. The two sexes show a very remarkable differentiation in coloration. The specimen figured is a male.

96. **Argynnis paphia, Linn.** (Pl. 8, fig. 4.)

A. paphioides, But.

Localities—Ôyama, Asamayama, Kanosan, Fujisan, Yezo.
Time of appearance—July, August.

This is a mountain species. I have taken it once, however, at Yokohama.

97. **Argynnis laodice, Pall.** (Pl. 8, fig. 5.)

Var. *japonica*, Mén.

Localities—Yokohama, Yezo.
Time of appearance—August.

Common about Yokohama.

98. **Argynnis ruslana, Motsch.** (Pl. 8, fig. 6.)

A. lysippe, Janson.

Localities—Yokohama, Nikko, Yezo.
Time of appearance—September.

Mr. Elwes remarks that this species comes very near *A. laodice*, Pall. It looks like a hybrid, but the specimens in my possession are as yet too few to enable me to give a decided opinion on the subject.

Family DANAIDÆ.

99. **Danais tytia, Gray.** (Pl. 8, fig. 9.)

Localities—Yokohama, Fujisan, Yamato, Ôyama, Atami, Kanosan, Yezo.
Time of appearance—May, August, September.

This is scarce about Yokohama, but I generally see two or three every year. It is much more abundant on the mountains, and I have taken as many as five specimens, at one sweep of the net, on the summit of a mountain in Yamato, near Yoshino, on the path leading to O-mine San-jo-san.

Family SATYRIDÆ.

100. **Melanitis ismene, Moore.** (Pl. 8, fig. 7.)

Locality—Yamato.
Time of appearance—October.

This is a very rare insect. I saw only two specimens in Yamato, both of which I captured. They were flying round the bole of a cryptomeria growing on the mountain pass leading up to Ôdaisan.

101. **Melanitis leda, Linn.** (Pl. 8, fig. 8.)

Localities—Tosa, Nikko (Mr. Maries).
Time of appearance—July, August.

Very rare. I have one specimen only, captured on the borders of Tosa and Iyo, in Shikoku. It was flitting among the tall stems of the cultivated hemp, and was, in consequence, very difficult to capture. I saw only two specimens.

102. **Melanitis n. sp.?**

Locality—Nagasaki.

I have only one specimen, received from Mr. Ota. My brother informs me that this comes nearest to *M. solandra* from Tahiti. It would be exceedingly interesting could a large series be obtained.

103. **Mycalesis gotama, Moore.** (Pl. 9, fig. 1.)

Locality—Yokohama.
Time of appearance—

This is very common about Yokohama, where it frequents dark thickets.

104. **Mycalesis perdiccas, Hew.** (Pl. 9, fig. 2.)

Locality—Yokohama.
Time of appearance—

Also very common, frequenting the same places as *M. gotama*, which it resembles in markings. Both species appear at the same time.

105. **Ypthima baldus, Fab.** (Pl. 9, fig. 3.)

Y. argus, But.

Localties—Yokohama, Asamayama, Yezo.
Time of appearance—August.

One of the most abundant butterflies about Yokohama. I have two specimens very dark in the underside from this locality.

106. **Erebia sedakovii, Ev.** (Pl. 9, figs. 4A, 4B.)

E. niphonica, Janson.
? *E. scoparia*, But.

Localities—Asamayama, Nikko, Yezo.

My Yezo specimen is *E. scoparia*, which appears to me probably only a local differentiation of the above, although I have not seen a sufficient number of specimens of either to enable me to decide.

107. **Satyrus dryas, Scop.** (Pl. 9, fig. 5.)

S. bipunctatus, Motsch.

Localities—Yokohama, Asamayama, Yezo.
Time of appearance—August.

Very abundant about Yokohama flitting among the grass.

108. **Pararge achine, Scop.** (Pl. 9, fig. 6.)

P. achinoides, But.

Localities—Nikko, Asamayama, Yezo.
Time of appearance—July, August.

Abundant at Nikko in June and July. The Yezo specimens are generally larger and lighter colored.

109. **Pararge deidamia, Ev.** (Pl. 9, fig. 7.)

P. ménétriésii, Brem.

Localities—Nikko, Asamayama, Yezo.
Time of appearance—July, August.

Not uncommon at Nikko.

110. **Pararge maackii, Brem.** (Pl. 9, fig. 8.)

Lasiommata marginalis, Motsch.

Localities—Yamato, Yezo, Tokyo (Fenton).

This is not a common insect.

111. **Lasiommata epimenides, Mén.** (Pl. 9, fig. 9.)

Neope fentoni, But.

Localities—Yezo, Asamayama.
Time of appearance—July, August.

Very rare in Japan, but, according to Mr. Elwes, not uncommon in various parts of the Amoor region.

112. **Lethe sicelis, Hew.** (Pl. 9, fig. 10.)

Localities—Yokohama, Asamayama.
Time of appearance—August.

Extremely abundant about Yokohama and everywhere in the plains, but does not go very far up the mountains, where it is replaced by the next species. I have taken the *larva*, and believe it feeds on the bamboo grass.

113. **Lethe diana, But.** (Pl. 9, fig. 12.)

Localities—Ôyama, Yamato, Asamayama, Yezo.
Time of appearance—July, August.

Common in all the mountains. It is probably the mountain form of the last species.

114. **Pronophila schrenkii, Mén.** (Pl. 10, fig. 1.)

Localities—Yezo, Asamayama.
Time of appearance—August.

This fine insect is common in Yezo. Mr. Leech (P.Z.S. 1887, p. 426.) says "it flies in dense underwood, and is hence rather hard to take."

115. **Neope gaschkevitschii, Mén.** (Pl. 9, fig. 11.)

Localities—Yokohama, Oyama, Yamato, Asamayama, Yezo.
Time of appearance—April, August.

Very abundant about Yokohama, in Yamato, and elsewhere. The specimens from high up Oyama are much darker than those taken about Yokohama.

116. **Neope calipteris, But.** (Pl. 10, fig. 2.)

Localities—Oyama, Yamato, Yezo.
Time of appearance—August.

This is a mountain insect.

117. **Cœnonympha œdipus, Fab.** (Pl. 10, fig. 3.)

C. annulifer, But.

Locality—Asamayama.
Time of appearence—July, August.

Like the last, a mountain insect.

Family HESPERIDÆ.

118. **Ismene benjamini, Guér.** (Pl. 10, fig. 4.)

I. benjamini, var. *japonica*, Murray.

Localities—Oyama, Nikko, Yamato.
Time of appearance—July ; Southern Japan, May (Mr. Leech.)

Common in the above localities.

119. **Pythauria chrysœglia, But.** (Pl. 10, fig. 5A, 5B.)

Localities—Nikko, Asamayama, Yezo.

I have a long series of specimens from Yezo.

120. **Daimio tethys, Murray.** (Pl. 10, fig. 6.)

Pyrgus tethys, Mén.

Localities—Yokohama, Yezo.

Abundant about Yokohama. I have a variety with the white spots in the forewing united, forming a large V-shaped patch.

121. **Pamphila mathias, Fab.** (Pl. 10, fig. 7.)

Locality—Yokohama.

Common about Yokohama ; also in Central and Southern Japan (Mr. Leech.)

122. **Pamphila lamprospilus, Feld.** (Pl. 10, fig. 8.)

P. vitrea, Murray.
Isoteinon lamprospilus, Feld.

Locality—Yokohama, Tsuruga (Mr. Leech.)

Common in the vicinity of Yokohama.

123. **Pamphila varia, Murray.** (Pl. 10, fig. 9.)

Localities—Yokohama, Yezo, Nagasaki, &c.

Common about Yokohama. Easily recognized by the dark veins on the underside of the hind-wings (Mr. Leech).

124. **Pamphila guttata, Brem. and Grey.** (Pl. 10, fig. 10.)

Eudamus guttatus, Brem. and Grey.
Gonoloba guttata, Mén.

Localities—Yokohama, Yezo.

Common about Yokohama.

125. **Pamphila pellucida, Murray.** (Pl. 10, fig. 11.)

Localities—Yokohama, Asamayama, Yezo.
Time of appearance—August.

Very common about Yokohama.

126. **Pamphila jansonis, But.** (Pl. 10, fig. 12.)

Localities—Ikao.

Very closely allied to *P. pellucida*, the only difference of any importance being a conspicuous pale spot near the base of the hind wing on the underside (Mr. Leech).

127. **Hesperia sylvanus, Esp.** (Pl. 10, fig. 13A, 13B.)

Localities—Asamayama, Nikko, Fujisan, Yezo.
Time of appearance—August.

Mr. Elwes remarks that the forms of this species found in China, Japan, and Amurland are usually larger than the European ones.

128. **Hesperia comma, Linn.** (Pl. 10, fig. 14A, 14B.)

Locality—Asamayama.
Time of appearance—July, August.

129. **Hesperia leonina, But.** (Pl. 10, fig. 15.)

Localities—Nikko, Yezo.
Time of appearance—August.

Not uncommon at Nikko.

130. **Hesperia rikuchina, But.** (Pl. 10, fig. 16A, 16B.)

Localities—Nikko, Yezo, Asamayama.
Time of appearance—August.

Abundant at Nikko.

131. **Hesperia flava, Murray.** (Pl. 10, fig. 17.)

Localities—Yokohama.
Time of appearance—June, August.

Common about Yokohama.

132. **Hesperia, Sp. ?** (Pl. 10, fig. 18.)

Localities—Nikko, Asamayama.
Time of appearance—July.

133. **Cyclopides ornatus, Brem.** (Pl. 10, fig. 19.)

Localities—Oyama, Fujisan, Nikko.

Occurs also in Yezo (Mr. Leech).

134. **Pyrgus inachus, Mén.** (Pl. 10, fig. 20.)

Localities—Nikko, Asamayama.
Time of appearance—August.

Rather scarce at Nikko.

135. **Syrichthus maculatus, Br. and Grey.** (Pl. 10, fig. 21.)

Pyrgus maculatus, Mén.

Localities—Yokohama, Nikko.

Common in Japan and Korea (Mr. Leech).

136. **Syrichthus sinicus.** (Pl. 10, fig. 22.)

Pyrgus sinicus, But.

Locality—Yokohama.

137. **Nisoniades montanus, Brem.** (Pl. 10, fig. 23.)

N. rusticanus, But.

Localities—Yokohama, Yezo.
Food plant—Oak (quercus).
Time of appearance—April.

Abundant about Yokohama in the early spring, feeding on the oak leaf.

期節　九月ヨリ十二月乃至翌年ノ四月ニ至ル

寒天ノ期節ニ余ハ温暖ナル陰退ノ場所ニ之ヲ得タル「アリ故ニ此種ノ冬眠ヲ爲スハ疑フベカラズ

（八二）

アムブリポジヤ、トルバアタ。バツトラ

（第貳版第拾六圖）

産地　長崎

此最モ珍奇ナル種類ニ就キ余ノ圖ヲ製スルヲ得タルハエイチ、ル―ミス氏ノ惠贈ニ係リテ深ク同氏ニ謝スル所ナリ、此種ノ現今世ニ存スルモノハ英國博物館ノ貯藏ニ屬スルモノヽ外殆ント此一品ニ止マレリ

（九二）

アムブリポジヤ、ル―ミシイ。エイチ、プライヤ

（第貳版第拾五圖）

産地　鹿野山

余ハ此珍奇ナル種ニ其名ヲ命スルニ當リ余ノ友人タルル―ミス氏ノ名ヲ取ルヲ甚ダ悅ブナリ同氏ハ此狹隘ナル屬ノ中ニ此甚タ新奇ナル種ヲ捕獲スルノ榮ヲ得タレバナリ

此寫生ハ殆ンド其解說ヲ要セスト雖モ他ノ例ニ效ヒ暫ク之ニ簡單ナル解說ヲ下サントス

擴張セル翅ノ大サハ一インチ八分ノ一ニシテ之ヲ一目「ジヤポニカ」及ビ「トルバアタ」ノ兩種ト區別シ得ルハ其大サノ頗ル小ニシテ且ツ其裏面ノ褐色ナルヲ以テナリ、其前後兩翅ノ表面礎部ノ半バヽ鮮青色ニシテ殘余ノ部分ハ黑色ナリ翅緣ハ前翅ニ於テハ黑ク後翅ニハ褐色ナリ前後兩翅ノ裏面ニ於テ「ライシニディ」族ノ特微タル班點ハ互ニ連合シテ四個ノ條紋ヲ成セリ

品中某ノモノハ全ク黑色ニシテ山間ニ産スルモノハ其前翅ニ灰白色ノ班文一個ヲ有セリ、其大サハ四分ノ三インチヨリ一インチ四分ノ一ニ達セリ

(五二) ライシイナ、(?)ヲガサハラヱンシス、ヱイチ、プライヤ

産地　小笠原群島　(第貳版第拾三圖)

期節　三月

一千八百七拾八年三月余ハ標品採集ノ目的ヲ以テ小笠原ノ孤島(無人島)ヘ渡航セリ、同島ニ於テ目擊スルヲ得タル種類ハ只タ「パピリオ、ズウサス」「ズウスウラス」形、「ライシイナ、ベイチカ」及ビ此類ニ過ギズシテ余ハ幸ニ此種ノ五品ヲ採集スルヲ得タリ而シテ從來ノ經驗ニ據レハ該種ハ該小群島固有ノ産タルガ如シ、此種ノ色澤ハ甚タ奇特ニシテ後翅ノ表面ハ濃藍色ヲ帶ビ裏面ハ綠色ニシテ光澤ヲ呈シ而シテ極メテ長キ觸鬚ヲ有セリ

(六二) キユレテス、アキユタ。ムアー　(第四版第一二圖)

産地　塔ノ澤、熱海、土佐、横濱、

期節　九月

此種ハ山間ニ普通ナル者ナレモ横濱地方ニテ余ノ之ヲ目擊セシハ只タ二回ニ過ギズ、翅ノ裏面ハ美麗ナル銀白色ヲ帶ヒテ表面ハ全ク之ト相反セリ、雌雄ニ隨テ其着色ノ異ナルモ亦著シクシテ雄ニ於テハ銅色ヲ帶ビ雌ニ在リテハ藍色ヲ呈セリ

(七二) アムブリポジヤジヤ、ポニカ。モオレイ　(第貳版第拾四圖)

産地　横濱

産地　本洲

期節　三月ヨリ十一月ニ至ル

「マルチフォルミス」ノ「ヘケイブ」形ニ「マンダリナ」ノ補欠形アルガ如ク此種ノ中ニ全ク黄色ニシテ甚ダ稀有ナル變種ヲ發見スル「アリ」之レ甚ダ普通ノ種ナリト雖モ余ハ其活狀ニ就テ一モ之ヲ報スルヲ得ズ而シテ此關係ニ就キ日本ハ實ニ博物學者ニ對シ最モ快樂アル研究ヲ遂クベキ無盡藏ナリ、余ハ限リアルノ日子ヲ以テ其研究ニ就事スルヲ得シハ僅々數種ニ過ギサレモ之ニ就キ常ニ極メテ愉快ナル且ツ意外ノ結果ノミヲ得タリ

（第貳版第拾一圖）

（三二）テリアス、ペセスバジヤンソン

産地　本洲

期節　夏季

此種ハ實ニ珍奇ニシテ且ツ變化ノ少ナキモノニシテ只タ炎暑ノ期節ニノミ現出ス其活狀ニ就テハ一モ之ヲ報導スルヲ得ズ是レ日本特有ノ種ナリ

（四二）ミレタス、ハマダドルウス　ライシニディ族

（第貳版第拾貳圖）

産地　横濱、日光、

期節　夏季ヨリ十月ニ至ル

此種ハ横濱近傍ニ於テ常ニ一定ノ局部ニノミ發見セラルベキ眞ニ一種ノ地方種ナリ、標

英國ノ如キ氣候寒冷ナル地ヘ移スルヿアラバ只ダ「マンダリナ」形ノミヲ産出シテ「ヘケイブ」形トノ關係ハ同族中他ノ二種間ニ存スル差違ヲ視ルガ如ク更ニ之ヲ疑フベカラザルニ至ルベク又日本ニテ氣候ノ温度增加スルヿアルト爲セバ「マンダリナ」形ハ消滅シ恰モ余カ嘗テ採集セル新嘉坡(シンガポール)其他ノ熱帶地方ニ於ケル如ク單ニ「ヘケイブ」形ノミヲ産出スルニ至ルベシ「ヘケイブ」形ハ雌ヨリモ遙ニ多數ノ雄ヲ産出スル蝶類ノ一形態ト假定セラレシト雖モ是レ事實ト相反スル者ノ如シ即チ余ガ之ヲ飼養スルニ當リ雌雄殆ンド等分ノ數ヲ得ルヲ得タレバナリ雄ハ好ンデ經路ノ濕地ニ群居シ或ハ公然飛翔スルヲ以テ容易ニ其多數ヲ捕獲スルヲ得雌ハ草木深叢ノ間ニ非ザレバ之ヲ獲ベカラスシテ目ニ觸ルヽヿ甚ダ少ナシ是レ前ノ如ク人ヲシテ兩性ノ數ニ不同アルヲ感セシムルノ原因タルニ似タリ雌雄ノ習性上ニ存スル差違ノ結果ハ其色澤ノ互ニ相異ナルヲ以テ之ヲ視ルベシ即チ雄ハ其色常ニ鮮黃色ニシテ雌ハ日光ニ暴露スルヿ稍々少ナキカ故ニ淡黃ニ就テハ然色ヲ呈セリ蓋シ是等ノ諸項ハ只タ「ヘケイブ」形ニノミ適用スベキ者ニシテ「マンダリナ」形ルニアラス夫レ「マンダリナ」形ハ寒冷ナル期節ニ現出スルモノニシテ其雌雄ノ習性モ略々同シク且ツ色澤ノ差違モ甚タ少ナシ而シテ亂雜ニ採集セル標品中ニモ雌雄ノ割合不同ナラザルヲ示ス

余ハ「マンダリナ」及ビ「ヘケイブ」形ノ最モ卓越ナルモノ二種ヲ圖ニ示セリ

テリアス、レエタ。ポイスジュアル

シエゲリイ。メニトレエ

(第貳版第拾圖)

