Beitr. Ent. · Bd. 19 · 1969 · H. 3/6 · S. 673–677 · Berlin

Academy of Sciences of the U.S.S.R.
Zoological Institute
Leningrad, U.S.S.R.

V. A. TRJAPITZIN

Redescription of the types of *Charitopus andalusicus* MERCET and *Xanthoectroma aquilinum* MERCET

(Hymenoptera: Encyrtidae)

Some years ago the author of the present paper (TRJAPITZIN 1964) made the conjecture that *Charitopus obscurus* (ERDÖS) might be a synonym of *Ch. andalusicus* MERCET, which was described from southern Spain (MERCET 1926). Later, owing to the kindness of Prof. G. CEBALLOS (Madrid, Spanish Institute of Entomology), the author got the opportunity to examine and redescribe the holotype of *Ch. andalusicus* MERCET, and he came to the conclusion that *Ch. obscurus* (ERDÖS) is a well defined species. Besides the holotype of *Xanthoectroma aquilinum* MERCET — another rare species of Encyrtidae from the collection of R. G. MERCET — was redescribed; this species was described originally from Old Castile (MERCET 1925) and later was discovered in Hungary (ERDÖS 1957) and Czechoslovakia (HOFFER 1953, 1959, 1966).

Besides the redescription of the types, the article contains a key of Eurasian species of the genus *Charitopus* FÖRSTER, which is divided into two subgenera — *Charitopus* s. str. (type species — *Ch. fulviventris* FÖRSTER) and *Charitopsis*, subgen. nov. (type species — *Charitopus laticornis* TRJAPITZIN).

The author is much indebted to Prof. G. CEBALLOS for kindly sending the types.

Charitopus andalusicus MERCET

Female. Head as wide as high. Occipital margin rounded, concave. Minimum width of vertex less than half the maximum width of the head (13:31). Length of frontovertex in the middle less than half the minimum width of vertex (5:13). Apical angle of ocellar triangle about 135°. Lateral ocelli near occipital margin; distance between lateral ocelli 2—$2^1/_2$ times greater than distance from lateral to median ocellus. Distance between lateral ocellus and margin of eye about $^3/_4$ of ocellar diameter. Distance from median ocellus to upper scrobe margin equal to ocellar diameter. Upper margin of facial depression concave. Distance (in vertical direction) from upper margin of facial depression to mouth border 10 times greater than corresponding distance to apex of vertex. Facial depression great, deep, its lateral borders touch the inner margins of eyes. Scrobes uniting near upper margin of facial depression at an angle of about 30°. Interantennal elevation of the face developed. Malar space shorter than eyes (10—11:16—18). Antennae attached near mouth border. Antennal sockets about $^1/_3$ as far apart from each other as from margin of eye (3:8—9).

DOI: 10.21248/contrib.entomol.19.3-6.673-677

Scape almost 8 times as long as its greatest width; the widest part of the scape is situated at less than $^1/_4$ the distance of its length (the distance to the widest part of scape was measured from the base of scape). Pedicel more than 4 times shorter than scape (5:23) and as long as first funicular segment. Funicular segments 2—6 slightly longer than the first one (6:5). First funicular segment twice, the rest 3 times as long as wide. Club slightly wider than sixth funicular segment and more than twice (7:3) as long. Mesonotum twice as wide as long, with complete parapsidal furrows. Scutellum as long as wide and as long as mesonotum. Propodeum in the middle 3 times shorter than scutellum, without carinae. Each of the two external parts of the propodeum with a shallow depression near its hind border. Anterior wing less than 3 times as long as its greatest width (8:3). Marginal and postmarginal veins at some distance from the border of the wing. Length ratio of marginal, stigmal and postmarginal veins as 8:5:2—3. Abdomen (without ovipositor) about $^7/_8$ the length of the thorax. The first visible (third true) tergite occupying $^4/_7$ of the length of abdomen, pygostyli are near hind margin of this tergite. Ninth syntergite triangular, with slightly concave anterior margin. Ovipositor thin, its exserted part about $^1/_4$ the length of abdomen. Seventh sternite triangular, extended posteriorly beyond the apex of abdomen and enclosing from below little less than $^1/_2$ of the exserted part of ovipositor sheaths.

