

SPECIES OF *IDIOMACROMERUS* CRAWFORD IN TURKEY (HYMENOPTERA: TORYMIDAE: MICRODONTOMERINI)

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ABSTRACT: In Turkey 25 species of *Idiomacromerus* Crawford 1914 (Hymenoptera: Torymidae), were found in several parts of Turkey. The species are: *I. curticaudatus* (Szelenyi) (new record); *I. papaveris* (Förster, 1856), *I. akdenizeus* (Doğanlar), elevated as distinct species from synonyms list of *I. papaveris* (new status) and, 22 of them as new species: *I. yumusi* sp. nov., *I. sebnemae* sp. nov., *I. gumusensis* sp. nov., *I. selimensis* sp. nov., *I. aladagensis* sp. nov., *I. erzurumensis* sp. nov., *I. golbasinensis* sp. nov., *I. lutfiyeae* sp. nov., *I. aslihanae* sp. nov., *I. zerovae* sp. nov., *I. nigdenensis* sp. nov., *I. haliti* sp. nov., *I. oguzhani* sp. nov., *I. mbahadiri* sp. nov., *I. uguranlari* sp. nov., *I. neslihanae* sp. nov., *I. zeynepbanuae* sp. nov., *I. gozuaciki* sp. nov., *I. hasandagus* sp. nov., *I. turhalensis* sp. nov., *I. karakurtensis* sp. nov., *I. fursovi* sp. nov.. The following species were transferred to *Pseudotormus* as new combinations: *P. urospermi* (Askew 2004), *P. semiaeneus* (Szelenyi 1957) and *P. bouceki* (Zerova & Seryogina, 1997), and the following ones to *Microdontomerus* as new combinations: *M. mesoplanus* (Askew & Nieves-Aldrey 2007), *M. ephedricola* (Askew 2000) and *M. longicornis* (Askew 1997). *Idiomacromerus pannonicus* (Ruschka, 1923) was moved from the torymid list of Turkey. The new species were described and diagnostic characters were illustrated, and an identification key for the 48 palearctic species was provided.

KEY WORDS: *Idiomacromerus* spp., Torymidae, key, Turkey

The genus *Idiomacromerus* was described by Crawford (1914) having type species *Idiomacromerus bimaculipennis* Crawford, 1914 by monotypy. Grissell (1995) recorded *Idiomacromerus* as valid genus in the tribe Microdontomerini (Torymidae), and gave its synonyms, such as: *Liodontomerus* Gahan, 1914, *Liotorymus* Steffan, 1962, *Lochimerus* Szelenyi, 1957, *Lochites* Förster, 1856, (Junior primary homonym of *Lochites* Gistel, 1844), *Lochitisca* Ghesquière, 1946 (Replacement name for *Lochites* Förster, 1856 nec Gistel, 1848). Up to now forty three species of *Idiomacromerus* are distributed worldwide, forty of them were present in the Palaearctic (32 spp. from Europe, 11 spp. from the Middle East, 3 spp. from Caucasus), four from several regions (Noyes, 2014). Sixteen species have been recorded from Ukraine and adjacent countries alone (Zerova & Seryogina, 1999) and only two species have been recorded from Turkey, such as: *Liodontomerus pannonicus* Ruschka which was synonymized with *Idiomacromerus pannonicus* Ruschka by Grissell (1995) was recorded by Doğanlar (1984) (Öncüer (1991) and Grissell (1995) followed that record, by this work it was found that it was a misidentification of a new species), and *Ameromicrus akdenizeus* was described from Adana, Turkey by Doğanlar (1989), and later it was recorded as synonym of *Idiomacromerus papaveris* (Förster) by Zerova & Seregina (2001). By this work *I. papaveris* was found as a different species from *A. akdenizeus*, and it was recorded again in some parts of Turkey.

Most species are associated with gall wasps, exclusively in the tribe Aylacini (herb gall wasps) (Askew, 1997, 2000; Askew et al., 2004; Zerova & Seryogina, 1997, 1999), and with cynipids inhabiting cryptic stem galls is particularly rich,

with several species specifically associated with different ayacine species on Asteraceae (Askew et al., 2004).

In this work morphological characters of the *Idiomacromerus* species from Turkey were studied and the new species were described, the status of some species were changed. By aids of some morphological characters a new identification key was provided for the species of *Idiomacromerus* in the Palearctic Region.

MATERIAL AND METHOD

This study is based upon examination and identification of the specimens collected from several parts of Turkey. The examined specimens and types were deposited in Insect Museum of Biological Control Station, Yüreğir, Adana, Turkey (IMBC). Specimens were collected by sweeping net and putting the whole contents of the swept materials directly in 96 % ethanol. After sorting the material, individuals were mounted on cards for further morphological studies. The species were identified by following the keys of Szelenyi (1957, 1959), Grissell (1995) and Zerova & Seregina (1999). Wings and antennae of some holotypes and paratypes were slide-mounted in Canada balsam. Photographs of diagnostic characters of the genera were taken by using of Leica DM 500 microscopes with a digital Leica ICC 50 camera attached to it.

Terminology and abbreviations

Morphological terminology follows Gibson (1997). Abbreviations used in the key and descriptions are: OOL= shorter distance between ocello-ocular line, POL= distance between posterior ocelli, F1-6 = funicular segments.

Acronyms of the museum:

IMBC: Insect Museum of Biological Control Station, Yüreğir, Adana, Turkey

MNCN: the Museo Nacional de Ciencias Naturales (Madrid)

HNHM: the Hungarian Natural History Museum

ZIKU: Schmalhausen Institute of Zoology (National Academy of Sciences of Ukraine)

BMNH: British Museum Natural History

USNM: United States National Museum

RESULTS AND DISCUSSION

I have not seen the types but by examining the their descriptions the following species of *Idiomacromerus* were transferred to the genus *Pseuderimerus*, which were fits definition given for the characters by Grissell (1995), i.e., hind tibia with 1 apical spur; the structure of antennal clava of female with apical spicula, anellus in both sexes wider than long and funicle with basal 1-5 segments reduced (appear to be, are, anelli, see figs. 3-4 of Askew (2004) based on those assessments, the species would appropriately be placed as species of *Pseuderimerus*, listed below:

urospermi (Askew). PALEARCTIC: Spain (**New combination**).

Idiomacromerus urospermi Askew, 2004: 145-146 (Figs. 3, 4). Holotype Fem, (MNCN)

The new combination is a result of the study on the illustrations of female habitus and forewing and female antenna given by Askew et al. (2004). ex gall of *Timaspis urospermi* in stem of *Urospermum picroides* collected 29-viii-2002, emerged 16.ix-2003 (J. L. Nieves-Aldrey leg). deposited in the Museo Nacional de Ciencias Naturales (Madrid) (MNCN).

semiaeneus (Széleányi). PALEARCTIC: Hungary.

Lochitimorpha semiaenea Szelenyi, 1957: 386-387 (Fig. A). Holotype fem. Somlovasarhely, Hungary (HNHM) (transferred *semiaenea* to *Pseuderimerus* by Grissell and recorded again in Grissell, 1995: 253). However, Zerova & Seregina (1999) and Askew (2004) recorded it in *Idiomacromerus*.

bouceki (Zerova & Seryogina). PALEARCTIC: Ukraine (**New combination**).

Liodontomerus bouceki Zerova & Seryogina, 1997: 970-971. Holotype fem. ZIKU

Zerova & Seregina (1999) (Figs. 26, 6-8) and Zerova et al. (2013) (Figs. 1, 13-15) recorded it in *Idiomacromerus*.

The following species of *Idiomacromerus* were transferred to the genus *Microdontomerus* which were fits definitoin given for the characters by Grissell (1995), i.e., hind tibia with 2 apical spur, and ventrally without serrations, antenna with 1 anellus (Grissell, 1995), based on those assessments the species would appropriately be placed as species of *Microdontomerus*, listed below:

mesoplanus (Askew & Nieves-Aldrey). PALEARCTIC: Spain (**New combination**).

Idiomacromerus mesoplanus Askew & Nieves-Aldrey, 2007: 386. Holotype fem. Spain, Madrid, Valdemorillo, (Museo Nacional de Ciencias Naturales (Madrid) (MNCN). ex gall of *I. luteipes* in *P. somniferum* stem, collected 6-VI-2004, emerged VI-2004 (J. L. Nieves-Aldrey leg).

ephedricola (Askew). PALEARCTIC: Spain (**New combination**).

Idiomacromerus ephedricola Askew, 2000: 56. Holotype fem. BMNH

longicornis (Askew). PALEARCTIC: Spain, Zaragosa (**New combination**).

Idiomacromerus longicornis Askew, 1997: 68-69. Holotype fem. BMNH.

The new combination is a result of the study on the illustrations of female habitus and forewing and female antenna given by Askew (1997). ex galls of *Stefaniola sasolae* (Tavares) (Cecidomyiidae) on *Salsola vermiculata* L. collected 19-i-1992 (J. L. Blasco-zumeta leg), deposited in BMNH.

***Idiomacromerus* Crawford**

Idiomacromerus Crawford, 1914: 124-125. Type species *Idiomacromerus bimaculatipennis* Crawford (orig. des. and monotypic USNM. The synonym list, distribution and host records were given by Grissell (1995: 85)).

Diagnostic characters: Hind femur simple; the occipital carina absent or weakly expressed; marginal vein 2.0-4.5x as long as stigmal vein; 2 or more anelli, and the unreduced eyes of the male. Additionally, in females, metaterga 2 and 3 are at most somewhat emerginate, in males only metaterga 2 is very slightly emarginate medially (Grissell, 1995).

Key to the paleartic species of *Idiomacromerus* Crawford

1(38) Antennae with 3 or more annelli

2(29) Antennae with 3 annelli (Figs. 2a-j)

3(4) Stigma increased, rounded, brilliant yellow, is considerably brighter than the remaining part of the nervation. Basal segments of funicula yellowish, antannae brown, the body of green. Metatarsi of all tarsi green, coxae, tibiae and pretarsi brownish- yellow. Segments of antennae transverse. Ovipositor index 1.3, ovipositor is equal to approximately 4/5 lengths of the metasoma. 1.5 mm.....*I. eltonicus* (Zerova et Seryogina)

4(3) Stigma normal, of the same colors as the remaining part of the nervation.

5(8) Lines of cubital and basal veins without hair

- 6(7) Forewing with marginal ciliae; front femora somewhat expanded. propodeum thrice as long as metascutum, femora metallic green, tibiae brown; ovipositor a little shorter than metasoma. 2.7-3.1 mm; 2.2 mm.....*I. budensis* (Erdős)
- 7(6) Forewing without marginal ciliae (Fig. 3a); front femora not expanded; Ovipositor 0.84x as long as metasoma (Fig. 1a). Ovipositor index 1.2x; Antenna (Fig. 2a) with F1 as long as F2; pedicel plus flagellum 2.12x as long as scape; club 2.3x as long as width; Forwing (Fig. 3a) marginal vein 2.77x stigmal vein and 1.8x postmarginal vein; antennae yellow; thorax black with greenish reflection, metasoma bronze; femora testaceous, except 1/6 apical yellow, tibiae, tarsi yellow, except last segment black; wing hyaline, veins yellow; hind femora, 2.7x as long as wide.....*I. yunusi* sp. nov.
- 8(5) Lines of cubital and basal veins are designated by numbers of hair; front coxae not expanded.
- 9(12) Body (Figs. 1b, c) bicolored
- 10(11) Head, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, except metasoma with brownish tan, pedicel and ovipositor black, fore wing with brownish maculae below stigmal and submarginal veins, except below marginal vein white. marginal vein 2.3x stigmal vein and 1.6x postmarginal vein. Ovipositor (Fig. 1b) 0.54x as long as metasoma. Ovipositor index 1.0x; fore and hind femora large, expanded 2.7x as long as wide.....*I. sebnemae* sp. nov.
- 11(10) Head, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, except metasoma yellow, antenna brown, except scape yellow, fore wing hyaline (Fig. 3c), marginal vein 1.9x stigmal vein and 1.5x postmarginal vein. Ovipositor (Fig. 3c) 0.38x as long as metasoma. Ovipositor index 0.66x; fore femora expanded 2.8x as long as wide; hind femora long 4.11x as long as wide.....*I. gumusensis* sp. nov.
- 12(9) Body green, blackish with coppery to violet reflection
- 13(18) Ovipositor at least 0.8x as long as metasoma.
- 14(15) Ovipositor 0.8x as long as metasoma; F1 almost as long as F2; flagellum clavate F5 1.7x as wide as long; pedicel plus flagellum 2.5x as long as scape; marginal vein 2.0x stigmal vein and 2.0x postmarginal vein; thorax coppery green, metasoma bronze, with the smoothed strongly bright sculpture; wing slightly infusate below marginal vein; the metasoma (top view) is not wider than thorax. 1.5 mm.....*I. lysander* (Szelenyi)
- 15(14) Ovipositor about 0.9-0.94x as long as metasoma
- 16(17) Body (Fig. 1d) thorax black with greenish reflection with metasoma bronze; fore wings hyaline; Ovipositor (Fig. 1c) 0.9x metasoma. Ovipositor index 1.4x; antenna (Fig. 2d) with pedicel plus flagellum 2.4x as long as scape; anelli strongly transverse, F1- F3 in same length, F4-F5 slightly longer 1.25x longer than F1; funicular segments distinctly transverse, gradually widening F5 twice as wide as long, 1.3x as wide as F1; Fore wing (Fig. 3d) marginal vein 2.5x stigmal vein and 1.36x postmarginal vein; hind femora large, 3.12x as long as wide.....*I. selimensis* sp. nov.
- 17(16) Body black with greenish reflection with metasoma bronze; fore wings hyaline; ovipositor 0.94x metasoma. Ovipositor (Fig. 1e) index 1.5x; antenna (Fig. 2e) with pedicel plus flagellum 2.4x as long as scape; anelli strongly transverse, 3rd anellus distinctly shorter than F1, 3x as wide as length; F1-F5 funicular segments strongly transverse, about 1.75x as wide as length; flagellum clubbed; club 1.67x as wide as F1, 1.7x as long as width. Fore wing (Fig. 3e) with marginal vein 2.83x stigmal vein and 1.5x postmarginal vein; hind femora large, 3.5x as long as wide.....*I. aladagensis* sp. nov.
- 18(13) Ovipositor at most 0.64x as long as metasoma
- 19(20) Body black with greenish reflection with metasoma bronze; fore wings hyaline; propodeum placed almost vertical, propodeum almost nill seen above. Ovipositor (Fig. 1f) 0.64x metasoma. Ovipositor index 1.28x; antenna (Fig. 2f) with pedicel plus flagellum 2.15x as long as scape; anelli transverse, funicular segments distinctly transverse, F1 twice, F5 2.67x as wide as long; funicle slightly widening apically, F5 1.44x as wide as F1. Fore wing (Fig. 3f) with marginal vein 2.5x stigmal vein and 1.5x postmarginal vein; hind femora large, 3.6x as long as wide.....*I. erzurumensis* sp. nov.
- 20(19) Propodeum declined, distinctly visible from above; Ovipositor about as long as 0.5-0.64x metasoma
- 21(22) Ovipositor about as long as 0.5x metasoma; Ovipositor index 1.0x; pedicel plus flagellum 2.63x as long as scape; marginal vein 2.38x stigmal vein and 1.5x postmarginal vein; thorax very dark coppery, nearly black, metasoma blackish with