此事實ノ正確ナルヲ保スルモノニシテ之ニ疑ヲ容ルヽモノハ宜シク其試驗ヲ施シ以テ其正否ヲ質スニ容易ナルベシ、世間ノ卓越ナル學士輩ハ此種ノ形態ヲ識別セントシテ其一生間ヲ徒費セシ「アルハ余ノ正ニ知ル所ナリ而シテ彼輩ノ自負愛賞スル所ノ理論ハ一朝余ノ爲メニ極論說破セラレ眞ニ其事業ノ徒勞ニ屬セシ「ハ恰モ水ノ涸レタル井中ニ底ノ脫シタル鈎瓶ヲ投ジ以テ一滴ヲモ得ザリシニ均シキガ故ニ其心ニ不快ヲ感スルハ當然ノ「ト謂フベシ、一千八百八拾年出版倫敦昆蟲學協會報告第四號ニ揭載セルバットラ氏ノ日本產「テリアス」ノ說ノ如キハ即チ此類ニ屬スル者ニシテ同書ノ眞ニ有用ナル部分ハ之ニ附セル着色ノ寫生圖ナリ是ニハ「マルチフォルミス」ノ凡ル形態ノ種類ヲ載セテ殆ント洩ス所ナシ

自然ニ任スレバ啻ニ「ヘケイブ」ノミヲ產スル期節ニ際シ一群ノ螟蛉ヲ折半シテ一半ヲ寒冷ナル處ニ置キ他ノ一半ヲ溫暖ナル處ニ置キ以テ之ヲ飼養セシニ余ハ同時ニ二形態ノ混交セル成蟲ノ一群ヲ得タリ就中溫暖ノ處ヨリ完全ナル「ヘケイブ」ヲ生シ寒冷ナル處ヨリ「マンダリナ」ヲ產セリ、一千八百八拾年出版倫敦昆蟲學協會報告第四號ニ揭載シテ雜種ニ關セルバットラ氏ノ意見ニ據レバ眞ノ雜種ナルモノハ「ヘケイブ」ト「マンダリナ」ノ兩種間ニ在リテ自然ニ現存スルモノトセリ、「マンダリナ」種ハ寒冷ナル山上ニ在リテ平原ニ於ケルヨリモ早ク產出シ漸次ニ下山シテ「ヘケイブ」形ト混交シ以テ晚秋ニ至ルマテ數回ノ生殖ヲ爲ス其無數ノ中間種ヲ比較スルキハ此兩種ノ母形間ニ順次ノ階級アルヲ視ルナリ此種ハ種類變遷ノ理ヲ說明スルニ極メテ適當ノ引証ト爲ルモノナリ、今若シ假ニ此種ヲ

サリイ。ホース

産地　日本中央及ビ南方

食草　鐵掃箒（メドハギ）

期節　三月ヨリ十二月ニ至ル（三月ニ現ハルモノハ冬眠セルモノナリ）

此種ハ博物學者ニ對シ凡ソ日本産蝶類中ノ最モ快樂ヲ與フルモノニシテ其生活ノ非凡ナル來歷ニ就テハ詳細ノ說明ヲ要スルガ故ニ余ハ可及的其詳說ヲ是ニ悉クサントス

抑々余ハ實驗ニ由リ同僚輩ト共ニ「テリアス」屬中一モ未タ嘗テ北海道ト本洲間ノ津輕海峽ヲ越ヘタルモノナキヲ發見セリ「マルチフオルミス」種ハ日本ヨリ濠洲ニ至ルマデノ南部地方並ニ遠ク亞非利加ニ至ルマデノ西方ニ産スルモ恐ラク日本ノ本洲ハ其産地ノ北域タルベシ、アムアランドニハ未タ其産アルヲ聞カズ

余ハ數年前冬眠ヲ爲セル「マンダリナ」形ノ雌ガ鐵掃箒ノ葉上ニ卵子ヲ産附スル所ヲ見出セリ、此卵子ヨリ余ハ飼養術ニ依リテ意外ニ「ヘケイブ」形ノモノ數多ヲ得タリ「ヘケイブ」形ハリン子アス氏ノ既ニ說明セルモノニシテ百有餘年間已ニ世人ノ熟知スル所ノモノナリ、此結果ハ余ノ更ニ思ヒ設ケサル所ニシテ當時其種類ノ變遷セザルヿニ就キ世間一般ノ輿論ト大ニ反對ヲ表セリ故ニ余ハ「ヘケイブ」形ノ卵子若クハ螟蛉ノ或ハ誤テ飼養函中ニ入リシナランヲ疑ヒ他日ノ研究ヲ待チテ此發見ノ結果ヲ世ニ公布スルヿヲ暫ク猶豫セリ、爾來再三此試驗ヲ行ヒシニ常ニ同一ノ結果ヲ得タリ是ニ於テ其事實ヲ倫敦昆蟲學雜誌ニ揭載セシニ甲論乙駁今ニ至リテ尙ホ之ヲ信ズル者ナキカ如シ然レモ余ハ素ヨリ

食草　荳料植物

期節　二月ヨリ十一月ニ至ル

此種ハ横濱近傍ニテ最モ多數ナル蝶類ノ一ニシテ春時現ハル、種ノ前驅者タリ、之レ二月中旬尚ホ積雪ノ地上ニ殘レルニ際シ日光ニ浴セル温暖ノ堤上ニ飛翔スルヲ屢々見ル所ナリ、此等ハ冬期ヲ經過シ來レルニ非ズ新ニ羽化セルモノタルハ余ガ屢々辛フシテ乾固セル所ノ翅ヲ具フルモノヲ得シ「アレバナリ、其雌ニハ黄色ノ者ト白色ノモノ、二種アリ、其夏種ト冬種トハ大ニ其色澤及ビ大サヲ異ニセリ、平原山間共ニ之ヲ産ス、余ハ夏末ニ羽化セル極メテ大ナル雌ト二月ニ現出セル雄ノ二品ヲ寫生ニセリ

（第貳版第九圖AB）

（一二）

テリアス、マルチフオルミス、エイチ、プライヤ

ヘケイブ、リン子アス

マンダリナ、デル、チーズ

ヘカベオイデス、メニトレヱ

シ子ンシス

マレシイ、バツトラ

ア子モ子、プヱルダ

コン子キシヴア、バツトラ

ヱイジヲツプ、メニトレヱ

ブレンダ、

原ニ産ス、日本南方ニ在リテハ山間ニ限ラルヽモ漸次北方ニ進ムニ從ヒ平原ニ産スルノ種類少ナカラス、余ハ一モ前種ノ北海道産ナル者ヲ得ル能ハサリシヲ以テ考フレバ同地ハ全ク此種類ニ由テ占居セラレタルモノヽ如シ「マキシマ」及ビ「アキユミナタ」ノ如キハ二樣形態ノ適例ト爲スベシ

(九一)

コリアス、パレイノリン子アス

産地　淺間山

期節　七月

(第貳版第三圖)

此種ハ其産地極メテ廣クアイスランド島ヨリ日本中央ニ至ルマデ海上六千フイート餘ノ高處ニ産ス、余ハ淺間山湯ノ平ニテ常ニ之ヲ見ルヿヲ得タリ、此地ハ軟弱ナル火山石ヨリ成リ地形凹凸極マリナキヲ以テ之ヲ捕獲スルニ頗ル困難ヲ極メリ、此種ハ其棲處ヲ離レ遠ク他方ニ彷徨セザルモノヽ如ク常ニ上昇下降シテ飛翔スルト雖モ決シテ此寒氣凜烈ナル地ヨリ下降スルヿナキニ似タリ

(〇二)

コリアスハイアル、リン子アス

シモダ、テル、ヲーズ

ヱレイト、ヱスペンシヤイ

サブアウラタ、バツトラ

ヱルウヱシイアイ、バツトラ

(第貳版第四圖AB)

産地　本洲、北海道

ハ單ニ飼養術ニ依リ決定スルヲ得ベシ、此種ハ横濱地方ニ産出セサルヲ以テ余ハ自ラ之ヲ試驗スルノ機會ヲ得ザリキ故ニ更ニ便宜ノ地ニ於ケル昆蟲學者ニ之ヲ讓ラントス、若シ「ウイリビヤ」ト「アミュレンシス」ハ異種類ニアラザリセバ恐ラクハ二樣形態ノ種ナルベシ余ハ採集セル其標品中ニテ最モ形態ヲ異ニセル二品ヲ是ニ寫生セリ

（第貳版第五圖）

（七一）

ロドセラ、マキシマ。バットラ

産地　横濱、大山、淺間山、

期節　五月、七月、

此種ハ次ニ掲載スルモノヨリ頗ル肥太ナル外貌ヲ有セリ而シテ余ハ嘗テ（一千八百八拾三年五月九日出版日本亞細亞協會報告書ヲ見ヨ）陳述セル意見ニ反シ今日ハ右兩種ノ全ク異種ナルヲ信スルナリ是レ余ハ一千八百八拾五年信州淺間山ニ於テ新ニ化生セル「マキシマ」及ビ「アキユミナタ」ノ兩種ヲ捕獲シ以テ之ヲ比較スルガ爲メニ未曾有ノ好機會ヲ得タレバナリ、余ハ横濱ニテ春時單ニ其雄ノミヲ得シ「屢々ナルモ未ダ嘗テ其雌ヲ得ザリシ所以ノモノハ惟フニ之レ其近傍ノ丘陵ヨリ彷徨シ來ルモノヽ外ナラザルガ如シ、此種ノ冬眠ヲ爲スハ疑フベカラザルナリ

（第貳版第六圖）

（八一）

ロドセラ、アキユミナタ。プヱルダ

産地　日光、淺間山、北海道

期節　七月

此種ハ余ガ蒐集シタル成績ニ據レバ專ラ高處ニノミ發見スルヲ得シモ北海道ニテハ平

リ、余ハ早春數日間ヲ費ヤシ以テ終ニ一雌ノ卵ヲ南芥菜ノ葉上ニ産附スル所ヲ目擊スルノ榮ヲ得タリ而シテ之ヲ孵化スルニ當リ全ク異形ノ「メレット」種ヲ得タリ、余ハ「パピリオ、ズウサス」及ビ「ズウスウラス」ニ同樣ノ變遷アルヲ發見セルヲ以テ此成績ノアランハ豫メ歸セザルニ非ザリシナリ

(五一) アンソカリス、スコレマス。バットラ

産地　横濱、日光、

食草　碎米薺（ダチツケバナ）

期節　三四月

此種ハ一週年間ニ只タ一回ノ現出ヲ爲スヿ疑フベカラズ、之ト類似ノ形態ハ更ニ他ニ見サル所ニシテ「スコレマス」ハ日本ニ産スル此屬ノ全ク代表者ナリ、余ハ其活狀ニ就キ通常濕地ニ自生スル碎米薺ノ葉ヲ食トスルヿノ外敢テ之ヲ知ラズ

（第三版第四圖AB）

(六一) リユコフアシヤ、シナピスリン子アス

アミユレンシス。メニトレエ

ウイリビヤ。ジヤンソン

産地　富士山、淺間山、北海道

期節　七八月

此種ハ本洲ノ南方ニテハ單ニ山間ノ産ナルモ陸中國南部及ビ北海道ニテハ平原ニ産スルモノト信ズ「ウイリビヤ」ト「アミユレンシス」ハ全ク異種ナルベシトノ公論アリ而シテ是

（第貳版第七八圖）

此種ハ其大サ甚タ不同ナリ、一千八百八十一年十一月十五日出版ノ動物學會報告中ニ掲載セル如クエルウエス氏ハ此種ヲ以テ「ピイリス、ブラシツケイ」ト誤解セリ然レモ「ブラシツケイ」ハ全ク日本ニ產セズ余ハ本年鹿兒島灣ヲ飛翔シ渡レル「ラアペエ」ノ數群ヲ見タリ然レモ同地ヨリ南方ニハ之ヲ見タルヿナシ

（四一）

ピイリス、ナツピイ、リン子アス　（第三版第八圖AB）

メガメラ、バツトラ

メレツト、メニトレエ

產地　本洲、北海道、

食草　南芥菜（ハタザホ）ノ如キ野生ノ十字花科植物

期節　三月ヨリ十月ニ至ル

此種ノ三月始メテ生出スル成蟲ハ「メガメラ」形ニシテ爾後續出スル所ノ「メレツト」形トハ大ニ其外貌ヲ異ニセリ、其大サハ一インチ四分ノ三ヨリ三インチニ達セリ

余ガ日本ニ於テ蝶類蒐集ニ就事セシ以來數年間他ノ「ピイリデイ」種ハ皆每年數回ノ生殖ヲ爲スモ當時「メガメラ」ト稱セラレタル者ハ一年中三四兩月ノ間ニ唯タ一回現出スル而已ニシテ其餘ハ絕エテ目ニ觸レサルヲ甚タ不審ニ思ヘリ、故ニ余ハ其螟蛉ノ四月ヨリ次春ニ至ルマデ如何ナル成行ヲ爲スヤ或ハ一旦蛹形トナリテ餘年ヲ送ルモノナルヤニ就キ頗ル其理會ニ苦メリ、抑モ不分明ナル蝶類ノ螟蛉ヲ養育セントスルニ當リ特ニ難事タルハ之カ爲メニ適當ノ食草ヲ見出スベキヿト雌ヲ誘導シテ卵子ヲ產附セシムルトニア

産地　北海道、日光、

期節　六七月

此種ハ山間ニ産スルモノナリ、或種ニアリテハ煤黑色ヲ呈シ而シテ其班文モ頗ル種々アリ、雌ハ其腹部ニ往々一ノ角鞘ヲ具セリ而レモ其用ノ果シテ何ニ在ルヤ余ハ未タ其發見セラレタルヲ聞カズ

ピイリデイ族

（二）アポリア、クラテイジイ。リン子アス

（第三版第七圖）

産地　北海道

食草　林檎樹

期節　夏季

此種ハ北海道ニ許多産出スルモ余ハ同島ヨリ以南ニ之ヲ見タルヿ莫シ

（三）ピイリス、ラアペエ。リン子アス

（第三版第六圖）

クルシウオラ。バツトラ

産地　日本全國

食草　萊菔（ダイコン）、甘藍（ハボタン）等ノ如キ栽培ニ係レル十字花科植物

期節　三月ヨリ十月ニ至ル

期節　五月及ヒ夏季

此種ハ日本産蝶類中ノ最大ナルモノニテ余ハ九州以北ニ未タ之ヲ見出サズ、其雄ノ裝飾ハ其雌ニ比スレバ稍々粗ニシテ純黑色ヲ帶ビ前翅ノ礎部ニ淡赤色ノ班文ヲ具フ、雌ハ甚ダ著明ニシテ其色澤ノ美麗ナルニ因リ其飛翔ノ際ハ眞形ヨリ更ニ大ナルモノヽ如シ、其尾ヲ有スル者ハ支那ニ産スルモ日本ニハ未ダ之ヲ得タルヿ莫シ、又余ノ經驗ニ據レバ日本産ノ雌ハ支那産ニ比スレバ更ニ黑色ヲ帶ベリ

（九）パピリオ、サアペドン。リン子アス　（第壹版第九圖）

産地　本洲

食草　タブノキ

期節　四月ヨリ夏末ニ至ル

此種ハ頗ル多ク産出ス、其螟蛉ハ常磐木タル「タブノキ」ノ嫩葉ヲ食トシ其色澤ハ該樹ノ嫩キ綠葉ニ彷彿タリ

（〇一）リユドルフイア、プジロイ。ヱルスク　（第壹版第拾圖）

産地　北海道、岐阜

期節　四月上旬

此種ハ甚ダ稀品ニシテ余ハ未タ其完全ナル者ヲ見タルヿナシ、之レ早春高山ニ産スルモノナリ

（一一）パルナスサス、グラシアリス。バツトラ　（第三版第五圖）

(六)パピリオ、アリシノス。グラッグ

産地　本洲

食草　木防己（アホツヒラフジ）

期節　四月ヨリ夏末ニ至ル

此種ノ雌ハ支那及ヒ琉球諸島ニテハ二樣形態ニシテ時ニ或ハ殆ント雄ノ如キ黑色若クハ淺黃色ヲ呈スルモノアレモ本洲ニテハ其淺黃色ナル者ノ外嘗テ之ヲ獲タルヿ莫シ、其雄ノ生活スル間ハ一種麝香樣ノ佳香ヲ發ス、其雌モ亦稍ヤ其香氣ノ淡薄ナルモノヲ發ス而レモ余ハ雌ノ香氣ノ佳良ナルニ反シテ不快ヲ感セリ、此種ハ「パピリオ」類中最モ多產スルモノニシテ之ヲ捕獲スルヿ容易ナリ、其螟蛉ハ稍々桑實ノ成熟シタル者ニ似テ其蛹ハ極メテ美麗ナル彫刻紋ヲ有セリ

（第三版第八圖）

(七)パピリオ、ヘレナス。リン子アス

產地　長崎、土佐、

期節　五月及ヒ夏季

此種ハ本洲ノ南方ニ產スルモノニテ余ハ四國以北ニ之ヲ見タルヿ莫シ、其後翅ノ大ナル白班文ハ甚ダ著明ナリ、其飛翔ハ鋭敏迅速ニシテ絕ヱズ同所ニ去來スルノ性アリ其雌ハ稀ナリ

（第貳版第二圖）

(八)パピリオ、メンモン。リン子アス

產地　長崎

（第貳版第一圖）

種中ニテ最モ遠ク北方ノ域ニ蔓延スルモノナリ、之ヲ寫生スルハ、極メテ難事ナリ、其螟蛉ハ頗ル「パピリオ、ズウサス」種ニ似タレ𪜈成蟲ハ甚ダ之ニ異ナレリ

（四）パピリオ、デメトリアス。クラマ

（第三版第一圖）

産地　本洲

食草　枸橘（カラタチ）

期節　四月ヨリ夏末ニ至ル

此種ハ「マケヲン」ノ「ズウサス」ニ於ケルト正ニ相反シテ其螟蛉ハ頗ル前二種ノ者ニ似タリ其雄ノ後翅ニハ廣楕圓形ノ帶綠白色ノ班文ヲ以テ裝飾セラルヽモ前翅ノ爲メニ陰蔽セラレ常ニハ之ヲ認ムル「能ハス、然レ𪜈其雄ガ雌ノ愛ヲ買ハントスルニ當リ之ヲ露出ス、デメトリアス」ト次ノ「マシレンタス」トハ恐ラク二樣形態ノ種ナラン