Body violet-golden-green. Upper part of facial depression violet. Hind surface of cheeks greenish-blue. Antennae dark, with brownish-yellow apices of scape and pedicel. Lateral parts of scapulae, meeting point of parapsidal furrows, axillae and median part of propodeum violet-blue or blue-violet. Anterior wings brownish (except basal $^3/_8$ and apex). Venation of anterior wings brown (basal half of submarginal vein yellow). Venation of hind wings yellow. Legs brown-black or black-brown; knees, fore tibiae (apart from an infuscation near the base), apical $^2/_3$ of median tibiae, apices of hind tibiae and all tarsi brownish-yellow. Last four segments of anterior tarsi and last three segments of median and hind tarsi infuscated. Dark parts of legs and antennae with greenish-blue-violet lustre. Abdomen greenish-violet-bluish. Ovipositor dark, basally brownish-yellow. Frons more or less transversally shagreened.[1] Face deeply reticulated, but scrobes almost smooth and interantennal elevation of face with very slightly pronounced longitudinal shagreen. Cheeks longitudinally shagreened. Mesonotum and axillae deeply reticulated, with larger cellulae in front of parapsidal furrows and smaller in the hind part of scapulae (and also on the axillae). Scutellum longitudinally striated. Propodeum in the middle with shallow reticulation and in lateral parts with more clearly reticulated-shagreened sculpture. The first visible (third true) tergite of abdomen largely reticulated; IX syntergite with similar but more superficial sculpture. Length (without ovipositor) about 1.3 mm.

[1] The sculpture was studied at a magnification of x56.

DOI: 10.21248/contrib.entomol.19.3-6.673-677

Holotype (♀) labelled „Almeria (G. Menor)" is preserved in the collection of Spanish Institute of Entomolgy in Madrid. The specimen was examined before by Dr. CH. FERRIÈRE (Geneva, Museum of Natural History), who beneath it pinned a label with the following note: "pas *Charitopus*! voisin de Tetracladia Ch. F."

Key to Eurasian species of the genus *Charitopus* FÖRSTER

Females

1 (2) Scape of the antennae strongly broadened (lamellar); second and third funicular segments as long as wide, the rest wider than long. Mesonotum without parapsidal furrows (*Charitopsis* subgen. n.). — U.S.S.R. (Kustanay region). . . . . *Ch. laticornis* TRJAPITZIN

TRJAPITZIN, Trudy Zool. Inst. AN SSSR, **XXXIV**, 241–242; 1964.

2 (1) Scape of the antennae without lamellar broadening; funicular segments longer than wide. Mesonotum with parapsidal furrows (*Charitopus* s. str.) . . . . . .

3 (6) Abdomen yellow, with dark lateral margins . . . . . .

4 (5) Pedicel of the antennae black. Front and middle femora (except the apices) dark. Middle and usually fore tibiae infuscated at the base. — Spain, Denmark, the German Federal Republic, Austria, Czechoslovakia, Hungary, U.S.S.R. (Kursk region, Moldavia, the Crimea, Krasnodar Territory, Daghestan, Armenia, Azerbaijan, Turkmenistan, Tajikistan, Irkutsk region, Primorye Territory) . . . . . *Ch. fulviventris* FÖRSTER

FÖRSTER, Verh. Nat. Ver. Preuss. Rheinl., **17**, 112; 1860. – MERCET, Bol. Soc. Esp. Hist. Nat., **16**, 372; 1916 (*Diversicornia pinicola*). – MERCET, Fauna Ibérica. Him. fam. Encírtidos., pp. 545–548; 1921 (*D. pinicola*). – RUSCHKA, Verh. Zool. bot. Ges. Wien, **LXX**, 245–248; 1921 (*Tetracnemus diversicornis*). – MERCET, Bol. Soc. Esp. Hist. Nat. **22**, 54; 1922 (synonymy). – NIKOLSKAYA, Chalcids of the fauna of the U.S.S.R., p. 433; 1952. – TRJAPITZIN, Trudy Zool. Inst. AN SSSR, **XXXIV**, 241–242; 1964. – BAKKENDORF, Ent. Medd., **XXX**, 118–119; 1965.

