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SPECIES OF THE GENUS *IDIOMACROMERUS* (HYMENOPTERA, CHALCIDOIDEA, TORYMIDAE) REARED FROM FLOWER HEADS OF SOME ASTERACEAE IN ISRAEL

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Species of the Genus *Idiomacromerus* (Hymenoptera, Chalcidoidea, Torymidae) Reared from Flower Heads of Some Asteraceae in Israel. Zerova M. D., Seryogina L. Ya., Kuslitzky W. S., Argov Ya. — Four species of the genus *Idiomacromerus* Crawford, 1914 are recorded from Israel as reared from flower heads of *Centaurea* spp. (Asteraceae). Two of them, *Idiomacromerus artusis* Zerova, sp. n. and *I. persimilis* Zerova, sp. n. are described.

Key words: Hymenoptera, Torymidae, *Idiomacromerus*, new species, Asteraceae, *Centaurea*.

Виды рода *Idiomacromerus* (Hymenoptera, Chalcidoidea, Torymidae) из соцветий Asteraceae в Израиле. Зерова М. Д., Серегина Л. Я., Куслицкий В. С., Аргов Я. — Четыре вида рода *Idiomacromerus* Crawford, 1914 отмечены из Израиля как выведенные из соцветий *Centaurea* spp. (Asteraceae). Описаны два вида: *Idiomacromerus artusis* Zerova, sp. n. и *I. persimilis* Zerova, sp. n.

Ключевые слова: Hymenoptera, Torymidae, *Idiomacromerus*, новые виды, Asteraceae, *Centaurea*.

Introduction

Four species of the parasitic wasps of the genus *Idiomacromerus* were found in material recently reared by W. Kuslitzky and Ya. Argov from flower heads of some Asteraceae (*Centaurea*) infested by Tephritidae and Cynipidae in Israel. Two species — *I. lysander* Szelenyi and *I. pulcher* Zerova et Seryogina have been previously known from Hungary and Ukraine, but from other hosts; two of reared species were found to be new and are described below. Material is deposited in collection of the Museum of the Tel Aviv University (TAU) and in I. I. Schmalhausen Institute of Zoology, Kyiv, Ukraine (SIZK).

Idiomacromerus artusis Zerova, sp. n.

Material. Holotype ♂, Israel, Kefar Barukh, 27.07.2010, ex seed heads of *Centaurea verutum* L. (W. Kuslitzky) (TAU). Paratypes: 2 ♀, label as in holotype; 8 ♂ label as holotype, but 15.06.2011 (TAU; SIZK).

Holotype and 8 paratypes are deposited in collection of the Museum of the Tel Aviv University. 2 paratypes — in collection of the Schmalhausen Institute of Zoology, NAS of Ukraine (Kyiv).

Description. Female (fig. 1, 7–9; 2, 1). Body length: holotype 1.8 mm (1.4–1.8 mm without ovipositor). Ovipositor sheath slightly shorter than abdomen and 1.43 times as long as hind tibia. Body bright bluish-green; extended part of ovipositor brown, all coxae and femora green, tibia and tarsi (except of last brown tarsal segments) yellow; wings hyaline, veins light yellow. Head and dorsal part of thorax with very finely reticulation, pubescence of head and thorax not visible.

Head from above distinctly broader than thorax, width to length 38 : 16; POL to OOL as 11 : 6. temple much shorter than the length of eye. Head in frontal view flat, wider than high in ratio 38 : 35; malar space consists 1/3 height of eye. External margin of clypeus straight; face cavity very long; face without pubescence, with very fine sculpture. Antenna

inserted very low, nearly over clypeus, scape reaching only half-length of face cavity, pedicel long, nearly as long as 5 flagellum segments, anellus very short, four basal flagellum segments very small, anelli-like, 3 subapical flagellum segments transverse, club stout, wide and long; pubescence on flagellum very thin, hardly visible.

Mesosoma not bulged in profile, almost flat dorsally; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum very short; propodeum and mesosternum almost smooth. All coxae without distinct sculpture, polished. Basal part of fore wing almost bare, apical part with very short and light pubescence. Ratio of marginal, postmarginal and radial veins is 3.3 : 1.5 : 1.0.

Metasoma: petiolus very short, all abdominal tergites with fine reticulation and green polished tinge. Ovipositor sheath a little 0.94 times as long as abdomen.

Male unknown.