- bronze luster, with the clear cellular sculpture; propodeum declining, distinctly visible from above; hind femora large, 3.1x as long as wide; 3/5 as wide as respective tibiae, the metasoma (top view) somewhat wider than thorax.1,6 mm.....*I. pannonicus* (Ruschka)
- 22(21) Ovipositor about as long as 0.6x metasoma
- 23(24) Antenna with basal 1/3 of scape, apical 1/4 pedicel and flagellum yellow; Pedicel plus flagellum 2.28x as long as scape; Ovipositor as long as 0.6x metasoma. Ovipositor index 1.0x; antenna with first anellus quadrate, other anelli transverse, F1-F4 funicular almost quadrate, F5 distinctly transverse, 1.86x as wide as long; funicle slightly widening apically, F5 1.62x as wide as F1; marginal vein 1.77x stigmal vein and 1.7x postmarginal vein; wings hyaline; propodeum declining, distinctly visible from above; hind femora large, 3.4x as long as wide; 2/5 as wide as respective tibiae.....*I. grisseli* Zerova & Seregina
- 24(23) Antenna brown, at most scape in basal 1/3 yellow; pedicel plus flagellum at least 2.6x as long as scape
- 25(26) Body (Fig. 1g) coppery greenish, scutellum and propodeum bronz, metasoma brown; antenna brown; fore wings hyaline; Propodeum declined, distinctly visible from above; ovipositor (Fig. 1g) 0.62x metasoma. Ovipositor index 1.16x; Antenna (Fig. 2g) with flagellum clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape reaching slightly below lower edge of median ocellus, 2.75x as long as pedicel; anelli transverse, funicular segments slightly transverse, F1 1.4x, F2-F3 1.3x, F4 1.44x, F5 1.78x as wide as long; scape 4.37x as long as broad, scape 1.23x as long as club; pedicel plus flagellum 2.86x as long as scape. Fore wing (Fig. 3g) Marginal vein 2.72x stigmal vein and 1.5x postmarginal vein; coxae and half of hind femora concolorous with body, fore and mid femora, half of hind femora, tibiae and tarsi yellow; hind femora large, 2.5x as long as wide.....*I. golbasinensis* sp. nov.
- 26(25) Antenna (Figs. 2h,i) with flagellum slightly clavate, funicle slightly widening apically
- 27(28) Antenna (Fig. 2h) with F5 1.28x as wide as F1, scape 2.8x as long as pedicel; pedicel plus flagellum 2.6x as long as scape; anelli transverse, funicular segments slightly transverse, F1 1.55x, F5 2.25 as wide as long; ovipositor (Fig. 1h) as long as 0.62x metasoma. Ovipositor index 1.16; Fore wing (Fig. 3h) with marginal vein 2.7x stigmal vein and 1.67x postmarginal vein, below marginal vein with sparse setae. Antenna with scape brown; body very dark greenish, nearly black, coxae and femora concolorous with body except apical 1/4 of femora, and fore tibia, apical and basal 1/4 mid and hind tibiae yellow; tarsi pale yellow, except last segment brown; wings hyaline, veins pale yellow; hind femora large, 3.5x as long as wide.....*I. lutfiyae* sp. nov.
- 28(27) Body (Fig. 1i) black with greenish reflection; fore wings hyaline; mesosoma slightly bulged in profile, propodeum declined, distinctly visible from above. Ovipositor (Fig. 1i) as long as 0.6x metasoma. Ovipositor index 1.2; antenna (Fig. 2i) with pedicel plus flagellum 3.0x as long as scape; the latter 1.8x as long as pedicel; anelli transverse, funicular segments distinctly transverse, F1 1.3x, F5 twice as wide as long; funicle slightly widening apically, F5 1.33x as wide as F1;. Fore wing (Fig. 3i) with marginal vein 2.5x stigmal vein and 1.6x postmarginal vein, below marginal vein with dense setae; scape in basal 1/3 yellow; coxae and femora concolorous with body, except apical tip of femora and tibiae and tarsi yellow, except hind tibia medially with black maculae; wings hyaline, veins pale yellow. Hind femora moderately large, 3.0x as long as wide.....*I. aslihanae* sp. nov.
- 29(2) Antennae with 4 and more anelli; club without spicula.
- 30(33) Antennae with at least 5 anelli like flagellomere.
- 31(32) Antennae with 6 anelli like flagellomere; toruli placed below lower ocular line; ovipositor 1.34x as long as metasoma; antenna having funicular segments without sensillae. 1,4 mm.....*I. balasi* (Szelenyi)
- 32(31) Antennae with 5 anelli like flagellomere; Toruli placed at same level of lower ocular line; ovipositor (Fig. 1j) 5.0x metasoma; Ovipositor index 8.0; antenna (Fig. 2j) having last 3 funicular segments with one row of linear sensillae, pedicel plus flagellum 2.5x as long as scape; fore wing (Fig. 3j) with marginal vein 2.7x longer than radial vein and 1.6x postmarginal vein; Body head and mesosoma green with metallic reflexion, metasoma yellow, with some brown lines laterally; antenna testaceous, scape yellow, in

- apical half dorsally brown, with metallic green reflexion, legs yellow, 3rd coxa dorsally green, hind femora medially testaceous. Hind femora 4.2x as long as wide.....*I. zerovaae* sp. nov.
- 33(30) Antennae with 4 anelli; clup without spicula; other characters variable
- 34(35) Ovipositor as long as metasoma; ovipositor index 2.2x; pedicel plus flagellum 2.0x as long as scape; marginal vein 2.86x stigmal vein and 2.5x postmarginal vein; body green with metallic reflection, coxae and femora concolorous with body; scape and pedicel dark brown, flagellum pale brown, tibiae brown, tarsi dirty yellow; wings hyaline, vein white; hind femora 3.67x as long as wide.....*I. mirabilis* Zerova
- 35(34) Ovipositor at most 0.76x as long as metasoma
- 36(37) Ovipositor 0.6x as long as metasoma; ovipositor index 1.38x; pedicel plus flagellum 2.72x as long as scape; marginal vein 2.1x stigmal vein and 1.8x postmarginal vein.....*I. persimilis* Zerova
- 37(36) Ovipositor 0.76x as long as metasoma; ovipositor index 1.43x; pedicel plus flagellum 2.5x as long as scape; marginal vein 3.3x stigmal vein and 2.2x postmarginal vein.....*I. artusis* Zerova
- 38(1) Antennae (Figs. 4b, e; Figs. 6a-l) with 2 anelli.
- 39(48) Female with mesosoma green, metasoma wholly or in the substantial part yellow, at most brown
- 40(43) Forewings hyaline
- 41(42) Female metasoma with basal tergites dorsally yellowish; mesosoma in dorsal view 1.55x as long as wide; Ovipositor 0.75x lengths of the metasoma; Ovipositor index 1.4; Hind femora 2.8x as long as wide.....*I. silybi* Askew
- 42(41) Female metasoma entirely yellow; ovipositor at most 0.4x lengths of the metasoma; Antenna with pedicel dark brown, clava yellow; F1 1.2x as broad as pedicel, 2.0x as broad as long; F2 slightly broader and longer than F1, F3-F5 subequal in length but progressively broadening and F6 2.3x as broad as long; linear sensilla in a single, irregular, transverse row on each funicle segment; clava 1.6x as long (excluding apical process) as broad, with a digitiform apical process or terminal spine, surrounded by long erect setae and a patch of short setae basal to the apical spine.....*I. luteus* Nieves-Aldrey & Askew
- 43(40) Forewing with darkened sections in the form of spot or wide arc; female metasoma brown
- 44(45) Ovipositor 0.78x lengths of the metasoma; Antenna brown; anelli transverse, funicular segments slightly transverse, funicle slightly widening apically, F6 1.33x as wide as F1. Fore wings with the darkening around the radial vein; submarginal and radial (especially stigma) veins are dark brown, marginal and postmarginal veins yellow. ovipositor 0.78x as long as metasoma. 2-2.2 mm; 1,5 - 1,7 mm.....*I. phlomidis* (Zerova et Seryogina)
- 45(44) Ovipositor at most 0.5x lengths of the metasoma
- 46(47) Ovipositor 0.5x lengths of the metasoma; front wings with the darkening partly of wide arc or the horseshoe, by the inverted convex part downward of the marginal vein.....*I. arcus* (Boucek)
- 47(46) Ovipositor about 0.25x lengths of the metasoma. forewing with base and below submarginal vein having brown band; marginal vein 4.75x stigmal vein, 3.6x postmarginal vein; Thorax .2.2x as long as wide; ovipositor index 0.5x; wings hyaline; sculpture of head and thorax (especially!) greased, almost smooth, strongly shining, body bright green, tibia yellow, 1.8-2.3 mm (Ovipositor 0.27-0.30 mm).....*I. conicollis* Askew
- 48(39) Female with mesosoma and metasoma green, the latter blackish with coppery to violet reflection,
- 49(58) Fore wings (Figs. 4c,f) darkening under marginal vein
- 50(51) Ovipositor (Fig. 4a) longer than metasoma, almost as long as thorax plus metasoma, 1.3-1.64x as long as metasoma; thorax wholly green with metasoma bronzy; fore wings with maculae below marginal vein; vipoositor index 2.7-3.1; antenna (Fig. 4b) with pedicel plus flagellum 2.1- 3.5x as long as scape; pedicel 1.3- 1.44x as long as anelli plus F1 combined; anelli transverse, F1 slightly transverse, F2-F6 almost quadrate; club 2.44-2.66x as long as width; scape 1.12-1.25x as long as club. Fore wing (Fig. 4c)

- with marginal vein almost 1.7-2.92x longer than radial vein, 1.22-1.5x postmarginal vein. Hind femora 3.5-4.2x as long as wide.....*I. nigdenensis* sp. nov.
- 51(50) Ovipositor (Fig. 4d) distinctly shorter than metasoma
- 52(55) Ovipositor at most 0.58x metasoma, Body wholly green with metasoma bronzy; fore wings with pale maculae below marginal vein;
- 53(54) Ovipositor (Fig. 4d) 0.58x as long as metasoma; ovipositor index 1.17. Antenna (Fig. 4e) with pedicel plus flagellum 3.0x as long as scape; pedicel 1.2x as long as anelli plus F1 combined; anelli transverse, F1 distinctly transverse, F2-F6 slightly transverse; club 1.75x as long as width; scape 1.14x as long as club; forewing (Fig. 4f) with marginal vein almost 2.67x longer than radial vein, 1.6x postmarginal vein; having area between postmarginal vein and stigmal vein narrow and with hair lines. hind femora 3.8x as long as wide.....*I. haliti* sp. nov.
- 54(53) Ovipositor of approximately 0.5x metasoma; ovipositor index 1.1x. Antenna with pedicel plus flagellum 2.62x as long as scape; pedicel 1.67x as long as anelli plus F1 combined; anelli transverse, F1- F6 distinctly transverse, club 2.4x as long as width; scape as long as club; marginal vein almost 2.7x longer than radial vein, 1.8x postmarginal vein; Wings darkening under the marginal vein, having area between postmarginal vein and stigmal vein, broad and bare. 1,3 - 3 mm; 1,2 - 2 mm.....*I. perplexus* (Gahan)
- 55(52) Ovipositor at least 0.75x metasoma
- 56(57) Ovipositor of approximately 0.75x metasoma; ovipositor index 1.26; marginal vein almost 1.76x longer than radial vein; antenna with pedicel plus flagellum 2.7x as long as scape; anelli strongly transverse, funicular segments transverse, flagellum clavate; body purplish black, not very shining, forewing with kidney shaped macula below marginal vein; coxae metallic, remainder of legs dark brown, only femora weakly metallic, with apices of femora and tibiae, and some of the more proximal tarsal segments lighter in color; front femur 2.9x and Hind femora 3.0x as long as wide. without ovipositor 2.4 mm, ovipositor sheaths 0.8 mm.....*I. pallistigmus* Askew
- 57(56) Ovipositor of approximately 0.88x metasoma; mesosoma in dorsal view 1.2-1.3x as long as broad. antennal funicle segments only slightly transverse. Thorax very dark coppery, nearly black, metasoma blackish with bronze luster; wings under the marginal vein more or less darkened, marginal vein 2.7x longer than the radial vein; antennae with 1 anellus and reduced second flagellomer; scape basal half and tibia dark yellow; 1,7-3 mm.....*I. mayri* (Wachtl)
- 58(49) Wings (Figs. a-l) hyaline
- 59(91) ovipositor at most slightly longer than metasoma (1.1x)
- 60(61) Ovipositor about 0.25x metasoma. Ovipositor index 0.5x; marginal vein 3.6x stigmal vein, 4.5x postmarginal vein; wings hyaline; Sculpture of head and thorax (especially!) greased, almost smooth, strongly shining, body bright green, tibia yellow, 2,1 mm.....*I. splendidus* (Szelenyi)
- 61(60) Ovipositor (Fig. 5a) at least 0.36x metasoma
- 62(67) Ovipositor at most 0.45x metasoma
- 63(66) Metasoma (Fig. 5a) almost as long as mesosoma; Antenna black, except 2/5 base of scape yellow; Head from the front as long as width.
- 64(65) Fore wing (Fig. 7a) with marginal vein 4.0x as long as stigmal vein and 2.6x postmarginal vein; basal cell and speculum closed by sparse setae, area below marginal vein with dense setae on both side. Antenna (Fig. 6a) with flagellum slightly clavate, anelli strongly transverse, funicular segments transverse; pedicel plus flagellum 3.05x as long as scape; scape 4.4x as long as width, 1.09x as long as club; pedicel 1.5x as long as width, and as long as anelli plus F1; anelli strongly transverse, funicular segments transverse, flagellum slightly clavate, F1 1.6x as wide as long; F6 1.36x as wide as F1, and 1.9x as wide as long; club 1.7x as long as width. Ovipositor (Fig. 5a) 0.36-0.44x metasoma; ovipositor index 0.66. Body green with bronze tint, metasoma dark bronze, basal segments of tarsus and tibia dark yellow, Hind femora 3.2x as long as wide.....*I. oguzhani* sp. nov.
- 65(64) Fore wing (Fig. 7b) with marginal vein almost 5x longer than radial vein, 2.5x postmarginal vein; basal cell and speculum closed by dense setae, area below marginal vein with sparse. Antenna (Fig. 6b) with pedicel plus flagellum 2.67x as long as scape; scape 4x as long as width, 1.11x as long as club; pedicel 1.67x as long as width, and

