

insect in certain years and partially controls it, so that it is only periodically destructive.

Doctor Howard stated that it was remarkable that no hymenopterous parasite had yet been found to infest *Aleyrodes citri*, for parasites are common on the other species of *Aleyrodes*. He said that California was a heaven for such parasites, and he predicted that, if the white fly obtained a foothold there, some species would become parasitic upon it.

—Mr. Heidemann presented the following paper:

NOTES ON HEIDEMANNIA CIXIIFORMIS UHLER AND OTHER SPECIES OF ISOMETOPINÆ.

[HEMIPTERA—HETEROPTERA.]

By OTTO HEIDEMANN.

Years ago Prof. P. R. Uhler published a description of *Heidemannia cixiiformis*,^a a new genus and species of the family Capsidæ. The description was taken from three specimens collected by Mr. E. A. Schwarz and myself near Washington, D. C., 1890; at Oakland, Md., and near Fort Pendleton, Md. This remarkable insect is very peculiar in form, and its whole habitus is somewhat distinct from that of a capsid. Professor Uhler remarks in his description that other specimens are needed for dissection to work out the elements and affinities of this antique pattern of the Capsidæ. No other specimens had been found, in spite of close searching during the summer seasons, until 1902, when Mr. N. Banks met with a single specimen that was perhaps resting on the bark of a maple tree at Falls Church, Va. But this summer, July 4, the much-wanted insect was again captured by Messrs. Schwarz and Barber at the famous collecting ground of Plummers Island, Maryland. A few days later I was so fortunate as to find the nymph form on the same tree from which the adults were taken. Recently I received the same species as an unnamed Capsus from Mrs. A. T. Slosson. She caught a single specimen near Delaware Water Gap, Pa.

The insect lives apparently in damp and shady places on the twigs of dead trees. It has the jumping habit, and Mr. Schwarz observed that it leaps for quite a remarkable distance.

^a Observations on Some Remarkable Forms of Capsidæ. By P. R. Uhler. Proc. Ent. Soc. Washington, Vol. II, no. 1, p. 119 (1891).

The species is by no means commonly found, as in all these years only eight specimens are recorded.

A close examination of the specimens from this fresh material with a high-power microscope disclosed the presence of two distinct ocelli, which are placed very near together on the narrow vertex of the head. (In the engraving of the insect that accompanies Professor Uhler's paper the ocelli have been overlooked.) The possession of ocelli, besides the remarkably shaped and depressed head, makes it now evident that the species *Heidemannia cixiiformis* Uhler has to be placed in the subfamily Isometopinæ, probably near the genus *Myiomma*.

In the year 1860 Dr. F. Xaver Fieber founded the genus *Isometopus*,^a based on two species, *Acanthia intrusa* Herrich-Schäffer^b and *Isometopus alienus* Fieber. He raised the genus to the rank of a family next to the Capsidæ. Later on, in 1875, Prof. O. M. Reuter^c treated it as a subfamily of the Capsidæ, which view is generally adopted now. The principal character of the Isometopinæ is the presence of two ocelli and the peculiar form of the head. In the Old World three species have been known and two genera, *Isometopus* Fieber and *Myiomma* Puton.^d Recently Dr. W. L. Distant, in his Fauna of British India,^e described three new species and two new genera, *Isometopus feamis*, *Turnebus cuneatus*, and *Sophianus alces*.

The occurrence of Isometopinæ in the New World has not been recorded before. The U. S. National Museum possesses a few examples, collected by Messrs. Schwarz and Barber at San Diego, Tex., Williams, Ariz., and Las Vegas Hot Springs, N. Mex. Others were taken in the East by Mr. N. Banks at Long Island, N. Y., Falls Church, Va., and by myself at Aurora, W. Va. The material now on hand comprises three new species, besides Uhler's *Heidemannia cixiiformis* and an undescribed nymph of the same. I think it advisable to place these new species in the old genus *Isometopus*, because our knowledge of the group from this continent is very limited on account of the small number of specimens secured up to the present time. Nevertheless, the description of these species now may induce other collectors of Hemiptera to hunt for these

^a Fieber.—Exegesen. Wiener Ent. Monatschrift, iv, pp. 258-259 (1860); Europ. Hem. Wien, pp. 26, 237 (1861).

