

**A new species of *Eridontomerus* with taxonomic  
and faunistic notes on some other taxa  
(Hymenoptera: Chalcidoidea: Torymidae)**

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**Abstract.** A new species, *Eridontomerus cyaneus* sp. nov., from Spain is described and illustrated. The male of *Torymus nemorum* Bouček, 1994, is described for the first time. New faunistic records of *Ecdamua cadenati* (Risbec, 1951) and *E. macrotelus* Walker, 1862, are given. *Diomorus magnificus* Risbec, 1955, syn. nov. is synonymized with *E. macrotelus*. The following new combinations are proposed: *Ecdamua macrotelus africanus* Risbec, 1955, comb. nov., *E. m. vassei* Risbec, 1955, comb. nov., and *E. m. congoanus* Risbec, 1955, comb. nov.

**Key words.** Taxonomy, new species, *Eridontomerus*, *Torymus*, *Ecdamua*, *Diomorus*, faunistics, Europe, Czech Republic, Spain, Africa, Botswana, Cameroon, Gambia, Ghana, Madagascar, Mauritius, Zambia, Zimbabwe

### Introduction

The genus *Eridontomerus* Crawford, 1907, includes 13 described species all of which occur in the Palaearctic region, and two of them are recorded also from the Nearctic region (GRISSELL 1995, NOYES 2005). The two Nearctic species, *E. isosomatis* (Riley, 1882) and *E. biroi* Ruschka, 1923, were considered as introduced, being distributed only in the USA (GRISSELL 1995).

The bionomy of *Eridontomerus* species is poorly known. Generally they have been reared from larvae of *Tetramesa* Walker, 1848 (Hymenoptera: Eurytomidae) feeding in grass stems of various Poaceae (GRISSELL 1995). ZEROVA & SERJOGINA (1999) reported *E. fulviventris* Erdős, 1954, in association with the plant genus *Centaurea* (Asteraceae) and PECK (1963) listed a gall midge, *Mayetiola destructor* (Say, 1817) (Diptera: Cecidomyiidae), as one of the many hosts of *E. isosomatis*.

The aim of the present paper is to describe a new species of *Eridontomerus*, frequently collected by Zdeněk Bouček and Antony Watsham in Spain during the 1970s. The description

of the male of *Torymus nemorum* Bouček, 1994, collected in the Czech Republic as well as new faunistic records for *Ecdamua cadenati* Risbec, 1951, and *E. macrotelus* Walker, 1862, are included, and a new synonym for *E. macrotelus* is proposed.

## Material and Methods

The following acronyms are used for museums in which the examined specimens are deposited (curator in brackets):

NMPC National Museum, Praha, Czech Republic (J. Macek);  
 BMNH Natural History Museum, London, United Kingdom (J. S. Noyes);  
 MNHN Museum National d'Histoire Naturelle, Paris, France (C. Villemant).

The exact label data are cited for name-bearing types. A double slash (//) divides data on different labels and a single slash (/) those on different rows.

The terminology used in the text follows GIBSON et al. (1997) and GRISSELL (1976) including all abbreviations for morphological structures. Abbreviations used in the text:

OD lateral ocellus diameter;  
 OOL distance between posterior ocellus and eye;  
 POL distance between posterior ocelli;  
 OI ovipositor index (ratio of length of ovipositor to length of hind tibia);  
 Gt<sub>1-n</sub> gastral tergum 1-n;  
 Fl<sub>1-7</sub> flagellar segment 1-7.

