NOTES ON JAPANESE BUTTERFLIES, WITH DESCRIPTIONS OF NEW GENERA AND SPECIES.

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The insects to which the following observations and descriptions refer were collected by Mr. H. Pryer, mostly in the immediate neighbourhood of Yokohama.

_Papilio Dehaani,_ Feld.—This species, which is probably not distinct from _P. Maacki_, Mén., appears to be not very uncommon, but, from its strong and rapid flight, is difficult to obtain in good condition.

_P. Demetrius_, Cram.

_P. Alcinois_, Klug.—There are two forms of this species, one black, the other fawn colour (_P. Mencius_, Feld.).

_P. Sarpedon_, Linn.

In addition, Mr. Pryer takes the following species: _P. Machaon_, L., _Xuthus_, L., "Xuthulinus" (?) _Xuthulus_, Brem.), and _Pammon_, L. He sends me the following note on _P. Xuthulinus_: "I believe _Xuthulinus_ to be a stunted form of _Xuthus_; the larva and food-plant are "the same, and very strangely, _Xuthulinus_ is the only single-brooded "_Papilio_ we have here, appearing very early in the year; the larvae "feed up very rapidly just as the leaves are going off the trees in No-"vember, so the question naturally arises, what becomes of them from "April to November? I think the small size is caused by bad and "insufficient food: if I can get time, I will endeavour to breed them "from the egg next spring."

_Parnassius glacialis_, Butl.—Two specimens from "Neko, about 100 miles north of Tokio." The species does not seem to occur on the mountains near Yokohama.

_Anthocaris Scolymus_, Butl.

_Colias Hyale_, Linn.—I have not seen specimens from Japan. Mr. Pryer states that it is extremely abundant both on the plains and on the mountains.

_Terias Iceta_, Boisd.—I am inclined to think that the insect de-"scribed by Ménétrics as _T. Jaegeri_ is the Japanese form of _T. Iceta_. Certainly the specimens in my collection agree closely with his de-"scription and figure.

_T. Mandarina_, De l'Orza.

_T. Hecabe_, Linn.
T. Brenda, Doubl., Hew.—This species, which appears to be very common in Japan, was originally described from Western Africa. It is very variable in its appearance, the hind marginal border sometimes presenting a well-marked sinus, as in T. Hecabe, which in other cases the sinus is almost (or quite) obsolete. I am inclined to think that it is a form of the extremely variable and widely distributed T. Hecabe, L.

Gonepteryx rhhamni, L.—I have only seen a single (damaged) specimen of this insect from Japan.

Pieris Melete, Mén.—"Varies considerably" (H. Pryer).

Chrysophanus phlæas, L.—The dark form (C. Timeus, Cram., Eleus, Fab., chinensis, Feld.) is only the summer brood of this species.

Lycaena Argyades, Pall.

L. Argia, Mén.—I think that I have rightly determined the specimens which I have referred to this species, though they all differ slightly from Ménétries' figure and description. The♀ especially seems liable to vary. In all the specimens which have come under my observation, I notice the following points of difference from the typical L. Argia: on the under-side of the anterior wings there is a minute spot below that within the cell, and another on the costa between the first and second sub-costa nervules; on the posterior wings there is a spot on the inner margin near base; none of these are noticed by Ménétries. Above these are six (sometimes seven) marginal dots on the hind-wing instead of five. I do not, however, consider these small differences as of specific value. The insect seems common about Yokohama.

L. japonica, sp. nov.

Alis suprâ dilute coruleis, postice brumneo-marginatis: sublus cinereis, nigromaculatis (maeulis albo-marginatis).

Allied to L. Argia, Mén.

♀. Wings above rather dull blue, with a narrow brown border to hind margin, well defined interiorly. Under-side: wings ash-grey; fore-wing with a discocellular streak, a spot within cell, another below it faintly indicated, and a transverse row of spots crossing the wing beyond the middle; all these markings are black, and are ringed with white. There are two sub-marginal rows of fuscous, rather elongate spots, the exterior very indistinct, and the inner suffusedly white margined, especially interiorly. A very fine fuscous marginal line before the cilia.

Hind-wings: a basal row of three spots, a discocellular streak, and a curved and angulated row of eight spots beyond middle; all these black, ringed with white. A double hind marginal row of indistinct fuscous lunules. Fringe dirty white.

Alar. exp., 1" 2".

Hab., Yokohama: Japan.
This species, though very close to *L. Ar gia*, seems distinct. It differs considerably in coloration, and exhibits no trace of the marginal spots of the hind-wing so conspicuous in *L. Ar gia*. I only possess a single specimen.

*L. Ladonides*, De l’Orza.—A single ♀ specimen. This species is very closely allied to *L. Argiolus*, Linn., and I cannot but doubt whether it be distinct.

*L. Pryeri*, Murray.—I believe that the nearest relationship of this very distinct species is with the *Argiolus* group.

*L. Lycormas*, Butler.—The only Japanese specimens I have seen are the types in Brit. Mus. I possess examples from Amoorland.