Comparative notes. *Idiomacromerus artusis* sp. n. is similar to *I. persimilis* sp. n. in having flagellar segments 1–2 very short and anelliform, differing by longer ovipositor, longer postmarginal vein and very short flagellar segments 3–4.

Idiomacromerus persimilis Zerova, sp. n.

Material. Holotype ♀, Israel, Nes Ziyvona, 18.08.2011, from seedhead of *Centaurea procurrans* Sieber ex Spreng. (Kuslitzky) (TAU). Paratypes: 1 ♀, 1 ♂, “86257”, Israel, Nes Ziyvona, 19.08.2010, from seedhead of *Centaurea procurrans* (W. Kuslitzky); 1 ♂, Israel, Giv’at Brenner, 10.09.2010, seedhead of *Centaurea procurrans* (Kuslitzky) (TAU; SIZK).

Holotype and paratypes (1 ♀, 1 ♂) in collection of the Museum of the Tel Aviv University, 1 paratype (female) in collection of the Institute of Zoology NAS of Ukraine (Kyiv).

Description. Female (fig. 1, 10–12; 2, 2). Body length 1.0–1.4 mm, holotype 1.4 mm (without ovipositor), ovipositor sheath 0.58 times as long as abdomen (in profile) and 1.35 as long as hind tibia. Body bright bluish-green; fore and middle coxae green, hind coxa brownish-green; femora, tibiae and tarsi bright yellow; tip of ovipositor dark brown. Wings hyaline, veins light yellow, almost white. Pubescence on head and thorax absent.

Head from above much broader than thorax, 1.27 times as wide as long; POL : OOL = 2.11 : 1.0; temples very short. Head in frontal view flat, 1.07 times as wide as high; frontal cavity shallow, polished, very long; clypeus with external margin straight, with 7–8 white short bristles on external side. Malar space much shorter than longitudinal eye diameter. Face without pubescence except of row of short bristles on external part of clypeus, sculpture of face very thin. Antenna inserted very low, on sides of clypeus; scape almost reaching half-length of face cavity; pedicel long, nearly as long as four following flagellum segments; club stout, as long as four previous flagellum segments. Basal part of flagellum with one anellus and three very small flagellar segments like anelli. Pubescence of flagellum very short and thin.

Mesosoma flat dorsally, pronotum very short, dorsal surface of thorax with very fine sculpture, propodeum almost smooth. All coxae without distinct sculpture, polished. Basal 1/3 part of fore wing bare, the last part with very short and light pubescence. Ratio of marginal, postmarginal and radial veins is 2.67 : 1.25 : 1.

Metasoma: petiolus very short, all abdominal tergites without distinct sculpture, polished; ovipositor distinctly shorter than (0.6 times as long as) abdomen (in profile).

Male. Length of body 1.1 mm. Colour and sculpture as in female. Club as in female, stout and thick. Abdomen 0.83 times as long as mesosoma.

Comparative notes. *Idiomacromerus persimilis* sp. n. is similar to *I. artusis* sp. n. in having flagellar segments 1–2 very short and anelliform, differing by shorter ovipositor and postmarginal vein, and flagellar segments 3–4 longer (1.5–2 times as wide as long). *I. persimilis* sp. n. also resembles *I. bouceki* (Zerova et Seryogina, 1997) (fig. 1, 13–15); from that species *I. persimilis* sp. n. differs by shorter postmarginal vein and very small apical process, which is long and stout in *I. bouceki*.