## Taxonomy

### *Eridontomerus cyaneus* sp. nov.

(Figs. 1-5)

**Type locality.** Spain, Castellon province, Benicasim.

**Type material.** HOLOTYPE: ♀, 'SPAIN: Castellon / Benicasim, 13-15. / vi.1973. Z.Bouček' (BMNH). PARATYPES: 4 ♀♀ 1 ♂, same label data as holotype (BMNH); 1 ♀, 'SPAIN: Castellon / Benicasim, 13-15. / vi.1973. A. Watsam' (BMNH); 1 ♀ 3 ♂♂ 'SPAIN (Castellon): / Benicasim, 22-24. / vi.74 Z.Bouček' (BMNH, NMPC); 1 ♀ 1 ♂ 'SPAIN: Toledo / 6.vii.1974 / Z.Bouček' (BMNH); 2 ♀♀ 'SPAIN: Madrid / El Pardo / 29.vi.1973 // Z.Bouček / BM1973-312' (BMNH); 3 ♀♀ 1 ♂ 'SPAIN (Madrid): / El Pardo, 10.vii. / 1974 Z.Bouček' (BMNH); 2 ♀♀ 4 ♂♂ 'SPAIN (Granada): / Cubillas, 4.vii. / 1974 Z.Bouček' (BMNH); 1 ♀ 'SPAIN: Burgos / Arranda de Duero / 1.vii.1973 Z. Bouček' (BMNH, NMPC).

**Description. Female.** Length of body 2.3-2.9 mm (holotype 3.25 mm), length of ovipositor 0.5-0.6 mm (holotype 0.5 mm).

Colouration and diagnosis. Antennae pale brown, with basal part of scape testaceous; head and mesosoma clearly metallic blue with blue-violet tint; coxa, femur, hind tibia and partly fore and mid tibia dark coloured with bright violet reflection; tarsi yellow except dark last tarsal segments and claws; gaster and ovipositor dark, sometimes with slight blue-violet metallic tint in distal one quarter. Head and mesosoma coarsely reticulate, densely covered with silver setae. Gaster entirely visible reticulate from dorsal and lateral view. Ovipositor more

than 0.33 times length of gaster. Tegula dark with slight metallic tint. Wings hyaline, venation pale yellow, only parastigma and apical part of submarginal vein slightly brownish.

Head transverse, about 1.2 times as wide as thorax, 2.2-2.3 (holotype 2.28) times as wide as long in dorsal view, 1.35-1.38 times as wide as high in frontal view (holotype 1.38); temples strongly converging, 0.12-0.15 times as long as length of head (holotype 0.13) (Fig. 1). Vertex more coarsely and densely reticulate than face, scrobal depression distinctly reticulate. Anterior margin of clypeus straight. Malar space 0.42-0.48 times length of eye (holotype 0.42 times), mouth 1.5-1.8 times malar space (holotype 1.72 times). Ratio POL : OOL 2.3-2.6, OOL : OD 1.25-1.5 (holotype POL : OOL 2.55, OOL : OD 1.29). Eyes densely setose. Antenna with scape not reaching anterior ocellus; flagellum strongly clavate, with one anellus; anellus and flagellar segments strongly transverse; first funicular segment as wide as pedicel, following flagellar segment always slightly wider than previous one, each of them covered with one row of longitudinal sensilla. Clava 1.6 times as long as wide (Fig. 2). Head entirely covered with protruding silver setae which are more dense in genal area.

Mesosoma about 1.5 as long as wide, dorsally with conspicuously coarser reticulation and longer protruding setae than on vertex. Mesoscutum with well visible, deep notauli. Scutellum about as long as wide, in outline nearly circular; basal part widely joining posterior part of midlobe of mesoscutum. Propodeum finely reticulate, except for shiny smooth median part delimited by two complete carinae and one incomplete one between them. Propodeal spiracles small and oval. Lateral part of mesosoma, except for smooth epimeron and coxae, finely reticulate. Femora stout, hind femur serrate on posterior margin, bearing two or three small teeth (Fig. 3). Forewing hyaline, 2.3-2.5 times as long as wide (holotype 2.4 times). Costal cell bare dorsally, with dense yellow-white setae ventrally; basal cell with one, at apex rarely with two rows of setae below submarginal vein; speculum reaching to the end of parastigma; disc of forewing in part below marginal vein seemingly bare, sparsely covered with long and pale setae, the rest of disc more densely, darkly and shortly setose; cubital setal line and basal setal line complete. Marginal vein 1.95-2.2 times as long as postmarginal vein (holotype 2.2 times) and 2.6-3 times as long as stigmal vein (holotype 2.9 times) (Fig. 4).