**Satsuma, gen. nov.**

Ocelli sat magni, pilosi.
Palpi valde pilosi, porrecti.
Antenne graciles, sat longa, distinctissime albo-annulata, in clarum distinctum subito desinentes.
Aile angulata, antica venâ sub-costali triramosâ, postice ad angulum alem vade producta.

Head of moderate size; eyes hairy; palpi moderately long, porrect, densely clothed with long hairs, terminal joint slender; antennae rather long, slender, white ringed, with distinct fusiform club. Thorax robust. Wings triangular, elbowed on hind margin, especially the hind-wing, which possesses a distinct lobe at anal angle.

Male with a small, almost linear, patch on fore-wing, at extremity of cell, similar to that observed in many species of *Theela*.

Hind-wings with a distinct groove to receive abdomen. Fringes spotted.

I have founded this genus to receive the curious species described by Mr. A. G. Butler (from a very imperfect specimen) as *Lycana ferrea*, and which is possibly identical with *Theela caeruleascens*, Motsch., though the very vague description by the latter leaves the point uncertain.

The elbowed form of the wings, together with the strongly developed lobe at the anal angle of hind-wings (which may indicate an affinity to *Deudorix*), at once separate the genus from any other known to me. The neuration seems to be nearly as in *Theela*, but the second sub-costal nervule of the hind-wings is given off further from the base than in that genus.

*Dipsas Attilia*, Brem.—I have received two specimens, which I think may be referred to the ♀ of this species. They differ from the description of the ♀ in possessing a rather conspicuous sub-marginal row of bluish-white spots (that at root of tail possesses a black centre) on hind-wings above; between these spots and the margin is a well-marked bluish-white line, divided by the brown nervures.
D. sappustriatu, Hew.
D. lutea, Hew.

Dipsas japonica, sp. nov.


Hab. Japoniam.

Very nearly allied to D. smaragdina, Brem. (E. Siberia), from which, however, it seems to me distinct. Judging from Bremer's figure, the two species would seem to be alike on the upper-side; but D. japonica differs beneath in the absence of the discocellular markings, and in the transverse white streak of the hind-wing being acutely angulated towards the anal angle (not obtuse, as Bremer describes D. smaragdina). Between the two black spots at the anal angle of hind-wing is a third small one, bearing some whitish scales in the middle. There are a few metallic-blue scales on the outer edge of the spot at the anal angle. The orange is continued along the inner margin for a short distance.

Dipsas orientalis, sp. nov.

♂. Alis suprâ bruneis, anticus ad apicem marginemque exteriorem saturioribus, maculâ magna pallida in obliquâ; posticus caudatis. Alis subus canis: anticus strigâ discocellari fuscâ, strigâ transversâ albi, basin versus fuscâo-marginatâ, in ramum medianum primum desinente, maculisque obsoletis præmarginalibus fuscis, albo-marginatis: posticus strigâ discocellari obsolus fuscâ, strigâ transversâ albi, basin versus fuscâo-marginatâ, apud angulum analem literâ W instar obtuse angulatâ, lunulâis præmarginalibus albis biseriatis, maculâ elongatis marginitis interioris (prope angulum analem) maculâque ad caudâ radicâ nigro-pupillâ, fulvis, lineaque praciliari albi.

Hab. Japoniam.

Very closely allied to D. Taxila, Brem. The fore-wings are brown, darker at the apex, and along the hind margin, and possess in the male a yellowish square patch at the end of the cell, which is continued obliquely in the direction of a point on the hind margin a little above the anal angle. This portion is ill-defined. On the under-side, the pattern of the wings much resembles that of D. Taxila, but the transverse streak of fore-wing is longer than in that species (judging from Bremer's figure), and the streak on the hind-wing is distinctly angulated in the form of a W, which does not appear to be the case in the allied species.
Amblypodia japonica, sp. nov.

Alis suprà violaceo-caruleis, late nigro-marginatis, anticis ad apicem subfalcatis, posticis ecaudatis: alis omnibus subitus brunneis, strigis fascisque saturioribus.

_Hab._ Japoniam.

Nearly allied to _A. Rama_, Koll., but abundantly distinct therefrom. The fore-wings are more produced at the apex than in _A. Rama_, and the hind-wings are completely destitute of a tail.

All the wings are above of a rich dark blue, widely black bordered, with only a trace of discocellular streaks. _Under-side_: brown, whitish along inner margin of fore-wing. _Fore-wing_: an oblong mark closing cell, a spot within cell, a spot below each of these, a transverse sub-macular fascia beyond middle, bent on first median nervure, a series of lunules along the hind margin, and a line before the fringe darker brown. _Hind-wings_: markings very indistinct: a basal row of three minute blackish dots, followed by a transverse band of hardly perceptible brown spots; a rather large outlined discocellular mark; a transverse macular band, the spots composing which (except the two nearest the costa) are only outlined with darker; and a sub-marginal row of crescents, edged interiorly near anal angle by greyish-blue scales. Fringe shining brown. All the dark markings of the under-side are faintly and very narrowly edged with lighter brown.

