

Mr. Kraus said that he had marked one female wasp (*Trypoxylon albitarsis* Fab.) with whiting and that she built five tubes side by side. Mr. Schwarz said that in the case he observed, two tubes were built by two wasps working together.

—The following papers were presented for publication:

### ON TWO NEW SPECIES OF PARASITES OF ALEYRODIDÆ.

By L. O. HOWARD.

In the course of the extensive investigations of the white fly (*Aleyrodes citri* R. & H.) now going on in Florida under the auspices of the Bureau of Entomology, as described by Mr. Marlatt at a recent meeting of the Society,<sup>a</sup> much attention is being paid to parasites. *A. citri* is as yet unparasitized, but other Aleyrodidæ are frequently killed in great numbers by several species of parasites of different genera. An effort is being made to induce the parasites of other species to attack *A. citri*, and as many species as possible are being introduced into Florida with this end in view. As yet none of them has attacked *A. citri*. A recent series of slides received from Dr. A. W. Morrill contain, among others, two new species which are here described.

#### Subfamily APHELININÆ Howard.

##### Genus ENCARSIA Foerster.

*Encarsia* Foerster, Kleine Monographien, 1878, pp. 65-66. (Type, *Encarsia tricolor* Foerster).

Including the single species here described, 14 species of this genus have been recognized, of which one was described by Foerster, one by Zehntner, and the remainder by the writer. Like other parasites of Coccidæ and Aleyrodidæ, the genus is now of wide distribution and if it were ever once localized it is now too late to approximate its original range. It is now represented in Europe, North America, Java, South Africa, West Indies, and Mexico.

Twelve of the 14 species have been reared, and of these 12, 3 have come from diaspine scale-insects and the remaining 9 from Aleyrodidæ. From the rearings so far made, the species

<sup>a</sup> See Proc. Ent. Soc. Wash., IX, pp. 121-124, 1908.

of this genus seem to be the most numerous and important of the parasites of Aleyrodidæ.

**Encarsia variegata**, n. sp.

*Female*.—Length, 0.64 mm.; expanse, 1.52 mm.; greatest width of fore wing 0.28 mm. Eyes faintly hairy; head broad, eyes well separated; ocelli large, situated at angles of a right-angled triangle; antennæ nearly naked; first funicle joint slightly shorter than pedicel, which is slightly swollen; second funicle joint longest, joints 3 and 4 and first joint of club subequal in length and each shorter than second funicle joint; terminal joint of club slightly shorter than basal joint. All tarsi 5-jointed. Ovipositor well extruded. Color: Head and thorax brown, except the mesoscutellum which is almost entirely silvery white; antennal scape and all legs pallid and nearly translucent; flagellum of antennæ yellowish; eyes dark red; ocelli red, not so dark as eyes; abdomen yellow, brighter above, but bordered on both sides and behind with a brown band. Wings perfectly hyaline, with a densely ciliate disc.

*Type*.—No. 11707, U. S. National Museum. Described from 2 female specimens reared by Dr. A. W. Morrill at Orlando, Fla., June 25, 1907, from *Aleurodicus perseæ* on lemon leaves. It produces a curious dimorphism in its hosts, according to Doctor Morrill's notes. Slide mounts sent by Doctor Morrill to Washington show that a single pupa of the parasite almost entirely fills the body of the host.

Genus **ERETMOCERUS** Haldeman.

*Eretmocerus* Hald., Amer. Journ. Science, Vol. IX, pp. 110, 111, May, 1850.

Doctor Haldeman, in the article just cited, describes among other things *Aleyrodes abutilonea* and *A. corni* and erects the new genus *Amitus* to contain *A. aleurodinis*, a parasite of the larvæ of *Aleyrodes corni* "of which it destroys a great many." His new genus *Eretmocerus*, to contain *E. corni*, n. sp., was based upon two mutilated females reared with this *Amitus*. He suggested that the *Eretmocerus* may possibly be parasitic in the body of the *Amitus*, making it a hyperparasite. Neither genus nor species was refound until 1895, when the writer described *Eretmocerus californicus* (Tech. Ser. 1, U. S. Dept. Agric., Div. Ent., Revision of the Aphelininæ of N. A., pp. 16, 17, figs. 1 and 3) from both sexes. This description was drawn up from many male and female specimens reared in June and October from an *Aleyrodes* on *Quercus agrifolia* at Los Angeles, Cal. by D. W. Coquillett. Mr. Coquillett apparently reared nothing else from the *Aleyrodes* on this par-

ticular food plant, but he reared *Pteroptrix flavimedia* How., *Encarsia angelica* How., and *E. coquilletti* How. from *Aleyrodes* on different plants at about the same time and in the same general locality, and there is nothing in his record to negative the idea that *E. californicus* may be hyperparasitic.

**Eretmocerus haldemani**, n. sp. (fig. 10).

*Female*.—Length, 0.64 mm.; expanse, 1.78 mm.; greatest width of fore wing, 0.32 mm. Antennal club more than four times as long as pedicel, not ellipsoidal as with *E. californicus*, but approaching the oar-shape figured by Haldeman for *E. corni* and lacking the longitudinal lines found abundantly on the club with *E. californicus*; antennæ as a whole about as long as entire body. Mesoscutum and mesoscutellum with a wide delicate irregular subhexagonal sculpture, the scutum in addition being faintly granular. (In *E. californicus* the surface of these sclerites is faintly aciculate.) General color lemon-yellow, eyes reddish, ocelli crimson, legs pallid, flagellum of antenna yellowish.

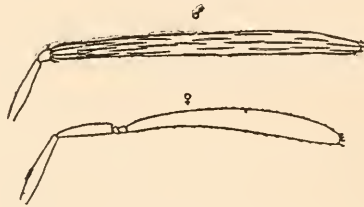


FIG. 10.—*Eretmocerus haldemani*: Antenna of male above, of female below.

*Male*.—Resembles female except for usual sexual differences.

*Type*.—No. 11708, U. S. National Museum. Described from 1 male and 1 female reared by A. W. Morrill at Orlando, Fla., from *Aleyrodes coronata* received from E. M. Ehrhorn, Berkeley, Cal. From the same material were reared several specimens of *Prospalta aurantii* How. and of a proctotrypid which the writer determines with some hesitation as *Amitus aleurodinis* Hald. So that here we have a situation almost precisely similar to that described by Haldeman fifty-eight years ago, and this species may very well prove to be a parasite of the *Amitus*.

On looking over some old material a slide was found carrying several specimens of the male of what is apparently this species, bred Aug. 27, 1895, from an *Aleyrodes* on cotton from Harrisville, Miss., together with a female of *Encarsia coquilletti* How.