Metasoma. Gaster only slightly shorter than head plus mesosoma, dorsally as wide as mesosoma, 1.7 times as long as wide, ovate; sculpture of gaster alutaceous but clearly visible on each tergum, distinctly coarser laterally than dorsally. Lateral panels of gastral terga densely setose, with only a few setae visible on  $Gt_2$  to  $Gt_6$  in dorsal view. Hind margin of  $Gt_1$  indistinctly and  $Gt_2$  more deeply emarginate medially but not incised, hind margin of other gastral terga straight (Fig. 5). Ovipositor about 0.36-0.4 times (holotype 0.39 times) as long as gaster (OI 0.7-0.9, holotype 0.7).

**Male.** Length of body 1.9-2.4 mm.

The same as female except as follows: Antenna with scape and pedicel entirely dark with slightly metallic colour; tegula dark with slight metallic tint. Flagellum dark brown. Head about 1.13-1.2 times as wide as thorax, 2.0-2.18 times as wide as long in dorsal view; temples 0.15-0.2 times length of head. Ratio POL : OOL 2.7-2.9, OOL : OD 1.0-1.2. Clava 1.5-1.8 times as long as wide, micropilosity area extending along whole ventral part of clava. Mesosoma not so strongly reticulate dorsally, more shiny than in female. Scutellum 1.2-1.35 times as long as wide, more narrowly joining mesosoma. Propodeum finely reticulate, with only

one carina medially. Hind femur finely serrate on posterior margin. Forewing 2.00-2.15 times as long as wide; all setae on forewing pale yellow; marginal vein 1.8-2.0 times as long as postmarginal vein, 2.5-3.0 times as long as stigmal vein. Sculpture of gaster finely alutaceous, more shiny than in females. Hind margin of  $Gt_1$  and  $Gt_2$  more or less incised medially.

**Variability.** The ranges in all measurements are given above; the variation in colour is as follows: scape from partly (in basal half) to entirely testaceous, with or without metallic tint, but always more darkened in the distal part of scape. Lateral parts of thorax and gaster dark testaceous in some specimens, without metallic reflection and blue colouration. Gaster reticulation finer and barely visible in the distal part of dorsal side of  $Gt_1$  and  $Gt_2$ , emargination of  $Gt_1$  and  $Gt_2$  sometimes deeper than in holotype, especially more or less incised in males.

**Differential diagnosis.** The new species differs from the remaining species of *Eridontomerus* by the combination of the following characters: thorax clearly blue-violet at least in dorsal part, covered with silver setae; venation of wings predominantly pale yellow; disc of wing below the marginal vein with sparse setation; body generally robust. According to the original description by ZEROVA & SERJOGINA (1999), the new species seems to be similar to *E. sapphyrinus* Zerova & Serjogina, 1999, but the latter species has the flagellum less clavate, with longer segments, hind margins of  $Gt_1$  and  $Gt_2$  are more deeply incised medially, and the body is bright blue-green in colour.

**Etymology.** *Cyaneus* (Greek adjective, latinized) = blue. The species name refers to the blue colour of the body of this species.