（第三版第貳圖）

（五）パピリオ、マシレンタス。ジヤンソン

産地　横濱ニハ稀品トス而レ𪜈本洲ノ諸山ニハ許多ヲ産ス

期節　五月ヨリ夏季ノ際トス

此種ノ雌ハ甚ダ稀ニ得ルモノニシテ其雄ハ恰モ前種ノ如キ裝飾ヲ有シ其始メテ孵化スルモノハ往々極メテ矮小ナリ余ハ圖ニ表ハセル雌ノ半バニ過キサルノ雄ヲ捕獲シ得タル「アリ、然レ𪜈未タ其螟蛉ヲ發見セル「ナシ、此種ハ殊ニ百合花ヲ實ラシムル爲メニ良媒者タルニ適スル「ハ即チ常ニ其花間ニ徘徊シテ自己ノ長キ後翅若クハ尾上ニ其花粉ヲ携帶スルヲ以テ視ルベシ

ズウスウラス。プレマ

産地　本洲

食草　枸橘（カラタチ）　崖椒（イヌサンセウ）

期節　三月ヨリ夏末ニ至ル

此種ハ前種ノ如ク早春現ハルヽモノヲ「ズウスウラス」形トナシ（第貳圖A）夏時ニ現ハルヽモノヲ「ズウサス」形トナス（第貳圖B）、「マケヲン」種ハ草葉ヲ食餌トスルモ「ズウサス」種ハ樹葉ヲ食餌トスルモノニシテ此兩種ノ蝋蛉ハ外貌甚タ異ナリ其差違ハ成蟲ヨリ此幼蟲ノ期節中ニ最モ著シ、「ズウサス」種ノ雌ニハ二樣ノ形アリ一ハ淡黃色ニシテ一ハ更ニ濃黃色ヲ呈セリ

（第壹版第三圖）

（三）パピリオ、マアケアイ。メニトレヱ

デハアーニ。プヱルダ

ビアノル。變種ジヤポニカ。バツトラ

チユタナス。プヱントン

産地　横濱、北海道、及ビ本洲ノ諸山

食草　枸橘、其他芸香科ノ諸木

期節　四月ヨリ夏末ニ至ル

此種ハ秀美ナルモノニシテ其色ニ綠色紫藍色等ノ數種アリ就中其後翅ニ赤キ班點ノ列ヲ具フルモノト否ラサルモノトアリ、其大サ幷ニ班紋ニモ亦種々アリ、之レ黑色「パピリオ」

サテイリデイ　拾八種

ヘスペリデイ　貳拾種

パピリオニデイ族

パピリオ屬

(一)パピリオ、マケチン。リン子アス　(第壹版第壹圖AB)

アジアチカ。バツトラ

ヒツポクラテス。フエルダ

産地　本洲、北海道、

食草　培養ノ繖形科植物即チ胡蘿蔔(コンロウ)。茴香(ウイキヤウ)。

期節　三月ヨリ夏末ニ至ル

此種ノ成蟲ハ三月ニ至リ前年ノ秋末ニ全ク其食餌ヲ終ヱタル螟蛉ヨリ化生スルモノニシテ此月ニ出ルモノハ常ニ矮小ニシテ色澤淡シ之ヲ「マケヲン」形トス(第貳圖)、是レヨリ夏季ニ入リ八月ニ至ルマデニ順次孵化スルモノハ肥太ニシテ色澤モ濃カナリ之ヲ「ヒツポクラテス」形トス(第壹圖)、此種ハ頗ル許多産スルモノニシテ往々胡蘿蔔ノ葉ヲ蝕害スルアリ

(二)パピリオ、ズウサス。リン子アス　(第壹版第貳圖AB)

余カ此所見ヲ開陳スルニ當リ單ニ標品室内貯藏ノ品ノミニ就キテ研究スル所ノ所謂井蛙博物學者ヨリ若干ノ駁擊ヲ受ケタリ但シ野外探究者ト著述者トノ爭論ハ寧ロ苛酷ニ過クルナルベシ

近來世間ニ提出セラレタル蝶類分科ノ新法鮮カラス然ルニ本篇ニ於テハ其數多ノ缺點アルニモ拘ハラス依然舊法ヲ襲用シテ敢テ之ヲ肯セザル所以ノモノハ他莫シ之レ余ノ目的ヲ達スルニ充分ナル便宜ノ別ニ自ラ存スルアルヿヲ深ク慮レバナリ

余ノ所有ニ屬スル標品ノ名ハ悉クバットラ及ビオーヽジヤンソン兩氏ノ撰ニ係レリ故ニ其名稱ノ謬誤ニ就キ余ハ其責ニ任セザルナリ然レモバットラ氏ノ考定ニ依リテ異種トセラレタルモノヽ中ニハ爾來其已ニ久シク世ニ知ラレタル種類ノ變形タルヿヲ發見スルヲ得タレバ宜ク此處ニ注意アランヿヲ要シ而シテ余ハ此等ノ誤ヲ訂正シ得タルモノハ之ヲ異名トシテ目錄中ニ揭載セリ

日本產蝶類ハ左ノ諸族ノ如シ

パピリオニデイ	拾壹種
ピイリデイ	拾貳種
ライシニデイ	三拾六種
レモニアイデイ	壹種
ニムフアリデイ	三拾八種
ダナイデイ	壹種

年々稀有ニ發現スル氣候ノ變化ト併セテ其地理學上ノ所謂位置ト地形トニ由來スルモノヽ如シ、此土ハ此ニ棲息スル種類ノ生存競爭ヲナスガ爲メニ恰モ一戰場タルヿ特ニ昔日ニ限ラス今尙ホ然リ、地質學上ヨリ推考スレバ當國ノ諸島ハ昔時大陸ノ遺跡ニシテ高嶺ノ山脈ニ於ケルガ如ク海面上ニ突出セシハ未タ遠キニ非サルベク今日地圖ニ視ルカ如キ千島群島ト其地勢同一ニシテ此古嶺間ニ存セル間隙ハ近時火山ノ作用ニ依テ漸ク充塞セラレタルモノト信スルナリ

日本動物類ノ舊北地方ニ屬スルハ確乎タルヿナリ然レモ又東洋地方ヨリ渡リ來タルモノ寡ナカラス、當國ニハ熱帶、温帶、及ビ寒帶ノ種類同地方ニ於テ互ニ雜居シテ就中許多ノ者ハ種々ノ行路ヲ經テ尙ホ陸續渡來スルヲ見ル、是レ日本動物類ニ他ノ特徴ヲ與フルノ原因タルヤ疑フ可カラズシテ余ハ是等ニ二、樣、形、態、ノ語ヲ附シ以テ注意ヲ促セリ、斯ノ如クニ其種類ノ交通連續スルヿハ其事實ニ就キ正ニ明瞭ナル所ノ證アリ即チ某ノ種類ニアリテハ別ニ視ルベキノ異狀ナキモ他ノ種類ニアリテハ極メテ確實ナル異點ヲ存セリ是レ其前者ハ平素ノ來住ニ依リ其祖宗ノ模形ヲ失ハス連綿トシテ眞種ヲ產出シ得ルモ其最モ著明ナル差違ヲ現出スル所ノ後者ハ久シク孤立シテ交通ヲ絕チシ故ナルベシ、蝶類ハ總シテ其体ノ構造ト徘徊スルノ習性アルトニ因リ廣遠ノ地上ニ蔓延スルヲ得且ツ僅々一週年ノ間ニ數回ノ生殖ヲ遂クル者多キヲ以テ變形態ノ數多ナルハ他動物ノ上ニ位スルヿ數等ニ下ラズ、是レ其絕エズ生活ノ變狀ニ接シ以テ古今不滅ノ生存競爭ヲ爲ス所以ナリ

日本蝶類

鱗翅科

蝶類小科

凡ソ鱗翅科ヲ二分シテ「ロパロセラ」及ビ「ヘテロセラ」ノ二小科ト爲ス、甲ハ即チ蝶類ニシテ乙ハ即チ蛾類ヲ總括ス、其蝶類ト蛾類トヲ區別スベキ要點ハ略ボ下ノ如シ、蝶類ハ殆ンド悉ク晝間飛翔スルモノニシテ常ニ其觸鬚ノ尖端多少肥太ナルモノヲ有シ、蛾類ハ晝夜並ニ飛翔スルヲ得ルモノニシテ概子單一ナルカ若クハ櫛齒狀ノ觸鬚ヲ有ス蓋シ必スシモ之ヲ以テ凡例トスベカラズ則チ蛾類ノ數族中ニハ儘々觸鬚ノ尖端肥太ナルモノアレバナリ

本篇ニ論スル所ハ單ニ蝶類ニ止マルト雖モ日本諸島ノ各地ニ於テ其種屬ニ就キ研究セル十有六年間ノ功勞ニ出テタルナリ

日本產蝶類ノ研究ハ啻ニ昆蟲學者ノ爲メ而已ナラズ、他ノ學士輩ノ爲メニモ亦其娛樂鮮少ナラズ、當國ニ於テハ同種變形ノ事實ニ就キ爭フベカラザルノ證據アリ日本產蝶類中ニハ每歲四季ノ異ナルニ隨ヒ交々明確ナル異形ヲ呈スル者アリテ是等ノ同種變形ハ同族中ノ異種ヨリ更ニ其差違ノ著シキ者往々之レアリ、余ハ飼養術ヲ以テ斯ノ如キ同種變形ハ其螟蛉ノ期節中之ガ感受スル所ノ溫度ニ起因スルヿヲ證明スルヲ得而シテ人爲的ニ其變形ヲ產出セシムルヿヲ得タリ、故ニ余ハ之ヲ名ケテ季候形態ト稱セリ、此ニ依リテ之ヲ觀レバ日本ニ此奇異ナル季候形態ノ自然ニ現出スル所以ノモノハ第一當國ニ於テ

ル説ヲ記載セリ(日本中央ノ山國ニハ甚ダ普キカラスト雖北海道及朝鮮ニハ夥多ナリ)ト

(一八)ヴァチサ、アンチヲパ、リン(第七版第壹圖)

産地　日光、北海道

期節　八月、五月

日光北海道ニ夥多ナレ𪜈常ニ山上ニノミ之ヲ發見ス

(二八)ヴァチサ、カルヂユイ、リン(第七版第二圖)

産地　横濱、前橋、北海道

食草　薊(アザミ)

期節　八月、九月、十一月、

横濱近傍ニ稀ナリ

(三八)ヴァチサ、カリレー、フアブ(第七版第三圖)

パピリチ、アタランター、インヂカ、ヘルプスト

産地　横濱、北海道

食草　苧麻(マヲ)

期節　一月、三月、八月、十一月

候ニ由テ數多孵化發生ス余ハ一月ニ蛹ヨリ啓發セルモノヲ所有ス横濱四隣頗ル多シ

期節

此種ハ季候ニ從ヒ變化ヲナスヿ著シ「ヴァ、アンゲリカ」ハ夏季ノ形種ニシテ「ヴァ、プライエリ」ハ冬季ノ形種ナリ此種ハ冬眠ヲナス

(八七) ヴァヲサ、ザンソメラス、シッフ、(第六版第十圖)

產地　横濱、

食草　楊柳及朴樹

期節　八月ヨリ四月ニ至ル

横濱四近頗ル夥多ナリ楊柳ヲ食餌トナス然ルに時ニ又朴樹上ニ之ヲ探見スルヿアリ而シテ此蠋ノ爲メニ大樹ノ兀然タルヿ往々之アリ但年一回生殖シ而シテ成蟲ハ冬眠ヲナス

(九七) ヴァヲサ、アルチシー、リン (第六版第十一圖)

バットレリ、フエントン

產地　北海道

期節

此種ハ北海道ニ普通ナレ𪜈本道(メイアイランド)ニ於テ發見セス

(〇八) ヴァヲサ、イヲ、リン (第六第十一圖)

產地　北海道、新潟、日光、碓井峠

期節　六月七月

シエー、エム、リーヲ氏ハ千八百八十七年刊行ノ動物學協會雜誌二百四十一葉ニ此種ニ係

外貌斑文及裏面ノ彩色ニ甚タ差異アリ余廿一ノ標品ヲ集メテ之ヲ通覽スルニ一トシテ相同シキモノナシ裏面ノ彩色ハ黑色ヨリ赤色ニ變スルアリ某標品ハ「ヴァ、シーアリユム、リン」ノ秋種ニ類似ス

(六七) ヴァチサ、ヴヰーアルプム、ヒユプチル？ (第六版第九圖)

エルーアルプム、エスペンシヤイ

產地　日光、北海道

期節　八月

此種ノ名稱ニ就テハ少シク疑ヒナキ能ハズ(千八百八十一年十一月十五日刊行ノ動物學協會雜誌)ニ揭載セルエルウエス氏ノアムアランド北支那及日本蝶類目錄ニ據レハ「ヴァ、エルーアルプム」ニ就テ左ノ記載アリ(特ニウスリ及日本ニ於テ之ヲ視察ス然ルニ該地ニハ稀ナラン日本種ハ「ヴァ、シエーアルプム」トシテ知ラレタル歐羅巴及亞米利加形種ノ間ニ在ルモノヽ如シ而シテ「シエアルプム」ハ蓋シ眞ニ區別スベキモノニアラザルベシ)トレッケル氏ハ歐羅巴及亞米利加形種ハ區別スル能ハザルヿヲ陳述ス)

(七七) ヴァチサ、シーヲリユム、リン (第六版第七圖AB)

アンゲリカ、クラマ

プライエリー、ジヤンソン

產地　横濱、北海道

食草　大麻及葎草(カナムグラ)

茲ニ圖スル所ノ標品ハ北海道ノ產ニシテ南方尋常ノ標品ヨリ寧ロ白色ノ多分ヲ占ム

(三七) ヴァヲサ、レパナ、リン (第五版第十二圖)

產地　日光、土佐、北海道

期節　七月

此種ハ其大サ外觀、彩色、及斑文ニ頗ル差異アリ某者ハ黑色ニ白斑アリ他者ハ紅白ノ二色ヲ帶ブ四時ノ運行ニ由テ二回或ハ三回ノ生殖ヲナス其慣性、斑文、及飛翔ノ狀ニ於テハ「リメニチス」ニ髣髴タリ

(四七) ヴァヲサプレシヤナ、プレーム (第五版第十一圖)

ストリゴッサ、バット

產地　日光、北海道

期節　五月

前種ニ係ル所ノ標徵ハ亦此種ニ適應ス其大サ外觀、彩色、及斑文ニ甚タ差異アリ余ハ一インチ五分ノ二ヨリ一インチ十分ノ七マテノ標品ヲ有ス

(五七) ヴァヲサ、シーアルブム、リン (第六版第六圖AB)

フェントニー、バット

ハミゲラ、バット

產地　日光、淺間山、北海道

期節　八月

ヲ視察スルヿ屢〻ナリ日本ニ產スル種ハ一般ニ裏面ニ暗色ヲ帶ブルヲ以テ熱帶ノ種ト識別スルヲ得ルナリ

(九六)チブチス、エキスセルレンス、ハット　(第六版第二圖)

產地　日光、淺間山、富士山、北海道

期節　七月

此種ハ稀レニシテ余ハ右ニ記スル地方ヨリ各々一品ヲ得ルノミナリキ

(〇七)チブチス、ブライエリー、バット　(第六版第三圖)

產地　富士山、淺間山、日光、

期節　七月

此種ハ山中ニノミ產ス然ルニ今年横濱近傍ニ於テ唯一箇ヲ視稍ヤ一驚ヲ喫セリ

(一七)チブチス、アルウイナ、ブレーム及クレイ　(第六版第四圖)

產地　淺間山、新潟、日光

期節　七月

此種ハ族中最大ノモノニシテ山上ニ稀ナラズ

(二七)チブチス、ラシラ、シッフ　(第六版第五圖)

ルドミラ、ヘルーシエフ

產地　日光、淺間山、北海道

期節　七月

千八百八十二年余ノ採集者カ北海道ニ於テ數多ノ標品ヲ蒐集セシカ爾來他ノ地方ニ於テ之ヲ視察セザリキ

(六六) リメニチス、シビルラ、リン (第五版第十五圖)

産地　横濱、富士山、日光

食草　忍冬(ニントウ)

期節　六月八月

此種ハ其大サ並ニ翅ノ表面ニ呈セル白色ノ斑文ニ著シキ差異アリ

(六七) チレスチス、セイヲダマス、ボイスト (第五版第十四圖)

産地　大和、薩摩、

期節　八月

千八百七十六年余ハ大峯山上ヨリ柏木村ニ降ル際多少ノ困難ヲ經テ之ヲ捕獲シ其種ノ秀逸ナル標品タルヿヲ視察シ頗ル驚駭セリ又昨年余ノ採集者ハ此種ヲ鹿兒島ニ於テ目視シタレ𪜈不幸ニシテ捕獲シ得ザリキ日本ノ南部及琉球島ニ於テハ稀ナラザルナリ

(六八) チプチス、アセリス、レプ

インテルメヂア、ダブリユー、ヒー、プライエル

産地　横濱、日光、淺間山

期節　六月、八月

種屬中最モ夥多ナル種ニシテ日光ノ酷シカラザル場所ニ翅ヲ展張シテ徐ロニ飛翔スル

「ヘピアルス」ノ爲メニ蝕セラレタ槲樹或ハ栗ニ就テ其蠹孔ニ液構アルヲ視ルベシ乃此液ハ蝶ヲ誘引スルニ頗ル適當ノモノニメ每種一般ニ其好ム所ノ樹アリテ其流溢セル液汁ヲ吸吮センタメニ時々其所ニ降リ來ル而メ此誘引所ハ地ノ蟲類モ亦聚合スルヲ以テ彼カ爰ニ恰好ノ位地ヲ占有スルマデ其翅ヲ振搖スルヲ視察セラルベシ若シ最初ニ捕獲ヲ誤ルトモ暫ク其所ニ待ツ𪜈ハ必ス復歸リ來ルベキナリ其蛹ハ甚タ大且扁平ニシテ鮮明ナル綠色ヲ帶ビテ美ナリ余數多ノ卵ヲ得タリ因テ其新タニ啓發シタル妙ニ種々ノ樹葉ヲ與ヘテ飼育ヲ試ミタレモ終ニ餌付カザリキ

