

very constant in the markings. Dr. Staudinger says it is nearest to *C. selina* female. Expanse, 68 mm.

*Hab.* Venezuela. I take the liberty of dedicating this species to Mr. F. Du Cane Godman, D.C.L., F.R.S., &c., through whose generosity our National Collection is being greatly extended, enlarged, and considerably enriched.

MONETHE JOHNSTONI, sp. n. (Pl. VII. fig. 2).

Male, Wings orange; apex blunt; external margin black, irregular, widest at the apex. Hind wings: outer margin black, with a narrow metallic green hair-line near the outer edge. Under side similar, but paler, and without the green hair-line. Palpi long. Rather similar in form to *Monethe molione* (Godman), but the apical spot is disconnected in that species. Expanse, 38 mm.

*Hab.* British Guiana. I have the pleasure of naming this species after Sir Harry Johnston, K.C.B.

SOME NEW OAHUAN (HAWAIIAN) HEMIPTERA.

By G. W. KIRKALDY.

THE island of Oahu may be divided roughly into two parts, viz. the Forest Region, say, from 1500 ft. upwards, to which for the most part autochthonous insects are confined—and those, indeed, sparsely—and the Lowlands, where introduced plants flourish, and where autochthonous forms are the exception. Around the coast, during the greater part of the year, there is nothing but a dreary vista of algaroba (*Prosopis juliflora*), gluebush (*Mimosa*), and the hateful lantana (*Lantana camara*), all of them destructive to clothing and temper.

Some time, however, during the period which the people here are pleased to call "winter," but which would pass very well for summer in England—and, if I may judge from recent reports, would scarcely be distinguishable from the English summer of 1903—sometimes varying much as to exact time and duration; after the heavy rains of November, December, January, and even, as this year, February and March, a lowly investment of Malvaceæ, especially *Sida*, Linné, and other similar plants, springs up, and with it certain insects found only at such times and in such situations around the Oahuan coast. The spot most convenient for dwellers in Honolulu is the well-known Leahi, or Diamond Head, an extinct crater some six miles from the city.\* Inside the crater (near the top of the rim only, for lantana and mimosa now fill the sides and floor), on the sloping sides exte-

\* The highest point of Leahi is 762 ft. above sea-level, the floor of the crater being 300 or 400 ft. lower.

riorly and down to the shore, are patches and stretches of *Sida*, &c., where the lantana and mimosa permit them to grow. However, in this coast region one finds *Ithamar hawaiiensis*, *Opuna hawaiiensis*, &c., as well as some of the forms now described. Although all these coast forms are so far not known outside the Hawaiian Islands, it is possible that some may yet be found on the coast-line among the short-lived spring vegetation in some of the southern Polynesian Islands.

Collecting on the mountains often has to be restricted to the knife-like ridges, the sides being almost impassable; in a few, such as the ridge from the Pacific heights to Konahuanui, there is a rough trail. Occasionally one sees a pair of the glorious *Pyrameis tammeamea* coquetting around the top branches of a koa-tree, or in brushing through the tree-ferns, one disturbs a nest of hornets (*Polistes hebraeus*. Fabr.); but usually insects have to be closely looked for or beaten out of the trees. Sweeping is of no avail, as there are almost no autochthonous species feeding on low-lying plants, and, indeed, there are scarcely any low-lying autochthones on the mountains.

For the present, the reader may profitably consult "Mr. Blackburn's *résumé* of his Journeys and Collecting in the Archipelago" (1885, Sci. Trans. R. Dublin Soc. (ii.) iii, pp. 197-208); soon, however, there will appear the Introduction to the 'Fauna Hawaiiensis,' in which all these matters will be fully discussed.

The genera and species now described are (\* = new) :—

Fam. Fulgoridæ, subf. Asiracinæ.

*Peregrinus*\* *maidis* (Ashmead).

*Megamelus leahi*.\*

*Aloha ipomoeæ*.\*

Fam. Tetigoniidæ subf. Jassinæ.

*Deptocephalus hospes*.\*

*Eutettix perkinsi*.\*

Fam. Miridæ subf. Mirinæ.

*Halticus chrysolepis*.\*

It is hoped that all these will be described in detail, and figured in the 'Fauna Hawaiiensis.'

#### PEREGRINUS, gen. nov.

Belongs to the section with short first segment of antennæ, and with lateral keels of pronotum not outwardly deflected, but reaching posterior margin. Somewhat allied to *Megamelus*, Fieber, but distinguished by the more rounded head, much larger and differently formed pronotum, different tegminal venation, &c. Somewhat like *Eucides* (= *Evides*, Fieber, preoccupied), but distinguished by the different form of the keel of the pronotum.