- 1.22x anelli plus F1; anelli strongly transverse, funicular segments transverse, flagellum moderately clavate, F1 1.75x as wide as long; F6 1.6x as wide as F1, and 2.2x as wide as long; club 1.9x as long as width; ovipositor (Fig. 5b) 0.45x metasoma; ovipositor index 0.74; setae body black with greenish reflection, scape in basal half, apical half of front and mid femora, 1/4 apical of hind femora, tibiae, tarsi yellow, except 2 segments of tarsi black, forewing veins yellow. Hind femura 3.0x as long as wide.....*I. mbahadiri* sp. nov.
- 66(63) Metasoma (Fig. 5 c) distinctly longer than mesosoma; antenna (Fig. 6c) with scape yellow, Head from front distinctly wider than length (70:63); flagellum distinctly clavate, testaceous dorsally with metallic green reflexion, F6 1.75x wider than F1; anelli strongly transverse, F1-F4 distinctly transverse 2.86x., F5-F6 transverse, F5 3.0x, F6 2.53x as wide as long; pedicel plus flagellum 2.37x as long as scape. Fore wing (Fig. 7c) with marginal vein 4.3x as long as stigmal vein and 2.0x postmarginal vein. Ovipositor (Fig. 5c) 0.43x metasoma; Ovipositor index 0.68; Body with head green, meso and metasoma black with coppery reflection, legs testaceous with metallic green reflection, last segment of tarsi brown. Hind femura 2.86x as long as wide.....*I. uguranlari* sp. nov.
- 67(62) Ovipositor at least 0.5x metasoma
- 68(71) Ovipositor approximately 0.5x metasoma
- 69(70) Fore wing with marginal vein 2.2x as long as stigmal vein and 1.7x postmarginal vein. Antenna with base and apical of scape and ring segment yellow; having very small first and almost twice size of 2nd ring segments and flagellum slightly clavate, F6 1.2x as wide as F1; funicular segments distinctly transverse; pedicel plus flagellum 3.27x as long as scape. Head from the front 1.23x as wide as height; from side view 1.7x as high as length. Ovipositor index 1.1. Hind femora 3.07x as long as wide. 2 mm.....*I. curticaudatus* (Szelenyi)
- 70(69) Marginal vein 3x stigmal vein; Sculpture of head and thorax clear, fine-mesh, surface weakly shining; Thorax with prescutum yellowish red, remaining part of thorax green, with the coppery reflection, the metasoma brown without the metallic tint; the 1st segment of metasoma noticeably longer than following. 1,6 mm.....*I. variegatus* (Szelenyi)
- 71(68) Ovipositor at least 0.54x metasoma
- 72(77) Ovipositor (Figs. 5d-e) at most 0.64x metasoma
- 73(74) Ovipositor (Fig. 5d) approximately 0.64x metasoma; ovipositor index 1.16x. Antenna (Fig. 5d) with scape black, with metallic green reflexion, pedicel and flagellum brown; Pedicel 1.1x as long as anelli plus F1 combined; both anelli distinctly transverse, flagellum almost filiform, F6 1.25x as wide as F1; funicular segments almost quadrate, to slightly transverse; pedicel plus flagellum 2.83x as long as scape; club 2.15x as long as width; scape 1.07x as long as club; Head from the front 1.12x as wide as height. Fore wing (Fig. 7d) with marginal vein 2.7x as long as stigmal vein and 1.9x postmarginal vein. Body black with metallic green reflexion, coxae and femora concolorous with body, except apical tips femora, tibiae, tarsi yellow, forewing veins pale yellow; Hind femura 3.0x as long as wide.....*I. neslihanæ* sp. nov.
- 74(73) Ovipositor (Fig. 5e) at most 0.56x metasoma
- 75(76) Ovipositor (Fig. 5e) 0.54x metasoma; Ovipositor index 1.11x; Antenna (Fig. 6e) with scape yellow, in apical half dorsally testaceous, pedicel and flagellum black; pedicel 1.33x as long as anelli plus F1 combined; both anelli distinctly transverse flagellum distinctly clavate, F6 1.5x as wide as F1; funicular segments distinctly transverse; pedicel plus flagellum 2.67x as long as scape; club 2.27x as long as width; scape 1.2x as long as club; Head from the front 1.23x as wide as height, from side view 1.8x as high as length. Fore wing (Fig. 7e) with marginal vein 2.64x as long as stigmal vein and 1.48x postmarginal vein. Body black with coppery reflection, coxae and femora concolorous with body, except apical tips femora, tibiae, tarsi yellow, except last segment of tarsi black, forewing veins yellow; Hind femura 2.8x as long as wide.....*I. zeynepbanuæ* sp. nov.
- 76(75) Ovipositor 0.56x metasoma; ovipositor index 0.96; antennae black; segments of funicle transverse; pedicel plus flagellum 2.7x as long as scape; head from the front as long as height, marginal vein 3.8x as long as stigmal vein and 2.7x postmarginal vein. 2.0-3.8 (holotype 2.1) mm.....*I. nitens* (Boucek)

- 77(72) Ovipositor at least 0.7x metasoma.
- 78(79) Ovipositor 0.7x metasoma; F6 about twice as wide as F1. Ovipositor index 1.5-1.7. F6 about twice as wide as F1; pedicel 1.77x anelli plus F1 (Fig. 5 of Askew & Nieves 1988); marginal vein almost 2.15x longer than radial vein; antenna with pedicel plus flagellum 3.0x as long as scape; anelli strongly transverse, funicular segments transverse,; pedicel 1.77x anelli plus F1; club 1.5x as long as width; body green with coppery on propodeum, metasoma black with coppery to violet reflection, basal segments of tarsus and tibia testaceous; Hind femora 3.4x as long as wide. 2.8-3.0 mm (+ ovi).....*I. centaureae* (Askew and Nives)
- 79(84) Ovipositor at most 0.75x metasoma
- 80(83) Ovipositor (Fig. 5j) 0.73x metasoma
- 81(82) Ovipositor index 1.35; flagellum moderately clavate, F6 1.4x as wide as F1. Fore wing (Fig. 7k) with marginal vein almost 2.7x longer than radial vein, 2.0x postmarginal vein; antenna (Fig. 6k) with pedicel plus flagellum 2.96x as long as scape; scape 5.5x as long as width, 1.32x as long as club; anelli strongly transverse, F1 distinctly transverse, twice as wide as long; other funicular segments slightly transverse, F2-F4 1.5x; F5-F6 1.7x as wide as long; club 2.1x as long as width. Body green with bronze tint, metasoma dark bronze, scape yellow,(in dark form scape black, except radicle and base of scape yellow), coxae, 1/2 of femora black, 1/2 of femora, tibiae yellow, tarsi yellow except claws black, and veins yellow; hind femora long, 4x as long as wide; hypopygium as fig. 8a. 1.6- 3.2 mm.....*I. papaveris* (Förster)
- 82(81) Ovipositor index 1.75; flagellum distinctly clavate F6 1.8x as wide as F1. Fore wing with marginal vein almost 2.6x longer than radial vein, 1.63x postmarginal vein; antenna with pedicel plus flagellum 2.86x as long as scape; the latter 4.6x as long as width, 1.16x as long as club; first anellus quadrate, 2nd anellus strongly transverse, funicular segments slightly transverse, distinctly widening towards tip; F1 1.5x, F2 1.37x, F3 1.2x, F4 1.5x, F5 1.67x, F6 1.8x as wide as long; club 1.73x as long as width. Body black with greenish reflection, scape yellow, flagellum testaceous; pedicel black, legs yellow, except coxae concolorous with thorax, and claws black; veins yellow. Hind femora 3.0x as long as wide.....*I. pulcher* (Zerova et Seryogina)
- 83(80) Ovipositor (Fig. 5f) 0.75x metasoma. F6 1.25x as wide as F1. Ovipositor index 1.04. Fore wing (Fig. 7f) with marginal vein almost 2.36x longer than radial vein, 1.5x postmarginal vein; antenna (Fig. 6f) with pedicel plus flagellum 2.5x as long as scape; the latter about 4x as long as width, and 1.5x as long as club; flagellum slightly clavate, anelli strongly transverse, funicular segments slightly transverse, F1-F2 about 1.33x as wide as long; F3-F5 almost quadrate, F6 1.25x as wide as long; club 1.76x as long as width. Body black with greenish reflection, scape, tibiae fuscous, tarsi yellow except claws black, forewing hyaline, veins yellow. Hind femura 3.1x as long as wide.....*I. gozuaciki* sp. nov.
- 84(79) Ovipositor at least 0.80x length of metasoma
- 85(88) Ovipositor at most 0.86x length of metasoma
- 86(87) Ovipositor (Fig. 5g) 0.80x length of metasoma; flagellum slightly clavate; ovipositor index 1.4. Antenna (Fig. 6g) with scape 4.6x as long as width, 1.1x as long as club; pedicel plus flagellum 2.5x as long as scape; flagellum slightly clavate, F6 1.5x as wide as F1; pedicel 1.4x as long as width, 0.73x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 twice, F6 1.7x as wide as long; club 2.5x as long as width. Fore wing (Fig. 7g) with marginal vein 2.0x longer than radial vein, 1.2x postmarginal vein. Body black with violet reflexion, antenna with scape yellow, pedicel and flagellum black, coxae and femora concolorous with body, except apical 1/5 of fore and mid femora, 1/4 of hind femora, tibiae and tarsi yellow. Hind femora 3.75x as long as width.....*I. hasandagus* sp. nov.
- 87(86) Ovipositor (Fig. 5h) 0.86x length of metasoma; ovipositor index 1.32. Antenna (Fig. 6h) with flagellum clubbed, funicular segments almost filiform, club wider; scape 5.0x as long as width, 1.25x as long as club; pedicel plus flagellum 3.1x as long as scape; flagellum clubbed, funicular segments almost filiform, F6 1.2x as wide as F1; pedicel 1.67x as long as width, 0.84x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 1.45x, F6 2.5x as wide as long and 1.25x as wide as F1; club 1.6x as long as width. Fore

