

Key to world species of the genus *Ectroma* Westwood, 1833  
(Hymenoptera: Encyrtidae), with redescription of  
*E. koponeni* Trjapitzin, 1989 from Madeira, Portugal

Определительные таблицы видов рода *Ectroma* Westwood, 1833  
(Hymenoptera: Encyrtidae), с переописанием  
*E. koponeni* Трjапитзин, 1989 с Мадейры, Португалия

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КЛЮЧЕВЫЕ СЛОВА: Hymenoptera, Encyrtidae, *Ectroma*, таксономия.

ABSTRACT: A key to the world species of the genus *Ectroma* Westwood, 1833 and redescription of *E. koponeni* Trjapitzin, 1989 from Madeira, Portugal, are provided. General information on *Ectroma* is given. *Idiococcophilus* Tachikawa & Gordh, 1987, **stat. rev.** is excluded from synonymy under *Ectroma* and recognized as a valid genus.

РЕЗЮМЕ. В статье даны определительная таблица видов рода *Ectroma* Westwood, 1833 мировой фауны и переписание *E. koponeni* Трjапитзин, 1989 с Мадейры, Португалия. Приведена информация о роде *Ectroma*. Род *Idiococcophilus* Tachikawa & Gordh, 1987, **stat. rev.** исключён из синонимов *Ectroma* и признан валидным.

### Introduction

Until 1972, the genus *Ectroma* Westwood, 1833 was considered to have a strictly Palaearctic distribution. However, *E. semifactum* De Santis, 1972 was described then from Argentina [De Santis, 1972] and *E. truncatum* Prinsloo, 1986 from Zimbabwe [Prinsloo, 1986]. Unidentified species of the genus were cited from India [Noyes & Hayat, 1984] and also from the Nearctic Region [Noyes et al., 1997]. In 2001, the senior author saw in the collection of the California Academy of Sciences at San Francisco, USA, one female of a new species of *Ectroma*, collected near Francis Lake in Sierra Nevada, California, USA. This species is closely related to *E. annulicorne* Trjapitzin, 1972 described from Russia (South Siberia), Kazakhstan and Mongolia [Trjapitzin, 1972].

Although a key to the Palaearctic species of *Ectroma* was published by the senior author earlier [Trjapitzin,

1989], now it needs improvement. This publication provides a key to the world species of *Ectroma* and also a redescription of *E. koponeni*, which was originally described rather briefly [Trjapitzin, 1989].

An abbreviation used in the text is: F – an antennal funicular segment.

### Genus *Ectroma* Westwood, 1833

TYPE SPECIES: *Ectroma fulvescens* Westwood, 1833, by monotypy.

SYNONYMS: *Metallon* Walker, 1848; *Pezobius* Förster, 1860; *Concentrolinea* Bakkendorf, 1965. Sharkov [1988] synonymized the genus *Idiococcophilus* Tachikawa & Gordh, 1987 under *Ectroma*. Its type species *I. japonicus* Tachikawa & Gordh, 1987 is known from Russia (Sakhalin, southern Kuril Islands) and from Japan, where it was reared from *Idiococcus bambusae* Takahashi & Kanda, 1939 (Hemiptera: Pseudococcidae) on bamboo grass, *Pleioblastus variegatus* Makino, beneath its leaf sheaths [Tachikawa & Gordh, 1987]. Trjapitzin [1989] accepted this synonymy. However, now we incline to resurrect this genus as valid, because it has a very long gaster with a well-developed epipygium, and its male is characterized by the antennae covered with long hairs.

The genus *Ectroma* belongs to the subfamily Encyrtinae Walker, 1837, tribe Mayridiini Hoffer, 1955. Its diagnoses were published by Mercet [1921] (as *Pezobius*), Nikolskaya [1952, 1963] (as *Pezobius*), and Hoffer [1957] (as *Metallon*). Data on hosts of *Ectroma* species are very scarce: some species were reared from Coccoidea on grasses, but these remained unidentified even to family. An *Ectroma* sp. was reared by I.V. Rosanov from Pseudococcidae on a gramineous plant in Kazakhstan [Trjapitzin, 1989].

### KEY TO WORLD SPECIES OF *ECTROMA* (FEMALES)

- 1(8) Wings not abbreviated: forewing exceeds apex of gaster.
- 2(5) Ovipositor sheaths long, not shorter than 1/3 of gaster length.
- 3(4) Ovipositor sheaths about 1/2 gaster length, usually black. Forewing darkened, with clear base and one transverse

