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Six new species of Chalcid flies parasitic upon *Eriococcus greeni* Newstead.

(With 8 fig.).

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Шесть новых видовъ хальцидидъ (Hymenoptera, Chalcidoidea), паразитирующихъ на *Eriococcus greeni* Newstead.

(Съ 8 рис.)

Subfam. **Eunotinae.**

The subfamily *Eunotinae* formed by the late Dr. W. H. Ashmead was considered by him as a part of the family *Pteromalidae*. By the complete parapsidal furrows and by the presence of two apical spurs on the posterior tibiae (at least in the case of some representatives of this group known to me) the subfam. *Eunotinae* would better be placed not far from the *Tridyminae*. Therefore Ratzburg rather correctly placed his *Tritypus areolatus* beside his genus *Tridymus*.

In Dr. Ashmead's „Classification of Chalcid Flies“ it is stated that *Eunotus* has pubescent eyes. In reality it has bare eyes. Genus *Enargopelte* Foerster was placed beside of *Eunotus* as having a large second segment of the abdomen. According to Förster himself, *Enargopelte* has „das erste Segment des Hinterleibes von gewöhnlicher Bildung (bedeckt nicht den ganzen Hinterleib wie bei *Megapelte*).“ Furthermore I was unable to find in Dr. Förster's description any indication as to the hairs, covering the eyes and am inclined to think these to be bare. The male of *Enargopelte* has the same shape of antennae as *Eunotus*. The female of *Enargopelte* has but a two-jointed club.

This character of *Enargopelte* seems to be somewhat doubtful and most probably it has a three-jointed or quite unjointed club, as

some other genera of *Eunotinae*. The following key serve for identification of the known European species of *Eunotus*.

- 1 (2) Antennae reddish-yellow, club black with reddish.
nigriclavis Förster.
- 2 (1) Antennae mostly reddish brown.
- 3 (4) Middle part of propodeum with 3 round areolae *areolatus* (Ratz.)
- 4 (3) Middle part of propodeum carinated, without impressions in form of areolae.
- 5 (6) Propodeum partly covered by the scutellum at the base. Abdomen obtusely angled at the tip, second segment occupying fully $\frac{3}{4}$ of the whole length of the abdomen . . . *cretaceus* (Walk.) Masi.
- 6 (5) Propodeum not covered at the base by the scutellum. Middle carina of propodeum on its anterior part prominent as a tooth or tubercle. Abdomen acute angled at the tip with the second segment (on specimen in alcohol) occupying less than $\frac{3}{4}$ of the whole length of the abdomen.

acutus, sp. nov.

E. acutus, sp. nov.

Female. Length 1,2 mm. Mandibles bidentate, head wide with vertex compressed, short. Antennae clavate, 10-jointed (scape, pedicel 5-jointed funicle and 3-jointed club; the ring joint united with first funicle joint). The funicle joints transverse. Mesonotum transverse. Parapsidal furrows on the posterior margin of mesonotum crossed by furrows separating axillae. Scutellum about one time and a half as long as mesonotum. Postscutellum invisible. Propodeum not covered at the base by the scutellum, with middle carina on its anterior part prominent in the form of a tooth, which is higher than the scutellum. Middle part of propodeum carinated with transverse costula and two lateral carinae, with irregular impressions. The lateral parts of propodeum prominent over the coxae, smooth. Stigmal vein of the anterior wings somewhat curved, longer than the postmarginal and somewhat (1:1,1) shorter than the marginal vein. Posterior tibiae have two apical spurs under higher magnification visible. Abdomen as long or even longer than the head and thorax combined, short ovate, pointed to the tip. The second segment as long as $\frac{2}{3}$ of the whole length of the abdomen its posterior margin entire. Ovipositor as long as $\frac{1}{7}$ of the length of the abdomen. Head and thorax reticulate, hairy, eyes bare. On the mesopleurae, epicnemial and mesepisterna longitudinally finely striated, mesosterna with thimble like punctures. There is a deep pit between episterna and epimeron. Abdomen smooth, its posterior part somewhat

shagreened. Very dark blue. Eyes brownred, funicle light brownish, club brown. The knees, ends of tibiae and first tarsal joints brownish. Veins of the wing brown.

Male. Length 1 mm. Antennae with the cylindrical, joints long, 9-jointed (scape, pedicel, four funicle joints and 3 jointed club). The

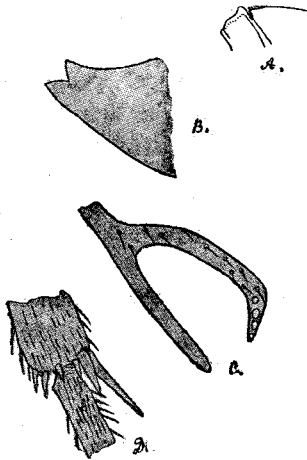


Fig. 1. *Ennotus acutus*, sp. ♀. A) Side view of the scutellum and of the propodeum; B) left mandible; C) stigmal and postmarginal vein of the anterior wing; D) end of the posterior tibia showing two apical spurs.