- wing (Fig. 7h) with marginal vein 5.0x longer than radial vein, 2.5x postmarginal vein; Body black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except apical 1/5 of femora, both ends of tibiae and tarsi yellow, except last two segment brown. Hind femora 5.0x as long as width.....*I. turhalensis* sp. nov.
- 88(85) Ovipositor about as long as metasoma.
- 89(90) Ovipositor (Fig. 5l) almost equal to the length of metasoma; ovipositor index 1.87. Antenna (Fig. 6i) with scape 4.5x as long as width, almost as long as club; pedicel plus flagellum 3.1x as long as scape; flagellum moderately clavate, F6 1.33x as wide as F1; pedicel 1.43x as long as width, as long as anelli plus F1; anelli transverse, funicular segments distinctly transverse, almost same length, distinctly widening towards tip, F1 1.5x, F6 twice as wide as long and 1.33x as wide as F1; club 2.25x as long as width. Fore wing (Fig. 7i) with marginal vein 4.75x longer than radial vein, 2.9x postmarginal vein. Body black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except fore tibiae testaceous, apical 1/5 of femora, both ends of mid and hind tibiae and tarsi yellow, except last two segment brown. Hind femora 5.0x as long as width.....*I. karakurtensis* sp. nov.
- 90(89) Ovipositor (Fig. 5k) 0.91-1.10x metasoma; ovipositor index 1.5-1.66. Fore wing (Fig. 7j) with marginal vein 2.70- 3.0x longer than radial vein and 1.37-1.57x postmarginal vein. Antenna (Fig. 6j) with scape 3.66x as long as width, 1.4x as long as club; pedicel plus flagellum 2.4x as long as scape; pedicel 1.9x as long as width, 1.15x as long as anelli plus F1 combined; flagellum moderately clavate, F6 1.3x as wide as F1; F1 2.33x F2-F3 1.6x, F4-F6 1.3x as wide as long; club 2.35x as long as width; malar space 0.37x length of eye. Body violet, with copery reflexion; scape, tibiae, tarsi, yellow excepts claws black, apical half of fore femora, apical 1/6 and tip of other femora yellow and veins pale yellow; (in pale form 1/6 of femora, fore tibia, both ends of mid and hind tibiae and tarsi yellow except claws black). Hind femora 3.07x as long as wide. Hypopygium as fig. 8b).....*I. akdenizeus* (Doğanlar)
- 91(59) Ovipositor distinctly longer than metasoma
- 92(95) Ovipositor at most shorter than length of body
- 93(94) Ovipositor about length of the metasoma plus 1/3 of mesosoma. Ovipositor index 2.5. Antenna with anelli wider than its length, sometimes square in front view, funicular segments quadrate, to longer than wide; club 2.44x as long as width; scape 1.23x as long as club; tibiae reddish, middle and hind ones infusate in middle, tarsi yellow. Female 1.5- 2 mm; male 2 mm (Figs. 23, 16).....*I. terebrator* (Masi)
- 94(93) Ovipositor (Fig. 5l) about length of the metasoma plus 1/2 of mesosoma, 1.5x metasoma; ovipositor index 2.8. Antenna (Fig. 6l) with scape 6.62x as long as width, 1.5x as long as club; pedicel plus flagellum 2.4x as long as scape; pedicel twice as long as width, 1.54x as long as anelli plus F1 combined; flagellum almost filiform, slightly widening apically, F6 1.3x as wide as F1; F1-F2 1.6x F3-F4 1.5x, F5-F6 1.55x as wide as long; club 2.5x as long as width. Fore wing (Fig. 7l) with marginal vein 1.7x longer than radial vein and 1.35x postmarginal vein. Body violet, with copery reflexion; scape, except apically brown, both ends of tibiae, tarsi, yellow excepts claws black. Hind femora 4.4x as long as wide.....*I. fursovi* sp. nov.
- 95(92) Ovipositor at least equal to length of body
- 96(97) Ovipositor equal to length of body; annelli in same length, 2nd anellus twice wider than the first anellus; pedicel 1.3x as long as anelli plus F1 combined, F1 quadrate, F2-F6 at least slightly longer than wide; head in frontal view almost as long as wide; marginal vein twice as long as stigmal vein and 1.3x as long as postmarginal vein. Body (without ovipositor) 2.4-2.8 mm, ovipositor 2.3--2.8 mm; male with antennal formula: 11353.....*I. carayoni* (Steffan)
- 97(96) Ovipositor slightly longer than body; 1st anellus 1/2 width of 2nd anellus, Pedicel as long as almost anelli plus F1 combined, F1 and F2 quadrate, F3-F6 transverse.....*I. korneyevi* Zerova & Seryogina

***Idiomacromerus yunusi* sp. nov.**

(Figs. 1a, 2a, 3a, 9a)

Etymology. The name is derived from the name of my grandson, Mehmet Yunus Anlar.

Diagnosis. Antennae with 3 anelli. Forewing without marginal ciliae; front femora not expanded; Ovipositor 0.84x as long as metasoma. Ovipositor index 1.2x; F1 as long as F2; pedicel plus flagellum 2.12x as long as scape; club 2.3x as long as width; marginal vein 2.77x stigmal vein and 1.8x postmarginal vein; antennae yellow; thorax black with greenish reflection, metasoma bronze; femora testaceous, except 1/6 apical yellow, tibiae, tarsi yellow, except last segment black; wing hyaline, veins yellow; hind femora, 2.7x as long as wide

Description:

Female. Body (Fig. 1a) black with greenish reflection, antennae yellow; femora testaceous, except 1/6 apical yellow, tibiae, tarsi yellow, except last segment black; wing hyaline, veins yellow metasoma bronze. Length 1.75 mm + ovipositor 1.0 mm.

Head in dorsal view 0.88x as wide as mesoscutum, width to length 35:18; POL twice OOL; OOL twice diameter lateral ocellus. Head in frontal view slightly wider than high in ratio 37:35; dorsal margin of torulus distinctly below level of lower orbit; malar space consists 1/4 height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2a) with flagellum strongly clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; anelli transverse, without longitudinal sensilla; scape nearly reaching only mid level of eye, 3.5x as long as broad; length of pedicel plus flagellum 2.12x as long as scape; pedicel 2.5 as long as broad, about 1.5x as long as anelli plus first funicle segment (F1); F1 as long as F2; F1 1.16x as broad as pedicel, 2.0x as broad as long; F3-F5 slightly broader and longer than F2, F1-F5 subequal in length and in width and F5 1.8 as broad as long; linear sensilla in a single row on each funicle segment; clava (Fig. 3a) 2.4 as long as broad, surrounded by long erect setae.

Mesosoma (Fig. 1a) bulged in profile, propodeum slightly visible dorsally; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum very short; propodeum and mesosternum almost smooth. All coxae reticulated. Forewing (Fig. 3a) with basal part bare, marginal ciliae absent; apical part with very short and light pubescence. marginal vein 2.77x stigmal vein and 1.8x postmarginal vein.

Metasoma (Fig. 1a) excluding ovipositor slightly shorter than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium at two-thirds metasoma length; Ovipositor 0.84x as long as metasoma. Ovipositor index 1.2. Hind femora large 2.7x as long as wide.

Male. Similar to female except as follows: Length 1.66 mm. Antenna (9 a) with club brown; 5 funicular segment strongly transverse, the last 3 segments transverse, about 2.3x as broad as long, club broad about 1.55x as broad as F5, 1.7x as long as width.

Material examined: Holotype, female, Turkey: Hatay, Antakya, Campus of MKU, 5-9.vii.2004, reared from flower head of *Echinops* sp., M. Doğanlar. Paratypes: 1 male, same data as the holotype; 1 female, Kahramanmaraş, Pazarcık, 27.vi. 2007, swept from pasture, M. Doğanlar. All of the types were deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey:Antakya, Hatay; Kahramanmaraş.

Host: reared from flower head of *Echinops* sp.

Comments: Female: *Idiomacromerus yunusi* sp. nov. is similar to *I. budensis* (Erdös) in having fore wing without hair on lines of cubital and basal veins. But the new species differs from all known species of the genus by having fore wing without marginal ciliae, and from *I. budensis* in having femora testaceous, except 1/6 apical yellow, tibiae, tarsi yellow, except last segment black (in *I. budensis* femora metallic green, tibiae brown).

***Idiomacromerus sebnemae* sp. nov.**

(Figs. 1b, 2b, 3b)

Etymology. The name is derived from the name of my grand daughter, Şebnem Tuğba Kazan.

Diagnosis. Antennae with 3 anelli; forewing having lines of cubital and basal veins with hair; marginal ciliae present; front femora not expanded; Body bicolored, head, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, except metasoma with brownish tan, pedicel and ovipositor black, fore wing brownish maculae below stigmal and submarginal veins, except below marginal vein white. pedicel plus flagellum 2.6x as long as scape; marginal vein 2.3x stigmal vein and 1.6x postmarginal vein. Ovipositor 0.54x as long as metasoma. Ovipositor index 1.0x; hind femora large 2.7x as long as wide.

Description:

Female. Body (Fig. 1b) bicolored, head, except face below toruli yellow, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, except metasoma with brownish tan, pedicel and ovipositor black, fore wing brownish maculae below stigmal and submarginal veins, except below marginal vein white. Length 1.5 mm + ovipositor 0.38 mm.

Head in dorsal view 1.2 broader than mesoscutum, width to length 34: 28; POL 2.5 OOL; OOL twice diameter lateral ocellus. Head in frontal view distinctly wider than high, in ratio 34:24; dorsal margin of torulus slightly below level of lower edge of eye; malar space consists 0.62 height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2b) with flagellum strongly clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; anelli transverse, without longitudinal sensilla; scape nearly reaching only mid level of eye, 4.6x as long as broad; length of pedicel plus flagellum 2.6x as long as scape; pedicel 2.1 as long as broad, about 1.3x as long as anelli plus first funicle segment (F1); F1 slightly longer than F2; F1 1.2x as broad as pedicel, 1.8x as wide as long; F2 2.4x as wide as long; F3-F5 slightly broader and longer than F2, F5 1.6 as broad as long, and 1.5x as wide as F1; linear sensilla in a single row on each funicle segment; clava 2.2 as long as broad.

Mesosoma (Fig. 1b) slightly bulged in profile; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, almost as long as mesoscutum; propodeum almost smooth, mesosternum finely reticulated. All coxae almost smooth with fine reticulated. Forewing (Fig. 3b) with basal part with basal cell and speculum closed, basal cell hairy apically, with two maculae, one below submarginal, other below postmarginal and stigmal veins; two maculae connected with a semicircular pale brownish band; below marginal with a circular area with white hairs, on maculae with stronger and black hairs, and apical part with very short and light pubescence. marginal vein 2.3x stigmal vein and 1.6x postmarginal vein.

Metasoma (Fig. 1b) excluding ovipositor slightly shorter than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about

half length metasoma; Ovipositor 0.54x as long as metasoma. Ovipositor index 1.0x; hind femora 2.7x as long as wide.

Male. unknown.

Material examined: **Holotype, female**, Turkey: Niğde, 11.vi.2003, O. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Niğde

Host: unknown.

Comments: Female: *Idiomacromerus sebnemae* sp. nov. is unique species in *Idiomacromerus* species having 3 anelli in having bicolored body and fore wing with two maculae. The new species seems to be similar to *Idiomacromerus arcus* (Boucek) in having fore wing maculate. But *I. sebnemae* n.sp having antenna with 3 anelli (in *I. arcus* having antenna with 2 anelli).

***Idiomacromerus gumusensis* sp. nov.**

(Figs. 1c, 2c, 3c)

Etymology. The name is derived from the name of Gümüş, Ulukışla, Niğde, from where the Holotype was collected.

Diagnosis. Antennae with 3 anelli; forewing having lines of cubital and basal veins with hair; marginal ciliae present; front femora expanded; body bicolored, head, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, except metasoma yellow, antenna brown, except scape yellow, fore wing hyaline, pedicel plus flagellum 2.35x as long as scape; marginal vein 1.9x stigmal vein and 1.5x postmarginal vein. Ovipositor (Fig. 1c) 0.38x as long as metasoma. Ovipositor index 0.66x; fore femora expanded 2.8x as long as wide; hind femora long 4.11x as long as wide

Description:

Female. Body (Fig. 1c) bicolored, head, dorsum of thorax and venter of mesothorax metallic green, remained of body yellow, antenna brown, except scape yellow, fore wing hyaline. Length 1.5 mm + ovipositor 0.25 mm.

Head in dorsal view as wide as mesoscutum, width to length 35:20; POL 1.8 OOL; OOL 1.43 diameter lateral ocellus. Head in frontal view distinctly wider than high, in ratio 35:20; dorsal margin of torulus distinctly below level of lower edge of eye; malar space consists 0.3 height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2c) with flagellum filiform, comprising 3 anelli, 5 funicle segments and a three-segmented clava; anelli transverse, without longitudinal sensilla; scape nearly reaching only mid level of eye, 3.7x as long as broad; length of pedicel plus flagellum 2.35x as long as scape; pedicel 2.3x as long as broad, about 1.8x as long as anelli; first annellus twice, second 2.5x, 3rd 2.4x as wide as long; F1, F2 equal in size, twice as wide as long; 1.25x as wide as pedicel; F3 1.67x; F4-F5 slightly longer and wider than F1, F5 1.22 as broad as long, and 1.1x as wide as F1; linear sensilla in a single row on each funicle segment; clava 2.25 as long as broad.

Mesosoma (Fig. 1c) slightly bulged in profile; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, slightly shorter than mesoscutum (15:27); propodeum smooth, mesosternum finely reticulated. All coxae finely reticulated, fore femora expanded 2.8x as long as wide; hind femora long 4.11x as long as wide. Forewing (Fig. 3c) with basal part with basal cell closed, hairy apically, speculum open, broad, reaching almost stigmal vein, marginal vein 1.9x stigmal vein and 1.5x postmarginal vein.

Metasoma (Fig. 1c) excluding ovipositor slightly shorter than rest of body (65:72); basal tergite with posterior margin weakly incised medially; tip of hypopygium about 0.77 length metasoma; Ovipositor (Fig. 1c) 0.38x as long as metasoma. Ovipositor index 0.66x; hind femora long 4.11x as long as wide.

Male. unknown.

Material examined: Holotype, female, Turkey: Gümüş, Ulukışla, Niğde, 11.vi.2003, O. Doğanlar, swept from pasture, on card, deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Niğde

Host: unknown.

Comments: Female: *Idiomacromerus gumusensis* sp. nov. is similar to *Idiomacromerus sebnemae* sp. nov. in having bicolored body. But *I. gumusensis* sp. nov. differs from *I. sebnemae* sp. nov. in having fore wing hyaline; marginal vein 1.9x stigmal vein and 1.5x postmarginal vein; Ovipositor 0.38x as long as metasoma. Ovipositor index 0.66x; hind femora long 4.11x as long as wide. (in *I. sebnemae* sp. nov. having fore wing with two maculae; marginal vein 2.3x stigmal vein and 1.6x postmarginal vein; ovipositor 0.54x as long as metasoma. Ovipositor index 1.0x; hind femora large, expanded 2.7x as long as wide).

***Idiomacromerus selimensis* sp. nov.**

(Figs. 1d, 2d, 3d)

Etymology. The name is derived from the name of Selim, Kars, from where the Holotype was collected.