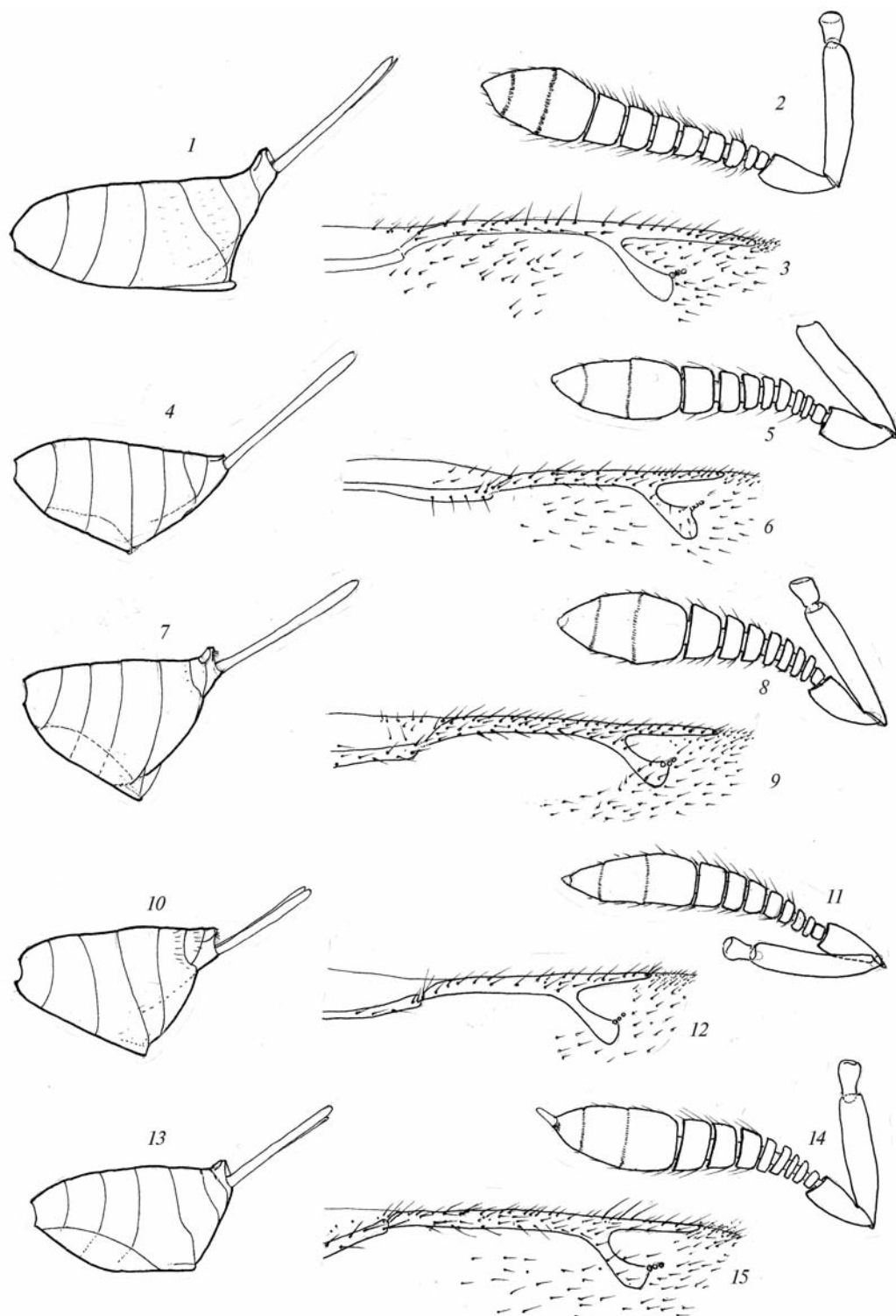


Fig. 1. Details of morphology of *Idiomacromerus* species: 1-3 — *I. pulcher*, 4-6 — *I. lysander*, 7-9 — *I. artusis* sp. n.; 10-12 — *I. persimilis* sp. n.; 13-15 — *I. bouceki*; 1, 4, 7, 10, 13 — abdomen (in profile); 2, 5, 8, 11, 14 — female antenna; 3, 6, 9, 12, 15 — fore wing venation.

Рис. 1. Особенности морфологии видов рода *Idiomacromerus*: 1-3 — *I. pulcher*, 4-6 — *I. lysander*, 7-9 — *I. artusis* sp. n.; 10-12 — *I. persimilis* sp. n.; 13-15 — *I. bouceki*; 1, 4, 7, 10, 13 — брюшко в профиль; 2, 5, 8, 11, 14 — усик самки; 3, 6, 9, 12, 15 — жилкование передних крыльев.

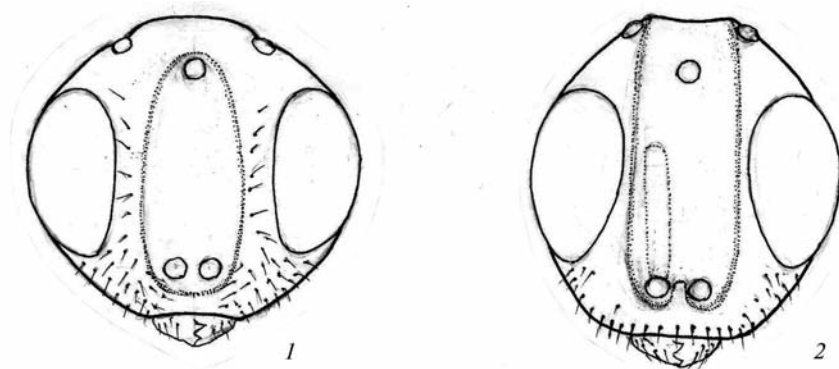


Fig. 2. Details of morphology of *Idiomacromerus* species: 1 — *I. artusis* sp. n. (head frontal view); 2 — *I. persimilis* sp. n. (head frontal view).