Antennae 8-jointed (scape, pedicel, 5 funicle joints and unjointed club). Pedicel about twice as long as broad, somewhat more than twice as long as the first funicle joint. First funicle joint somewhat shorter than broad, 2—5 funicle joints a little longer than broad or at least never shorter than broad, increasing in length. Club only a little longer than the three preceding funicle joints together.

On the thorax the mesonotum is half as long as the scutellum. Scutellum ovate, covering the propodeum and about $\frac{2}{3}$ of the second abdominal segment.

The stigmal and postmarginal veins of the anterior wing subequal in length. Stigmal vein somewhat curved. The marginal vein one time and a half as long as the stigmal vein.

funicle joints with two rows of sensilli by which each joint seems to be divided in two. Pedicel shorter than the first funicle joint. Postmarginal vein is about as long as the stigmal vein. Knees and tibial ends lighter than in the female.

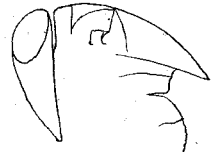


Fig. 2. *Scutellista aenea*, sp. n. ♂. Side view showing the head and the shape of the scutellum.

Hab. 5 females and 1 male reared from *Eriococcus greeni* Newstead on *Agropyron repens* at the Poltava Experiment Station.

Scutellista aenea, sp. nov.

Female. Length 1,5 mm. Head large, broader and deeper than the thorax, threeangular, vertex sharp, narrow.

Eyes bare. Antennae

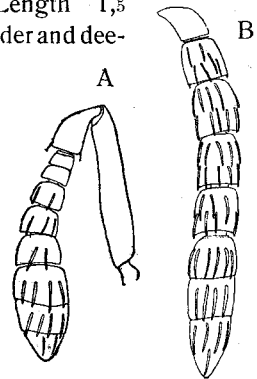


Fig. 3. *Scutellista aenea*, sp. n. A — ♀, antennae; B — ♂, flagellum of the antennae.

The posterior tibiae with two apical spurs, one of which is much shorter than the other.

Abdomen round oval with the second segment of ordinary length; head and thorax with short black bristles.

Aeneous; eyes reddish brown, scape of antennae and basal parts of tarsal joints testaceous. The ultimate tarsal joints dusky. The funicle and the veins of the wings brown. There a cloud below is the stigmal vein of the anterior wing.

Male. Length 1 mm. Antennae 7-jointed (scape, pedicel 4 funicle joints and unjointed club.) Pedicel shorter than the first funicle joints. The funicles joints are cylindrical, decreasing in length. Scape dark brown, funicle fuscous.

Hind femorale stouter than in the female.

Hab. One female and 1 male reared at Poltava Experiment Station from *Eriococcus greeni* on *Agropyron repens*.

From *S. cyanea* Motsch. differs distinctly by the shorter scutellum, smaller size and dark colour.

***Encyrtus subapterus*, sp. nov.**

Female. Length 1 mm. Head round, vertex narrow, ocelli forming an acute angled triangle, lateral ocelli nearer to each other than to the anterior ocellus. Antennae clavate; scape only slightly expanded beneath; pedicel almost as long as the first three funicle joints together; first funicle joint somewhat longer than thick, second joint as long as thick, other joints broader than long. Club of antennae shorter than the whole funicle, three jointed.

Apterous, only one hind wing developed; most probably as a rule there ought to be winged females.

Aeneous; ovipositor short, scape of antennae brown with metallic tint, pedicel light brown, funicle uniformly pale yellow, club brown;

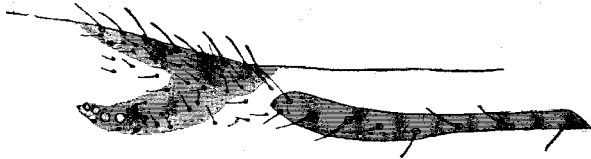


Fig. 4. *Encyrtus subapterus*, sp. n. ♂. Veins of the anterior wing.

veins brownish; coxae and femorae aeneous; trochanters, knees, tibiae and tarsi pale yellow.

Male. Length 0,7 mm. Both mandibles four-dentate, as it was observed on two dissected specimens. Scape of antennae slender, funicle more slender than in the female. Winged, submarginal vein clavate;

here is a distinct interruption between submarginal and stigmal veins; stigmal, marginal and postmarginal vein, have not distinct borders and are only indicated by the pigment. Wings somewhat dusky, without white bands and with a small irregular fascia beneath of the submarginal vein. Antennae light brown. In other respects similar to the female.



Fig. 5. *Encyrtus subapterus*, sp. n. ♂ and ♀. Mandible of the male and antennae of both sexes.

Habitat. One female and four males were reared from *Eriococcus greeni* on *Agropyron repens* at the Poltava Experiment Station.

In Dr. G. Mayr's table of the species of *Encyrtus* the species in question would run to 12, where it ought to be placed next *chalcostomus* Dalm., from which it differs by the broader vertex and darker colour.