(四六) ユリパス、ジヤポニカ、フエルダ (第五版第八圖)

產地　横濱、

食草　朴樹(エノキ)

期節　六月八月十月

此種ハ年ニ二回現出ス樹ノ周圍ニ飛翔スルヲ視察スルヿ屢々ニメ殊ニ其食餌トナス朴樹ニ多シ「ユ、カロンダ」ノ如ク「コスサス」其他ノ鱗翅類及甲蟲類ノ爲メニ蝕セラレタル槲樹、栗、柳、等ノ蠹孔ニ於テ常ニ發見セラル此蝎ハ樹梢ノ皮裏ニ冬眠チナスヲ以テ當時ハ鼠色チ帶ヒルト雖春候萌芽ヲ生スルヤ其皮忽チ變シテ綠色チ呈ス其形狀通常ノ「アパチユラ」ノ如ク光リタル圓筒形ニシテ分岐セル頭ヲ具フ

(五六) リメニチス、ポプリー、リン (第五版第十五圖)

產地　北海道

此種ハ常ニ山上ニ在リ雄ハ夥多ナレ𪜈雌ハ極メテ稀少ニシテ多少雄ヨリ大ナリ

(二六) アパチユラ、イリア、シップ (第五版第九圖)

パール、クリチイ、シップフ、ヘレ、フニルト

サブスチ、ユタ、バット

產地 東京、淺間山、大山

食草 柳

期節 七月ヨリ九月ニ至ル

此蝶ハ頗ル美麗ニシテ甚タ變化シ易シ東京ニ於テハ珍シカラザレ𪜈横濱ニ於テハ祁ル

ヿ幾稀ナリ性甚輕擧ニシテ或ハ高ク楊柳ノ梢上ニ飛翔シ或ハ卑ク路上ノ濕地ニ降リ或

ハ所好ノ樹葉ニ停止ス又其蛹ハ綠色ニシテ容姿色澤共ニ楊柳ノ嫩葉ニ髣髴ス產地ニ因

テ色ノ光澤ニ甚タ差異アリ此種ハ平野ヨリ山上ニ稍〻夥多ナリ

(三六) ユリパス、カロシダヒユー (第五版第六圖)

產地 横濱、秩父、大和、

期節 七月

此大ナル種ハ稀ナラザレ𪜈完全ノモノヲ獲ルヿハ甚タ難事ニシテ余ハ終日之ヲ目擊ス

ル數十種ナルモ未タ其一ヲモ捕ルヿ能ハザリキ性頗ル勇敢ニシテ雄ハ往々喬木ノ頂上

ニ恰好ノ地ヲ占メ鳥若クハ蟲ノ其傍ヲ過クルアレバ突出シテ之ヲ追趕シ暫クシテ之ヲ

見捨ツルヿハ再ヒ舊所ニ復スルナリ之ヲ捕獲スルニ殆ド唯一法アルノミ「コスサス」又ハ

シ七月ニ至リ「ベセスバ」形種ニ孚化スル所ノ卵子ヲ放產ス此二種ノ形種ニ關シ最モ裨益アル問題ノ說明ニ猶不充分ノ所アリト雖モ余ハ鱗翅類中ニ比類ナカラントト認ム然モ此未曾有ナル變化ノ成績ニ就テハ其如何ナル理由ノ在ル有リテ存スル所チ知ラス

レモニアイデー族

(〇ち)リビセア、レピタ、ムアー（第五版第十三圖）

產地　横濱、日光、北海道

食草　朴樹（エノキ）

期節　七月ヨリ五月マデ

此蝶ノ生殖ハ唯一回ニシテ其成蟲ノ長命ナル鱗翅類中ニ冠タリ七月ニ蛹ヨリ啓發シ翌年五月マデ生存ス其啓發以降直ニ蟄伏シテ冬眠ヲナシ來年三月マデ靜息シ而メ早春暖日ニ蹙起シ朴樹ノ森林ニ放卵スルチ視察ス其蛹ハ「ヴアチサ」ノ蛹ノ如ク尾部ヲ以テ懸垂セリ成蟲ハ其斑文並大サニ著シキ差異アリ

ニムフアリデ族

(一六)ヂコルラシア、チシマキユス、ボイブト（第五版第十圖）

產地　日光、土佐、新潟

期節　六月、七月

ペセスパ、ジヤンソン　（第二版第十一圖）

レエタ、ボイスト　（第二版第十圖）

前編十葉ニ記載シテ之ヲ刊行シタル後余ハ岐阜ノ名和氏ト交ヲ結ヒ頗ル裨益ヲ得甚タ緊要ナル發明ヲ爲セリ即チ此「テリアス、ペセスパ」ハ夏季ノ形種ニシテ「テリアス、レエタ」ハ冬季ノ形種ナル丁ヲ撿出セリ此事タル全ク意外ニシテ名和氏ト俱ニ「ラ、ペセスパ」ノ雌カ山扁豆（カハラケツメイ）ニ放卵スルヲ視察シ其卵ヲ採リテ之ヲ孚化發育セシメ「テ、レエタ」ノ標品數多ヲ得タリ然ルに其中ニハ親ノ「テ、ペセスパ」ノ形種ニ少シモ類似セルモノコレナシ然ルニ「ペセスパ」ノ卵ヨリ「テ、ムルチホルミス」ノ「ヘカペ」ノ形種ニ甚タ相似タル標品ヲ飼育セリ蓋シ此モノハ雜種ナラン「テ、レエタ」ノ翅ノ外形ハ尖リテ「ペセスパ」ノ外形ハ圓シ而シテ「レエタ」ハ「ペセスパ」ヨリ尙ホ大ナリ余ハ此等ノ二形種ヲ結合シテ「テリアス、バイホルミス」ト名ケント欲ス「テ、レエタ」ノ形種ハ蛹タル丁唯七日ニシテ羽化シ而テ生息スル八ケ月此世代中四ケ月ヨリ五ケ月マテ冬眠ヲナス前編十葉ニ余ハ「レエタ」ハ三月ヨリ十一月マテ顯ハル丶丁ヲ說ケトモ今其說ノ誤レルヲ知ル而テ前說ニ反スルノ眞ニ近キヲ知レリ此種ハ年末ノ十一月十二月ニ顯ハレテ冬眠ヲナシ三月始テ覺起ス此生活上ノ來歷ヲ知ラサリシガ爲メ余ハ「レエタ」ノ蝎カ三月ヨリ十一月マテ生活スルノ誤說ヲ述ルニ至リシナリ「レエタ」形種ハ八月ニ於テ「ペセスパ」形種ノ放卵シタル卵子ヨリ啓發シタル蝎カ非常ニ些少ノ日子ヲ以テ其發育變化ヲ完了シ九月ノ初旬或ハ稀レニ八月ノ下旬ニ羽化シテ顯出ス「レエタ」ハ十一月前ニ冬眠ヲ始メス而テ冬月中睡眠ヲ爲シ三月春暖ノ日ニ覺起シ五月マテ飛翔

ナス樹木ハ唯春候新葉ヲ生スルノミ然ルニ雜艸及蔓草ハ早春ヨリ晩秋ニ至ルマテ生長ス故ニ樹葉ヲ食スル者ハ其發育ノ際ニ取ル可キ食餌ヲ年ニ一回得ルノミト雖モ雜草等ヲ食スル者ハ三月ヨリ十月マテ之ヲ得ルヲ以テ其生殖夥多ナリ然モ此法則ハ堅顎ヲ具ヘテ而メ年々唯一回現ハル、他ノ屬ニ應用スルヿ能ハス其唯一回生殖スル事實ハ他ニ事情ノ存スルアルヲ以テナリ即チ蝙蝠、蜘蛛、蜻蛉等ノ如キ余カ所謂恒敵者ノ爲メニ捕獲セラルヘキ成蟲ノ構造、彩色、慣習、是ナリ仮令ハ冬季羽化シ其月ニ放卵スル「ハイベルニア デ」族ノ如キ其卵速ニ孵化シテ蠕トナリ食ヲ採ル暫時ニシテ蛹ニ變シ其儘夏秋ヲ經過シ來冬ニ至ル余ハ此理由ノ明瞭ナルヲ信ス如何トナレハ凡テ「ハイベルニア デ」族ノ雌ハ無翅或ハ唯飛翔シ得サル翅ヲ具ヘ雄ハ甚タ異常ニ發達シタル翅ヲ具フルヲ以テ多少遁逃ニ遲鈍ナリ是等ノ爲メニ他ノ犧牲トナルヿヲ免ルヽ能ハスシテ晝ハ蜻蛉ノ呑噬ヲ蒙リ夜ハ蜘蛛ノ網ニ罹ル故ニ此等ノ讐敵ノ蟄伏スル寒冷ノ時季ニ際シ孚化シテ成蟲トナルヿヲ發見セリ又「テニヲカムパー」ハ强健ナル蛾ニシテ唯春季ニ發生ス此蛾ハ樹ニ接近シテ翅ヲ振搖スルノ慣習アリ若シ彼レノ發生遲延シテ蜘蛛ノ網ハ樹林ニ滿チ蝙蝠ハ旦夕ニ群飛スルノ時季ニ發生セハ忽チ絶滅セラルヘシ斯ノ如ク蟲ノ來歷ニ注意シテ研究スルキハ其一回或ハ二回發生スルノ理由ヲ詳細ニ判定シ得可キヲ信ス

ピリーデ族（前編十葉ニ接續ス）

テリアス、バイホルミス、エイチ、プライヤ

セクラ、ジヤポニカ　(一)
セクラ、オリエンターリス　(一)
セクラ、スマラクヂナ　(一)

種類ニ由テ右ノ各綱ニ倣ハサルモノアリ「セクラ、ジヤポニカ」ノ多變形種ノ雌ニ於テハ或ハ輝色アリ或ハ暗色アリ又季候形種即チ「ポリチムマタス、フリーアム」ノ雄ノ如キハ夏季殆ト黑色トナリ北海道ノ「ライシイナ、ユフエマス」ハ殊ニ雄ニ於テ光澤アルヲ見ル

其第二ノ特性モ記スヘキ價アリ翅ノ表裏面ニ驚クベキ相違ヲ呈スルノ一事ニシテ其差違ハ生活上讐敵ノ捕擊ヲ防禦スルニ頗ル肝要ノ具ナリ余屢蜻蛉ノ此藍蝶ヲ捕獲ス可ク追究スルヲ視察スト雖未タ之ヲ捕ヘシモノヲ見ス此蝶ノ飛翔スル際之ヲ遠望スルトキハ宛モ唯藍色ノ物質ガ種々ノ運動ヲ爲ス如シ然ルニ仔細ニ之ヲ靜視セハ乃チ此蝶ノ迅速ニ群翔シテ灰白色及藍色(或ハ雌ノ茶褐色)ヲ交呈ス而テ蜻蛉ノ追擊劇シケレハ蝶ハ翅ヲ收メテ新裝ヲ呈スルヲ以テ追究者ハ終ニ見捨ツルニ至ル

第三ノ特性ハ一年間ニ某種ハ一回他ノ種ハ數回ノ生殖ヲ爲スノ一事ナリ前表ニ於テ一年ニ唯一回現ハル、種ニ對シテハ(一)ノ符號ヲ附シ數回現ハル、モノニハ(二)ノ符號ヲ附セリ(?)ノ符號ハ未タ詳カナラザルモノナリ余ハ右ノ表ニ付テ次ノ結果ヲ得タリ即チ一年一回現ハル、所ノ種ハ孰レモ樹葉ヲ食ヒ數回現ハル、モノハ雜草若クハ蔓草ヲ食ト

ス此種ノ蝎ニ就テ其体ノ構造並慣習ヲ研究スルニ余ハ其蝎ノ運動甚タ遲鈍ニシテ且一般ニ頭部頗ル細微ニ顎軟弱ニシテ唯嫩葉ヲ蠶食スルニ勝ユルヿヲ發見セリ而テ食餌ト

セクラ、エンセア　(一)
セクラ、ダブリウアルバム　(一)
セクラ、プルニイ　(一)
セクラ、メラ　(一)
セクラ、イバラ　(一)
セクラ、バットレリー　(一)

〔二〕雄僅ニ彩色アリ雄暗色

ニファンダー、ファスカ　(?)
ライシイナ、ユフヒマス　(?)

〔三〕雄輝雌暗色

キユレチス、アキユタ　(一)
ライシイナ、アルヂアデス　(一)
ライシイナ、アルヂア　(二)
ライシイナ、アルグス　(二)
ライシイナ、イーゴン　(?)
ライシイナ、イバリエンシス　(?)

〔四〕雄甚タ光輝雌暗色

セクラ、サフアリナ　(一)
ライシイナ、ライコルマス　(?)
ライシイナ、ピーチカ　(二)

〔六〕雌輝雄ニ優ル

ライシイナ、プライエリー　(一)

〔七〕雌雄殆ト仝色

ライシイナ、チガサワラエンシス　(?)
アムブリポヂア、ジヤポニカ　(一)
アムブリポヂア、タルバタ　(?)
アムブリポヂア、ルーミサイ　(?)
セクラ、シクナタ　(?)
セクラ、アラタ　(一)
セクラ、フリバルヅキー　(一)
ポリヲムマタス、フリーアス　(二)

〔八〕雌雄共ニ佳麗

ヂプサス、シーペストリアタ　(一)
ヂプサス、ルテア　(一)
ヂプサス、ジヨナシー　(一)

期節　三月及六月

此種ハ日本產ライシニデイ族ノ藍色ナル類中最美麗ナルモノナリ該種ハ他ノ種ニ似ス年ニ唯一回現出ス

（八五）ライシイナ、ユフエマスエチビ（第五版第四圖ＡＢ）
カザモトドルウス

產地　富士山、日光、淺間山、北海道

期節　八月

此種ハ山中ニ產シ且甚タ變化アリ某ノ標品ハ全ク茶褐色ニシテ他ハ濃厚ノ藍色ヲ呈ス

（九五）ライシイナ、イバリエンシス、バット（第五版第五圖）

產地　南部、淺間山

余ハ南部產ノ甚タ損傷セル標品二箇及淺間山產ノ佳品一箇ヲ有ス

「ライシニデイ」族ニ關スル甚タ面白キ點ヲ茲ニ記載スベシ

第一ニ類中諸種ノ雌雄ノ色澤ニ著シキ差等アル是ナリ余ハ此事實ヲ詳明センガ爲メ左綱ノ下ニ表ヲ掲クベシ

〔一〕雌雄共ニ暗色ナリ

ミレタス、ハマダ　（二）
セクラ、アチリア　（一）

〔五〕雄輝雌亦輝ニシテ小差アリ

セクラ、ヲルセザス　（？）
ライシイナ、アルザヲラス　（二）

如ク殆ト暗色ニシテ綠色ノ鱗アリ前後兩翅ノ起部及外緣ニ沿フテ疎ニ散見ス雷テエチ、ジエ、ス、ノー氏ノ採集ニ係ル千島產ノ損傷セル標品ヲ得タリ余ハ此種ニ屬スルモノト信ス余淺間山ニ於テ二三百フィートヲ登ル間ニ三種ヲ視察セリ皆單純ノ標品タルヿハ明白ナリト雖數多ノ標品ヲ調査シテ此等ノ全ク一種ニ歸スルヿヲ斷定セリ

（四五）ライシイナ、イゴン、シッフ（第五版第二圖）

ミクラルガス、バット

余ハ本道（メインアイランド）ノ北部ヨリ得タル標品一箇ヲ有ス

（五五）ライシイナ、アルシヲラス、リン（第四版第廿五圖AB）

產地　橫濱

期節　春及夏

此蝶ノ種子ニハ異樣アリ雄ハ常ニ變セザレ𪜈雌ニハ二箇ノ甚タ違ヘル季候形種アリ一ハ表面ニ黑色ヲ帶ヒ他ハ概子後期ニ現出シ甚タ輝色アリ第二ニ孵化シタルモノハ往々兩形種ヲ兼備シテ現出ス

（六五）ライシイナ、ライコルマス、バット（第五版第三圖AB）

產地　北海道

此種ハ特ニ北海道ニ產シ本地ニ夥多ナリ某ル雄ハ殆ト雌ノ如ク黑色ナリ

（七五）ライシイナ、プライエリ、モーレイ（第五版第十六圖）

產地　橫濱、北海道

此種ハ北海道ニ甚タ多シ余カ有スル數品ハ悉ク皆其裏面ノ斑文ニ著シキ變化アリ

(八四) セクラ、フリバルツキー、レト (第四版第二十圖)

産地　横濱

期節　三月

此種ハ最モ早ク現出スル蝶ニシテ稀有ノ種類ニハアラザレ𪜈其慣性ニ關シテ常ニ採集者ノ輕忽ニ附セラルヽヲ免レズ其飛翔スルヤ甚タ迅速ニシテ常ニ喬木ノ枝ニ起居シ通例好ンテ靜止スル所ノ葉アリ若シ其邊ヲ經過スルモノ有レバ之ヲ追趕シツヽ倦怠スルマデ徘徊シ而テ復ビ自己ノ居所ニ歸宿ス卵子ノ發生スルハ年ニ唯一回ナリ而テ此蝶ハ積雪ノ未タ消ヘザル時ニ於テ屢々視察セラル

(九四) ポリチムマタス、フリアス、リン (第四版第廿一圖)

チチンシス、フエルト

エレンス、ファブ

産地　横濱

期節　三月ヨリ十一月

食草　スカンポ

此種ハ成蟲ノ羽化スル時期ニ由テ其大サ並彩色ニ著シキ變化アリ早春ノ種形ハ小ニシテ彩色鮮明ニ後翅ノ後緣ニ往々藍色ノ斑點羅列ス然ルニ溫度ノ增加スルニ從ヒ其形チ大ニシテ且暗色ヲ帶ヒ遂ニ其大サ英國産標品ノ殆ド二倍ニ達ス暑中ハ雄ノ彩色往々眞