Diagnosis. Antennae with 3 anelli; thorax black with greenish reflection with metasoma bronzy; fore wings hyaline; ovipositor 0.9x metasoma. Ovipositor index 1.4. Antenna with pedicel plus flagellum 2.4x as long as scape; anelli strongly transverse, F1- F3 in same length, F4-F5 slightly longer 1.25x longer than F1; funicular segments distinctly transverse, gradually widening F5 twice as wide as long, 1.3x as wide as F1; Fore wing with marginal vein 2.5x stigmal vein and 1.36x postmarginal vein; hind femora large, 3.12x as long as wide.

Description:

Female. Body (Fig. 1d) black with greenish reflection, metasoma bronze, femora concolorous with body, except 1/6 apical yellow, tibiae yellow except medially black, tarsi yellow, except last segment black; wing hyaline, veins yellow. Length 1.5 mm + ovipositor 0.5 mm.

Head in dorsal view 1.4 broader than mesoscutum, width to length 38:15; POL 2.8x OOL; OOL 1.4x diameter of lateral ocellus. Head in frontal view slightly wider than high in ratio 38:30; dorsal margin of torulus slightly above level of lower edge of eyes; malar space consists 0.33x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2d) with flagellum distinctly clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, 5x as long as broad; scape 1.2x as long as club; antenna with pedicel plus flagellum 2.4x as long as scape; anelli strongly transverse, F1- F3 in same length, F4-F5 slightly longer, F5 1.25x longer than F1; funicular segments distinctly transverse, gradually widening F5 twice as wide as long, 1.3x as wide as F1; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1d) distinctly bulged in profile; propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, 0.6x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3d) with basal cell and speculum closed, basal cell a few setae

apically, speculum broad, below marginal vein with sparse setae, apical part with very short and light pubescence; marginal vein 2.5x stigmal vein and 1.36x postmarginal vein.

Metasoma (Fig. 1d) excluding ovipositor slightly shorter than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; ovipositor 0.9x as long as metasoma; ovipositor index 1.4; hind femora 3.12x as long as wide.

Male. Unknown.

Material examined: Holotype, female, Turkey: Kars, Selim 12.vii.2012, M. Doğanlar, swept from *Onobrycis sativa* field, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Kars, Selim

Host: unknown.

Comments: Female: *Idiomacromerus selimensis* sp. nov. is similar to *I. aladagensis* sp. nov. in having metasoma slightly shorter than metasoma, and antenna with pedicel plus flagellum 2.4x as long as scape. But *I. selimensis* differs from *I. aladagensis* in having anelli strongly transverse, funicular segments distinctly transverse, gradually widening F5 twice as wide as long, 1.3x as wide as F1; scape 5x as long as broad; scape 1.2x as long as club; fore wing with speculum closed, moderately broad (in *I. aladagensis* the first two anelli strongly transverse, 3rd anellus distinctly longer and wider than them; funicular segments slightly transverse, almost same length and width; scape 4.2x as long as broad; fore wing with speculum open, very broad).

***Idiomacromerus aladagensis* sp. nov.**

(Figs. 1e, 2e, 3e)

Etymology. The name is derived from the name of Adana, Aladağ, from where the Holotype was collected.

Diagnosis. Antennae with 3 anelli; body black with greenish reflection with metasoma bronzy; fore wings hyaline; ovipositor 0.94x metasoma. Ovipositor index 1.5. Antenna with pedicel plus flagellum 2.4x as long as scape; anelli strongly transverse, 3rd anellus distinctly shorter than F1, 3x as wide as length; F1-F5 funicular segments strongly transverse, about 1.75x as wide as length; flagellum clubbed; club 1.67x as wide as F1, 1.7x as long as width. Marginal vein 2.83x stigmal vein and 1.5x postmarginal vein; hind femora large, 3.5x as long as wide.

Description:

Female. Body (Fig. 1e) black with greenish reflection, metasoma bronze, scape black, apical 1/6 of femora, and tibiae yellow, except mid and hind tibiae with 1/4 medially black; tarsi, yellow, except claws black; wings hyaline, veins pale yellow. Length 1.63 mm+ovipositor 0.65 mm.

Head in dorsal view as wide as mesoscutum, width to length 23:8; POL 3x OOL; OOL 1.4x diameter of lateral ocellus. Head in frontal view as wide as high in ratio 23:23; dorsal margin of torulus slightly below level of lower edge of eyes; malar space consists 0.36x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2e) with flagellum clubbed, funicular segments filiform, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, the first two anelli strongly transverse, 3rd anellus distinctly longer and wider than both of them; funicular segments slightly transverse, almost same length and width; scape 4.2x as long as

broad, scape 1.29x as long as club; antenna with pedicel plus flagellum 2.4x as long as scape; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1e) slightly bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, 0.54x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3e) with Basal part of basal cell closed, speculum open, basal cell a few setae apically, speculum very broad, below marginal vein with sparse setae, apical part with very short and light pubescence; marginal vein 2.83x stigmal vein and 1.5x postmarginal vein.

Metasoma (Fig. 1e) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/4 length metasoma; ovipositor 0.94x metasoma; ovipositor index 1.5x; hind femora 2.5x as long as wide.

Male: Unknown.

Material examined: Holotype, female, Turkey: Adana, Aladağ, 16.vii.2001, O. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, same data as holotype.

Distribution: Turkey: Adana, Aladağ,

Host: unknown.

Comments: Female: *Idiomacromerus aladagensis* sp. nov. is similar to *I. selimensis* sp. nov.. The discussion was given before.

***Idiomacromerus erzurumensis* sp. nov.**

(Figs. 1f, 2f, 3f, 9b)

Idiomacromerus pannonicus (Ruschka, 1923): misidentification by Doğanlar (1984).

Etymology. The name is derived from the name of Erzurum, from where the Holotype was collected.

Diagnosis. Antennae with 3 anelli; body black with greenish reflection with metasoma bronzy; fore wings hyaline; propodeum placed almost vertical, propodeum almost nil seen above. Ovipositor 0.64x metasoma. Ovipositor index 1.28. Antenna with pedicel plus flagellum 2.15x as long as scape; anelli transverse, funicular segments distinctly transverse, F1 twice, F5 2.67x as wide as long; funicle slightly widening apically, F5 1.44x as wide as F1. Marginal vein 2.5x stigmal vein and 1.5x postmarginal vein; hind femora large, 3.6x as long as wide.

Description:

Female. Body (Fig. 1f) black with greenish reflection, scape yellow, pedicel and flagellum brown, coxae and femora concolorous with body except apical 1/5 of femora, and tibiae yellow; tarsi pale yellow, except claws brown; wings hyaline, veins pale yellow. Length 1.7 mm+ovipositor 0.5 mm.

Head in dorsal view slightly narrower than mesoscutum, width to length 30:15; POL 1.75x OOL; OOL 1.33 diameter of lateral ocellus. Head in frontal view as wide as high, in ratio 30:30; dorsal margin of torulus same level of lower orbit; malar space consists 0.25x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2f) with flagellum clubbed, funicular segments filiform, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, anelli transverse, funicular segments distinctly transverse, F1 twice, F5 2.67x as wide as long; funicle slightly widening apically, F5 1.44x as wide as F1. scape 5x as long as broad, scape 1.25x as

long as club; antenna with pedicel plus flagellum 2.15x as long as scape; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1f) dorsally almost flat in profile, propodeum placed almost vertical, propodeum almost nil seen above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, almost as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3f) with basal cell and speculum closed, basal cell almost bare, speculum very broad, below marginal vein with sparse setae, apical part with very short and light pubescence; Marginal vein twice stigmal vein and 1.4x postmarginal vein;

Metasoma (Fig. 1f) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/4 length metasoma; ovipositor 0.64x metasoma. Ovipositor index 1.285x; hind femora 3.6x as long as wide.

Male. Similar to female except as follows: length 1.9 mm. antenna (Fig. 9 b) with flagellum slightly clavate; club 2.1x as long as wide.

Material examined: Holotype, female, Turkey: Erzurum, 08.ix.1980, M. Doğanlar, swept from *Medicago sativa* field, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: Erzurum, 1 female, 08.ix. 1984; 1 male, 04.vii.1984, M. Doğanlar, swept from *Medicago sativa* field, on card, deposited in the Insect collection of Research Station of Biological Control, Adana. (The specimens were identified as *I. pannonicus* by Doğanlar (1984).

Distribution: Turkey: Erzurum

Host: reared from Tephritidae sp. in the flowerheads of *Carduus* spp.

Comments: Female: *Idiomacromerus erzurumensis* sp. nov. is a unique species in having propodeum placed almost vertical, in other species of *Idiomacromerus* with 3 anelli, and Ovipositor about as long as 0.5-0.64x metasoma. Other diagnostic characters were given in the key.

***Idiomacromerus golbasinensis* sp. nov.**

(Figs. 1g, 2g, 3g, 9c)

Etymology. The name is derived from the name of Gölbaşı, Adıyaman, from where the holotype was collected.

Diagnosis. Body coppery greenish, scutellum and propodeum bronzed, metasoma brown; antenna brown; fore wings hyaline; Propodeum declined, distinctly visible from above; Ovipositor 0.62x metasoma. Ovipositor index 1.16x; flagellum clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape reaching slightly below lower edge of median ocellus. Antenna with scape 2.75x as long as pedicel; anelli transverse, funicular segments slightly transverse, F1 1.4x, F2-F3 1.3x, F4 1.44x, F5 1.78x as wide as long; scape 4.37x as long as broad, scape 1.23x as long as club; antenna with pedicel plus flagellum 2.86x as long as scape. Marginal vein 2.72x stigmal vein and 1.5x postmarginal vein; coxae and half of hind femora concolorous with body, fore and mid femora, half of hind femora, tibiae and tarsi yellow; hind femora large, 2.5x as long as wide.

Description:

Female. Body (Fig. 1g) coppery greenish, scutellum and propodeum bronzed, metasoma brown; antenna brown; fore wings hyaline; ; coxae and half of hind femora concolorous with body, fore and mid femora, half of hind femora, tibiae and tarsi yellow; wings hyaline, veins pale yellow; Length 1.38mm+ ovipositor 0.5 mm.

Head in dorsal view 1.13 broader than mesoscutum, width to length 25:10; POL 2.25x OOL; OOL 0.5x diameter of lateral ocellus. Head in frontal as wide as high in ratio 25:23; dorsal margin of torulus at level of lower edge of eye; malar space consists 0.29x height of eye. external margin of clypeus straight; face strongly reticulated. Antenna (Fig. 2g) with flagellum clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; (Fig. 1E); scape reaching slightly below lower edge of median ocellus, anelli transverse, funicular segments slightly transverse, F1 1.4x, F2-F3 1.3x, F4 1.44x, F5 1.78x as wide as long;; scape 4.37x as long as broad, scape 1.23x as long as club; antenna with pedicel plus flagellum 2.86x as long as scape. linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1g) slightly bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum distinctly reticulated; pronotum about 0.6x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3g) with basal cell closed and speculum open, basal cell almost bare, speculum very broad, below marginal vein with sparse setae, apical part with very short and light pubescence; marginal vein 2.72x stigmal vein and 1.5x postmarginal vein.

Metasoma (Fig. 1g) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma. Ovipositor 0.62x metasoma. Ovipositor index 1.16x; hind femora broad 2.5x as long as wide.

Male. Similar to female, except as follow: length 1.2 mm. Antenna (Fig. 9c) with 3 anelli, F1-F3 distinctly transverse, without sensillae, F4-F5 transverse, with sensillae, club 1.67x as long as wide.

Material examined: Holotype, female, Turkey: Gölbaşı, Adıyaman, 24.v.2007, M. Doğanlar, swept from pasture, on card, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratype: 1 male, same data as the holotype.

Distribution: Turkey: Gölbaşı, Adıyaman

Host: Unknown.

Comments: Female: *Idiomacromerus golbasiensis* sp. nov. is similar to *Idiomacromerus grisselli* Zerova & Seregina and *Idiomacromerus aslihanæ* sp. nov. in having ovipositor about as long as 0.6x metasoma, and it is also similar to *I. lutfiyæ* sp. nov. by pedicel plus flagellum at least 2.6x as long as scape. But it differs from *I. grisselli* in having pedicel plus flagellum 2.86x as long as scape; F1 1.4x, F2-F3 1.3x, F4 1.44x, F5 1.78x as wide as long, and F5 2.28x as wide as F1 (in *I. grisselli* pedicel plus flagellum 2.28x as long as scape; F1-F4 funicular almost quadrate, F5 distinctly transverse, 1.86x as wide as long; funicle slightly widening apically, F5 1.62x as wide as F1). *I. golbasiensis* sp. nov. differs from *I. lutfiyæ* sp. nov. and *I. aslihanæ* sp. nov. in having flagellum clavate, funicle distinctly widening apically, F5 2.28x as wide as F1; pedicel plus flagellum 2.86x as long as scape; hind femora large, 2.5x as long as wide (in *I. lutfiyæ* sp. nov. and *I. aslihanæ* sp. nov. flagellum slightly clavate, funicle slightly widening apically, F5 1.28x as wide as F1, and F5 1.33x as wide as F1 and pedicel plus flagellum 2.6x, and 3x as long as scape,; hind femora longer, 3.5x and 3.0x as long as wide, respectively).

Idiomacromerus lutfiyæ sp. nov.

(Figs. 1g, 2g, 3g, 9d)

Etymology. The name is derived from the name of Prof. Dr. Lütfiye Gençer, who is the collector of holotype.

Diagnosis. Body black with greenish reflection; antenna with scape brown fore wings hyaline; propodeum declined, distinctly visible from above;. Ovipositor 0.62x metasoma. Ovipositor index 1.16. with flagellum moderately clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, anelli transverse, funicular segments slightly transverse, F1-F3 1.25x, F4-F5 1.56x as wide as long; funicle moderately widening apically, F5 1.25x as wide as F1; scape 3.67x as long as broad, scape as long as club; antenna with pedicel plus flagellum 3.27x as long as scape. Marginal vein 2.7x stigmal vein and 1.67x postmarginal vein; hind femora large, 3.5x as long as wide.