5 (4) Pedicel of the antennae yellowish-white. Only the bases of front femora slightly infuscated. — Ceylon . . . . . *Ch. cuprifrons* (MOTSCHOULSKY)

MOTSCHOULSKY, Bull. Soc. Imp. Nat. Moscou, **XXXVI**, 60–61; 1863 (*Leptorhopala*). – TRJAPITZIN, Trudy Zool. Inst. AN SSSR, **XXXIV**, 242; 1964.

6 (3) Abdomen dark, with metallic lustre . . . . . .

7 (8) 2–6 funicular segments of the antennae not more than twice as long as wide. Scutellum longitudinally reticulated. Ovipositor scarcely exserted (its exserted part equals at most about $^1/_9$ of the length of abdomen). — Hungary, Czechoslovakia, U.S.S.R. (Moldavia, Nakhichevan ASSR) . . . *Ch. obscurus* (ERDÖS)

ERDÖS, Ann. Hist.-Nat. Mus. Nation. Hungarici, **XXXIX** (9), 142–144 (*Tetracnemus*); 1946. – FERRIÈRE, Mitt. Schweiz. Ent. Ges. **28**, 134; 1955. – HOFFER, Acta Faun. Ent. Mus. Nation. Pragae, **10**, 39–40; 1964.

8 (7) 2–6 funicular segments of the antennae three times or slightly less than three times long as wide. Scutellum longitudinally striated. Exserted part of ovipositor about ¼ of the length of abdomen. — Spain . . . . . *Ch. andalusicus* MERCET

MERCET, Eos, **11**, 315–317; 1926.

Charitopsis TRJAPITZIN, subgen. nov.

Differs from the nominative subgenus (*Charitopus* s. str.) by absence of parapsidal furrows and by dilated antennae.

Type species: *Charitopus laticornis* TRJAPITZIN.

DOI: 10.21248/contrib.entomol.19.3-6.673-677

Xanthoectroma aquilinum MERCET

Female. Head as wide as thorax and slightly wider than high (33:28). Occipital margin straight. Minimum width of vertex twice as narrow as maximum width of head. Frontovertex about a third wider than long in the middle. Eyes convex, with slightly divergent inner margins. Apical angle of ocellar triangle about 100°. Distance between lateral ocelli twice as great as distance from a lateral to the median ocellus. Lateral ocelli closer to occipital margin than to margins of eyes (1.5:3.5—4). Transition from frons to face little pronounced. Facial depression shallow. Scrobes straight, converging upwards at an angle of about 40°. Malar space shorter than eye (10—17). Antennae attached at the level of ventral eye margins. Ratio of distance between antennal sockets to distance from antennal socket to eye margin and to corresponding distance to mouth margin 5:5—6:4. Anterior angles of pronotum pronounced (about 120°). Hind margin of pronotum very strongly archwise concave. Mesonotum twice as wide as long. Parapsidal furrows not quite reaching the hind border of mesonotum: distance from the hind end of a furrow to hind border of mesonotum less than one fourth of the length of a furrow. Inner angles of axillae meeting. Scutellum flat, slightly longer than wide and longer than mesonotum (9:8:7). Propodeum short, in the middle $4^1/_2$ times shorter than scutellum. Scape of antennae not dilated, 5 times longer than its maximum width and 3 times longer than pedicel. Length ratio of pedicel, funicular segments (in parentheses) and club as 5:(8:8:7:6:5.5:5):10. Funicular segments rectangular and becoming slightly wider towards the apex of funicle. First funicular segment a little more than four times as long as wide, the second four times, the third $3^1/_2$ times, the fourth three times, the fifth more than twice (11:5), the sixth less than twice. Club slightly wider than the last funicular segments and little more than 3 times as long as its own maximum width (10:3). Wings not shortened. Anterior wing 3 times as long as its greatest width. Stigmal vein of anterior wing longer than marginal and postmarginal (6:4:4). Abdomen longer than head and thorax combined (13:11). Pygostyli a little nearer to the base than to the apex of abdomen. Ovipositor slightly protruded, with very wide sheaths.