^b Herrich-Schäffer.—Wanz. Ins., vi, p. 48, fig. 608 (1839).

^c Reuter.—Bih. Vet. Ak. Handl., iii, 1, p. 61 (1875).

^d Puton.—Hemiptères. Ann. Soc. Ent. France, Vol. III, ser. 5, pp. 20-21 (1873).

^e Distant.—Fauna Brit. Ind., Vol. II, pp. 483-486 (1904).

frail but interesting insects, and probably more new forms will be found.

Heidemannia cixiiformis, Uhler.

Description of the nymph.—General outline of a capsid larva. Head shaped as in the adult, deeply set into the thorax. Pronotum short but very broad; mesonotum large, a longitudinal sharply cut line in the middle. Wing pads broadly rounded at apex, reaching to the fourth abdominal segment; the third segment carries a small blackish tubercle. The whole body is covered but sparingly with short golden pubescence. Color yellowish brown, spotted with darker brown in irregular patterns. First antennal joint very short, yellowish, the second joint banded with brown towards the apex, third joint blackish. Some dark dots on each side of the abdominal segments dorsally. Legs black, with a yellowish band at base of tibiæ and before the apex; tarsal joints brownish. Sides of pronotum vividly yellowish marked. Ocelli very near together at the narrow vertex. Length, 2 mm.; width, 1.2 mm.

One specimen, Plummers Island, Maryland, July 6, 1907 (Heidemann).

Isometopus pulchellus, n. sp. (fig. 7, a).

Head, seen from above, very short, depressed and rounded in front; at the occiput two ocelli plainly visible, placed nearer to the eyes than to each other. Antennae inserted on the underside of head, distant from the eyes, near the prominent, brownish tylus, as long as the distance from head to tip of scutellum; first joint very short; second joint longest, thickened towards the apical part; last two joints, taken together, only half the size of the preceding one and much thinner. Eyes reniform, somewhat flattened in front, very large, almost covering sides of head. Pronotum a little more than twice as broad as long, the sides quite broadly reflexed and rounded anteriorly; a transverse, narrow ridge before the anterior margin, not reaching the sides; the surface roughly, deeply punctured in irregular rows. Scutellum rather short, as broad as long, somewhat elevated above the elytra, a little excavated at base, the sides very steep. Elytra quite broad; costal margins evenly rounded, reflexed, and in their whole length somewhat grooved. Membrane with two cells, whitish, iridescent. Rostrum strong, long, reaching the abdomen. The whole body is covered with close, short hairs, those on the elytra very fine, appressed to the surface. Head, pronotum, scutellum, basal part of clavus, first antennal joint, and the two terminal ones, dorsal part of abdomen, base of venter, and all the sternal pieces glossy, dark-brown in color; there are also two brown spots on the tip of clavus and two other depressed spots on inner side of corium above cuneus. All other parts of body, elytra,

legs, coxae, second joint of antennae, last three segments of abdomen, and edge of same, also the rostrum except at tip, yellowish white. Length, 2.2 mm.; width, 1 mm.

Four female specimens. Falls Church, Va., July 15 and August 2, 1907 (Banks); Sea Cliff, N. Y. (Banks); Aurora W. Va., August 8, 1907 (Heidemann).

Type.—No. 11368, U. S. National Museum.

This species is easily recognizable by the contrasting colors of dark brown and yellowish white. In general appearance it looks much like *Isometopus intrusus* as figured by Herrich-Schäffer and Puton, with the difference, that in our species the scutellum is much shorter.

Isometopus signatus, n. sp. (fig. 7, b).

