

Two new species of *Idiomacromerus* Crawford (Hymenoptera, Chalcidoidea, Torymidae) from Spain

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Two new species of Idiomacromerus Crawford (Hymenoptera, Chalcidoidea, Torymidae) from Spain.— Two new species of *Idiomacromerus* are described from the Monegros region. One species, *I. conicollis*, has a conical pronotum and is partly brachypterous, the first example of wing reduction to be recorded in Torymidae; the second species, *I. longicornis*, is a parasitoid in cecidomyiid (Diptera) galls on *Salsola* and is characterized by long antennae and ovipositor and a bicoloured thorax.

Key words: Hymenoptera, Chalcidoidea, Torymidae, *Idiomacromerus conicollis* n. sp. *Idiomacromerus longicornis* n. sp., Brachyptery.

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Introduction

Most of the twenty-three already known Palaearctic species of *Idiomacromerus* Crawford, 1914 were originally described in *Liodontomerus* Gahan, 1914, the latter being a junior synonym of *Idiomacromerus* by 81 days (GRISSELL, 1995).

In this paper two interesting new species are described, one of which provides the first recorded instance of brachyptery in Torymidæ. Both new species were found by J. Blasco-Zumeta in the Retuerta de Pina in the Monegros region (Zaragoza) of Spain.

Descriptions of new species

Idiomacromerus conicollis n. sp. (figs. 3-5)

Female

Body brown, weakly metallic with mainly violet reflections, weak green reflections from head and scutellum; antenna and legs brown with bases and apices of tibiae, and tarsal segments 1-3(4) stramineous; forewing brownish at base and in a transverse band below parastigma. Length including ovipositor 1.8-2.3 mm (ovipositor 0.27-0.30 mm).

Head in dorsal view 2.1 times as broad as long, 1.6 times as broad as mesoscutum; in facial view 1.05 times as broad as high. Ocelli small, posterior ocellus separated from adjacent orbit by over twice its diameter. Eye twice as long as malar space. Face below toruli with rather sparse, short, scale-like hairs. Lower edge of torulus above level of lower ocular line. Scape not reaching anterior ocellus; combined length of pedicel plus flagellum (fig. 4) 1.13 times breadth of head; pedicel twice as long as broad; flagellum clavate, the first and second segments anelliform, transverse; six funicle segments, the first (F1) narrower than pedicel and F2 but with sensillae, all funicles at least slightly transverse, each with a single transverse row of sensillae; clava slightly more than twice as long as broad. Mouth opening 1.45 times malar space. Occipital carina distinct (but weak) above foramen magnum.

Mesosoma in dorsal view 2.2 times as long as broad, shining, with weak and rather open reticulate sculpture, sparsely pubescent; pronotum conical with sides

evenly but shallowly convex, medially fully half length of mesoscutum; notauli shallow posteriorly, intercepting posterior margin of mesoscutum at or very slightly mesad of scutello-axillary sutures; scutellum about 1.15 times as long as broad, transversely vaulted; propodeum medially 0.6 times length of scutellum, smooth with a few short anterior carinulae, no spiracular sulcus. Mesosoma in profile (fig. 3) almost twice as long as high with dorsal surfaces of pronotum and mesoscutum smoothly joining; pronotum conical, anterior margin of front coxal insertion almost equidistant from foramen magnum and mesoscutal dorsum, scutellum gibbous. Front femur stout, 2.7 times as long as broad; hind femur 3.8 times as long as broad; hind tibia with only a single apical spur discernible.

Wings more or less shortened, forewing (figs. 3, 5) varying between reaching only apex of first gastral tergite, to extending to the fifth gastral tergite (as in holotype); lengths (in type) of costal cell: marginal vein: stigmal vein: postmarginal vein as 210:114:23:7 [in highly brachypterous specimens (fig. 3), the wing beyond the stigma is especially shortened]; speculum large, closed below only distally; basal vein with 2-4 hairs; cubital vein beneath basal cell with 1-6 hairs.

Gaster (excluding ovipositor) about 0.85 times as long as rest of body; tergites with weak sculpture, not apically excised; T1 constricted; hypopygium at about half gastral length; ovipositor just over one quarter length of rest of gaster.