余ハ北海道ニ於テ余ノ採集者カ獲タル標品一箇ヲ所持シタリ

(三四) セクラ、メラ、ジャンソン (第四版第十六圖)

産地　日光、淺間山

此種ハ暗色ニシテ且稍ヤ稀品ナリ

(四四) セクラ、ヲルセヂス、バット

産地　日光、御嶽山

期節　七月

此種ハ其雌雄ノ彩色「ライシニデー」族中大ニ異リタル「ライシイナ、アルジチラス」ニ類似ス雄ハ鮮明ナル藍色ニシテ雌ハ藍色ニ黑キ緣アリ「ライシイナ、アルジヲラス」ハ(エイド)第十三編百零七頁ニ秀美ナル圖アリ抑此彩色ノ相類似スルハ甚タ奇異ニシテ此事實ハ昆蟲ノ同種屬中二箇ノ遠ク隔離セル種類ニ就テ其雌雄ノ粧飾ニ類似ノ照應アル例證ナリ

(五四) セクラ、イバラ、バット (第四版第十八圖)

産地　日光

余ハ日光ヨリ一品ヲ得タリ此種ハ(エイド)第十四編百十參頁ニ美麗ナル圖アリ

(六四) セクラ、バットレリ、フエント (第四版第十三圖)

産地　北海道

此種モ亦稀有ノモノニシテ余ハ唯一箇ノ標品ヲ北海道ヨリ得タルノミ

(七四) セクラ、シクナタ、バット (第四版第十九圖)

(九三) セクラ、アチリア、ブレーム (第四版第十一圖)

產地　横濱、

期節　五月ヨリ七月

此種ハ横濱近傍最モ夥多ナリ翅ノ表裏ノ斑文ニ著シキ變化アリ標品中多クハ後翅ノ表面ニ灰白色ノ斑點ヲ呈セズ且裏面ノ斑文ニ著シキ差違アリ

(〇四) セクラ、エンセア、ジャンソン (第四版第十二圖)

產地　日光、北海道、淺間山

期節　七月

此種ハ日光ニ少カラズ又淺間山ニモ夥多ナリ

(一四) セクラ、ダブリューアルバム、ノッグ (第四版第十四圖)

ストライモン、フェントニー、バット

產地　北海道

此種ハ北海道ニ多シ且其大サニ著シキ變化アリバットラ氏ハ僥倖ニシテ稍ヤ大ナル標品ヲ得之ニ「ストライモン、フェントニー」ノ名ヲ命セリ(エイド)第十四編百十五版ニ其圖アリ余ハ該圖ニ符合スル「セクラ、タブリューアルバム」ノ雌ノ標品數種ヲ有ス且其種ハ裏面ノ白色線ノ甚タ種々ナルヿヲ發見ス

(二四) セクラ、ブルニー、リン (第四版第十五圖)

產地　北海道

ナリトセラレシハ既ニ紛亂セル種屬ニ猶一層ノ錯雜ヲ加フル而已ニシテ正當トハ認メ難シ「セクラ、オリエンターリス」モ亦小形ニシテ翅ノ輪郭稍尖リ亦北方形種タルノ性ヲ具フレトモ足ルヲ知ラザル造種家ノ劫掠ヲ免レタリ「セクラ、シヤポニカ」ノ雄ハ甚タ慓悍ニシテ好ンデ赤楊樹ノ葉上ニ停止シ競爭者ノ來ルヲ俟ツ「セクラ、スマラクヂナ」ニ就テ余ハ一說アリ這ハ恐クハ雜種ニアラサルナキ乎ト思考セシカ今僅ニ其然ラサルナキヲ疑フニ至レリ然ルニ飼養術ニ由テ未ダ此點ヲ實驗スルノ場合ヲ得ズ若シ此モノ眞ニ雜種ニアラザリセバ此種ト「セクラ、シヤポニカ」ハ亦二樣形種ノ一例ナラン而テ「セクラ、オリエンターリス」及「セ、シヤポニカ」ハ横濱ニ夥シト雖「セクラ、スマラクヂナ」ハ該地ニ於テ決シテ目擊セザルハ其雜種ニ非サル最良ノ確證タリ此四種ノ雌ノ正形ハ祖先ノ暗色ヲ存ス併シ「セクラ、シヤポニカ」ニ於テハ中ニ就キ北方形種ニ變形アリテ雄ノ呈スル綠色トハ全ク異ニシテ雌ハ藍色ヲ帶フルト雖其輝色ニ種々濃淡ノ差等アリテ存ス故ニ此終リノ種ハ明カニ變遷ノ階梯ナリトス「ヂプサス」種屬ノ雌ハ雄ト均キ彩色ヲ具フ「セクラ、シヤポニカ」ノ雌ノ如キモ造種家ハ此肝要ナル事實ヲ隱蔽セントシテ爲メニ妨害ヲナスト雖亦同一ノ順路ニヨルモノナリ

（八三）セクラ、アラタ、プレーム（第四版第十圖）

產地　日光、富士山、岐阜、北海道、

期節　五月ヨリ七月

此種ハ甚タ佳麗ニシテ常ニ山上ニ在リ雌雄共ニ殆ト均一ナリ

レヂナ、バットラ

産地　横濱、淺間山、日光、北海道

期節　平地ニテハ五月ヨリ七月ニ至リ山地ニテハ七月、八月

（六三）

セクラ、オリエンターリス、モーレイ（第四版第八圖AB）

産地　横濱、日光、淺間山、北海道

期節　前種ニ仝シ

（七三）

セクラ、サフィリナ（第四版第九圖AB）

産地　北海道

此四種モ一ノ特殊ノ種屬ニシテ凡テ四種ノ雄ハ最モ鮮麗ナル虹彩ノ綠色ヲ呈シ「セクラ、オリエンターリス」及「セクラ、サフヒリナ」ノ二種ノ雌ハ暗茶褐色ナリ「セクラ、スマラグヂナ」ノ雌ハ余カ視シ所ノ凡テノ標品ニ於テハ前翅ニ帶黃茶褐色ノ斑点アリ然ルニ「セクラ、ジヤポニカ」ノ雌ハ多變形種ニシテ甚タ變化シ易シ而テ「セクラ、ジヤポニカ」ノ多變形種ハ全ク茶褐色ニシテ第二ハ前翅ニ光輝アル藍色ノ大ナル斑點アリ第三ハ前翅ニ黃茶褐色ノ斑點アリ第四ハ藍色又ハ黃茶褐色ノ二斑點アリ而テ其變化ノ各階級ヲ混合セル標品ヲ屢〻發見スルヿアリ故ニ雌ノ彩色ハ專ラ季候ノ寒暖ニ關シ北地或ハ高緯度ノ處ニ於テ獲タル標品ハ多クハ藍色ヲ呈スルヿ制規ノ如シバットラ氏ハ此理由ニ就テ北方形種ヲ別種

右ノ三種ハ日本產「ライシニディ」族中尤モ美麗ニシテ且特別ノ種屬ナリ故ニ余ハ是等ヲ一括シテ論ズベシ「ヂプサス、ルーテア」及「ヂ、ジョナシー」ニ於テハ判然二種ノ狀態ニシテ「ヂプサス、ルーデア」ハ山上若クハ平野ノ兩所ニ發見セラル然ルに較〻山上ニ在ルヲ多シトス「ヂプサス、ジョナシー」ハ余ノ經驗ニ於テハ特ニ山上ニノミ栖息セル如シ之ニ反シテ「ヂプサス、シーペストリアタ」ハ唯平地ニ於テ視察スルノミ且余ハ未ダ北海道ヨリ之ヲ獲ズ凡テ此三種ノ雌ハ其彩色甚ダ珍奇ニシテ日本產「ライシニディ」族ノ通則ニ反シ殆ド全ク雄ノ彩色ヲ擅有セリ元來「ライシニディ」族ノ雌雄共ニ暗色ナルハ祖先ヨリノ遺傳ニシテ雌ノ過半ハ此性質ヲ具ヘ雄ハ往々粲然タル彩色ヲ呈スルモノト知レリ然ルニ此種ニ於テハ雌雄共ニ其美麗ナル殆ト均一ニシテ唯雌ハ尙一般ニ黑色ナル翅ノ尖端ニ固有ノ暗色ノ形迹ヲ呈セルノミ渾テ此三種ハ日沒凡ソ二時間前ヨリ黃昏マテ最モ活潑ニ運動ス此時雄ハ概チ樹木ノ頂上ニ徘徊シ往々同時ニ三四回交尾シテ飛翔スルモノナリ

(四三) セクラ、ス「マラグヂナ、ブレーム」(第四版第六圖AB)

產地　日光、淺間山、北海道

期節　七月、八月

(五三) セクラ、ジヤポニカ、モーレー(第四版第七圖ABCD)

ファスシアタ、ジヤンソン

(〇三)ニファンダー、ファスカプレーム及グレー(第四版第二圖)

ゲスパー、プレーム

產地　日光、富士山

期節　六月、九月

此ニ揭クル圖ハ雌蝶ニシテ雄蝶ハ尙尖銳ナル翅ヲ具ヘ其表面ノ彩色暗紫ナリ此種ハ丘岡及山背ニ飛翔ス

(一三)ゲプサス、シーペストリアタ、ヒウ(第四版第三圖)

產地　横濱、東京

期節　五月、六月

(二三)ゲプサス、ルーテアヒウ(第四版第四圖)

產地　横濱、日光、北海道、淺間山

期節　五月、六月

(三三)ゲプサス、ジョナシージャンソン(第四版第五圖)

產地　北海道、横濱

期節　六月、七月

ニ至ル此事ハ余チシテ何故ニ此等ノ學者ハ斯ノ如ク新種ニ名稱ヲ附スルヿニ掛念チナスヤヲ疑ハシム蓋シ彼輩ハ種々ノ榮譽ヲ博センカ爲メ或ハ自己ノ光榮ヲ成就セント欲スルニアランカ若シ夫ノ兒戲ニ均シキ者チ不朽ニ存セン爲メニ碑チ建ント欲セハ其誤見モ亦甚シキ哉一回定メラレタル名稱ハ命名者ニ於テ他ニ何ノ益アラン猶余ハ爰ニ一言ヲ贅セントス百年ノ後日本或ハ其他ノ一二ノ昆蟲ニ付テ其説明者ノ略稱ノ頭字カ仮令But或ハTubニアルトモ何ノ苦慮スル所アラン蓋シ博物館ノ職員ハ概研究スベキ多タノ時日ヲ全ク分類或ハ解説ノ具ニ機械的ノ業ニ用フルハ是亦不得止ノ事實ナレ𪜈此等ノ説明者カ種々ノ學問上ノ光榮ヲ我物顔ニ自慢スルハ宛モ望遠鏡ノ具鍄管チ造ル機械師カ之チ使用スルヘルシエル其人ト優劣チ爭フト一般ナリ

目錄ノ頁ニ與ヘ而テ次ノ番號ハ其頁中ニ記入シ捕獲セシ場所時季並ニ蟲類ノ慣性ニ關スル一二ノ備忘ヲ共ニ記載スヘシ余ハ嘗テ辛苦ト時日ヲ費シ蒐集シタル標品ニ目錄ノナキヲ視察セリ斯ノ如キハ蒐集者其人ニシテ實驗上ノ價直アルニモセヨ恰モ數多ノ錦繪ヲ有スルト一般ニシテ人ヲ敎迪スルノ事實アラサレバ眞ノ價直ナキモノナリ

名稱ノ事

余ハ亦名稱ノ事ニ付キ一言セント欲スルモノアリ抑理論上ニ於テハ屬及種名ノ配合ニ由テ特殊ノ種類ヲ顯ハスト雖實驗上ヨリ觀ルトキハ不幸ニモ其相表裏スルノ例尠シトセス此等ハ何カニ付ケテ屬及種ヲ增加スル造種家ノ熱心ヨリ起因ス此弊ハ常ニ增加シテ一種ニ二十以上ノ異名ヲ附シ爲メニ異名字書ヲ要スルニ至ル ストライクランド氏カ數年前「プリチス、アスソシエーション」ノ嘉納シタル「ストライクランド」法ニ於テ此弊ヲ改良セント企圖セラレシフアルモ其良考ノ結果ハ却テ永ク忘却シタル命名者ノ名ト不用ノ名稱トノ再興ニ過キサリシ夫レ名稱ニ就テ眞ノ要旨ハ其名ノ普ク通用スルニ在リ故ニ其名ニシテ若シ公衆ニ熟知セラル、名稱ト抵觸セハ其所謂「ロー、ヲフ、プライヲリチー」ナル或ル感情ノ尊敬ニ就テ與ヘラレタルニ係ハラサルナリ偖又恰モ毛ヲ裂クカ如キ細微ナル徒勞ノ事業ニノミ心ヲ用フル學者ノ穿鑿ヨリ厘ニ知ラレタル地方ノ單一ノ標品ニ就テ充分ノ試驗ヲモ爲サス或ハ材料モナキニ新ニ名稱ヲ附セシヨリ大ナル弊害ヲ起ス

ケ目ヲ屢吹クヿハ最モ緊要ナリ○密生セル雜草ノ中ヨリ蛾類ヲ驅逐スルニ實効アル方法ハ煖室中ニ於テ施ス如ク燻ラスヲ可トス

燈火モ亦蛾ヲ蒐集スルニ甚牧獲アル一法ニシテ街頭ノ瓦斯燈ノ如キハ夥多ナル収納ヲ與フルモノナリ故ニ輕便ナル梯ヲ携ヘ直ニ毒壺ヲ以テ蟲ヲ捕フヘシ玆ニ一言スヘキハ豫メ警察官ニ其旨ヲ通知シ置クト若シ燈火ノ不意ニ消滅スルヿ速ニ點スヘキ爲メ木燧ヲ用意スヘキヿ是ナリ○光力强キ燈火ヲ高キ臺ノ上ニ置キ其下ニ白色ノ綿布ヲ敷キ夜ニ之ヲ勝地ニ据ヘ蟲類ヲ誘導スルヿハ其敷物上ニ數多ノ昆蟲ノ佇立スルヲ視察スヘキナリ○又蛾ヲ捕フルニ鰻ヲ漁スルニ用フル絲蹄ニ倣ヒ種々ノ絲蹄ヲ造レリ其趣向ハ蛾ノ一タビ其内ニ入ルモノハ復ヒ出ル能ハサル如クニナシ燈火又ハ砂糖ヲ用ヒテ之ヲ誘引スルナリ數多ノ蟲類ハ常ニ唯砂糖又ハ花ニ賴テ之ヲ捕獲スルヲ得可シ砂糖ハ黑砂糖ニ日本酒ヲ混合シ之ニ燒酎或ハ麥酒ヲ小量ニ加合ス而テ黃昏ニ之ヲ樹幹ニ塗布シ夜ニ入リ燈火ヲ提テ之ヲ巡視シ若シ蛾類ノ砂糖ニ集マルヲ認ルヿハ直ニ毒壺ニ投スヘシ

眞夜ニハ各類ノ昆蟲數多砂糖ヲ搜索シ來ルト雖往々一蟲ヲモ得ル能ハサルヿアリ又松及樅ハ一般ニ收利ナシ待霄草(マツヨヒグサ)ハホークモスヲ誘フニ最モ善キ花ニシテ且永ク凋マス春候最モ蟲類ヲ誘引スル花ハ旌節花(キフシ)ニシテ其枝梢ヲ靜カニ大ナル傘ノ上ニテ振搖スヘシ又常春藤(キヅタ)ノ花ハ均シク秋季ニ舉用セラルベキナリ

蒐集シタル標品ハ精細ナル目錄ヲ編纂ス可シ此目錄ハ番號ヲ以テ容易ニ編成スルヲ得ヘシ見出ノ番號ハ各自ノ種名ニ付シ補助ノ番號ハ獲タル標品ニ付ス即チ最初ノ番號ハ

蠋ヲ搜索スルニ方リ植物体ノ各部カ諸蠋ニ適スルヿヲ記臆セサル可ラス或ハ葉ヲ食ヒ或ハ幹、樹皮、花實、根、茸、苔(苔ヲ食フモノハ概其体色ノ食物ニ類似セルノミナラス苔ヲ其脊部ニ負戴セリ)或ハ枯死セル纖緯(衣服ノ如キ)乾燥シタル標品、枯葉、等ヲ食トスルモノアリ數多ノ穀蛾屬ニハ其蠋期中葉ノ表裏ノ膜間ニ經過スルモノアリ又數多ノ蠋ハ特ニ夜中ニノミ掃網ヲ以テ採集スルヿヲ得ヘシ其掃網ハ綿布ヲ以テ堅固ニ之ヲ製シ雜艸ノ上ヲ前後左右ニ打チ掃フナリ又樹木ノ枝梢ヲ撲チテ蠋ヲ傘ノ中ニ受留ルモ亦實効アル一法ナリ

蠋ノ裝置法　二十年前余初テ蠋ヲ膨脹ノ酒精燈ノ上ニ之ヲ乾燥スルヿニ就テ何如ニ之ヲ調製スヘキカヲ指示セシ以來此方法大ニ進歩シ忍耐ト實地トニ據テ此ノ方法ヲ以テ多數ノ佳麗ナル標品ヲ調製スルヿヲ得ルニ至レリ其概略下ノ如シ先ツ蠋ヲ一日間絶食セシメ而テ濃厚ノ明礬水ニ投シテ後吸墨紙ノ間ニ之ヲ置キ頭部ヨリ漸々ニ之ヲ壓シテ内容ヲ押出シ玻璃ノ吹管ヲ以テ其空皮ノ肛門ニ挿入シ「プリッキ」函ヲ以テ圍繞シタル酒精燈ノ上ニ之ヲ翳シテ乾クマテ之ヲ吹クナリ此酒精燈ヲ覆フ「プリッキ」函ハ唯前面ニ小窓ヲ開キ内部ニ亞鉛ノ棚アルヲ以テ火焔ハ其亞鉛ヲ衝キテ奥ヲ迂回シ此小窓ニ奔出シ以テ蠋ノ空皮ヲ乾燥ス吹管ノ尖端ハ殆ト正角ニ屈折シ而シテ其中央ニ空球ヲ具フ羽化セル標品ヲ獲ル能ハサル季節ニハ蛹ヲ掘リ又ハ之ヲ精密ニ搜索スヘシ○孤立セル大樹ヲ撰ヒ其幹ノ根部ヲ圍繞セル苔及ヒ土塊ヲ敷紙等ノ上ニテ篩フヘシ

