-Mr. Emerton, upon invitation, gave a short talk, stating that he had come to Washington to work over some material in the Arachnida and to study the collection of Mr. Banks.

—Doctor Dyar exhibited specimens of mosquitoes belonging to the genus Deinocerites, and spoke of the fact that these are known to breed only in mangrove swamps at the tide-water level and in the holes of crabs.

-Mr. Quaintance spoke of the recent destructive outbreak of *Enarmonia prunivora* Walsh in apple orchards. This lepidopterous pest had been supposed to be connected in some way with the plum curculio (*Conotrachelus nenuphar* Hbst.) and had been bred from black knot. The first brood lives in the calyx of the apple and there pupates. The second brood often lives entirely outside. The species has been taken from Ontario south, and as far west as British Columbia.

—Mr. Burke exhibited four species of the coleopterous genus Trachykele. One of these was found in cedar of Lebanon at New Orleans. Another came from Mexico and a third from California; he gave notes upon the species and remarked that they all apparently feed upon cedar of some kind, one species ruining cedar which is used for fence posts.

-The following papers were offered for publication :

NEW TROPICAL AMERICAN NEUROPTERA.

By NATHAN BANKS.

About a year ago Prof. F. Campos, of Guayaquil, Ecuador, sent me a small collection of neuropteroid insects from that country. Several species in the collection are new, and the descriptions of these forms constitute this paper. I have added the description of a new ant-lion fly from Lower California. Three of the new species from Ecuador belong to the peculiar genus Dimares, only two species of which were previously known.

Dimares bellulus, n. sp.

Face yellowish, with a transverse brown band from eye to eye, connected in middle to the brown above, thus forming two pale spots below the antennæ; a large blackish spot between and above antennæ; vertex pale yellowish, with brown streaks, a median pair close together

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and several oblique ones on the sides; antennæ black; palpi brown at tips of joints. Pronotum brown, a pale yellow spot each side in front and one each side behind; thorax dull brown, several pale spots, in pairs on mesoscutellum and metascutellum, and on anterior and lateral lobes of mesothorax; sides brown; abdomen dull brownish-black; legs pale yellowish, with many erect black bristles; tips of tarsal joints brown. Wings hyaline, mottled with brown; the fore pair with spots nearly all over, most prominent along the radial and cubital veins, and the apex rather broadly black, the posterior margin mostly black, none of the spots forming bands. Hind wings with the apex broadly brown, two costal spots before it, two median and two on hind margin just behind costals, and one median spot before all in basal half of wings. Venation mostly brown, but in the fore wings there are many white veins; the radial sector and its branches are more or less white.

Expanse 55 mm., width of fore wing 8 mm.

From Posorja, Ecuador (Campos).

Dimares venustus, n. sp.

Face and vertex mostly brownish black; two pale spots below antennæ, and some faint ones on the vertex; antennæ brown; palpi brown at tips of joints; thorax brown, spotted much as in D. bellulus, sides yellowish brown; abdomen yellowish on basal half, beyond brown; legs yellowish, tips of tibiæ and of tarsal articles brown, many black bristles. Wings hyaline, spotted with brown on apical half; fore wing with apex broadly brown, containing two small pale spots, and band before and narrowly separated from it; this band is broken in the middle behind; before this is another short band, more oblique, not reaching costal margin and behind much broken up; before this are two spots, one on the radius, the other just behind it, and many small spots elsewhere on the veins. Hind wings with a large apical spot, containing two pale spots; before this is a broad, irregular band apparently made of two or more spots united, and containing a hyaline median spot behind; before this is a subcostal spot, and a short band from middle to hind margin; basal half of wing unmarked; venation mostly brown, with some white veins as in D. bellulus.

Expanse 52 mm., width of fore wing 9 mm.

From Posorja, Ecuador (Campos).

Dimares formosus, n. sp.

Face yellowish, two brown spots below antennæ, and one on the base of clypeus; vertex brown; antennæ brown, apex black; palpi black on tips of joints, pronotum yellowish, with an elongate black streak each side, one across middle, and a spot on lower sides; thorax dull brown, with some inconspicuous paler spots, sides grayish; legs yellowish, with black bristles, tips of tarsal joints brown; abdomen

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yellowish on basal third, beyond dull black. Wings hyaline, marked much as in D. venustus; fore wings with an apical black spot, containing two subapical pale spots, a large band before it, broken behind, another band before latter and reaching the costa, but much broken up behind, and before this last band is another, more oblique, not reaching costa, and broken up behind; on the basal part of wing are many small dots along the veins. Hind wings also marked like D. venustus, but the spots are larger and connected through the middle, the pale areas in apical spot are larger, and there is also a small but distinct spot in the middle of basal half of wing; venation brown, partly white as in the other species.

Expanse 76 mm., width of fore wing 13 mm.

From Posorja, Ecuador (Campos).

Eremoleon angustus, n. sp.

Face yellowish, with a dark-brown interantennal mark, from which a median projection extends down to the clypeus; above antennæ pale brown, with a median pale spot just above and between antennæ; vertex yellowish brown, with several black spots each side; pronotum brown, with a median yellowish stripe, and a slightly curved yellowish mark on each side; thorax brown, spotted with yellowish, a pair on anterior lobe of both mesothorax and metathorax more prominent than the others; venter mostly yellow; abdomen brown, most of the segments with a yellowish mark each side. Legs pale yellowish, tips of all joints black, and the femora and tibiæ heavily spotted with the same color, most prominently beneath. Wings hyaline, venation mostly brown, the subcosta, radius, radial sector, and median interruptedly white, some of the cross-veins also white, a short brown marginal streak on the anal angle of the fore-wings, the pterostigma slightly infuscated. Legs very slender, hind femora longer than mesothorax plus metathorax; spurs weak, and barely longer than the first tarsal joint, which is no longer than the next. Wings very narrow, hind ones only about one-half the width of the fore pair, and plainly shorter, fore wings subfalcate at the tips; radial sector arises beyond fork of the cubitus, but in hind wings plainly before the fork of cubitus, and with but one cross-vein before it.