Male

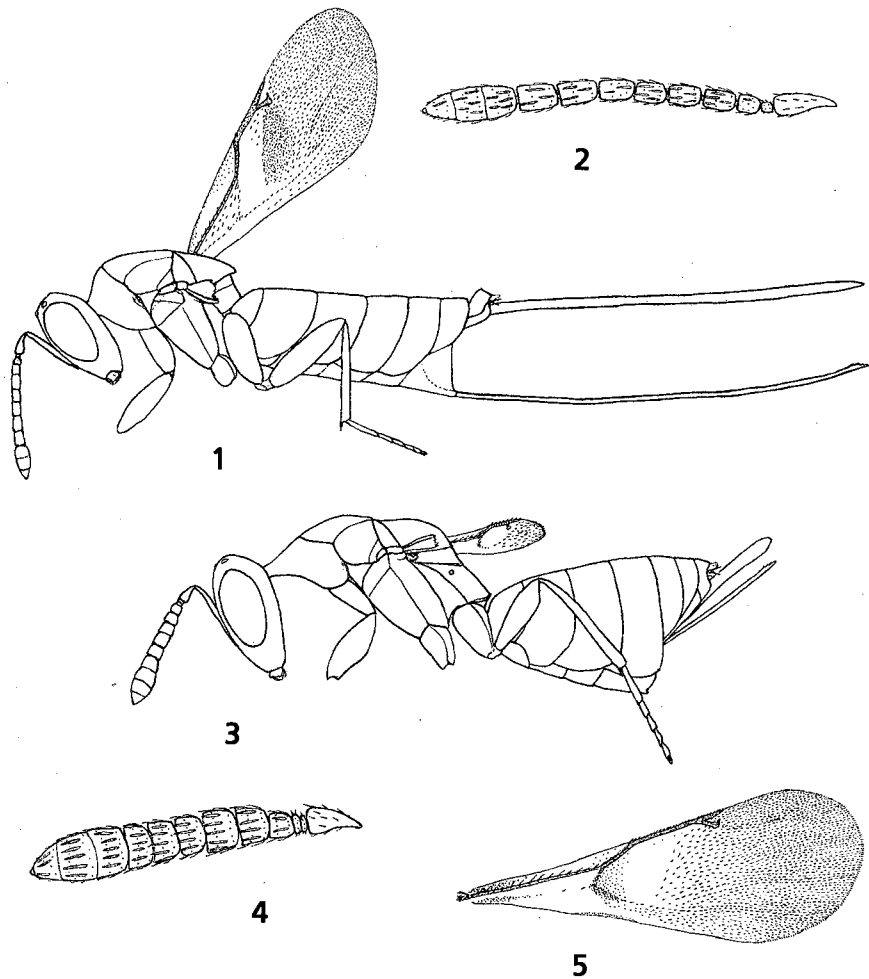
Resembles female in colour. All four examples seen are highly brachypterous. Eye normal, 2.15 times as long as malar space. Antenna with flagellum clavate, narrow basally with third flagellar segment anelliform, lacking sensillae.

Holotype

♀, Spain, Zaragoza, Pina de Ebro, Retuerta de Pina, 10 V 1992, pitfall trap with vinegar, J. Blasco Zumeta leg. Deposited in the Natural History Museum (London).

Paratypes

6♀ 1♂, same data as holotype; 3♀ 3♂, as holotype except that collected 25 IV 1992, J.



Figs. 1-5. *Idiomacromerus longicornis* n. sp.: 1. Body of female from left; 2. Left pedicel and flagellum. *Idiomacromerus conicollis* n. sp.: 3. Body of brachypterous female from left; 4. Left pedicel and flagellum; 5. Right forewing of macropterous specimen (scale as in figure 3).

Idiomacromerus longicornis sp. n.: 1. Cuerpo de hembra por la izquierda; 2. Pedicelo y flagel·lum izquierdos. *Idiomacromerus conicollis* sp. n.: 3. Cuerpo de hembra braquiptera por la izquierda; 4. Pedicelo y flagel·lum izquierdos; 5. Ala anterior derecha de un especimen macróptero (escala como en la figura 3).