Description:

Female. Body (Fig. 1h) dark greenish almost black, antenna brown, coxae and femora concolorous with body except apical 1/4 of femora, and fore tibia, apical and basal 1/4 mid and hind tibiae yellow; tarsi pale yellow, except last segment brown; wings hyaline, veins pale yellow; Length 1.62 mm+ovipositor 0.45 mm.

Head in dorsal view as wide as mesoscutum, width to length 30:15; POL 2.4x OOL; OOL twice diameter of lateral ocellus. Head in frontal as wide as high in ratio 34:55; dorsal margin of torulus slightly above level of lower orbit; malar space consists 0.34x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2h) with flagellum moderately clavate, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, anelli transverse, funicular segments slightly transverse, F1-F3 1.25x, F4-F5 1.56x as wide as long; funicle moderately widening apically, F5 1.25x as wide as F1; scape 3.67x as long as broad, scape as long as club; antenna with pedicel plus flagellum 3.27x as long as scape; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1h) slightly bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, 0.8x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3h) with basal cell closed and speculum open, basal cell almost bare, speculum very broad, below marginal vein with sparse setae, apical part with very short and light pubescence; Marginal vein 2.7x stigmal vein and 1.67x postmarginal vein.

Metasoma (Fig. 1h) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/4 length metasoma; ovipositor 0.62x metasoma. Ovipositor index 1.16x; hind femora 3.5x as long as wide.

Male. Similar to female except as follows: Length 1.3-1.5 mm. Antenna (Fig. 9 c) with F1-F2 1.3x, F3-F4 twice, F5 1.83x as wide as long; F5 1.7x as wide as F1; scape 4.0x as long as broad, scape 1.16x as long as club; antenna with pedicel plus flagellum 2.7x as long as scape.

Material examined: Holotype, female, Turkey: Sivas, Paşabahçe, 12.vii.2012, L. Gençer, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes:, Sivas, 1 female, Türk-İş blokları, 05.ix. 1992; Paşabahçe, 1 female, 2 male, 04-13.viii.1992; 2 female, 05-06. ix.1992; 1 female, Tuzlugöl, 26.vii.1992; 1 female, 04.viii.1992; 3 females, Univ. Campus, 07.viii.1992; 1 male, Univ. Campus, 16.vii.1992, 1 female, 17.viii. 1992. all paratypes collected by L. Gençer. deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Sivas, Paşabahçe

Host: Unknown.

Comments: Female: *Idiomacromerus lutfiyae* sp. nov. is similar to *Idiomacromerus grisselli* Zerova & Seregina and *Idiomacromerus aslihanae* sp. nov. in having ovipositor about as long as 0.6x metasoma, and ovipositor index about 1.0-1.2. But *I. lutfiyae* sp. nov. differs from *I. grisselli* by antenna with scape brown; pedicel plus flagellum 2.6x as long as scape; anelli transverse, funicular segments slightly transverse, F1 1.55x, F5 2.25 as wide as long; funicle slightly widening apically, F5 1.28x as wide as F1. (in *I. grisselli* antenna with basal 1/3 of scape, apical 1/4 pedicel and flagellum yellow; pedicel plus flagellum 2.28x as long as scape; first anellus quadrate, other anelli transverse, F1-F4 funicular almost quadrate, F5 distinctly transverse, 1.86x as wide as long; funicle slightly widening apically, F5 1.62x as wide as F1). *I. lutfiyae* sp. nov. differs from *I. aslihanae* sp. nov. in having Antenna with scape brown; pedicel plus flagellum 2.6x as long as scape; the latter 2.8x as long as pedicel; hind femora large, 3.5x as long as wide (in *I. aslihanae* sp. nov. antenna with scape in basal 1/3 yellow; pedicel plus flagellum 3.0 as long as scape; the latter 1.8x as long as pedicel; hind femora 3.0x as long as wide).

***Idiomacromerus aslihanae* sp. nov.**

(Figs. 1h, 2h, 3h, 9e)

Etymology. The name is derived from the name of my daughter, Dr. Ashhan (Doğanlar) Anlar

Diagnosis. Body black with greenish reflection; fore wings hyaline; mesosoma slightly bulged in profile, propodeum declined, distinctly visible from above. Ovipositor as long as 0.6x metasoma. Ovipositor index 1.2. Antennae with 3 anelli; pedicel plus flagellum 3.0x as long as scape; anelli transverse, funicular segments distinctly transverse, F1 1.3x, F5 twice as wide as long; funicle slightly widening apically, F5 1.33x as wide as F1. Marginal vein 2.5x stigmal vein and 1.6x postmarginal vein; scape in basal 1/3 yellow; coxae and femora concolorous with body, except apical tip of femora and tibiae and tarsi yellow, except hind tibia medially with black maculae; wings hyaline, veins pale yellow; hind femora moderately large, 3.0x as long as wide.

Description:

Female. Body (Fig. 1i) black with greenish reflection, scape in basal 1/3 yellow; coxae and femora concolorous with body, except apical tip of femora and tibiae and tarsi yellow, except hind tibia medially with black maculae; wings hyaline, veins pale yellow. Length 1.65 mm+ ovipositor 0.48 mm.

Head in dorsal view slightly narrower than mesoscutum, width to length 50:20; POL 2.4x OOL; OOL 1.4 diameter of lateral ocellus. Head in frontal view slightly higher than wide in ratio 36:34; dorsal margin of torulus same level of lower edge of eye; malar space consists 0.36x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 2i) with flagellum slightly clavate, funicular segments slightly widening apically, comprising 3 anelli, 5 funicle segments and a three-segmented clava; scape reaching slightly below lower edge of median ocellus, anelli transverse, funicular segments distinctly transverse, F1 1.3x, F5 twice as wide as long; funicle slightly widening apically, F5 1.33x as wide as F1; scape 1.1x as long as club; antenna with pedicel plus flagellum 3x as long as scape; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 1i) slightly bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum 0.75x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation.

Forewing (Fig. 3i) with basal cell and speculum closed, basal cell bare, speculum very broad, below marginal vein with sparse setae, apical part with very short and light pubescence; marginal vein 2.5x stigmal vein and 1.6x postmarginal vein.

Metasoma (Fig. 1i) excluding ovipositor as long as mesosoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/4 length metasoma; ovipositor as long as 0.6x metasoma. Ovipositor index 1.2; hind femora 3.0x as long as wide.

Male. Similar to female except as follows: length 2.2 mm. Antenna (Fig. 9e) with F1-F2 twice, F3-F4 2.5x, F5 1.8x as wide as long; F5 1.25x as wide as F1; scape 4x as long as width, and 1.5x as long as club; antenna with pedicel plus flagellum 2.24x as long as scape

Material examined: Holotype, female, Turkey: Hatay, Hacıpaşa, 12.vii.2012, M. Doğanlar, swept from lent field, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratype: 1 male, 25.vi.1998, Hatay, Hacıpaşa, 25.vi.1998, M. Doğanlar, swept from lent field, on card.

Distribution: Turkey: Hatay, Hacıpaşa

Host: Unknown.

Comments: *Idiomacromerus aslihanæ* sp. nov. is similar to *I. golbasinensis* sp. nov., *Idiomacromerus sivasensis* sp. nov. and *Idiomacromerus grisselli* Zerova & Seregina. The discussion was given before.

***Idiomacromerus zerovaae* sp. nov.**

(Figs. 1j, 2j, 3j)

Etymology. The name is derived from the name of Dr. M. D. Zerova, who is a famous Ukrainian chalcidologist.

Diagnosis. Ovipositor about 2.5x length of the body, 5.0x metasoma; Ovipositor index 8.0; antenna with scape 4.1x as long as width, 1.04x as long as club; pedicel plus flagellum 2.5x as long as scape; pedicel 2.3x as long as width, 1.6x as long as the first 4 segments of flagellum combined; flagellum clavate, strongly widening apically, the last funicular segment (F5) 1.4x as wide as, and 2.5x as long as fourth flagellar segment (F1); 1st anellus 0.8 width of 2nd and 3rd anellus; F1-F2 anelli form, almost 2.5x as wide as long; F3 1.2x, F4 1.9x as wide as long; F5 the biggest funicular segment, almost quadrate, 1.07x as wide as long; club 2.11x as long as width; malar space 0.26x length of eye; fore wing with marginal vein 2.7x longer than radial vein and 1.6x postmarginal vein; Body head and mesosoma black with greenish reflexion, metasoma yellow, with some brown lines laterally; antenna testaceous, scape yellow, in apical half dorsally brown, with metallic green reflexion, legs yellow, 3rd coxa dorsally green, hind femora medially testaceous. Hind femora 4.2x as long as wide.

Description:

Female. Body head and mesosoma black with greenish reflexion, metasoma yellow, with some brown lines laterally; antenna testaceous, scape yellow, in apical half dorsally brown, with metallic green reflexion, legs yellow, 3rd coxa dorsally green, hind femora medially testaceous; forewings hyaline, veins pale yellow. Length 1.3 mm+ovipositor 1.6 mm.

Head in dorsal view 1.1x wider than mesoscutum, width to length 42:26; POL 2.25 OOL; OOL 1.33 diameter far from lateral ocellus. Head in frontal view as wide as high in ratio 42:42; dorsal margin of torulus at level of lower margin of eye; malar space consists 0.26x height of eye. external margin of clypeus straight; face with fine sculpture. antenna (Fig. 2j) with scape 4.1x as long as width, 1.04x as long as club; pedicel plus flagellum 2.5x as long as scape; pedicel 2.3x as long

as width, 1.6x as long as the first 4 segments of flagellum combined; flagellum clavate, strongly widening apically, the last funicular segment (F5) 1.4x as wide as, and 2.55x as long as fourth flagellar segment (F1); 1st anellus 0.8 width of 2nd and 3rd anellus; F1-F2 anelli form, almost 2.5x as wide as long; F3 1.22x, F4 1.86x as wide as long; F5 the biggest funicular segment, almost quadrate, 1.07x as wide as long; club 2.11x as long as width; linear sensilla in a row on each funicle segment.

Mesosoma (Fig. 1j) 1.85x as long as height, 0.7x as long as metasoma, with pronotum and mesoscutum almost flat, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long in side view, 0.54x as long as mesoscutum; propodeum almost smooth, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 3j) with basal cell closed by sparse setae, with some on upper side; speculum closed, narrow, reaching beginning of marginal vein; with 4-5 rows of long setae below marginal vein; marginal vein 2.7x longer than radial vein and 1.6x postmarginal vein, having area between postmarginal and stigmal vein broad, bare.

Metasoma (Fig. 1j) excluding ovipositor 1.16x as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 4/5 length metasoma; Ovipositor (Fig. 1 j) about 1.25x length of the body, 2.5x metasoma. Ovipositor index 4.0; Hind femora 4.2x as long as wide.

Male. Unknown.

Material examined: Holotype, female, Turkey: Hatay, Antakya, 28.vii.2007. M. Doğanlar, swept from pasture, on card, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 2 females, same data as holotype.

Distribution: Turkey: Hatay, Antakya.

Host: Unknown.

Comments: Female: *Idiomacromerus zerovae* sp. nov. is similar to *Idiomacromerus balasi* (Szelenyi) and *I. mirabilis* Zerova in having antenna with 4 or more anelli. But *I. zerovae* sp. nov. differs from both of them in having ovipositor longer than body, and 2.5x as long as metasoma; antenna having 5 anelli like flagellomere. In both species ovipositor shorter, in *I. balasi* ovipositor 1.34x as long as metasoma, in *I. mirabilis* ovipositor as long as metasoma; in antenna with 6 anelli like flagellomere in *I. balasi* and with 4 anelli like flagellomere in *I. mirabilis*.

***Idiomacromerus nigdenensis* sp. nov.**

(Figs. 4 d-f, 9f)

Etymology. The name is derived from the name of Niğde, from where the holotype was collected.

Diagnosis. Antennae with 2 anelli; thorax wholly green with metasoma bronz; fore wings with maculae below marginal vein; ovipositor longer than metasoma, almost as long as thorax plus metasoma, 1.3-1.64x as long as metasoma; Ovipositor index 2.7-3.1; Pedicel plus flagellum 2.1- 3.5x as long as scape; Pedicel 1.3- 1.44x as long as anelli plus F1 combined; anelli transverse, F1 slightly transverse, F2-F6 almost quadrate; club 2.44-2.66x as long as width; scape 1.12-1.25x as long as club; marginal vein almost 1.7-2.92x longer than radial vein, 1.22-1.5x postmarginal vein. hind femora 3.5-4.2x as long as wide.

Description:

Female. Body (Fig. 4d) wholly green with metasoma bronz. color of scape variable from yellow to black, flagellum brown; fore wings with maculae below

marginal vein; front tibia yellow sometimes with black maculae; middle and hind ones infusate, basal and apical ends yellow, tarsi yellow, last 1-2 segments black. Length 1.5-1.65 mm+ovipositor 1.12-1.4 mm.

Head in dorsal view 1.12 broader than mesoscutum, width to length 28:13; POL 2.8 OOL; OOL 1.5 diameter lateral ocellus. Head in frontal view slightly higher than wide in ratio 30:27; dorsal margin of torulus at level of lower orbit; malar space consists 0.28x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 4e) with flagellum almost filiform, comprising 2 anelli, 6 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, 3.67x as long as broad; length of pedicel plus flagellum 2.1-3.5x as long as scape; pedicel 1.8x as long as width, about 1.3-1.44x as long as anelli plus first funicle segment (F1); 1st anellus slightly, 2nd anellus strongly transverse, funicular segments at least slightly transverse, club 2.34-2.66x as long as width; scape 1.27x as long as club; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 4d) distinctly bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long, 0.6x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 4f) with basal cell and speculum closed, basal cell 3-4setae apically, with a maculae below stigmal veins, reaching median part of wing; below marginal with sparse setae, apical part with very short and light pubescence. marginal vein 2.33x stigmal vein and 1.67x postmarginal vein.