- clear band in middle. 1.7–2.1 mm. — Austria [new record: Hundsheimer Berg, 24.VI.1941, Bischoff, 3 ♀♀ (Zoological Museum of Humboldt University, Berlin, Germany)], Czech Republic, Denmark, England (UK), Finland, Germany, Hungary, Kazakhstan, Lithuania, Mongolia, Romania, Russia [Chita, Leningrad, Kaluga, Voronezh (new record: Khoper Natural Reserve, 1.VIII.1974, V.A. Trjapitzin, 1 ♀ (Zoological Museum, Russian Academy of Sciences, St. Petersburg, Russia)), Orenburg Provinces; Republic of Altay, Yakutia], Slovakia, Spain, Sweden, Ukraine. This species was reared in Hungary from *Coccoidea* on grasses [Györfi, 1962] .....  
*E. reinhardi* (Mayr, 1876)
- 4(3) Ovipositor sheaths about 1/3 gaster length, yellowish- or yellow-brown. Forewing not darkened, only slightly yellowish. 1.5 mm. — Austria, Czech Republic, Denmark, Finland, Hungary, Lithuania, Moldova, Russia (Leningrad, Kaluga, Orenburg, Irkutsk Provinces; Republic of Altay), Sweden, Ukraine ..... *E. arenarium* (Erdős, 1955)
- 5(2) Ovipositor sheaths not longer than 1/7 gaster length or not exerted.
- 6(7) Forewing darkened, with clear base and one transverse clearer band, strongly narrowed in the middle, stigmal vein shorter than marginal vein. F1 shorter than pedicel, clava black. 1.7 mm. — Austria, Bulgaria [new record: Madara, 25.VII.1928, L. Biró (Hungarian Museum of Natural History, Budapest, Hungary, NMNHB)], Czech Republic, England (UK), Germany, Hungary, Moldova, Portugal, Romania, Russia (Black Sea Coast of Krasnodar Territory, Kabardino-Balkaria), Serbia, Slovakia, Spain, Sweden, Ukraine (the Crimea) .....  
*E. fulvescens* Westwood, 1833
- 7(6) Forewing only slightly darkened, with a clearer base and with two symmetric clear patches; stigmal vein as long as marginal vein. F1 as long as pedicel; clava with 2nd and 3rd segments light. 1.5–2.0 mm. — Czech Republic, Georgia (Adzharia), Hungary [new record: Kelebia, 15.V.1961, J. Erdős, ex. coccid on *Agrostis alba* L., 1 ♀ (NMNHB)], Romania, Russia (Kaluga Province, Black Sea Coast of Krasnodar Territory, Kamchatka, Primorye Territory), Slovakia ..... *E. albiclavatum* (Hoffer, 1957)
- 8(1) Wings strongly abbreviated: rudiment of forewing at most reaching just beyond posterior margin of propodeum.
- 9(12) At least one funicular segment of antenna white or yellowish-white, in contrast to other funicular segments.
- 10(11) Only F6 white or yellowish-white. Ovipositor sheaths only slightly exerted. Rudiment of forewing obliquely truncate, darkened basally and apically. 1.5 mm. — Argentina ..... *E. semifactum* De Santis, 1972
- 11(10) F4–F6 or F5–F6 white or yellowish-white. Exserted part of ovipositor sheaths about 1/2 gaster length. Rudiment of forewing pointed, hyaline. 1.6–2.3 mm. — Kazakhstan, Mongolia, Russia (Buryatia, Chita Province, Primorye Territory) ..... *E. annulicorne* Trjapitzin, 1972
- 12(9) Antennal funicle more or less uniformly colored, without any contrastingly white or yellowish segments.
- 13(16) Ovipositor sheaths not shorter than 1/3 gaster length.
- 14(15) Ovipositor sheaths about 1/2 gaster length, usually black. Rudiment of forewing oval (see also couplet 3) .....  
*E. reinhardi* (Mayr, 1876)
- 15(14) Ovipositor sheaths about 1/3 gaster length, yellowish or yellow-brown. Rudiment of forewing obliquely truncate and pointed (see also couplet 4) .....  
*E. arenarium* (Erdős, 1955)
- 16(13) Ovipositor sheaths not longer than 1/7 gaster length or not exerted.
- 17(20) Clava completely or almost completely dark.
- 18(10) F2 and F3 not longer than wide. Clava of male antenna light only in its apical third (see also couplet 6) .....  
*E. fulvescens* Westwood, 1833
- 19(18) F2 and F3 distinctly longer than wide. Clava of male antenna completely white. Female 1.8, male 1.24 mm. — Bulgaria, Hungary, Spain (including Tenerife, Canary Islands) ..... *E. insigne* (Mercet, 1921)
- 20(17) Clava lighter than preceding funicular segments or as light, at least, as F6, although base of 1st claval segment may be darkened either completely or only basally.
- 21(22) Rudiment of forewing with rounded or transversely truncated apex. F1 and F2 distinctly longer than wide; 1st claval segment darkened (see also couplet 7) .....  
*E. albiclavatum* (Hoffer, 1957)
- 22(21) Rudiment of forewing with pointed apex.
- 23(24) Pedicel 1.5 times longer than F1; F1 distinctly longer than wide; clava somewhat wider than F6. Ocelli forming an equilateral triangle. Mesosomal dorsum with dark hairs. 1.6 mm. — Portugal (Madeira) .....  
*E. koponeni* Trjapitzin, 1989
- 24(23) Pedicel 2.0 times longer than F1.
- 25(26) All funicular segments more or less quadrate (F3–F6 according to figure in Hoffer, 1970); F1–F4 yellowish-brown, F5 a little darker, F6 the darkest; clava 2 times as long as wide (according to figure in Hoffer, 1970); scape broadened ventrally. Ocelli forming a slightly obtuse triangle. 1.2 mm. — Croatia ..... *E. dalmatinum* Hoffer, 1970
- 26(27) F1–F5 longer than wide, F6 quadrate or subquadrate; funicle pale-yellow or brownish-pale-yellow; clava almost 3 times as long as wide; scape not broadened ventrally. Ocelli forming a strongly obtuse triangle. 1.25–1.5 mm. — Zimbabwe ..... *E. truncatum* Prinsloo, 1986