Blasco-Zumeta leg. Deposited in the Natural History Museum (London), Royal Museum of Scotland (Edinburgh) and the author's collection.

Additional material

One ♀, same locality as holotype, collected in a Malaise trap emptied 24 V 1991, J. Blasco-Zumeta leg. This specimen is not included in

the type series because it differs in having almost fully-developed wings (fig. 5) with their apices almost reaching apical margin of T5, and stronger body sclerotisation with head greenish, pronotum yellowish and only weakly metallic, and rest of thorax with purplish to greenish reflections. Ratio of vein lengths marginal: stigmal: postmarginal as 170:38:73.

Discussion

The relatively long marginal vein in the holotype, 3.1 times as long as the postmarginal vein, does not accord with GRISSELL'S (1995) characterization of *Idiomacromerus*, but the shorter marginal vein (2.3 times post-marginal) in the more normal-winged specimen taken in a Malaise trap, together with the weak development of the occipital carina, and other characters, indicate that the new species is attributable to *Idiomacromerus*.

In this genus, *I. conicollis* is distinguishable by its indistinct, weak and shining body sculpture combined with a long and conical pronotum. Only *I. splendidus* (Szelényi) has similar shining sculpturation (in other describe species, head and thorax are densely, strongly reticulate and dull), but its pronotum is not conical and it has a posterior collar region with, in dorsal view, subparallel sides. The conical pronotum of *I. conicollis* is a feature shared, to a greater or lesser degree, with *I. nitens* (Bouček) and *I. lysander* (Szelényi), but both of these latter species have dense and dull body sculpture.

Biology

Brachypterous forms have not, to my knowledge, been previously reported in Tormyidae. In *I. conicollis* wing development is variable to the extent that some individual are able to fly whilst others can not. The host of *I. conicollis* is unknown but is probably either subterranean or found on the surface of the ground and it may, since most of the material was captured in pitfall traps charged with vinegar, be associated with acetic acid.

Idiomacromerus longicornis n. sp. (figs. 1, 2)

Female

Head metallic bronze green; scape varying from pale only at base to testaceous with

only apex of dorsal surface darkened; thorax bicoloured, reddish yellow and metallic bronze-green, the extent of pale coloration variable, in dark specimens (as holotype) restricted to small patches on the prothorax in front of the spiracles and to just below the wing insertions, in pale specimens occupying all of the thorax (but no part of the head) except the mesopleuron and the antero-median part of the mesoscutum. Forewing with elliptical brown mark (sometimes faint) from stigma along distal edge of speculum. Legs reddish yellow in pale specimens, in dark specimens hind coxa and sometimes middle coxa metallic. Gaster non-metallic, brownish, with broad transverse yellow stripes which are reduced to spots in dark specimens. Length including ovipositor 3.0-5.0 mm ovipositor (1.4-2.4 mm).

Head in dorsal view 1.8 times as broad as long, 1.1 times as broad as mesoscutum; in facial view 1.13 times as broad as high. Eye about 3.4 times as long as malar space. Face below toruli with conspicuous, flattened, white, scale-like hairs which are also on inner orbits and lateral margins of scrobes. Lower edges of toruli distinctly below level of lower ocular line. Scape not reaching anterior ocellus; combined length of pedicel plus flagellum (fig. 2) 1.3 times breadth of head; pedicel in profile almost three times as long as broad; first flagellar segment anelliform, transverse to quadrate; second flagellar segment slightly longer than broad almost as broad as third segment and with one or two linear sensillae (in small specimens the second flagellar segment may be anelliform, lacking sensillae, and much smaller than third flagellar segment); flagellar segments 3-8 longer than broad, separated by short peduncles and not compacted, each with two irregular transverse rows of sensillae; clava ovate, 2.8 times as long as broad. Mouth opening 1.5 times malar space. Occipital carina absent.

Thorax in dorsal view 1.4 times as long as broad with strong, dense, dull reticulate sculpture and white scale-like pubescence; notauli intercept posterior margin of mesoscutum laterad of scutello-axillary sutures, scutellum slightly longer than broad. Propodeum (fig. 1) short, medially

less than 0.2 times length of scutellum, very weakly reticulate with several, short, anterior, longitudinal carinulae. Front femur 3.4 times, hind femur 3.3 times as long as broad; hind tibia with two apical spurs, the inner almost as long as apical width of tibia, the outer hardly half length of inner.