**Bionomics.** Unknown.

**Distribution.** Spain.

### *Torymus nemorum* Bouček, 1994

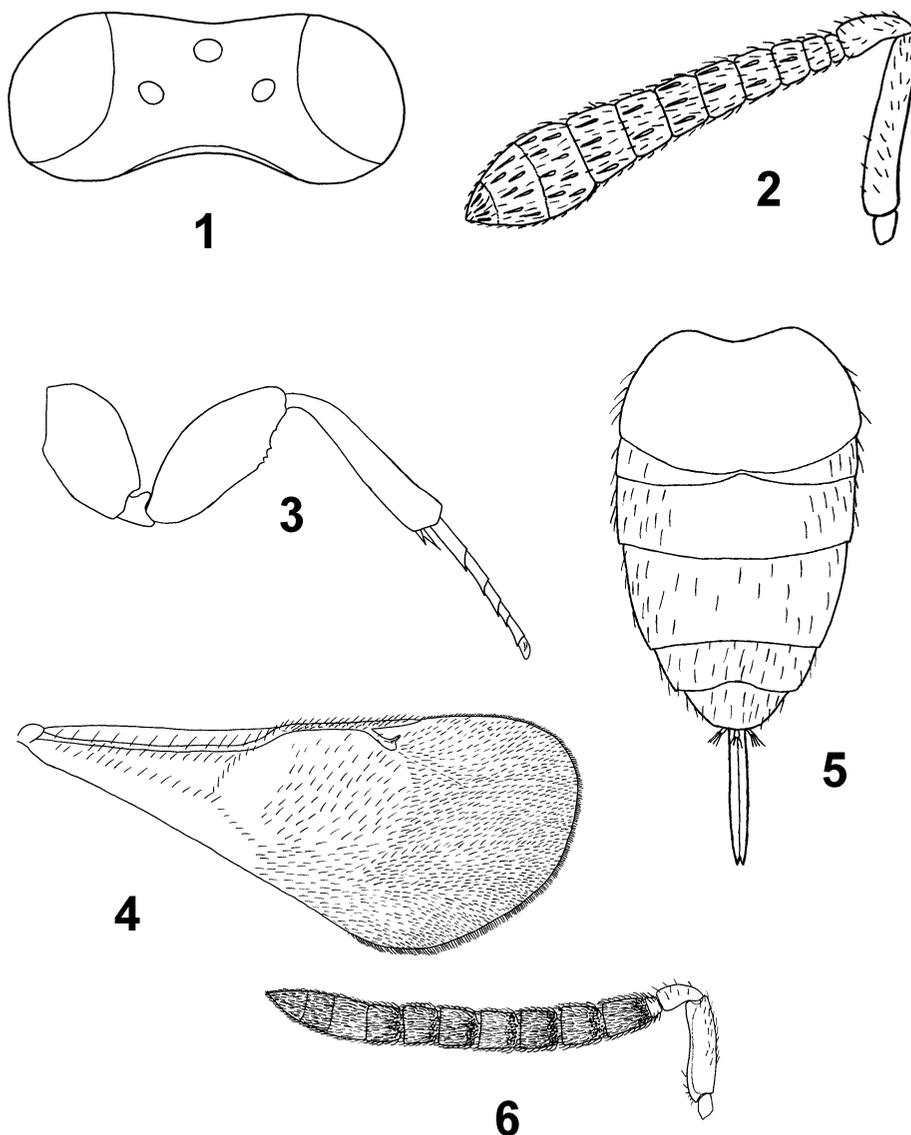
(Fig. 6)

**Material examined.** CZECH REPUBLIC: BOHEMIA centr., Všenory (6051), 26.vii.1988, 1 ♂ 1 ♀, J. Macek lgt., P. Janšta det. (NMPC).

**Description of male.** Body length 3.15 mm. Head with upper part of face, vertex and occiput posteriorly partly coppery, lower face bright green, area of scrobal depression with violet tint; thorax dorsally and laterally as well as coxae predominantly bright green with slightly coppery tint, mid and hind coxa apically, fore coxa ventrally, femora, tibiae and tarsi entirely pale to reddish testaceous, last tarsal segments darker apically; tegula reddish testaceous, darkened at apex, venation reddish testaceous; wings slightly fuscous, not hyaline, covered with dark setae; metasoma dorsally in basal part of  $Gt_1$  partly green to dark coppery, followed by a narrow and inconspicuous reddish testaceous band, more distinct in lateral view of gaster, gaster dark coppery with slightly violet reflection distally.