數多ノ蛾ハ樹皮ニ類似セルヲ以テ樹幹ヲ精細ニ穿鑿スヘシ蟲ヲ追出ス前ニ其樹皮ノ裂

ニ撒布スヘシ外觀稍醜ケレ𪜈梅雨中ハ常ニ黴又ハ乾酪蟲ヲ除去スルヲ得ヘシ然𪜈若シ黴氣ヲ生シタル𪜈ハ抽匣ヲ六フイート程隔テ、猛火ノ周圍ニ置キ二三日ノ間數時間ヅツ玻璃蓋ヲ除キ置クヘシ又此法ノ代リニ鹽化石灰ヲ小皿ニ盛リ各抽匣ノ裏ニ暫時間入レ置ク𪜈ハ能ク濕氣ヲ除去スルヲ得ヘシ樟腦ハ防腐ノ効アルモ標品ヲ損傷スルノ虞アルヲ以テ之ヲ用ヰザルヲ可トス蟲ヲ殺スニ酢若クハ稀酢酸ヲ通例ノ鐵筆ニテ用フ之ヲ施スニハ鋏筆ニ酢ヲ含マセテ蟲ノ胸部ヲ側面ヨリ刺スヘシ然ル𪜈ハ其液筆尖ヲ傳フテ傷口ニ浸入ス仮令眞ニ死セル者ト雖新鮮ナル者ハ此法ヲ施サスシテ裝置スヘカラス蟲ヲ裝置スルニ就テ余ハ經驗上ヨリ大陸法ノ善良ニシテ英國法ノ誤謬アルヲ發見セリ大陸法ノ所長ハ蟲ノ位地ヲ高ク裝置シ翅ヲ水平ニナシ前方ニ充分展張ス此位地ニ保ツ𪜈ハ之ヲ寫生スルヿ容易ニシテ且其下部ニ年月捕獲地等ノ附箋ヲ帖スル餘地アリ黴又ハ蟲ノ害ヲ受ケス又之ヲ移スニ破損ノ危險少シ翅ヲ展張シテ其乾燥スルマテ之ヲ支持スルニ余ハ大ナル標品ニハ細キ絹布(其幅八分ノ一インチヨリ二分ノ一インチニ至ル)二條ヲ用ヒ小ナル標品ニハ馬ノ尾毛ヲ用フ而テ此二條ノ絹布ヲ双翅ノ上ニ置キ通例ノ止針ヲコークノ細片ニ通徹シ之ヲ以テ其絹布ヲ刺止ムル𪜈ハ絹布ハ細片ノコークニ壓セラレ翅ハ絹布ニ支持セラルヽナリ

標品ヲ獲ル最便法ハ蝸ヨリ飼養シ之ヲ發育セシムルニアリ啻ニ良品ヲ得ルノミナラス其種類ノ慣性及應化ヲ隨意ニ研究スルヲ得且此法ハ常ニ多クノ興味ヲ得又研究者ニ裨益ヲ與フルヿ多シ

ス且成ル可ク丈一屬ノモノヲ一目ニ通覽スルヲ得可ラシム凡テ抽匣ハ空氣ノ侵入セサル蓋ヲナスヘシ而テ蝶類ニハ抽匣ノ蓋モ底板モ玻璃ヲ用ユルヲ必要トス此等ノ抽匣ニハコークノ細片ヲ木ノ薄片間ニ狹ミ平角ノ棒ヲ造リ之ヲ匣底ニ排置ス且豫メ匣ノ內緣ニ此コークヲ入レヘキ方形ノ小孔ヲ穿チテ之ト嵌入ス故ニ此コークハ標品ノ大小ニ由テ或ハ之ヲ接近セシメ或ハ之ヲ隔離ス蛾類ノ抽匣ニハ唯蓋ニ玻璃ヲ用ヒ底板ノ上ニハコークヲ敷キ而テ其上ヲ白紙ニテ帖スヘシ抽匣ノ深サハ針頭ノ玻璃蓋ニ觸レサルヲ適度トス(即チ內法深サ一インチ四分ノ三)緣ハ二重ニ爲シ蓋ニ齒アリテ其溝ニ鉗入ス抽匣ノ橫面ニ凹細溝アリテ外函ノ內側ニアル凸形棧其溝ニ入リ以テ之ヲ支持ス各抽匣ノ大サハ同一ニシテ適宜ニ之ヲ上下變換スルヲ得セシム抽匣中ノ蟲其他ニ濕氣ヲ帶ハシムルト否ハ特ニ細工ノ巧拙ニ之レ由ル○止針ハ凡テ大ナル蝶蛾ニハ其長ノ平等ナルヲ要ス然ル其太サニハ自ラ次第差等アリ又細微ノ蝶蛾ニハ細小ノモノヲ用フヘシ○鑷子ハ尖端ヲ稍幅廣ニナシテ前方ニ屈撓セシメ其內側ニ橫齒ヲ刻ミ之ヲ合スルヒハ其齒互ニ相交叉シ以テ針ヲ拔キ刺シスル際之ヲ堅固ニ支持スル用ニ供ス○剪刀ハ大ナル蛾類ノ腹部ヲ切開シ其內容ヲ除去スル時ニ使用スルモノナルヲ以テ最モ尖端ノ精銳ナルモノヲ要ス

藥品類中靑酸加里ハ精良ノモノヲ用フヘシ此藥ハ概ヲ小塊ヲ爲スモノナリ若シ其効能著シカラサルヒハ酢ヲ二三滴加フヘシ然ルヒハ新鮮トナスヿヲ得○那布太林ハ抽匣ノ二重緣ノ間ニ撒布シ蠹蟲ノ害ヲ豫防スルニ最モ可ナリ○沈澱鉛及炭酸石灰ハ抽匣ノ底

リ函底ニ刺止ムルナリ○網ハ口經二フイート以上ニシテ淺キヲ可トス笠狀ノ網ハ最モ使用ニ便ナリ○毒壺ハ厚キ玻璃ノ平滑ナル水呑ニ抹紙膠（インヂャラバー）ノ栓ヲ爲スヲ最モ可トス而テ青酸加里ノ細末ヲ吸墨紙ニ包ミ之ヲ水呑ノ底ニ收メ又其上ヲ厚紙ニテ覆フベシ○採集函ハ縱八インチ横十インチニシテコークヲ布キ雙底（蓋モ亦身ノ用ヲナス）トナス而テ之ニ肩ヨリ帶フルニ足ルヘキ紐ヲ附ス○投蝎筒ハ亞鉛ヲ以テ造リ其側面ニ無數ノ孔ヲ穿チ亦紐ヲ附シ採集函ト反對ニ之ヲ荷フ○梧桸（アケモノ）ハ一ヲ他ニ收メ套箱（イレコ）ニナル可ク之ヲ造ルヘシ○玻璃管ハ一インチ乃至二インチノ長サニシテコークノ栓ヲ具フヘシ○袋ハ開閉ヲ便ニシ口金物ヲ附シテ疾走ノ際物品ノ遺脫ヲ防ク○裝置函ハ最モ必要ノ具ニシテ其函中ニハ少クモ裝置板三十枚ヲ具フヘシ其函ハ旅行ノ際運搬ニ耐ヘク充分堅固ニ製造スヘシ裝置板ハ軟質ノ板ニテ製造シ溝ニハコーク或ハ蜀麥莖（モロコシガラ）ヲ布クヘシ而テ乾燥中標品ノ軀幹ニ歪斜ヲ生スルヿヲ防ク爲メニ函中ニ收ムルニハ直線ニ之ヲ立ツヘシ且此板ハ能ク平坦ニシテ渾テ仝一ノ深サニスベシ但シ一インチヨリ減スベカラス○飼蝎用玻璃製圓壔ハ玻璃筒ノ一端ヲ網ニテ包ミ他ノ一端ヲ土製ノ皿上ニ立テ皿ノ中央ニ孔ヲ穿チ蝎ノ食餌ニ供スヘキ艸木ヲ其孔ニ挿ミ其下部ニ水鉢ヲ設ケ艸木ノ枯凋ヲ防ク○陳列函ハ頗ル緊要ノモノニシテ若シ其標品ニシテ完全ナラサリセハ採集者カ積日ノ苦心モ徒勞ニ屬スヘシ種々ノ經驗ニ據テ視察セルニ抽匣ニ用ユル板ハ櫻ノ赤身ヲ最モ可トス外函ニハ樹脂ヲ生セス屈撓セサルモノヲ可トス樟榛松樅等ノ如キモノハ甚タ不適當ナリトス抽匣ハ長サ十四インチ幅廿一インチノ大サニナセハコークノ小板十二枚ヲ敷テ寸隙ヲ餘サ

期節　四月

早春横濱ニ多シ楡葉ヲ食餌トス

採集ノ事

此書ノ初編ヲ刊行セル以來余ハ讀者諸士カ昆蟲學上ニ就キ實地ノ經驗ヲ施セシヿ少ナシトノ報告ヲ得タレハ今茲ニ其實驗ヲ爲スニ緊要ナル二三ノ方法ヲ指示スルハ日本ノ學友諸士ノ爲メ敢テ無用ニアラサルヘシト思惟セリ

其所要ノ器具藥品ハ左ノ如シ

一　網　九　玻璃管

二　毒壺　十　裝置函

三　採集函　十一　飼蝎用玻璃製圓壔

四　投蝎函　十二　陳列函

五　梻（マケモノ）棕　十三　鑷子及剪刀

六　袋　十四　藥品類（青酸加里、硫酸、炭酸石灰、稀酢酸）

七　提燈　十五　昆蟲針

八　砂糖壺

以上ノ諸器具ハ野外ノ使用ニ供スル者ナルヲ以テ成ル可ク輕便ナランヿヲ要ス先ツ網中ノ動物ヲ毒壺ニ移シ窒塞氣絶セシメテ之ヲ採集函中ニ移シ止針ヲ以テ其體ノ側面ヨ

（一冊三）チクロピテス、チルナタス、ブレーム（第十版第十九圖）

産地　大山、富士山、日光

北海道ニモ亦産セリト云フ（リーチ氏）

（一冊四）ピルグス、イナクス、メン（第十版第廿圖）

産地　日光、淺間山

期節　八月

日光ニ稍々寡少ナリ

（一冊五）サイリクサス、マクラタス、ブレーム及グレー（第十版第廿一圖）

ヒルグス、マクラタス、メン

産地　横濱、日光

日本及朝鮮ニ普通ノモノナリト云フ（リーチ氏）

（一冊六）サイリクサス、シニクス（第十版第廿二圖）

ピルグス、シニクス、バット

産地　横濱

（一冊七）ニソニアデス、モンタナス、ブレーム（第十版第廿三圖）

ニ、ルスチカナス、バット

産地　横濱、北海道

食草　槲樹

(一廿八)
ヘスペリア、コムマ、リン（第十版第十四圖AB）
産地　淺間山
期節　七月、八月

(一廿九)
ヘスペリア、レヲニア、バット（第十版第十五圖）
産地　日光、北海道
期節　八月

日光ニ寡シトセス

(一卅〇)
ヘスペリア、リクキナ、バット（第十版第十六圖AB）
産地　日光、北海道、淺間山
期節　八月

日光ニ多シ

(一卅一)
ヘスペリア、フラバ、モーレー（第十版第十七圖）
産地　横濱
期節　六月、八月

横濱ニ普通ノモノナリ

(一卅二)
ヘスペリア、スプ、（第十版第十八圖）
産地　日光、淺間山
期節　七月

(一廿四)　パンピラ、グッターター、プレーム及クレー（第十版第十圖）
ユダムス、グッターター、プレーム及グレー
ゴノロバ、グッターター、メン
產地　横濱、北海道
横濱ニ普通ノモノナリ

(一廿五)　パンピラ、ペルシダ、モーレー（第十版第十一圖）
產地　横濱、淺間山、北海道
期節　八月
横濱ニ甚タ普通ノモノナリ

(一廿六)　パンピラ、ジヤン、ノニス、バット（第十版第十二圖）
產地　伊香保
此種ハ「パ、ペルシダ」ニ甚タ相ヒ類似ス唯其最ナル差異ハ后翅ノ裡面ノ翅根ニ近ク明瞭ナル斑點アリト云フ（リーチ氏）

(一廿七)　ヘスペリア、シルバヌス、エスプ（第十版第十三圖ＡＢ）
產地　淺間山、日光、富士山、北海道
期節　八月
エルウエス氏ハ支那日本及アムアランドニ於テ見出サル、此種ノ形狀ハ歐羅巴產ノモノヨリ常ニ大ナリト云ヘリ

産地　日光、淺間山、北海道

余カ有スル北海道産ノ標本ハ品類頗ル多シ

(一廿〇)　タイメウ、テチス、モーレー　(第十版第六圖)

ヒルグス、テチス、メン

産地　横濱、北海道

横濱ニ多シ余カ有スル變種ハ前翅ニ白點アリ相集合シテV形ノ斑文ヲ呈ス

(一廿一)　パンピラ、マシアス、フアブ　(第十版第七圖)

産地　横濱

横濱ニ普通ノモノナリ亦日本中央及南方ニ産スト云フ(リーチ氏)

(二廿一)　パンピラ、ランプロスピラス、フエルト　(第十版第八圖)

パ、ピトレア、モーレー

イソテイノン、ラムプロスピラスフエルト

産地　横濱、敦賀(リーチ氏)

横濱近傍ニ普通ノモノナリ

(三廿一)　パンピラ、バリア、モーレー　(第十版第九圖)

産地　横濱、北海道、長崎等

横濱ニ普通ノモノナリ后翅ノ裡面ニ黑條アルヲ以テ容易ニ識別セラルヽト云フ(リーチ氏)

産地　横濱、大山、大和、淺間山、北海道、

期節　四月、八月

横濱、大和其他ニモ頗ル夥シ大山ノ山頂ヨリ獲タル標品ハ横濱ニ於テ採集シタルモノヨリモ一層暗色ナリ

(六一一)　チヲペ、カリプテリス、バット　(第十版第二圖)

産地　大山、大和、北海道

此蝶ハ山間ニ産スルモノナリ

(七一一)　セノニムフア、エチパス、フアプ　(第十版第三圖)

セ、アンヌリフエル、バット

産地　淺間山

期節　七月、八月

前種ノ如ク山間ニ産スルモノナリ

(八一一)　イスメチ、ペンジヤミニー、グエル　(第十版第四圖)

イ、ペンジヤミニー、ヴァール、ジヤポニカ、モーレー

産地　大山、日光、大和

期節　七月、日本南方五月(リーチ氏)

右ノ地方ニ普通ノモノナリ

(九一一)　ピサウリア、クリセクリア、バット　(第十版第五圖AB)

期節　七月、八月

日本ニ於テハ甚タ罕ナリ然シエルウエス氏ノ説ニ據レハアムア地方ノ各所ニハ小ナカラスト云フ

(二一一)レセ、シセリス、ヒユー（第九版第十圖）

産地　横濱、淺間山

期節　八月

横濱ニ頗ル夥ク到ル所ノ平原ニアリ然氏次種ノ如ク山上ニ居ラス余此蝟ヲ獲シニ竹ヲ以テ食餌トナスヿヲ認定セリ

(三一一)レセ、チアナ、バット（第九版第十二圖）

産地　大山、大和、淺間山、北海道

期節　七月、八月

此種ハ諸峯ニ多シ蓋シ前種ノ山上形種ナラン

(四一一)プロノフイラ、シユレンキイ、メン（第十版第一圖）

産地　北海道、淺間山

期節　八月

此佳麗ナル蝶ハ北海道ニ普通ノモノナリリーチ氏(千八百八十七年刊行動物學協會雜誌四百廿六葉)曰「此種ハ繁茂セル森林中ニ飛翔スルヲ以テ捕獲ニ稍〻困難ナリ」ト即是ナリ

(五一一)チチペ、ガシユケピチー、メン（第九版第十一圖）

横濱ニ頗ル夥ク雑草中ニ飛翔ス

(八〇一) パラーゲ、アキチ、スコプ (第九版第六圖)

パ、アキノイデス、バット

産地　日光、淺間山、北海道

期節　七月八月

六七月ノ候日光ニ夥シ北海道産ノ標品ハ概チ大ニシテ其色モ亦鮮明ナリ

(九〇一) パラーゲ、ディダミア、エプ (第九版第七圖)

パ、メニトリエシー、ブレーム

産地　日光、淺間山、北海道、

期節　七月八月

此種ハ日光ニ寡シトセス

(〇一一) パラーゲ、マーキー、ブレーム、(第九版第八圖)

ラシチマタ、マアジナリス、モッシユ

産地　大和、北海道、東京(フエントン)

此蝶ハ尋常ノモノニアラズ

(一一一) ラシヲマタ、ユピメニヂス、メン (第九版第九圖)

チチブ、フエントニー、バット

産地　北海道、淺間山

ス

(五〇一) イプシマ、バルダス、ファブ (第九版第三圖)

イ、アルガス、バット

産地　横濱、淺間山、北海道

期節　八月

横濱ニ於テ最モ夥多ナル蝶類ノ一ナリ余ハ當地産ニシテ其裡面ノ甚タ黑色ナル標品二個ヲ有ス

(六〇一) エレビア、セダコウイ、エブ (第九版第四圖AB)

エ、ニホニカ、シヤンソン

? エ、スコパリア、バット

産地　淺間山、日光、北海道

余カ有スル北海道産ノ標品ハ「エ、スコパリア」ナリ然ルに余ハ未タ充分ナル數多ノ對照品ヲ見サルヲ以テ之ヲ確定スルヿ難シト雖蓋シ「エ、セダコウイ」ノ産地ニ由リ生セル差異ナラシト認メタリ

(七〇一) サチルス、ドライアス、ブコブ (第九版第五圖)

サ、バイプンクタータス、モッシユ

産地　横濱、淺間山、北海道

期節　八月

山路ニ生セル杉林ノ間ヲ飛翔シ居シモノナリ

(一〇一) メラニチス、レダ、リン (第八版第八圖)

産地 土佐、日光(マリース氏)

期節 七月八月

此種モ亦罕品ナリ余ハ四國ノ土佐ト伊豫ノ界ニ於テ唯一匹ヲ捕獲セリ該品ハ莖高キ麻圃ノ中ニ飛翔セシヲ以テ之ヲ捕フルニ頗ル苦心セリ余ハ唯二匹ヲ視シノミナリシ

(二〇一) メラニチス、スプ?