Metasoma (Fig. 4d) excluding ovipositor slightly longer than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 4/5 length metasoma; ovipositor longer than metasoma, almost as long as thorax plus metasoma, 1.3-1.64x as long as metasoma. Ovipositor index 2.7-3.1; hind femora 3.5-4.2x as long as wide.

Male. Similar to female except as follows: Length 1.4-1.5 mm. Antenna (Fig. 9f) 3 anelli, 5 funicular segments and a three-segmented clava; pedicel 1.14x as long as width, as long as anelli; the latter strongly transverse, F1 slightly transverse, F2-F5 quadrate to slightly longer than width; club 3.75x as long as width.

Material examined: Holotype, female, Turkey: Niğde, 11.vi.2003, O. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 3 females, 1 male, same data as the holotype; 1 female, Höyük, Niğde, 11.vi.2003, O. Doğanlar, swept from pasture, on card, 2 females, Ardahan, side of the road from Ardahan to Şavşat, 10 km from Ardahan, 11.vi. 2003, swept from *Onobrychis sativa* L. field, M. Doğanlar.

Distribution: Turkey: Niğde, Höyük; Niğde; Ardahan, side of the road from Ardahan to Şavşat, 10 km from Ardahan.

Host: Unknown.

Comments: Female: *Idiomacromerus nigdenensis* sp. nov. is unique species by long ovipositor, almost as long as thorax plus metasoma, 1.3-1.64x as long as metasoma in the species of *Idiomacromerus* having 2 anelli and fore wing with maculae. The new species seems to be similar to *Idiomacromerus terebrator* (Masi) in having long metasoma, if the maculated forewing ignored. But *I. nigdenensis* sp. nov. having 1st anellus slightly, 2nd anellus strongly transverse, funicular segments at least slightly transverse; front tibia yellow sometimes with black maculae; middle and hind ones infusate, basal and apical ends yellow, tarsi yellow, last 1-2 segments black. (in *I. terebrator* having anelli wider than its

length, sometimes square in front view; funicular segments quadrate, to longer than wide; tibiae reddish, middle and hind ones infusate in middle, tarsi yellow).

***Idiomacromerus haliti* sp. nov.**

(Figs. 4a-c, 9g)

Etymology. The name is derived from the name of Prof. Dr. Halit Çam, who is the collector of holotype.

Diagnosis. Antennae with 2 anelli; Body wholly green with metasoma bronzy; fore wings with pale maculae below marginal vein; ovipositor 0.58x as long as metasoma; Ovipositor index 1.17; Pedicel plus flagellum 3.0x as long as scape; Pedicel 1.2x as long as anelli plus F1 combined; anelli transverse, F1 distinctly transverse, F2-F6 slightly transverse; club 1.75x as long as width; scape 1.14x as long as club; forewing with marginal vein almost 2.67x longer than radial vein, 1.6x postmarginal vein; having area between postmarginal vein and stigmal vein narrow and with hair lines. hind femora 3.66x as long as wide.

Description:

Female. Body (Fig. 4a) wholly green with metasoma bronzy; fore wings with pale maculae below marginal vein; scape black; fore tibia yellow, mid and hind tibiae yellow, medially fuscous, tarsi pale yellow, last segment brown. Length 2.12 mm+ovipositor 0.65 mm.

Head in dorsal view 1.12 broader than mesoscutum, width to length 36:16; POL 2.3 OOL; OOL 1.67 diameter lateral ocellus. Head in frontal view as wide as high, in ratio 35:35; dorsal margin of torulus slightly above level of lower orbit; malar space consists 0.37x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 4b) with flagellum slightly clavate, F6 1.33x as wide as F1, comprising 2 anelli, 6 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, 5.33x as long as broad, 1.5x as long as club; Pedicel plus flagellum 2.5x as long as scape; pedicel 1.86x as long as width, 1.3x as long as anelli plus F1 combined; anelli transverse, F1 distinctly transverse, 2.5x as wide as long; F2-F6 slightly transverse, F6 1.7x as wide as long; club 1.5x as long as width; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 4a) almost flat in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum short, 0.66x as long as mesoscutum; propodeum with fine reticulation, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 4c) with basal cell closed, basal cell one row of setae near submarginal vein; speculum narrowly open, moderately broad, below marginal vein with 2-3 rows of setae; below stigmal veins with a maculae, reaching median part of wing; forewing with dense setae below marginal vein. marginal vein almost 2.67x longer than radial vein, 1.6x postmarginal vein; having area between postmarginal vein and stigmal vein narrow and with hair lines.

Metasoma (Fig. 4a) excluding ovipositor slightly shorter than mesosoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 1/2 length metasoma; ovipositor 0.58x as long as metasoma. Ovipositor index 1.17; hind femora 3.8x as long as wide.

Male. Similar to female except as follows: Length 1.8-2.0 mm. Antenna (Fig. 9g) with F5 1.25x as wide as F1, comprising 3 anelli, 5 funicle segments and a three-segmented clava; 5.0x as long as broad, 1.15x as long as club; Pedicel plus flagellum 2.8x as long as scape; pedicel 1.25x as long as width, 1.25x as long as anelli; anelli transverse, F1-F3 distinctly transverse, twice as wide as long; F4 1.33x, F5 twice, as wide as long; club 1.9x as long as width.

Material examined: **Holotype, female**, Turkey: Tokat, Gümenek, 05.viii.1989, H. Çam, swept from pasture, on card, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, forewing and left antenna slide mounted in Canada balsam, same data as holotype; 6 females, 2 males, Tokat, Gümenek, 29.vii.-05.viii.1989, H. Çam, swept from pasture, on card; 1 female, 1 male, Tokat, Taşlıçiftlik, 28.vii. 1989, H. Çam, swept from pasture, on card; 7 females, 1 male, 04.-28.vii.1989, H. Çam, swept from pasture, on card; 1 female, 29.vii. 1986, H. Çam, swept from pasture, on card; 1 female, Paşabahçe, Sivas, 24.vii. 1992, L. Gencer, swept from pasture, on card. The paratypes were deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Tokat, Sivas.

Host: Unknown.

Comments: Female: *Idiomacromerus haliti* sp. nov. is similar to *I. perplexus* (Gahan) in having forewing with maculae below marginal vein and ovipositor about as long as half of metasoma. But *I. haliti* sp. nov. differs from *I. perplexus* in having pedicel plus flagellum 3.0x as long as scape; Pedicel 1.2x as long as anelli plus F1 combined; F1 distinctly transverse, F2-F6 slightly transverse; club 1.75x as long as width; Forewing having area between postmarginal vein and stigmal vein, narrow and with hair lines (in *I. perplexus* pedicel plus flagellum 2.62x as long as scape; Pedicel 1.67x as long as anelli plus F1 combined; F1- F6 distinctly transverse, club 2.4x as long as width; Forewing having area between postmarginal vein and stigmal vein, broad and bare).

***Idiomacromerus oguzhani* sp. nov.**

(Figs. 5a, 6a, 7a, 9h)

Etymology. The name is derived from the name of my son, Associate Prof.Dr. Oğuzhan Doğanlar who collected the holotype.

Diagnosis. Marginal vein 4.0x as long as stigmal vein and 2.6x postmarginal vein; basal cell and speculum closed by sparse setae, area below marginal vein with dense setae on both side Antenna with flagellum slightly clavate, anelli strongly transverse, funicular segments transverse; pedicel plus flagellum 3.05x as long as scape; scape 4.4x as long as width, 1.09x as long as club; pedicel 1.5x as long as width, and as long as anelli plus F1; anelli strongly transverse, funicular segments transverse, flagellum slightly clavate, F1 1.6x as wide as long; F6 1.36x as wide as F1, and 1.9x as wide as long; club 1.7x as long as width. Ovipositor 0.36-0.44x metasoma; ovipositor index 0.6- 0.71. Body green with bronze tint, metasoma dark bronze, basal segments of tarsus and tibia dark yellow. Hind femora 3.2x as long as wide.

Description:

Female. Body (Fig. 5a) green with bronze tint, metasoma dark bronze; fore wings hyaline; 2/5 base of scape yellow; coxae concolorous with body, femora and tibiae, tarsi, except last segment brown. Length 1.95 mm+ovipositor) 0.3 mm.

Head in dorsal view 1.14 broader than mesoscutum, width to length 28:15; POL 2.0x OOL; OOL 1.83 diameter far from lateral ocellus. Head in frontal view slightly wider than high in ratio 43:40; dorsal margin of torulus at level of lower orbit; malar space consists 0.32x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6a) with flagellum slightly clavate towards club, comprising 2 anelli, 6 funicle segments and a three-segmented clava; scape nearly reaching lower edge of median ocellus, 4.4x as long as broad; Pedicel plus flagellum 3.05x as long as scape; Pedicel 1.5x as long as width, as long as anelli plus F1 combined; anelli transverse, F1 1.6x as wide as long; funicular segments

transverse, gradually widening towards club, F6 1.36x as wide as F1, 1.9x as wide as long; club 1.7x as long as width; scape 1.09x as long as club; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 5a) with pronotum and mesoscutum almost flat in profile, scutellum distinctly bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum short, 0.43x as long as mesoscutum; propodeum almost smooth, mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7a) with basal cell and speculum closed by sparse setae, basal cell bare on upper side; speculum broad, reaching half of marginal vein; forewing with dense setae below marginal vein. marginal vein almost 4x longer than radial vein, 2.6x postmarginal vein; having area between postmarginal vein and stigmal vein with dense setae on both side.

Metasoma (Fig. 5a) excluding ovipositor as long as mesosoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; ovipositor 0.36- 0.44x as long as metasoma. Ovipositor index 0.66; hind femora 4.0-4.3x as long as wide.

Male. Similar to female except as follows: length 1.4 mm. Antenna (Fig. 9f) with one anellus, 7 funicular segments, 3-segmented club. F1 almost quadrate, smaller than other funicular segments, flagellum slightly clavate, club narrower than F7.

Material examined: Holotype, female, Turkey: Adiyaman, Gölbaşı, 24.v. 2007, O. & M. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 2 females, 23 males, same data as holotype; 4 females, 2 males, Yukarımülk, Pazarcık, Kahramanmaraş, 24.v. 2007, swept from pasture; 1 F, Kangörmez, Bozova, Şanlıurfa, 07.v.2005, Buğday; 1F, 1M, Keçikuyusu, Oğuzeli, Gaziantep, 13.v. 2011, pasture; 1 F, Keçikuyusu 6km Direkli, Oğuzeli, Gaziantep, 02.v. 2010, pasture; 3F, 4M, from Gölbaşı to Adiyaman Araban road connection, 02.v. 2008, swept from lent field; 1 female, Tokat: Center, 01.vi. 1986; 1 female, Necip, 11.v.1989, H. Çam, 1 female, 2 males, Niğde, Höyük, O. Doğanlar, All of the paratypes were swept from pasture and deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Adiyaman, Tokat, Niğde, Gaziantep, Kahramanmaraş.

Host: Unknown.

Comments: Female: *Idiomacromerus oguzhani* sp. nov. is similar to *Idiomacromerus mbahadiri* sp. nov. and *Idiomacromerus uguranlari* sp. nov. in having ovipositor about 0.44x of metasoma. But *I. oguzhani* sp. nov. differs from *I. mbahadiri* by marginal vein 3.0-4.0x as long as stigmal vein and 1.9-2.14x postmarginal vein; basal cell and speculum closed by sparse setae, area below marginal vein with dense setae on both side; Antenna with pedicel plus flagellum 3.05x as long as scape, and F1 1.6x as wide as long; F6 1.36x as wide as F1 (in *I. mbahadiri* marginal vein almost 5x longer than radial vein, 2.5x postmarginal vein; basal cell and speculum closed by dense setae, area below marginal vein with sparse setae; antenna with pedicel plus flagellum 2.67x as long as scape, and F1 1.75x as wide as long; F6 1.6x as wide as F1). *Idiomacromerus oguzhani* sp. nov. differs from *I. uguranlari* by metasoma almost as long as mesosoma; antenna black, except 2/5 base of scape yellow; head from the front as long as width (in *I. uguranlari* metasoma distinctly longer than mesosoma; antenna with scape yellow, flagellum testaceous dorsally with metallic green reflexion; head from front distinctly wider than length (43:35)).

***Idiomacromerus mbahadiri* sp. nov.**

(Figs. 5b, 6b, 7b)

Etymology. The name is derived from the name of my friend, Mustafa Bahadır, who helped me when I collect the specimens.

Diagnosis. Marginal vein almost 5x longer than radial vein, 2.5x postmarginal vein; basal cell and speculum closed by dense setae, area below marginal vein with sparse setae. Antenna with pedicel plus flagellum 2.67x as long as scape; scape 4x as long as width, 1.11x as long as club; pedicel 1.67x as long as width, and 1.22x anelli plus F1; anelli strongly transverse, funicular segments transverse, flagellum moderately clavate, F1 1.75x as wide as long; F6 1.6x as wide as F1, and 2.2x as wide as long; club 1.9x as long as width; ovipositor 0.45x metasoma; ovipositor index 0.74; body black with greenish reflection, scape in basal half, apical half of front and mid femora, 1/4 apical of hind femora, tibiae, tarsi yellow, except 2 segments of tarsi black, forewing veins yellow; hind femora 3.0x as long as wide

Description:

Female. Body (Fig. 5b) black with greenish reflection, scape in basal half, apical half of front and mid femora, 1/4 apical of hind femora, tibiae, tarsi yellow, except 2 segments of tarsi black, forewing veins yellow. Length 1.7 mm+ovipositor 0.2 mm.