Forewing (fig. 1) with lengths costal cell: marginal vein: stigmal vein: postmarginal vein as 80:29:12:16. Cubital hair row complete beneath basal cell and speculum; basal vein and cell pilose; speculum moderately large; space between stigma and postmarginal vein bare.

Gaster (fig. 1) elongated, excluding ovipositor about 1.2 times as long as rest of body; tergites alutaceous with apical margin of T1 excised (in dried specimens T1-T3 appear excised but this is an artefact of gastral shrinkage and pigmentation of the tergites; dissections show that only T1 is excised).

Male

Varies in colour like the female; wings hyaline. Hairs on head and thorax shorter and sparser than in female and not scale-like. Eyes small, only about 1.4 times as long as malar space. Antennal flagellum very narrow proximally, gradually expanding distally and equalling width of pedicel at flagellar segment 5; clava about 3.0 times as long as broad.

Holotype

One ♀, Spain, Zaragoza, Pina de Ebro, Retuerta de Pina, reared from gall of *Stefaniola salsolae* (Tavares) collected 19 I 1992 from *Salsola vermiculata* L., J. Blasco-Zumeta leg. Deposited in the Natural History Museum (London).

Paratypes

Five ♀ 15♂ same data as holotype; also same data except different gall collection dates 8♀ 4♂ ex galls collected 22 VIII 1991, 7♀ 16♂ ex galls collected 28 VIII 1991, 7♀ 11♂ ex galls collected 9 II 1992, 5♀ 5♂ ex galls collected 22 V 1992, 1♂ ex gall collected 13 V 1993 (all J. Blasco-Zumeta leg.). Deposited in the Natural History Museum (London), Royal Museum of Scotland (Edinburgh) and the author's collection.

Additional material

Same locality as holotype and paratypes, 2♀ in Malaise trap emptied 20 VI 1991, 1♂ in colour water trap 7 VI 1991, 2♀ swept from *Thapsia villosa* L. 1 VI 1991, 1♀ swept from *Santolina chamaecyparissus* L. 28 V 1992 (all J. Blasco-Zumeta leg.).

Discussion

I. longicornis differs from other species belonging to *Idiomacromerus* and listed by GRISSELL (1995) in having an elongated flagellum with just a single anellus (at least in larger specimens), reduced male eyes, and excision first gastral tergite in female. The long ovipositor is a character which *I. longicornis* shares with *I. terebrator* (Masi) and *I. longfellowi* Girault but it differs from both of these in having a more elongated flagellum and partly pale-marked thorax.

Biology

Material included in the type series was all reared from galls of the cecidomyiid *Stefaniola salsolae* developing on *Salsola vermiculata*. Several other parasitoids were reared from galls of this midge, including *Ormyrus monegricus* Askew and *Mesopolobus maculipennis* (Mercet), but *I. longicornis* was easily the most numerous.

Idiomacromerus species have been reared as parasitoids of phytophagous Eurytomidae and of gallicolous Cynipidae, but rarely [*I. balasi* (Szelényi)] of Cecidomyiidae (GRISSELL, 1995).

Resumen

Dos nuevas especies de Idiomacromerus Crawford (Hymenoptera, Chalcidoidea, Torymidae) de España

Se describen dos nuevas especies de *Idiomacromerus* de la región de los Monegros. Una de ellas, *I. conicollis*, tiene un pronoto cónico y es parcialmente braquíptera, el primer ejemplo de reducción de las alas mencionado en los Torymidae (figs. 3-5). La segunda especie, *I. longicornis*, es un parasitoide de agallas de cecidomiidos (Diptera) en ejemplares de *Salsola* y se caracteriza por sus largas antenas y ovipositor y un tórax bicolor (figs. 1, 2).

Acknowledgements

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Reference

GRISSELL, E. E., 1995. Torymina (Hymenoptera: Chalcidoidea: Torymidae) a redefinition, generic classification, and annotated world catalog of species. *Memoirs on Entomology International*, 2: 1-470.