Vertex seven-sided, formed much as, in *Eueides*, central keel of front forked nearer to the base than to the apex, somewhat again as in *Eueides*, but a little more roundedly; lateral margins anterior to the eyes subparallel. Antennæ also very similar to *Eueides*, but the second segment a little more dilated apically. Pronotum subrotundately emarginate basally, lateral keels reaching to the base, a little arched outwardly; there is also an impressed dot on each side of the middle keel. Scutellum very large, nearly three times as long medianly as the not insignificant pronotum, the part within the keels produced posteriorly subacutely, this produced part being about one-third of the entire scutellar length; lateral keels straight, slightly diverging posteriorly, widely separated anteriorly from the middle keel. Posterior tibiæ longer than the femora, extending well beyond the apex of the abdomen; first segment of the tarsus much longer than the other two together.

Type, *P. maidis* (Ashmead).

*Delphax maidis*, Ashmead, 1890, 'Psyche,' v. 323, text figs.

*Dicranotropis maidis*, Van Duzee, 1897, Bull. Buffalo Soc. Nat. Sci. v. 240.

In his description, Ashmead has omitted to mention a characteristic dark brown elongate spot in the angle formed by the junction of the great claval vein and the interior margin of the tegmen.

*Hab.* North America: Florida and Texas; on corn and coarse grass. Hawaiian Islands: Hawaii, Oahu, and Kauai; on corn (introduced).

I am indebted to my friend Mr. Van Duzee for a specimen of this insect, which he had before him when writing his paper on the North American forms (cited above).

Descriptions and figures of the earlier stages of this and other forms will, it is hoped, appear shortly in another place.

#### MEGAMELUS LEAHI, sp. n.

The short winged form only is known, and is distinguished from the other described species by the shape of the tegmina, which are longer and narrower, and rounded apically; the veins are strongly studded with setiferous granules.

Head, thorax, and legs pale greenish, with a slight bluish tinge; intercarinal areas on head, a broad band on each side of the central keel of pronotum and scutellum, three small spots on each side of the pronotum between the last mentioned and the lateral keels, and one on the scutellum, pale brownish green. Eyes brownish black. Clypeus apically more or less silvery, spotted with brownish red at the base; front also somewhat obscurely striped longitudinally with pale brownish green, and spotted apically with brownish red. The legs are also marked with pale brownish green, the apices of tibiæ, of tarsi, and of the spines brownish black. Tegmina semiopaque, milky, veins pale brownish, granules dark brownish. Abdomen above pale greenish brown (with a purple lustre towards the base), and with a median and

three lateral longitudinal silvery stripes, the median of these three not nearly reaching the base. Ovipositor in the female pale brownish. Tibial spur with eight strong spinelets. Long.  $2\frac{1}{2}$  mill.

Oahu: Leahi. On a yellow composite not yet determined. (Only inside the crater, or on top, not on the lower slopes. March–April, 1904—G. W. K.).

The above is the colouring in living examples; when dry the green often turns to pale yellow, and the whole colouring becomes more obscure.

ALOHA,\* gen. nov.

Belongs to the division with short antennæ, and straight entire pronotal keels.

Head narrower than the pronotum (lateral margins between the eyes subparallel), little prominent before the eyes, as seen from above, anterior margin roundly truncate; vertex shaped something like *Delphacodes*, Fieb.† (nec Melichar), but the middle keel generally almost obsolete (sometimes, however, strongly developed), with an impressed spot on each side. First segment of antennæ about two-thirds of the length of the second. Frons somewhat narrow, subparallel, with two median keels which are subparallel, but slightly rounded outwardly, obsolete on the arched part of the head. Clypeus tricarinate, median keel strongly developed. Rostrum reaching to posterior coxæ. Pronotum short, keels entire. First segment of posterior tarsi about twice as long as the other two together, tibial spur about two-thirds the length of the first segment of tarsi. Tegminal venation very similar to that of *Megamelus*.

ALOHA IPOMOÆ, sp. n.

♀. Flavo-testaceous above and beneath, exterior lateral margins spotted with blackish brown. Tegmina hyaline tinged with brownish, immaculate in the long-winged form, except that the apical angle of the lower claval area is dark brown; in the short-winged form there is a spot at the apex of the costal area; veins with setigerous blackish granulations.

♂. Similar to the female, but darker; abdomen blackish, apical margin (and lateral margins more or less) pale ochreous or flavous. Tegmina spotted with black. Long.  $2\frac{1}{2}$ –3 mill.; expanse of tegmina, 8 mill.

*Hab.* Honolulu, from coast-line up to about 1000 ft.; on various species of *Ipomoea* (R. C. L. Perkins and G. W. K.; March, April, 1904). This species is doubtless autochthonous.

DELTOCEPHALUS HOSPES, sp. n.

In structure somewhat near to *D. signatifrons*, Van Duzee, but with different head pattern, &c.

\* "Aloha," the Hawaiian salutation (lit. "love").

† The type of *Delphacodes*, Fieb., is *mulsanti*, Fieb. For Melichar's genus *Delphacodes* I propose the name *Pseudaræopus*, type *lethierryi* (Rey).