Encyrtus breviventris, sp. nov.

Female. Length 0.8 mm. Head round, vertex moderately broad; scape of antennae not dilated. Antennae slender, pedicel

about as long as first three funicle joints together; each funicle joint longer than broad. Threejointed club as long as four preceding funicle joints combined. Abdomen short. Wings light brownish; venation similar to that of the preceding species.

Dark brown; pedicel, funicle and club of antennae uniformly pale brown; the veins of the wing brownish; trochanters, knees, tibiae at apex and tarsi testaceous.

Male. Length 0.6 mm. Mandibles distinctly four-dentate, as it was observed on one dissected specimen. Flagellum with long hairs; first and second funicle joints as long as broad, the rest longer than wide; pedicel about times two and a half as long as first funicle joint. Club unjointed.

Habitat. One female and two males were reared from *Eriococcus greeni* on *Agropyron repens* at the Poltava Experiment Station.

In Dr. Gr. Mayr's synoptic table of species of *Encyrtus* this species would run to 35. But it does not seem to be closely allied to either of

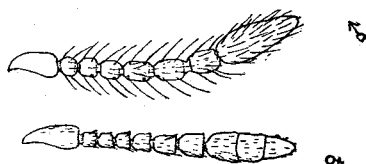


Fig. 6. *Encyrtus breviventris*, sp. n. Antennae of both sexes.

two species described here and by the duskiness of the wing and by the venation it neat to the species of *Encyrtus* with a pale ring on the funicle.

Aphicus nitens, sp. nov.

Female. Length 0,88 mm. Vertex rather narrow; ocelli at angles of an acute angled triangle; lateral ocelli well separated from the eye border and from the occipital margin. Scape of antennae short, pedicel stout, about half as long as the scape and much thicker and longer than the basal joints of the funicle; club ovate, somewhat shorter than the funicle, sutures distinct.



Fig. 7. *Aphicus nitens*, sp. n. ♂. Veins of the anterior wing and antenna.

Postmarginal vein of the anterior wing short, stigmal vein with a moderately large knob. Abdomen ovate, longer than the thorax; ovipositor short, not prominent. Body finely coriaceous shining greasy. General colour black without metallic tint. Antennae brownish. Legs dusky; trochanters, knees, tarsi and partly tibiae yellowish.

Male. Length 0,65 mm. Similar to the female, club of antennae unjointed, truncated at apex and with short bristles. Abdomen short, rotund.

Habitat. 5 males and 3 females were reared from *Eriococcus greeni* on *Agropyron repens* at the Poltava Experiment Station.

Subfam. Aphelininae.

Perissopterus zebra, sp. n.

Female. Length 1 mm. Eyes naked. Scape of antennae strongly compressed, funicle slender, pedicel longer than the funicle joint, which is about two times and a half as long as thick at apex; the club is one time and a half as long as funicle joint, long-ovate. Fore wing with the pattern, shown on the figure; hairs covering the disk black and strong only on the coloured spots of the wing and colourless and weak on the intermediate hyaline spots. Postscutellum acutely-angled; ovipositor as long as $\frac{1}{5}$ of the length of the abdomen. Head pale lila-rose with two transverse brown bands; mouth parts yellowish; mandibles black at apex; eyes dark lila-rose; front and vertex with many hairs bearing punctures of black colour. Scape of antennae con-

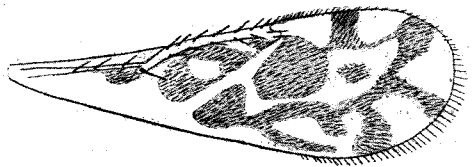


Fig. 8. *Perissopterus zebra*, sp. n. Anterior wing of the female.

lorous, with two transverse brown bands; pedicel dusky above at the base, pale lila-rose at apex; ring joints dark as well as the base of the funicle joint and the whole club. General colour very pale lila, almost white; mesonotum and scutellum yellowish with many black hair-bearing punctures; two longitudinal spots on the scutellum and all margins on the thorax black. Coxae with dark spots; femorae with several partly interrupted transverse black bands, tibiae with 3—4 transverse black bands, knees and coronets black. Tarsi yellowish with two ultimate joints dusky. Abdomen with alternating dark brown and pale lila bands, which are interrupted or sinuated by dark spots. Underside of abdomen is yellowish. Ovipositor dusky.

Male. Smaller. Subapterous, wing reaching only to the middle of the abdomen. Antennae with the same number of joints as in the female, thus differ from the type species of the genus with which the male has 5-jointed antennae.

Hab. 7 females and 4 males reared from *Eriococcus greeni* on *Agropyron repens* at the Poltava Experiment Station. 2 additional males were bred from *Sipha maydis* Pass., infected by *Aphidius*. One of these aphids was dissected and inside it was found a pupa of *Aphidius* with the abdomen consumed by the parasite. *Sipha maydis* was collected on the same plant as the scale insect and was kept separately in a small phial. Evidently in these cases we have the wrong parasitism of *Perisopterus*.