Expanse 42 mm., width of fore wing 5 mm.

From Santa Elena, Ecuador. It differs from the type of Eremoleon in shorter spurs and narrower wings, but as it agrees in venation I will retain it there, since other species may yet be found intermediate in spur length and width of wings.

Acanthaclisis assimilis, n. sp.

Similar in general appearance to A. fallax. The markings of head and pronotum are as in that species; the palpi, however, are wholly

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dark; the antennæ dark, and narrowly, indistinctly annulate with pale; the mesonotum is pale, with a median black stripe undivided by pale; the pleura are brown, with long white hair; the fore legs are mostly black, the tibiæ with some pale bands, other legs paler, and all thickly clothed with long white hair; abdomen dull black. Wings hyaline, in general appearance like A. fallax, the pterostigma being dark, and in the fore wings an oblique subapical mark, but the radius is not punctate, only interrupted at long intervals by black; there are nine cross-veins before radial sector in fore wings, none of them crossed (several crossed in A. fallax); there are two series of costals beyond the basal fourth of wing; in the hind wings there are six or seven cross-veins before the radial sector, and the anal runs into the branch of the cubitus.

Expanse 96 mm., width of fore wing 12 mm.

From Santa Elena, Ecuador.

Brachynemurus camposi, n. sp.

Face yellowish, a brown interantennal mark, vertex mostly brown; pronotum dark brown, with a narrow median yellow line, and a faint yellowish streak each side behind; thorax brown, with a narrow median yellow stripe, and some spots each side; abdomen yellowish brown, apparently unmarked; legs brownish yellow, the tarsi mostly black, the tips of the tibiæ infuscated, most of the bristles on front legs snow-white, some white ones on hind legs, others black. Wings hyaline, veins mostly brown, only indistinctly interrupted with pale, subcosta and radius not marked, pterostigma not prominent. Antennæ short, and with very large knobs; legs short, anterior tarsi fully as long as the tibiæ; the basal joint of tarsus short, but much longer than the middle ones, apical joint long, spurs as long as two tarsal joints. Wings extremely slender, subfalcate at tips, three cross-veins before radial sector in fore wings, in fore wings the anal runs by the branch of cubitus and ends near end of that vein, but in hind wings the anal turns down just beyond fork of cubitus.

Expanse 34 mm., width of fore wing 3.5 mm.

From Santa Elena, Ecuador.

Brachynemurus eiseni, n. sp.

Similar in many respects to *B. sackeni*, and in a paper on Neuroptera from Baja California I considered it that species. It differs, however, in a number of points, and especially in the male appendages. The vertex has three large spots behind, one of them median, and two each side in front; the thoracic marks are more united than in *B. sackeni*, but on the same plan, the dots on the mesoscutellum larger than in that species and situated more nearly in front; the abdomen has the pale spots of a snow-white color, and they are present on all the segments, the last at base and tip; the apical white spot of each segment is divided by a black median line. The wings are not nearly as heavily marked as in *B. sackeni*, and the radial sector arises only a trifle in front of the fork of the cubitus. The male appendages are only about twice the length of the last segment, and the male abdomen is not as long as in *B. sackeni*.

Several specimens from San Jose del Cabo, Baja California (Eisen).

Ululodes flavistigma, n. sp.

Face with gray hairs, brown hair above, near eyes, and on vertex; antennæ yellowish, the articulations narrowly black, knob brown; thorax dark brown or dull black, pleura with gray hair; abdomen brown, more yellow above, and with a curved dark-brown spot each side on each segment; legs pale brownish, tips of the tibiæ black. Wings hyaline, pterostigma yellowish, inconspicuous on both pairs; venation yellowish brown, the costal veins darker than others, none marked with black. Wings rather long, but not slender; in the fore wing the anal vein does not run into branch of cubitus, but is connected thereto by a cross-vein; in the hind wings the anal cells are not more than one and one-half times as long as broad (in many species twice as long as broad).

Expanse 60 mm., width of fore wing 7.5 mm.

One specimen from Guayaquil, Ecuador.

A GALL-MAKER OF THE FAMILY AGROMYZIDÆ.

(Agromyza tiliæ, n. sp.)

By F. D. COUDEN.

During the spring of 1907 a correspondent forwarded to the Department of Agriculture some twigs of linden (*Tilia americana*) showing evidence of a "peculiar disease" for which a remedy was desired. An examination in the Bureau of Entomology showed the presence of small dipterous larvæ inside the galls with which the twigs were covered. They were at first supposed to belong to the family Cecidomyiidæ, although no one to whom the twigs were shown recalled having seen any cecidomyiid galls that in any way resembled these. Fortunatly I was able to breed adults from this material, and they proved to belong, not to the Cecidomyiidæ, but to the Agromyzidæ, a family the species of which greatly differ in their food habits, although there is no previous record of a gall-maker among them.



Banks, Nathan. 1907. "New tropical American Neuroptera." *Proceedings of the Entomological Society of Washington* 9, 30–34.

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