Body yellow. Pedicel, funicle and club of antennae blackbrown. Anterior wings brownish. Front tarsi, 2 or 3 of the last segments of middle tarsi and 1 or 2 of the last segments of hind tarsi darkened. Dorsal side of thorax with very minute and not dense light setae. Length 1.7 mm.

Holotype (♀) labelled „Aguilafuente (Segovia) 16 IV 1924 Ceballos" is preserved in the collection of the Spanish Institute of Entomology in Madrid.

Summary

Redescriptions of the holotypes of encyrtids *Charitopus andalusicus* MERCET (from Andalusia) and *Xanthoectroma aquilinum* MERCET (from the Old Castile) are given in the article. Original key of Old World species of the genus *Charitopus* FÖRSTER is included. The genus *Charitopus* is divided into two subgenera: subgenus *Charitopus* s. str. (type species — *Ch.*

DOI: 10.21248/contrib.entomol.19.3-6.673-677

fulviventris FÖRSTER) and subgenus *Charitopsis* nov. (type species — *Charitopus laticornis* TRJAPITZIN). *Charitopsis* differs from the nominative subgenus in the absence of parapsidal furrows and in widened scape of female antennae.

Zusammenfassung

Dieser Artikel enthält die Redeskriptionen der Holotypen der Encyrtiden *Charitopus andalusicus* MERCET (aus Andalusien) und *Xanthoectroma aquilinum* MERCET (aus Castilien) und eine Bestimmungstabelle der Arten der Gattung *Charitopus* FÖRSTER der Alten Welt. Die Gattung *Charitopus* wird in zwei Untergattungen geteilt: subgen. *Charitopus* s. str. (typische Art — *Charitopus fulviventris* FÖRSTER) und subgen. *Charitopsis* nov. (typische Art — *Charitopus laticornis* TRJAPITZIN). *Charitopsis* unterscheidet sich von der nominativen Untergattung durch das Fehlen der Parapsidalfurchen und durch die erweiterten Antennen des Weibchens.

Резюме

В статье дается переописание голотипов энциртид *Charitopus andalusicus* MERCET (из Андалузии) и *Xanthoectroma aquilinum* MERCET (из Старой Кастилии), а также оригинальная определительная таблица видов рода *Charitopus* FÖRSTER Старого Света. Род *Charitopus* разделен на два подрода: subgen. *Charitopus* s. str. (типовой вид — *Ch. fulviventris* FÖRSTER) и subgen. *Charitopsis* nov. (типовой вид — *Charitopus laticornis* TRJAPITZIN). Подрод *Charitopsis* отличается от номинативного подрода отсутствием парапсидальных борозд и расширенными усиками самки.

References

ERDÖS, J. Series encyrtidarum novarum Hungaricarum. Acta Zool. Acad. Sc. Hungaricae, **III**, 5—87; 1957.

HOFFER, A. Encyrtidae našich státních přírodních reservací. I. Ochrana Přírody, **VIII**, 83—89; 1955.

— Miscellanea Encyrtidologica. III. (Hym., Chalcidoidea). Acta Ent. Mus. Nation. Pragae, **XXXIII**, 5—36; 1959.

— Přehled nálezů druhů rodové skupiny Anagyrus How. (Hym., Chalc., Encyrtidae) v Československu. Zprávy Československ. Společn. Ent., **II**, 1—8; 1966.

MERCET, R. G. Adiciones a la fauna española de Encírtidos (4a nota) y una especie nueva de Francia. Bol. R. Soc. Esp. Hist. Nat., **XXV**, 146—153; 1925.

— Adiciones a la fauna española de Encírtidos (Hym. Chalc.). 6.a nota. Eos, **II**, 309—320; 1926.

TRJAPITZIN, V. A. New encyrtids (Hymenoptera, Encyrtidae) from steppes and deserts of Kazakhstan. Trudy Zool. Inst. AN SSSR, **XXXIV**, 235—246; 1964. [In Russian]

DOI: 10.21248/contrib.entomol.19.3-6.673-677