

Distribution: Venezuela, Panama, Guatemala.

Panama records: El Valle, Coclé Prov., XII-8-38; V-20-39; VII-9-39; VI-16-40. Cerro Campana, Panama Prov., VI-II-39. Cerro Azul, Panama Prov., V-17-41.

***Chrysops mexicana* Kröber.** (Figs. 6 and 7.)

Chrysops calogaster var. *mexicana* Kröb., 1925, Konowia, IV, p. 248, Pls. II, IV, ♂, ♀; wing, abdomen) (Volcan Colima, Mexico); 1934, Rev. Ent., IV, 2, p. 225.

In many respects this species is intermediate between *calogastra* and *soror*, but I believe it to be distinct from both. Most of my specimens agree perfectly with Kröber's description and figures, except that the abdomens are always entirely black from the third tergite on. In two specimens, however, the tibiae are all black, the hyaline crescent is reduced to a series of short streaks, and the spot on the fork of the third vein is broadly connected with the cross-band.

Distribution: Mexico (Kröber), Panama.

Panama records: Cerro Campana, Panama Province, VI-11-39, VII-2-39, 2500-3000 ft. El Valle, Coclé Province, VII-9-39, XII-10-39, 2000-2500 ft. Rio Pequeni, VIII-21-40.

EXPLANATION OF FIGURES.

Fig. 1. *Chrysops variegata* (de Geer).

Fig. 2. *C. melaena* Hine.

Fig. 3. *C. incisa* Macq.

Fig. 4. *C. calogastra* Schin.

Fig. 5. *C. soror* Kröb.

Fig. 6. *C. mexicana* Kröb.

Fig. 7. *C. mexicana* Kröb.

All figures were drawn from female specimens and are all to the same scale.

A NEW CHALCIDOID PARASITE OF THE VETCH BRUCHID.

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A European species of the eulophid genus *Tetrastichus* was introduced into North Carolina in 1939 by the Bureau of Entomology and Plant Quarantine for control of the vetch weevil, *Bruchus brachialis* Fahraeus, and specimens of the parasite were subsequently reared by J. S. Pinckney from host material collected in the release area. The material for the original introduction was collected in the department of Var, France, by H. L. Parker.

The identity of this parasite had not been established at the time of the introduction and has remained in doubt up to the present time. Specimens, said to be part of the originally introduced material, run to *annulatus* Foerster in the key by Kurdjumov (Rev. Russe d'Entom. XIII, p. 251, 1913) to the European species of *Geniocerus* (which I consider to be a synonym of *Tetrastichus*) and seem to agree closely with the short specific description by Foerster. *Tetrastichus annulatus* was originally described from a specimen or specimens collected by Foerster in the alpine region of Switzerland, a region not very far removed, but quite different in elevation from the maritime area of Var. The species is recorded by Dieuzeide (Bul. Soc. Nat. Hist. d'Afrique du Nord, vol. 22, p. 270, 1931) from Algeria as a parasite of the itoniid *Amblardiella tamaricum* (Kieffer), the identification of the parasite having been made by Ch. Ferrière. It seems unlikely that the same species of *Tetrastichus* would be found to attack two such widely different hosts as *Amblardiella tamaricum* and *Bruchus brachialis*.

In the absence of either a detailed description of *annulatus* or authentic specimens for comparison and in view of the uncertainty injected by the different host records and the different altitudes at which the Foerster type and the bruchid parasites were collected it is deemed inadvisable to identify the latter as *Tetrastichus annulatus* despite its apparent close agreement with that species. In order to supply a name for the bruchid parasite it is herewith described as a new species.

The new species resembles *Tetrastichus rapo* (Walk.), but differs by the infuscations on the middle and hind tibiae, by the carina mesad of propodeal spiracle, and by the somewhat longer joints of the funicle.

***Tetrastichus bruchivorus*, new species.**

Tetrastichus sp. Strong, U. S. Dept. Agr. Bur. Ent. and Pl. Quar., Rept. of Chief, p. 89, 1939.

Female.—Length 1.65 mm. Head, thorax, and abdomen metallic green with a slight bluish tinge; scape black, flagellum brownish black; all coxae and femora concolorous with the thorax, the apical one-fourth to one-sixth of femora pale yellow; anterior tibia entirely yellow; intermediate tibia yellow with a fuscous band in the middle; posterior tibia with the basal one-half to two-thirds brownish black, the apex yellow; all tarsi yellow with apical two segments fuscous; wings hyaline, venation fuscous.

Antenna moderately stout; scape subcylindrical; pedicel about one and one-half times as long as thick; single ring joint transverse; first funicular joint a little longer than pedicel and about as thick as pedicel; second funicular joint a little shorter than first; third joint of funicle slightly longer than broad; club distinctly three jointed, subovate, about equal in length to the last two funicu-

lar joints, the apical joint terminating in a short spine. Head transverse, finely lineolate-reticulate; cheek more than half as long as height of eye; ocellocular line equal to about twice long diameter of an ocellus, distinctly shorter than distance between posterior ocelli; eyes bare; mandibles broad, each with three short, blunt teeth, the outer one the most distinct. Thorax ovoid, about two-thirds as long as broad; prothorax short, transverse, rounded in front, finely sculptured; mesoscutum finely lineolate; parapsidal grooves deeply impressed; median longitudinal groove very fine but distinct and complete; prescutum longer than broad, with a single row of hairs along each parapsidal groove; axillae and scutellum sculptured like mesoscutum; scutellum convex, with two pairs of black setae and with the two longitudinal grooves distinct; postscutellum weakly reticulated; propodeum medially about one-third as long as scutellum, weakly reticulately sculptured, with a median longitudinal carina and another very weak carina curving outwardly just mesad of the spiracle, the lateral folds and spiracular sulci absent. Wings extending beyond apex of abdomen; submarginal vein with three to five bristles dorsally; marginal vein about equal to submarginal and slightly more than twice as long as stigmal; marginal cilia short. Abdomen ovate, as long and about as broad as thorax, distinctly reticulately sculptured; ovipositor just reaching apex of abdomen.

Male.—Length 1.5 mm. Like the female in all respects except in the antennae and abdomen. Antenna long and rather stout; scape a little broader than in female, about four times as long as broad; pedicel about one and one-half times as long as broad; one very short ring joint; funicle four jointed, distinctly broader than pedicel; first funicular joint a little longer than pedicel, with a whorl of hairs basally which are about twice the length of the segment; second, third, and fourth joints subequal in length and breadth, each a little longer than first and each with a basal whorl of hairs similar to those on first segment; club distinctly three jointed, a little longer than last two funicular joints, no thicker than funicle; first joint of club with a basal whorl of hairs which are not so long as those on funicular joints; second and third joints with numerous hairs but they do not appear to be arranged in whorls; apical joint terminating in a short spine. Abdomen elliptical, a little shorter than the thorax and distinctly narrower.

Type locality.—Department of Var, France.

Type.—U. S. National Museum No. 55900.

Described from 52 female specimens (1 holotype) reared from *Bruchus brachialis* Fahraeus infesting vetch, collected in the Department of Var, France, by H. L. Parker; 9 females and 1 male (the allotype) reared from *Bruchus ulicis* Mulsant and Rey collected by Parker in the same French department; 14 females taken at quarantine in Philadelphia, Pa., in seeds of vetch originating in Italy and which were infested with *B. ulicis*; and two females reared from *B. brachialis* collected at Statesville, N. C., by J. S. Pinckney.



Gahan, A. B. 1942. "A new chalcidoid parasite of the vetch bruchid."
Proceedings of the Entomological Society of Washington 44, 8–10.

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