Fusco-testaceous; front transversely broadly striped (about eight) with dark brownish, the basal markings of these visible just at the apex of the vertex. Eyes purplish brown. Tegmina with colourless veins, the claval and some of the corial sparsely sown with dark brown, extreme apex of clavus dark brown, apex of tegmina obscurely fumate. *A characteristic dark brown spot at the base of the median ante-apical cell.* Legs pallid, with dark granules. Abdomen more or less dark. Vertex strong, somewhat flat, margin in front of the eyes straight; ocelli almost on a level with the disk of vertex before the upper margin of eye. Pronotum scarcely twice as broad as long, sides short, posterior angles strong, postero-lateral margin nearly parallel with scutellar margin of tegmina, which are long with appendices slightly overlapping; costal veins not reflexed, median ante-apical cell a little constricted, extending posteriorly clearly beyond the adjacent cells, and a little farther than the exterior discoid cell. Length, 3 mm.

Honolulu; attracted to light in the evening (probably from grasses), March, 1904 (R. C. L. Perkins). Possibly introduced.

#### EUTETTIX PERKINSI, sp. n.

Not closely allied to any species known to me.

Head, pronotum, and scutellum pale clear yellow. Vertex with a tiny brownish dot on each side (near the intero-apical angles of the eyes as seen from above) joined together by a thin brownish line, at right angles to the longitudinal suture of the vertex; on each side of the last-named, in the middle of the subquadrilateral areas thus formed, is a larger brownish speck. Eyes greyish. Mesonotum with antero-lateral and apical margins black, concealed by the pronotum, part of which thus acquires a greenish tinge. Lateral margins of scutellum narrowly blackish, two dots on the disk the same colour. Tegmina opaque ivory white interiorly, milky subhyaline exteriorly; base of clavus smoky, bordered internally by dark brown; extreme apex of clavus dark brown, interior and apical parts (except the anti-apical areoles) smoky.\* Beneath pale stramineous, claws brown. Vertex well rounded, between the eyes very delicately, longitudinally wrinkled and punctured. Lateral margin of vertex between the eyes slightly diverging outwardly and anteriorly. Venation rather obscure exteriorly, not reticulated. Ultimate segment about four times as long as the penultimate, posterior margin notched apically. Pygofer scarcely four times as long as the last segment, spines almost colourless. Long. 4 mill.

Leahi; on *Sida* (one of the Malvaceæ), March, 1904.

N.B.—In somewhat immature specimens the tegmina are only slightly smoky, the apical veins being more or less dark brownish (especially at the extero-lateral margins). In very immature examples the whole insect is pale yellowish, only the claws being dark.

\* The effect of the tegminal colour and pattern is therefore smoky, with a large pale opaque spot in the centre (of the two tegmina shut together), and pale lateral margins.

## HALTICUS CHRYSOLEPIS, sp. n.

Head, pronotum, and scutellum shining black, immaculate. Tegmina brownish black. Pronotum, scutellum, and tegmina sufficiently thickly covered with easily divested pale golden scale-like hairs. First and second segments of antennæ pallid; apex of second black, third and fourth dark; base of third tarsal segment black, posterior femora a little reddish. Abdomen black. Head as seen in front subequilaterally triangular. Clypeus as seen from the side scarcely wider at the apex than in the middle; labium narrow as seen from the side. Pronotum transversely aciculate. Long.  $2\frac{1}{4}$  mill.

Honolulu; on grass and *Carex* (March, 1904, R. C. L. Perkins).

N.B.—*Calocoris canus*, Distant (1893), is usually quoted as a synonym of *H. uhleri*, Giard, but, I think, in mistake. Distant's species seems more allied to the *saltator*, Fourcroy, group. It has certainly nothing to do with *Calocoris*.

In July last (1903) I had the opportunity of a very brief survey, through the courtesy of Mr. Alex. Rodger, the curator, of F. B. White's collection of Hawaiian Hemiptera, contained in the Museum of Natural Sciences, Perth, Scotland.

Five types are lost, viz. :—

1. *Geotomus jucundus*, which is well known to be = *pygmalus*, Dallas.
2. *Triphleps persequens*, of which, however, I have seen a specimen answering to the description.
- 3 & 4. *Dilasia decolor* and *denigrata*. Both now placed as one species in *Lasiocheilus*.
5. *Lilia delecta*. Unknown to me.

Of the others :—

6. *Nabis lusciosus* is similar to the example figured on pl. v. f. 35, of my "Hemiptera" ('Fauna Hawaiensis,' iii.).
7. *Nabis subrufus* is similar to fig. 37.

The other forms have been correctly interpreted.

## NOTE ON THE ORTHOPTEROUS GENUS CAPNOBOTES.

BY T. D. A. COCKERELL.

DURING the last week of August, 1903, at Pecos, New Mexico, I became acquainted with the Dectoid genus *Capnobotes*. The dry hillocks at Pecos are clothed with nut pines (*Pinus edulis*) and so-called cedars, species of *Sabina*. From the pines, at dusk, there proceeds a shrill cry, produced by the males of *Capnobotes*. The noise is loud, but pitched in so high a key that my companion, who was not at all deaf to ordinary sounds, could