Рис. 2. Особенности морфологии видов рода *Idiomacromerus*: 1 — *I. artusis* sp. n. (голова спереди); 2 — *I. persimilis* sp. n. (голова спереди).

Idiomacromerus pulcher (Zerova et Seryogina, 1997)

Zerova, Seryogina, 1997: 973 (*Liodontomerus*)

Material. 3 ♀, Israel, Ramat Yishay, 15.06.2011 (Kuslitzky) (TAU).

Comments. This species was described based on material from southern regions of the Palaearctic Region (Ukraine: Crimea, Kherson Region; Tadjikistan), where it was reared from cynipid larvae in flower heads and stems of some Asteraceae. In Israel, this species was reared from flower heads of *Centaurea hyalolepis* Boiss. (Asteraceae) with larvae of Tephritidae.

Idiomacromerus lysander (Szelényi, 1959)

Szelényi, 1959: 141–146 (*Liodontomerus*)

Material. 12 ♀, 1 ♂, Israel, Nes Ziyona, 18.08.2011, seed head of *Centaurea procurrens*, (Kuslitzky) (TAU).

Comments. This species was described based on material from Hungary, where it was reared from seeds of *Medicago minima* (Linnaeus) Bartal. (Fabaceae). In Israel it was reared from seed heads of *Centaurea procurrens* Sieber ex Spreng.

Discussion

All species of *Idiomacromerus*, reared in Israel from flower heads of some *Centaurea* form a group of morphologically similar species. The features they share are as follows: the long and stout pedicel, stout and wide club; base of flagellum very narrow with very small anellus and decrease first flagellar segments; flat dorsal surface of thorax (fig. 1, 2, 5, 8, 11). *I. bouceki* (fig. 1, 13–15) is also similar to these species, but is a parasite of another host (*Tetramesa*) (Zerova, Seryogina, 1997).

Key to the species of *Idiomacromerus* reared from flower heads of Asteraceae in Israel and some other plants in Ukraine

Таблица для определения видов *Idiomacromerus*, выведенных из соцветий Asteraceae в Израиле и некоторых других растений в Украине

- 1 (2). Antenna with two distinct anelli (fig. 1, 1–3). *I. pulcher* (Zerova et Seryogina)
 2 (1). Antenna with one anellus and 2–4 anelliform segments.
 3 (4). The apex of club with apical process (fig. 1, 14). *I. bouceki* (Zerova et Seryogina)
 4 (3). The apex of club without distinct apical process.

- 5 (6). Two basal flagellar segments very short, anelliform (fig. 1, 5). Ovipositor 1.5 times as long as hind tibia (fig. 1, 4, 6). *I. lysander* (Szelényi)
- 6 (5). At least three basal flagellar segments very short anelliform.
- 7 (8). Postmarginal vein distinctly (1.5 times) longer than stigmal (fig. 1, 9). Ovipositor more than 1.39 (1.43) times as long as hind tibia. *I. artusis* sp. n.
- 8 (7). Postmarginal vein slightly (1.25 times) longer than stigmal (fig. 1, 12). Ovipositor less than 1.39 (1.35) longer than hind tibia. *I. persimilis* sp. n.

References

- Szelényi G.* Two new species of *Liodontomerus* Gah. (Hym., Chalcidoidea) // *Acta Zoologica Academiae Scientiarum Hungaricae*. — 1959. — 5, N 1–2. — P. 141–146.
- Zerova M. D., Seryogina L. Ya.* New Palearctic species of Chalcidoidea wasps from the Genus *Liodontomerus* (Hymenoptera, Torymidae) // *Zoologicheskij Zhurnal*. — 1997. — 76, N 8. — P. 970–974. — Russian : *Зерова М. Д., Серегина Л. Я.* Новые палеарктические виды хальцидоидных наездников рода *Liodontomerus* (Hymenoptera, Torymidae) // *Зоологический журнал*.

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