Head 1.1 times as wide as thorax and about twice as wide as long. Temples converging, about 0.18 length of head. Head 1.27 as wide as high, mouth 1.8 times as wide as malar space, the latter 0.44 length of eye. Eyes with distinct setae (clearly visible using 50x magnification), 1.4 times as long as wide. Ocelli of medium size: POL : OOL 1.74, OOL : OD 1.6. Sculpture of frontoververtex area, best visible between ocelli, slightly rugose with several rather large punctures. Scrobal depression smooth except for a small alutaceous area in the middle. Scrobes slightly projecting laterally up to frontofacial area, producing small but visible protuberance

below each lateral ocellus. Vertex covered by dark setae, these pale to whitish on face. Antenna as follows: pedicel plus flagellum 1.4 times length of head, scape slightly extended in the basal part, finely sculptured except for narrow smooth ventral stripe ventrally, reaching to the middle of anterior ocellus, 4.4 times as long as wide. Pedicel 1.7 times as long as high, not as



Figs. 1-6. 1-5 – *Eridontomerus cyaneus* sp. nov., female. 1 – head, dorsal view; 2 – antenna, lateral view; 3 – hind femur, anterior view; 4 – forewing, dorsal view; 5 – gaster, dorsal view. 6 – *Torymus nemorum* Bouček, 1994, male antenna, lateral view.

wide as first funicular segment, anellus 2 times as long as wide. Flagellum rather filiform,  $F_5$  and  $F_6$  quadrate,  $F_7$  slightly transverse (ratio of measurements of  $F_1$ - $F_7$ : 12.5/10.0, 11.5/10.5, 11.5/10.5, 12.0/10.5, 11.0/10.5, 11.0/11.0, 9.5/10.0), clava 3 times as long as wide, without conspicuous micropilosity area (Fig. 6).

Thorax densely setose dorsally except for bare area medially on scutellum. Dorsum of thorax coarsely rugulose with piliferous punctures on distal part of mesoscutum and on scutellum. Scutellum slightly convex basally in lateral view, 1.2 times as long as wide, joining mesoscutum at one small point. Propodeum with raised oblong rounded reticulation medially, 3.4 times as wide as long. Hind coxae enlarged and massive, 2.4 times as long as wide and bare dorsally. Forewing densely setose on disc, basal cell dorsally with several setae in upper half and along basal setal line, speculum extended just below parastigma (marginal vein : postmarginal vein : stigmal vein – 48:11:7).

Gaster not compressed laterally, dorsally with hind margins of gastral terga straight.

**Differential diagnosis.** In the key by GRAHAM & GIJSWIJT (1998) the male of this species fits the male of an unidentified species '*T. ?abberant ventralis*' (couplet 47). The male of *T. nemorum* differs from *T. ventralis* (Fonscolombe, 1832) in having the scape reaching the middle of anterior ocellus, vertex more distinctly reticulate with several close and quite large punctures, small protuberances below lateral ocelli, thorax dorsally with coarsely rugulose sculpture with piliferous punctures on distal part of mesoscutum and scutellum, propodeum coarsely raised-reticulate and legs reddish testaceous.

**Bionomics.** Unknown (BOUČEK 1994).

**Distribution.** This is probably a rare species, collected so far only in a few localities in the Czech Republic (Moravia: Lednice (7166), Bohemia: Trabice hill (5350) near Ústí nad Labem (BOUČEK 1994), and Všenory).

### *Ecdamua cadenati* (Risbec, 1951)

*Plesiostigmus cadenati* Risbec, 1951: 321-323.

*Ecdamua cadenati*: BOUČEK (1976): 347, GRISELLE (1995): 188, ZAVADA (2005): 158.

**Material examined.** CAMEROON: Bamenda Hosp., 4,800', 7.xii.1937, M. D. W. Jeffrys (1 ♂ 1 ♀, BMNH).

GAMBIA: Fajara, 26.i.1978, L. Huggert (1 ♀, BMNH). GHANA: Tafo, 14.iv.1961, M. R. Smith, R. Eady det. (1 ♀, BMNH).

ZAMBIA: Lusaka, vii.1980, R. A. Beaver (1 ♀, BMNH).

ZIMBABWE: Salisbury (= Harare), ii.1976, A. Watsham (1 ♀, BMNH).

**Distribution.** Nigeria, Senegal, Sierra Leone, Uganda (BOUČEK 1976, GRISELLE 1995); Niger (ZAVADA 2005). This is a new species for Cameroon, Gambia, Ghana, Zambia, and Zimbabwe.