Libythea Lepita, Moore.—Cannot be distinguished from Himalayan examples.

Neptis aceris, Lep.—Cannot be separated from the European species.

_Euripus Charonda_, Hew.

_E. japonica_, Feld. (Diagoras, Hew.).

_Argynnis Sagana_, Doubl., Hew.

_A. Ella_, Brem.

_A. Laodice_, Pall., var. _japonica_, Mén.

_A. pallescens_, Butl.?—I am somewhat doubtful about this species, which I am almost inclined to regard as a variety of _A. Adippe_, W. V. The two specimens now before me (♂) are much larger and more richly coloured than Mr. Butler represents his _A. pallescens_, and indeed, agree more closely in some respects with his _A. vorax_ (Shanghai), especially in the shape of the fore-wings, but they possess the three sub-apical silver spots on the under-side of fore-wing, mentioned as one of the points in which _A. pallescens_ differs from _A. vorax_. Probably both these forms are local varieties of _A. Adippe._

_Pyramcis indica_, Herbst.

_P. cardui_, Linn.—I have not seen Japanese specimens.

_Vanessa Glauconia_, Motsch.—Appears to me only a local form of _V. Charonia_, Drury.
V. xanthomelas, W. V.
V. e-{aurceum}, Linn.
Letho Sicelis, Hew.
'Neope Goschkevitschi, Mén.
Satyrus Phædra, Linn., var. bipunctatus, Motsch.
Ypthima Argus, Butl. ?.
Mycalesis Gotama, Moore.
M. Perdiceas, Hew.
Pyrgus maculatus"Mén.

Daimio, gen. nov.
Antenna costa medium superantes, gracillima, clavâ fusiformi, hamatâ.
Palpi sat breves, squamosi, articulo ultimo distincto.

I have very briefly characterised this genus, which only contains, at present, a single species, D. Tethys, Mén. Hitherto this insect has been associated doubtfully with Pyrgus (sect. Erynnis) or with Nisoniades, but it differs considerably from both in structure. The antennæ are long and very slender, and terminate in a gradually formed hooked fusiform club. They are provided with a tuft of hair at the base. The palpi have the second joint covered beneath with squamous scales, whilst the terminal joint is scantily clothed with short hairs. The fore-wings of the male appear to be destitute of the costal fold found both in Pyrgus and Nisoniades.

D. Tethys, Mén.

Nisoniades montanus, Brem.
Pamphila Dara, Koll. ?—I am doubtful about the identity of the Japanese insect with this Himalayan form; but Indian examples in Brit. Mus. (so named) come very close to those sent by Mr. Pryer.

Pamphila vitrea, sp. nov. (?).
Aliis suprâ bruneis, basius versus (præsertim posticis) fusco-pilosis, anticus maculâ sub-apicali pellucidâ tripartitâ, maculâ discocellulârî pellucidâ super alteram magnam quadratam, maculâ pallide albo-flavescente subopacâ in venam sub-medianam, maculâque pellucidâ minore inter ramos medianos superiores. Posticis immaculatis.
Alar. exp., 1" 7"'.
Hab. Japoniam.

A distinct and well marked species.

P. guttata, Brem., Grey.
PAMPHILA VARIA, sp. nov. (?)  


Hab. Japoniam.

I believe that the insects above described may be sexes of one species, on account of the similarity of the markings of the under-side. It is, however, possible that they are specifically distinct. Only one male has fallen under my observation, but two females now before me differ somewhat on the under-side of the hind-wing, one of them possessing an additional spot between the costal vein and first sub-costal nervule. There is a tendency in both sexes towards the formation on the under-side of both wings of a sub-marginal row of yellow spots.

I have described the hind-wing as spotless above, but in both the females there is an appearance of a very minute central spot. I think, however, that this is accidental, and has been caused in the process of setting.

PAMPHILA PELLUCIDA, sp. nov. (?)  

Alis supra bruneis, albo-maculatis: anticeis maculis duabus disco-cellularibus super alteram exteriorem magnam quadratam, maculâ sub-apicali tripartitâ, alteris duabus inter maculas sub-apicalis et quadratam, stri-gâque parrâ in venâ sub-medianâ (maculis omnibus pellucidis). Posticis maculis quatuor pellucidis, fasciâ brevem formatibus.

Subtus, alis ochrace-bruneos, anticeis ad marginem intériorem nigro-fuscis, maculis ut in paginis superiore. Ciliis albis.

Hab. Japoniam.

Allied to P. guttata, Brem., Grey, but sufficiently distinct. The spots on the hind-wing are arranged in a curious alternate manner, the first and third being nearer the hind margin than the second and fourth.

The above notes relate only to insects in my own collection, and do not pretend to form anything like a complete list of the butterflies of Yokohama. I believe that Mr. Pryer is now engaged in the compilation of such a list, to the appearance of which I look forward with much interest.

Beckenham, Kent: November, 1874.