*Ectroma koponeni* Trjapitzin, 1989

Figs 1–2

*Ectroma koponeni* Trjapitzin, 1989: 287, 452.

TYPE MATERIAL. Holotype, ♀ — Portugal, Madeira, Funchal, Pico de Cruz, 16.III.1980, M. Koponen; Paratype, ♀ — same data and depository as holotype; all in Zoological Museum, University of Helsinki, Helsinki, Finland.

DESCRIPTION. **Female.** Length 1.5–1.6 mm. Head brownish-orange-yellow. Antenna blackish-yellowish-brown, with lighter 2nd and 3rd claval segments. Apex of mandible dark. Pronotum predominantly orange-yellow. Mesoscutum and axilla bluish-bronze-violet. Scutellum almost black. Rudiment of forewing hyaline. Mesopleura brown-yellow. Legs brown-yellow or yellow-brown. Gaster greenish-violet. Frontovortex with minute punctation. Mesosomal dorsum with dark hairs.

Head as wide as high. Occipital margin concave. Inner orbits of eye (dorsal view) diverging anteriorly. Frontovortex convex, longer than wide (5:3); minimum width of vertex about 1/3 maximum head width. Ocelli very small, forming less than 20° angle; distance between posterior ocelli somewhat more than that from posterior to anterior ocellus (7:6); distance from posterior ocelli to eyes' margins not more than diameter of ocellus, and distance to occipital margin less than that between posterior ocelli (4–5:7). Facial cavity rather deep, formed by scrobes meeting dorsally and with rounded apical and lateral margins. Antenna (Fig. 1) inserted immediately below level of inner eye margin; distance between toruli a little less than distance from torulus to eye margin and more than that to mouth margin (3:2). Malar space shorter than greatest diameter of eye (5:11–12). Mandible 3-dentate, with teeth of almost equal length. Length of pronotum, measured

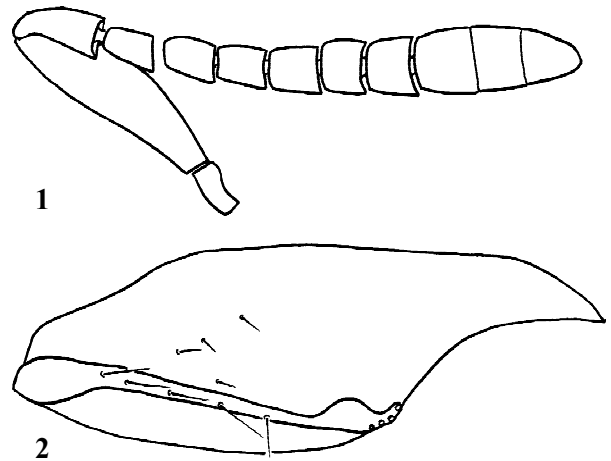
medially, 3 times less than its width. Mesoscutum hardly convex, short, 2.5 times as wide as long. Apices of axillae touching one another. Scutellum almost flat, with nearly straight lateral margins and with pointed apex; lateral sides of scutellum convergent at a little less than 20° angle, scutellum 1.5 times longer than mesoscutum, as wide as long. Wings rudimentary; rudiment of forewing with pointed apex (Fig. 2), reaching beyond posterior margin of propodeum, but not reaching posterior margin of 1st gastral (3rd abdominal) tergite. Mesotibial spur as long as 1st segment of mesotarsus. Propodeum in its middle part more than 3 times shorter than scutellum (18:5), and in its lateral parts only a little shorter than scutellum. Gaster somewhat longer than mesosoma; 1st gastral tergite occupies about 1/5 gaster length; pygostyles nearer to base than to apex of gaster; sides of gaster beyond level of pygostyles straight and convergent posteriorly at about 60° angle; apex of gaster pointed. Ovipositor sheaths slightly exerted.

**Male unknown.**

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Figs 1–2. *Ectroma koponeni*, female: 1 — antenna; 2 — rudiment of forewing.

Рис. 1–2. *Ectroma koponeni*, самка: 1 — усик; 2 — рудимент переднего крыла.

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