産地 長崎

余ハ唯一品ヲ織田氏ヨリ得タリ予ノ家兄ハ此種ノタヒチ産ノ「メ、ソランドラ」ニ最モ類似セルヿヲ告知セリ若數多ノ標品ヲ收集スルヲ得ハ其興味果ノ如何ソヤ

(三〇一) ミカレシス、ゴタマ、モーレー (第九版第一圖)

産地 横濱

期節

此種ハ横濱ニ甚タ多ク樹木ノ繁茂セル暗所ニ出沒セリ

(四〇一) ミカレシス、ペルヂカス、ヒウ (第九版第二圖)

産地 横濱

期節

此種モ亦多ク其斑文ノ類似セル「ミ、ゴタマ」ト均シキ塲所ニ出沒シ二種共ニ同期節ニ現出

(八九) アルジンニス、ルスラナ、モッシュ (第八版第六圖)

ア、リシッペ、ジャンソン

産地　横濱、日光、北海道

期節　九月

エルウエス氏ノ説ニ據レハ此種ハ「ア、ラチチス、パル」ニ甚タ類似スト云リ其狀雜種ノ如ク見ユレ𪜈余ノ所有スル標品ハ甚些少ナルヲ以テ之ヲ確定スル能ハス

ダナイデー族

(九九) ダナイス、チチア、グレイ (第八版第九圖)

産地　横濱、富士山、大山、大和、熱海、鹿野山、北海道

期節　五月八月九月

此種ハ横濱近隣ニ稀ナレ𪜈概シテ毎年二三チ視ル凡テ山上ニ夥多ナルモノナリ余ハ之ヲ大和ノ大峯山上ニ達スル途次吉野近傍ノ山頂ニ於テ蟲網一揮ノ下ニ五匹ヲ獲シ𪜈アリキ

サチリデー族

(〇〇一) メラニチス、イスメチ、モーレー (第八版第七圖)

産地　大和

期節　十月

此種ハ甚タ稀品ナリ余ハ大和ニ於テ唯二匹ヲ目擊シ之ヲ捕獲セリ這ハ大臺山ニ通スル

産地　横濱、北海道

期節　七月、八月

此種ハ横濱ニ甚タ普通ノモノナリ

（五九）アルジンニス、サガナ、ダブル（第八版第三圖）

ア、ポーリナ、ノルドム

産地　横濱、淺間山、北海道

期節　七月

此種ハ横濱ニ多シ雌雄ノ彩色ニ甚タ著シキ差違ヲ呈ス玆ニ圖スル標品ハ雄蝶ナリ

（六九）アルジンニス、パフピア、リン（第八版第四圖）

ア、パフピヲイデスバット

産地　大山、淺間山、鹿野山、富士山、北海道

期節　七月、八月

此蝶ハ山間ニ産スルモノナレ𪜈余ハ嘗テ横濱ニ於テ之ヲ獲タルヿアリ

（七九）アルジンニス、ラヲヂス、パル（第八版第五圖）

ヴァール、ジヤポニカ、メン

産地　横濱、北海道

期節　八月

此種ハ横濱ニ普通ノモノナリ

產地　日光、淺間山、北海道

期節　七月

此種ハ其大サ並ニ彩色ニ著シキ差違アリ日光及北海道ニ多シ

(一九)アルジンニス、アグレイア、リン　(第七版第十一圖)

ア、ホルチコナ、ジヤンソン

產地　富士山、北海道

期節　九月

此蝶ハ尋常ノ種類ニアラス

(二九)アルジンニス、アヂペー、リン　(第七版第十二圖)

ア、パルレスセンス、バット

產地　横濱、富士山、大山、淺間山、北海道等

此種ハ到ル所ニ多シ

(三九)アルジンニス、チリツペ、フエルド　(第八版第一圖AB)

產地　大山、淺間山、富士山、鹿野山、北海道、

期節　八月

此種ハ山中ニ甚タ多シ

(四九)アルジンニス、アナヂチメチー、フエルド　(第八版第二圖)

ア、エラ、プレーム

（七八）メリチーア、新種？（第七版第七圖）

產地　淺間山

期節　八月

此種ハ蓋シ「メリチーア、アサリア」ノ特異ノ變形ナラン

エルウエス氏カ論ル如ク「メリチーア」屬ハ非常ニ錯雜セルヲ以テ之ヲ說明スルニハ須ク數多ノ標品ヲ要スベシ

（八八）アテルラ、ファアランタ、ドリユリー（第七版第十圖）

產地　彼杵（ソノギ）（長崎ヲ距ル凡三十哩）

期節　十月

玆ニ圖スル標品ハ千八百八十年リヴレンド、ダブリユー、アンドリユウ氏カ採集セシモノニ係ルヘウトソン氏ノ目錄ニハカラバル、ナタール、マダガスカル及メキアンノ標品ヲ記載シタリ又此種ハ「ロパロセラ、マレイアナ」（第九版第四圖）ニ圖アリ

（九八）アルシンニス、ニフエ、リン（第七版第八圖AB）

產地　橫濱、長崎、土佐、八丈島

期節　三月ヨリ七月

橫濱近傍ニハ稀ナレ𪜈日本南方ニハ普通ナルモノヽ如シ

（〇九）アルシンニス、ダフチ、シッフ（第七版第九圖）

ア、ラブヂア、ハツト

（八四）ヴァチサ、カロニア、ドリユリー（第七版第四圖）

ヴァール、クラウコニア、モッシユ

産地　横濱北海道

食草　菝葜（サルトリイバラ）

期節　八月

此種ハ横濱ニ甚ダ夥ク其大サ並ニ斑文ノ色澤ニ變化アリ

（八五）メリチーア、フヒーベー、シッフ（第七版第五圖）

ヴァール、シビリカ

ヴァール、イーセリア、エヴ

メ、スコトシア、バット

産地　淺間山

期節　七月

大サ並ニ彩色ニ甚シキ差違アリ

（八六）メリチーア、アサリア、ロット（第七版第六圖）

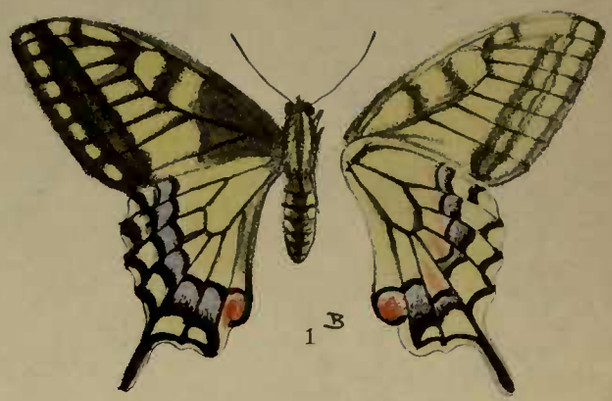
メ、ニホナ、バット

産地　淺間山

期節　七月

此種モ亦其大サ並ニ彩色ニ頗ル變化アリ


1A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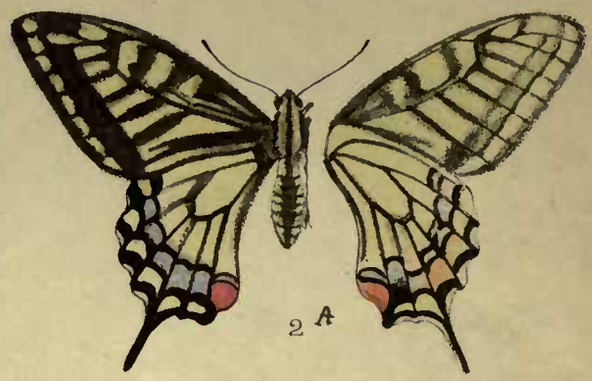
2A


2B


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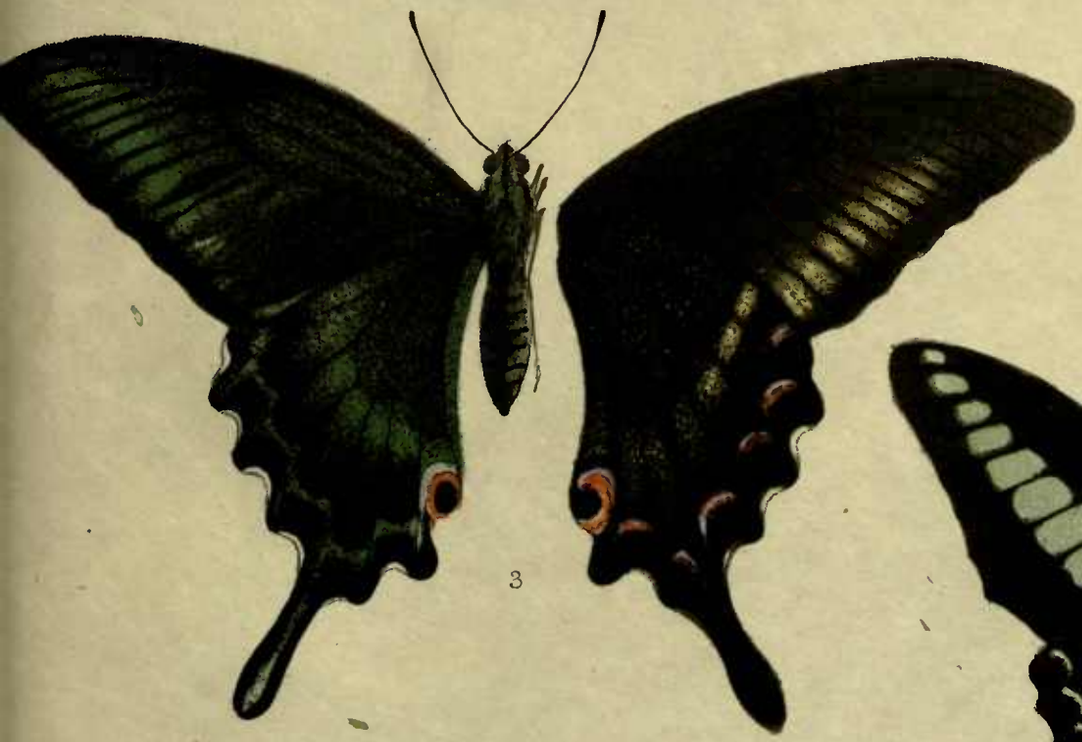
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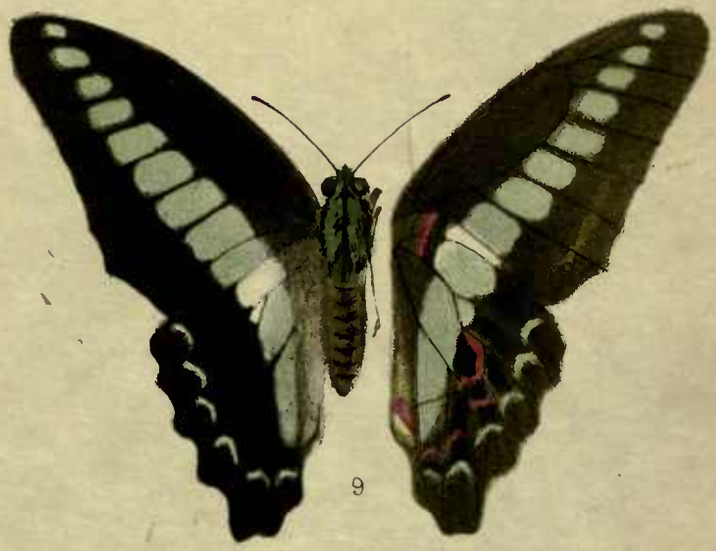
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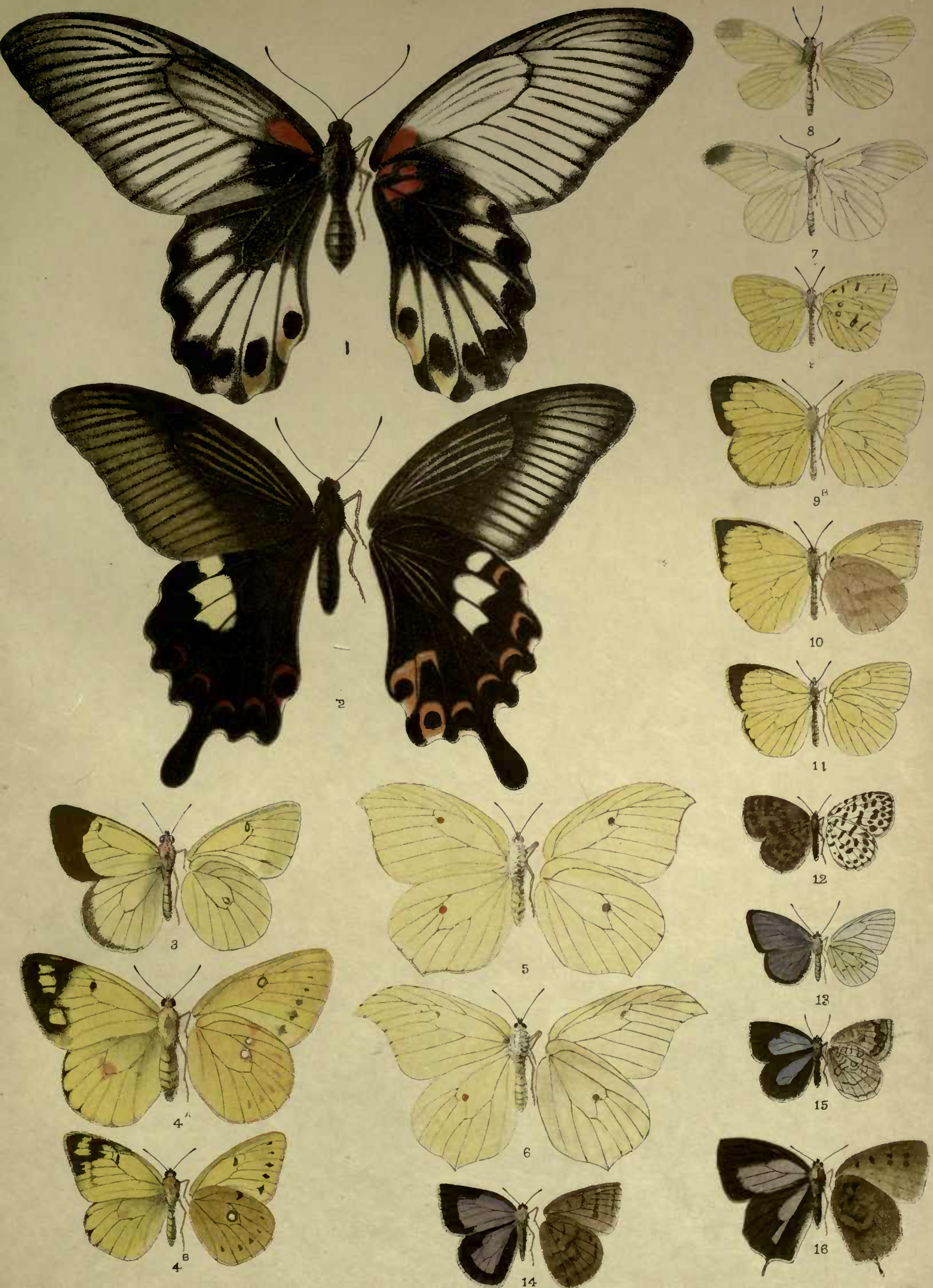
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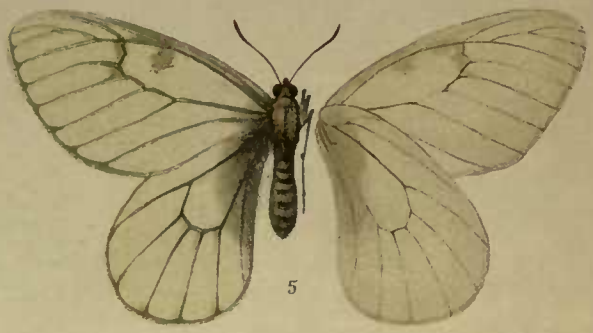
4A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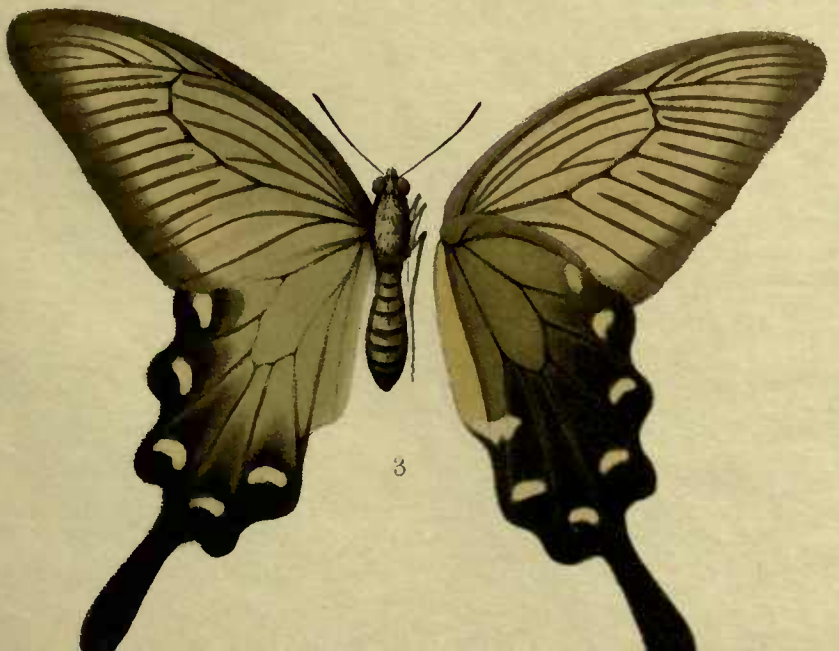
8A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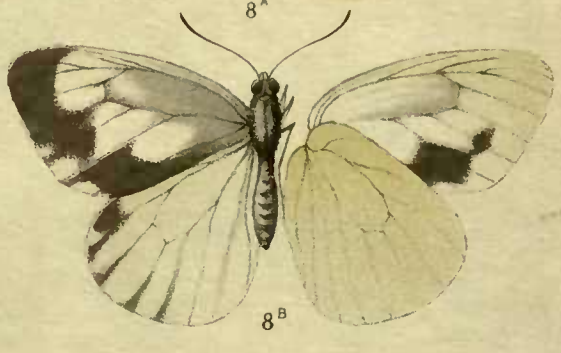
8B