In form and color similar to the preceding species. Head a little broader, almost reaching the anterior angles of pronotum. Abdomen slightly longer, somewhat pointed towards apex, shining, brown and densely hairy. Rostrum brownish, darker at tip, reaching to the third abdominal segment. Antennae yellowish brown; the second joint less thickened towards apex. Head and eyes dark brown; occiput and underside of head throughout and the tibiæ basally yellowish. Legs, coxae, and tarsal joints yellowish white, the femora banded with dark brown. Sternum blackish; metasternum at the sides with the orifices yellowish, showing two narrow, longitudinal black stripes. Pronotal sides more rectangular, behind the callosities two small round tubercles; near the humeri and at anterior angles are two yellowish patches above and beneath. Pronotum and scutellum roughly punctured and glossy dark brown. Elytra yellowish white, ornamented with a brownish, broad zig-zag design, including the tip of clavus and the lower part of cuneus. Membrane whitish, translucent. The whole surface of the body beset with fine pale hairs. Length, 2.4 mm., width, 1 mm.

Three female specimens. San Diego, Tex., April 29, May 25, and June 5 (Schwarz).

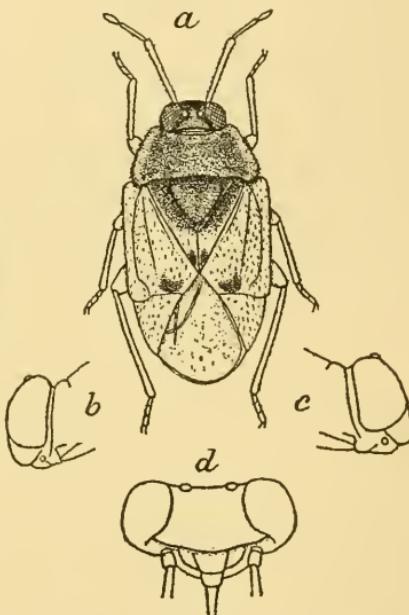


FIG. 7.—*a*, *Isometopus pulchellus*; *b*, *I. signatus*, side view of head; *c*, *I. unicolor*, side view of head; *d*, same, front view of head. Greatly enlarged.

Type.—No. 11369, U. S. National Museum.

This species resembles *I. pulchellus*, but it is a trifle larger in body and has a different color pattern.

Isometopus unicolor, n. sp. (fig. 7, c. d).

Body more compact, broader, and somewhat larger than in the other two species. Head with the eyes not reaching the anteriorly rounded sides of pronotum; basal part and underside of head and the outer margins of the eyes narrowly yellowish white. Ocelli quite prominent. Antennæ blackish, with the apex of the joints whitish; the second joint a little swollen at tip. Elytra broad and strongly rounded at sides; the costal margins rather broadly expanded; cuneus slightly incised at the outer margins basally. Rostrum dark brown, touching the third abdominal segment. Underside of body brownish; venter and the last two segments partly yellowish. Legs dark brown; lower part of coxæ, apex of femora and tibiæ, and the tarsal joints yellowish white. Head, pronotum, and scutellum irregularly wrinkled and coarsely punctured, less so on the elytra; color uniformly dark brown and shining. The membrane smoky, at base darker, and near cuneus with a narrow, whitish stripe. Body very hairy. The males are not yet known. Length, 2.6 mm.; width, 1.2 mm.

Eleven female specimens. Williams, Ariz., July 9-27 (Barber and Schwarz).

Type.—No. 11370, U. S. National Museum.

This species can be distinguished from the other two species by the somewhat larger size and the uniform dark-brown color.

Mr. Heidemann exhibited specimens of both adult and pupal forms of *Heidemannia cixiiformis*, and adults of the new species described in his paper.

Mr. Schwarz mentioned the jumping habit of Heidemannia. He said that adults could jump over 2 feet—farther than any of the other Hemiptera-Heteroptera except the Saldidæ.

—Mr. Webb exhibited specimens of the hemipteron *Pachylis gigas* Burm. which he found feeding on pods of mesquite in the foothills of the Santa Catalina Mountains, southern Arizona. These insects are interesting because of the greatly enlarged femora of the males. They do not seem to cause any serious damage to the plant.

—Doctor Hopkins presented a preliminary note and ex-