**Comments.** This species is very similar to *E. macrotelus* Walker, 1862; it differs only in having the basal cell opened distally (without cubital setal line) and possessing a median groove anteriorly on the scutellum (BOUČEK 1976). However, both species are extremely variable (e.g. in colour, body size, sculpture, shape of antennae) and it seems that these characters are not fully reliable. Moreover, the distribution of both species is overlapping. It would be useful to make a detailed morphometric study on a large number of specimens to verify their species status.

### *Ecdamua macrotelus* Walker, 1862

*Ecdamua macrotelus* Walker, 1862: 388.

*Ecdamua macrotelus*: BOUČEK (1976): 347, GRISELLE (1995): 188, ZAVADA (2005): 159.

*Diomorus magnificus* Risbec, 1955a: 183 (3 ♀♀); **syn. nov.**

*Diomorus magnificus*: RISBEC (1955b): 574.

**Type material.** *Ecdamua macrotelus*: LECTOTYPE: ♀, 'Port Natal [Durban], Republic of South Africa' (BMNH). *Diomorus magnificus*: SYNTYPE ♀ 'Madagaskar / Bekily / III. 30 / A. Seyrig // Museum Paris // P. Janšta & Z. Bouček det.' (MNHN).

**Additional material examined.** **ZIMBABWE:** Salisbury (= Harare), Chishawasha, viii. 1979, A. Watsham (1 ♀, BMNH). Makumbi Miss., iv.1975, A. Watsham (4 ♂♂ 1 ♀, BMNH). **MADAGASCAR:** Bekily, II. 37, A. Seyrig (1 ♀, MNHN). **MAURITIUS:** Rose hill, 29.iii.1933, Ray. Mamet (1 ♀, BMNH). **BOTSWANA:** 18 mls. NE Kalkfontein, 12.-13.iv.1972, Southern African Exp. (1 ♂ 1 ♀, BMNH).

**Distribution.** Kenya, Republic of South Africa, Uganda (BOUČEK 1976, GRISELLE 1995); Sierra Leone (ZAVADA 2005); new for Botswana, Madagascar, Mauritius, and Zimbabwe.

**Comments.** RISBEC's (1955a) description of *Diomorus magnificus* is based on three female syntypes from Madagascar (locality Bekily), one of them collected in March 1930, the other two in April 1933. The species was keyed out in latter paper (RISBEC 1955b) together with three subspecies of *D. magnificus* from the African continent.

Surprisingly, four specimens labeled as *D. magnificus* are deposited in the MNHN. Three of them are the syntypes mentioned by RISBEC (1955a) in his paper and the fourth specimen was only found recently in the collection of the MNHN (C. Villemant, pers. comm.). It was collected at the type locality (Bekily) of the nominotypical subspecies of *D. magnificus magnificus* and is also labeled as a type, marked by a red label with letters 'TYPE'. However, this specimen is obviously excluded from the type series, because its collecting date (February 1937) differs from those cited in the original (RISBEC 1995a).

We studied one of the three syntypes and the fourth specimen mentioned above. Moreover, G. Delvare (pers. comm.) recently confirmed conspecificity of all three syntypes. We confirm that all specimens labeled as types of *D. magnificus*, as discussed above, really fit RISBEC's (1955a) original description of *D. magnificus*. Therefore, we synonymize *D. m. magnificus* with *E. macrotelus*. This, in turn, requires new combinations for the other subspecies of *D. magnificus* described by RISBEC (1955b): *Ecdamua macrotelus africanus* Risbec, 1955, comb. nov. (from *Diomorus magnificus africanus*); *E. macrotelus vassei* Risbec, 1955, comb. nov. (from *Diomorus magnificus vassei*); *E. macrotelus congoanus* Risbec, 1955, comb. nov. (from *Diomorus magnificus congoanus*). Unfortunately, it was not possible for us to examine also the syntypes of these subspecies (deposited in the MNHN).

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