4B


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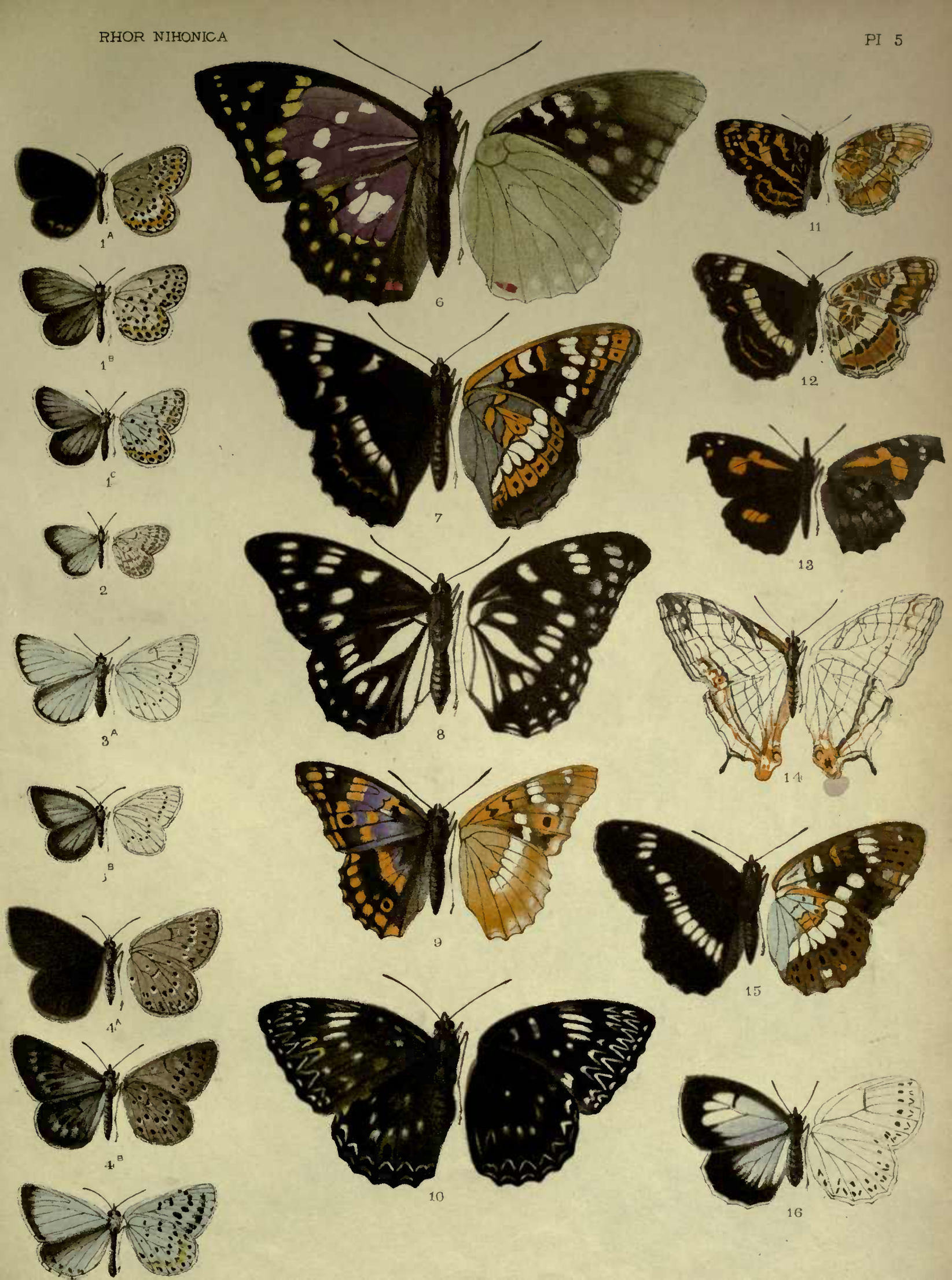
25B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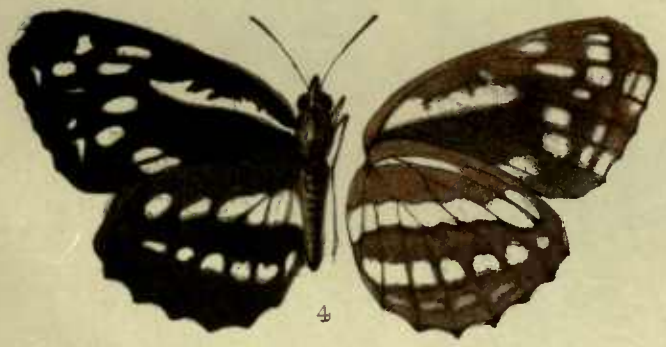
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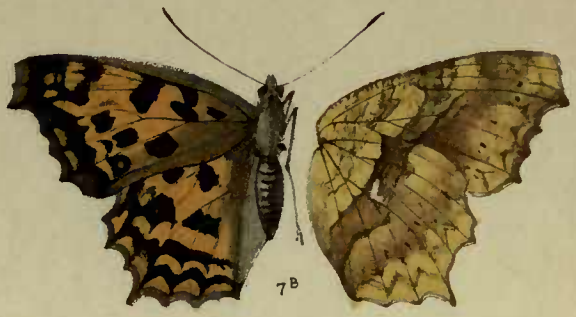
6A


6B


7A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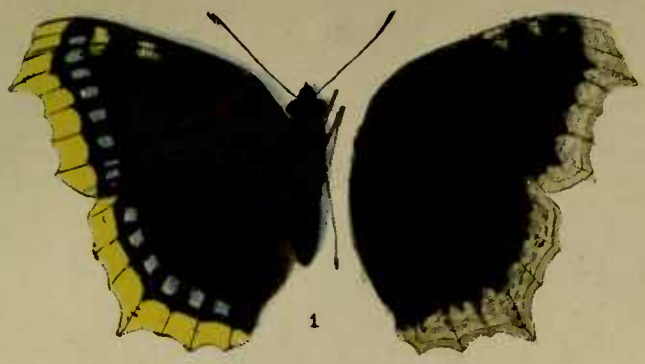
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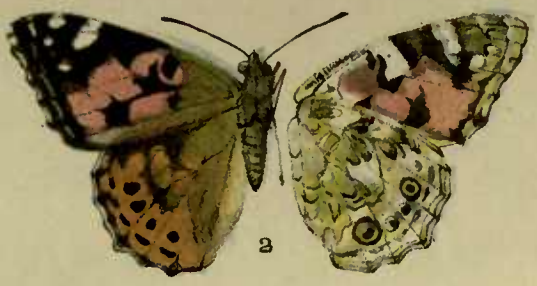
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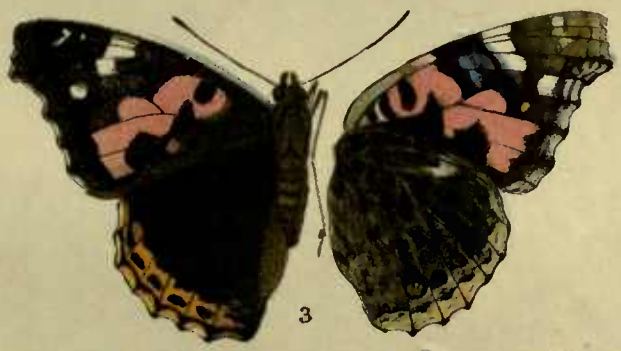
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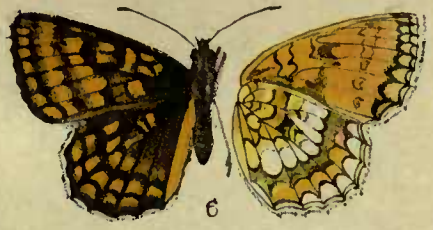
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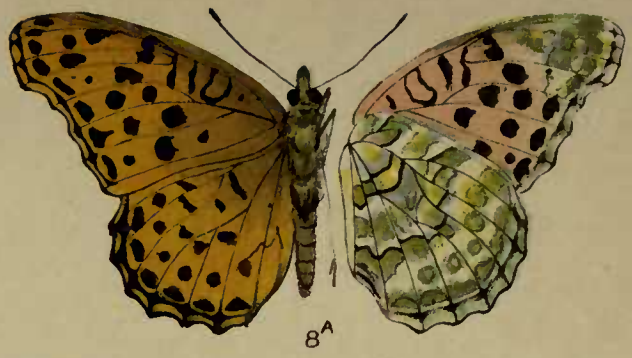
8A


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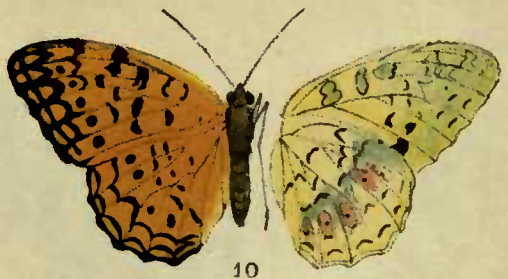
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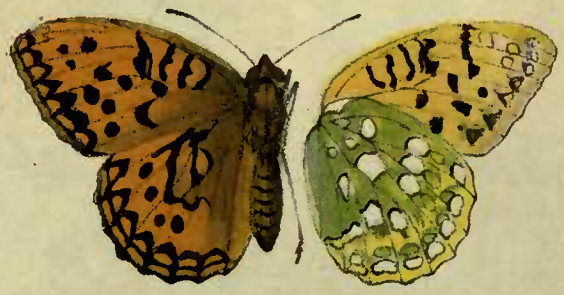
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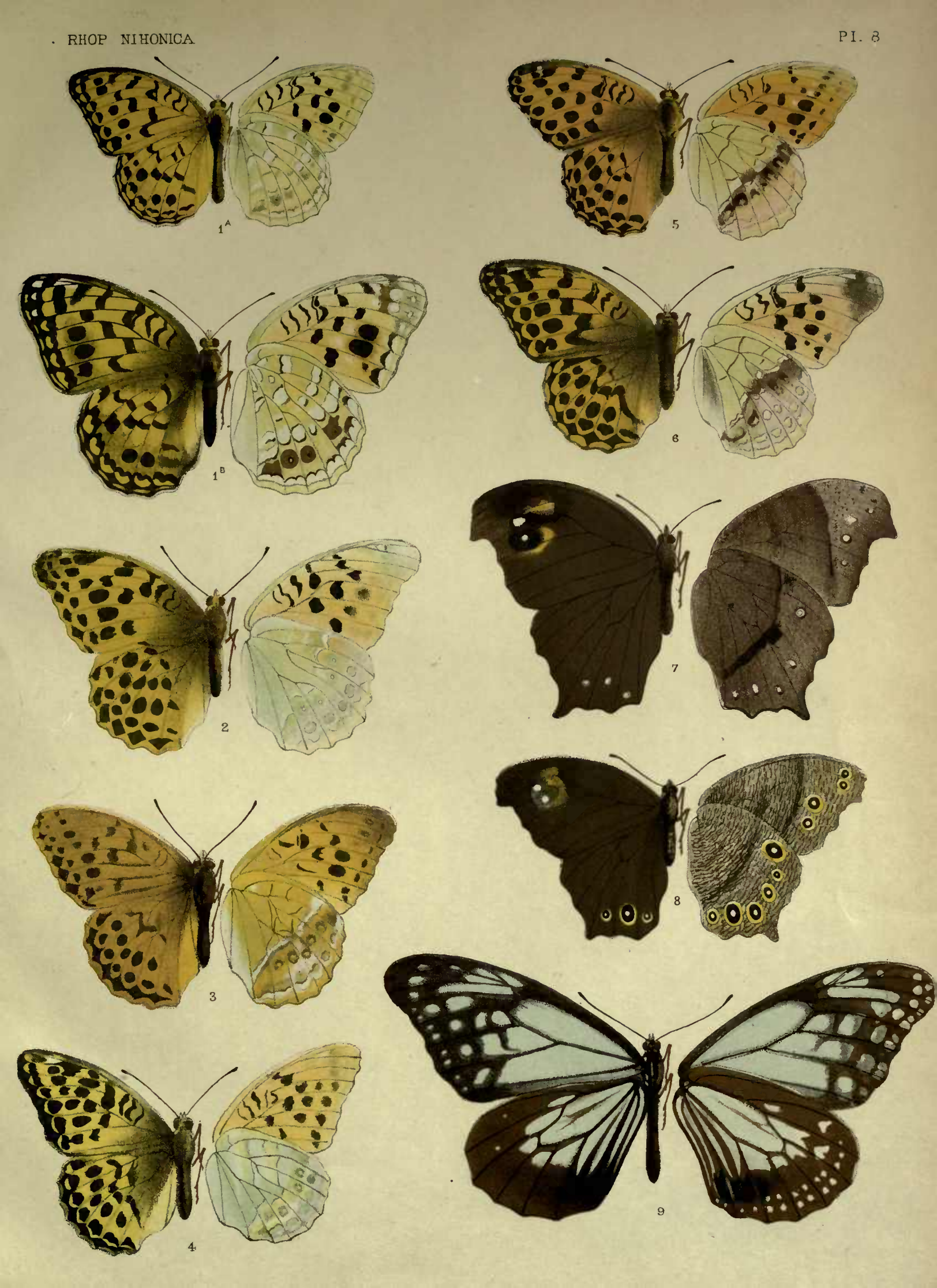
1A
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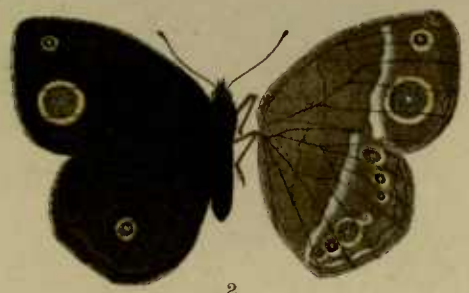
1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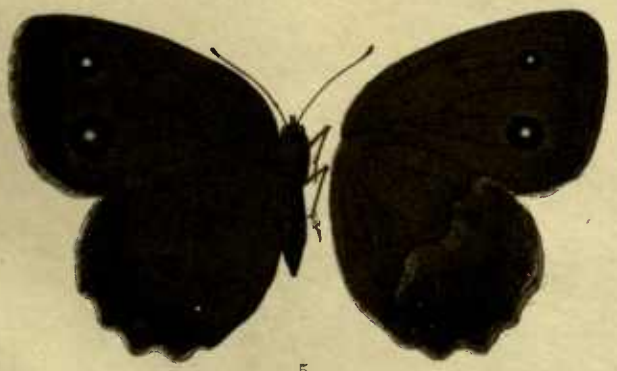
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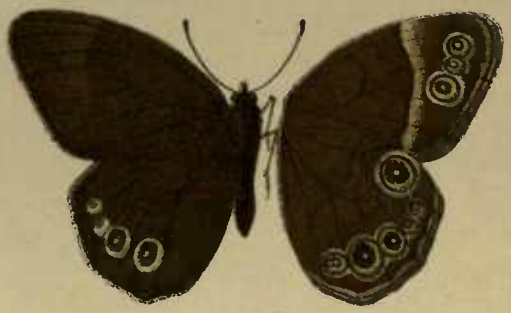
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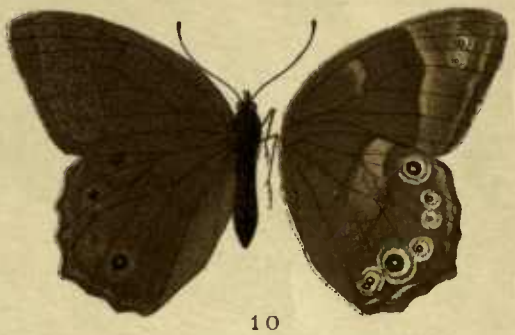
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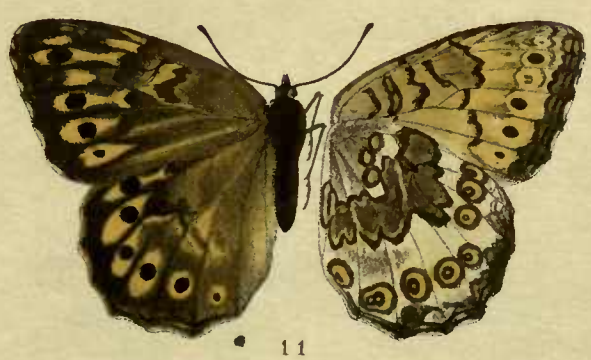
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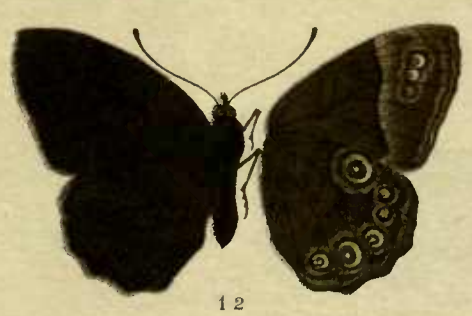
12


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Butterflies of Japan.

pr.25'18 de Ong