Head in dorsal view 1.3x as wide as mesoscutum, width to length 30:15; POL 2.5x OOL; OOL 2 diameter far from lateral ocellus. Head in frontal view almost as wide as high in ratio 30:30; dorsal margin of torulus slightly below level of lower margin of eye; malar space consists 0.35x height of eye; external margin of clypeus straight; face reticulated. Antenna (Fig. 6b) with pedicel plus flagellum 2.67x as long as scape; scape 4x as long as width, 1.11x as long as club; pedicel 1.67x as long as width, and 1.22x anelli plus F1; anelli strongly transverse, funicular segments transverse, flagellum moderately clavate, F1 1.75x as wide as long; F6 1.6x as wide as F1, and 2.2x as wide as long; club 1.9x as long as width; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 5b) with pronotum and mesoscutum slightly bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with distinct reticulation; pronotum short, 0.36x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7b) with basal cell and speculum closed by dense setae, basal cell with some setae on upper side; speculum broad, reaching almost half of marginal vein; forewing with sparse setae below marginal vein; marginal vein almost 5x longer than radial vein, 2.5x postmarginal vein; having area between postmarginal and stigmal vein narrow with 2 setae.

Metasoma (Fig. 5b) excluding ovipositor slightly longer than mesosoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/4.5 length metasoma; ovipositor 0.45x metasoma; ovipositor index 0.74; hind femora 3.0x as long as wide.

Male. Similar to female excepts as follows: Length 1.4-1.6 mm. Antenna with one anellus, 7 funicular segments, F1 1.5x as wide as long; F6 twice as wide as F1, and 2.5x as wide as long; club 2.2x as long as width.

Material examined: Holotype, female, Turkey: Hatay, Belen, Kömürçukuru, 05.v.2012, M. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes; 3 Females, 2 Males, Kömürçukuru, Belen, Hatay, 05.v. 2012; 2 Females, 1 Male, Sekili 8 km to Oğuzeli, Gaziantep, 02.v.2010, swept from pasture.

Distribution: Turkey: Hatay, Belen, Gaziantep.

Host: Unknown.

Comments: Female: *Idiomacromerus mbahadiri* sp. nov. is similar to *I. oguzhani* sp. nov. and *I. uguranlari* sp. nov.. The status of the species were discussed above.

***Idiomacromerus uguranlari* sp. nov.**

(Figs. 5c, 6c, 7c)

Etymology. The name is derived from the name of my son in law, Uğur Anlar.

Diagnosis. Wings hyaline, metasoma distinctly longer than mesosoma; antenna with scape yellow, head from front distinctly wider than length (70:63); flagellum distinctly clavate, testaceous dorsally with metallic green reflexion, F6 1.75x wider than F1; anelli strongly transverse, F1-F4 distinctly transverse 2.86x,, F5-F6 transverse, F5 3.0x, F6 2.53x as wide as long; pedicel plus flagellum 2.37x as long as scape. marginal vein 4.3x as long as stigmal vein and 2.0x postmarginal vein. Ovipositor index 0.68; Ovipositor 0.43x metasoma. Body with head green, meso and metasoma black with coppery reflection, legs testaceous with metallic green reflection, last segment of tarsi brown. Hind femora 2.86x as long as wide.

Description:

Female. Body (Fig. 5c) with head green, meso and metasoma black with coppery reflection, antenna with scape yellow, flagellum testaceous dorsally with metallic green reflexion; legs testaceous with metallic green reflection, last segment of tarsi brown wings hyaline, veins yellow. Length 1.32 mm+ovipositor 0.45 mm.

Head in dorsal view 1.35 broader than mesoscutum, width to length 28:14; POL 5.33x OOL; OOL a diameter far from lateral ocellus. Head in frontal view wider than high in ratio 70:63; dorsal margin of torulus slightly above level of lower margin of eye; malar space consists 0.26x height of eye; external margin of clypeus straight; face reticulated. Antenna (Fig. 6c) with flagellum distinctly clavate towards club, comprising 2 anelli, 6 funicle segments and a three-segmented clava; scape distinctly below lower edge of median ocellus, 4.2x as long as broad; pedicel plus flagellum 2.37x as long as scape; pedicel 1.9x as long as width, as long as anelli plus F1 combined; anelli strongly transverse, F1-F4 distinctly transverse 2.86x,, F5-F6 transverse, F5 3.0x, F6 2.53x as wide as long and 1.75x as wide as F1; club 1.7x as long as width; scape 1.25x as long as club; linear sensilla very sparse, 1-3 sensillae on each funicle segment.

Mesosoma (Fig. 5c) with pronotum and mesoscutum bulged in profile, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with distinct reticulation; pronotum short, 0.5x as long as mesoscutum; propodeum finely reticulated, mesosternum finely reticulated. All coxae with distinct reticulation. Forewing (Fig. 7c) with basal cell and speculum closed by sparse setae, basal cell with a few setae on upper side; speculum broad, reaching half of marginal vein; forewing with sparse setae below marginal vein. marginal vein 4.3x as long as stigmal vein and 2.0x postmarginal vein; having area between postmarginal vein and stigmal vein narrow, with 2 setae.

Metasoma (Fig. 5c) excluding ovipositor as long as mesosoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 2/3 length metasoma; ovipositor index 0.68; ovipositor 0.43x metasoma. Hind femora 2.86x as long as wide.

Male. Unknown.

Material examined: Holotype, female, Turkey: Bahkesir, 25. viii. 2004, (B. Hepdurgun), trapped in orchards of *Olea europea* on card, forewing and left

antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Balıkesir.

Host: Unknown.

Comments: Female: : *Idiomacromerus uguranlari* sp. nov. is similar to *I. oguzhani* sp. nov. and *I. mbahadiri* sp. nov.. The status of the species were discussed above.

***Idiomacromerus curticaudatus* (Szelenyi, 1981)**

Liodontomerus curticaudatus Szelenyi, 1981: 211-212. Holotype female, Hungarian National History Museum, Hungary.

Idiomacromerus curticaudatus (Szelenyi), Grissell, 1995: 196. New combination for *Liodontomerus curticaudatus* Szelenyi.

Material examined: 1 female, Hamamköy, Ankara, 11.ix. 1990, reared from seed of *Medicago sativa*, M. Aydemir (**New record for Turkey**).

***Idiomacromerus neslihanae* sp. nov.**

(Figs. 5d, 6d, 7d, 9i)

Etymology. The name is derived from the name of my daughter, Neslihan Doğanlar.

Diagnosis. Ovipositor approximately 0.64x metasoma; ovipositor index 1.16x. Antenna with scape black, with metallic green reflexion, pedicel and flagellum brown; Pedicel 1.1x as long as anelli plus F1 combined; both anelli distinctly transverse, flagellum almost filiform, F6 1.25x as wide as F1; funicular segments almost quadrate, to slightly transverse; pedicel plus flagellum 2.83x as long as scape; club 2.15x as long as width; scape 1.07x as long as club; Head from the front 1.12x as wide as height; marginal vein 2.7x as long as stigmal vein and 1.9x postmarginal vein. Body black with metallic green reflexion, coxae and femora concolorous with body, except apical tips femora, tibiae, tarsi yellow, forewing veins pale yellow. Hind femora 3.0x as long as wide.

Description:

Female. Body (Fig. 5d) black with metallic green reflexion, antenna with scape black, with metallic green reflexion, pedicel and flagellum brown; coxae and femora concolorous with body, except apical tips femora, tibiae, tarsi yellow, forewing hyaline, veins pale yellow. Length 2.1 mm+ovipositor 0.63 mm.

Head in dorsal view 1.16x as wide as mesoscutum, width to length 35:15; POL 2.5x OOL; OOL 2 diameter far from lateral ocellus. Head in frontal view 1.1x as wide as high in ratio 35:32; dorsal margin of torulus at level of lower margin of eye; malar space consists 0.26x high of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6d) with scape black, with metallic green reflexion, pedicel and flagellum brown; Pedicel 1.1x as long as anelli plus F1 combined; both anelli distinctly transverse, flagellum almost filiform, F6 1.25x as wide as F1; funicular segments almost quadrate, to slightly transverse; pedicel plus flagellum 2.83x as long as scape; club 2.15x as long as width; scape 1.07x as long as club; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 5d) with pronotum and mesoscutum slightly bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with distinct reticulation; pronotum short, 0.45x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7d) with basal cell closed by sparse setae, with a few setae on upper side, speculum open, broad, reaching almost stigmal vein; forewing with a few setae below marginal vein; marginal vein 2.7x as long as

stigmal vein and 1.9x postmarginal vein; having area between postmarginal and stigmal vein narrow, bare.

Metasoma (Fig. 5d) excluding ovipositor as long as mesosoms; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; ovipositor approximately 0.64x metasoma; ovipositor index 1.16x; hind femora 3.0x as long as wide.

Male. Similar to female, except as follows: length 1.55 mm. Antenna (Fig. 9i) with both anelli very small and distinctly transverse, pedicel plus flagellum 2.8x scape, the latter 4.2x as long as wide; funicular segments distinctly transverse.

Material examined: Holotype, female, Turkey: Kahramanmaraş, Araban, Yukarımülk, 11.v.2008, M. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, Adıyaman, Gölbashi, 20 km to Malatya, 24.v. 2007; 5 males, Adıyaman, Gölbashi, 20 km to Malatya, 24.v. 2007, M. Doğanlar, swept from pasture, on card. The paratypes were deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Kahramanmaraş, Adıyaman.

Host: Unknown.

Comments: Female: *Idiomacromerus neslihanæ* sp. nov. is similar to *Idiomacromerus nitens* (Bouček) in having ovipositor 0.64 metasoma, and Ovipositor index around 1.16 and antennae black. But *I. neslihanæ* sp. nov. differs from *I. nitens* in having marginal vein 2.7x as long as stigmal vein and 1.9x postmarginal vein; funicular segments almost quadrate, to slightly transverse; head from the front 1.12x as wide as height; (in *I. nitens*, marginal vein 3.8x as long as stigmal vein and 2.7x postmarginal vein; funicular segments transverse; head from the front as long as height).

***Idiomacromerus zeynepbanuæ* sp. nov.**

(Figs. 5e, 6e, 7e, 9j)

Etymology. The name is derived from the name of my daughter in law, Associate Prof. Dr. Zeynep Banu (Porgalı) Doğanlar.

Diagnosis. Ovipositor approximately 0.54x metasoma; ovipositor index 1.11x; antenna with scape yellow, in apical half dorsally testaceous, pedicel and flagellum black; Pedicel 1.33x as long as anelli plus F1 combined; both anelli distinctly transverse flagellum distinctly clavate, F6 1.5x as wide as F1; funicular segments distinctly transverse; pedicel plus flagellum 2.67x as long as scape; club 2.27x as long as width; scape 1.2x as long as club; head from the front 1.23x as wide as height, from side view 1.8x as high as length; marginal vein 2.64x as long as stigmal vein and 1.48x postmarginal vein. Body black with couperly reflexion, coxae and femora concolorous with body, except apical tips femora, tibiae, tarsi yellow, except last segment of tarsi black, forewing veins yellow. Hind femora 2.8x as long as wide.

Description:

Female. Body (Fig. 5e) black with couperly reflexion, antennae black, with metallic reflexion, except scape yellow; coxae and femora concolorous with body, except apical tips femora, tibiae, testaceous, tarsi yellow, except last segment of tarsi black, forewing hyaline, veins yellow. Length 1.9 mm+ovipositor 0.5 mm.

Head in dorsal view almost as wide as mesoscutum, width to length 32:15; POL 1.7x OOL; OOL a diameter far from lateral ocellus. Head in frontal view as wide as high in ratio 43:43; dorsal margin of torulus at level of lower margin of eye; malar space consists 0.31x height of eye. external margin of clypeus straight; face

with fine sculpture. Antenna (Fig. 6e) with flagellum distinctly clavate; comprising 2 anelli, 6 funicle segments and a three-segmented clava; scape nearly reaching distinctly below edge of median ocellus, 3.33x as long as broad; pedicel plus flagellum 2.67x as long as scape; pedicel 1.33x as long as anelli plus F1 combined; both anelli and funicular segments slightly transverse; F6 1.5x as wide as F1; club 2.27x as long as width; scape 1.2x as long as club; linear sensilla in a single row on each funicle segment.

Mesosoma (Fig. 5e) with pronotum and mesoscutum slightly bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with distinct reticulation; pronotum short, 0.4x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7e) with basal cell and speculum closed by sparse setae, basal cell with some setae on upper side; speculum broad, reaching almost stigmal vein; forewing with a few setae below marginal vein. ; marginal vein 2.64x as long as stigmal vein and 1.48x postmarginal vein, having area between postmarginal and stigmal vein narrow with 4 setae.

Metasoma (Fig. 5e) excluding ovipositor longer than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 5/6.5 length metasoma; ovipositor approximately 0.54x metasoma; ovipositor index 1.11; hind femora 2.8x as long as wide.

Male. Similar to female, except as follows: length 1.7 mm. Antenna (Fig. 9j) with 3 anelli, 5 funicular segments, 3-segmented club; flagellum distinctly clavate, pedicel plus flagellum 2.78x scape.

Material examined: Holotype, female, Turkey: Tokat, 19.viii.1989, H. Çam, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, Tokat; 2 females, 2 males, Tokat, Taşlıçiftlik, 02.vi.-28.vii.1989; 1 female, Gümenek, 29.vii. 1989, H. Çam, swept from pasture, on card. The paratypes were deposited in same museum as the Holotype.

Distribution: Turkey: Tokat

Host: Unknown.

Comments: Female: *Idiomacromerus zeynepbanuae* sp. nov. is similar to *Idiomacromerus nitens* (Boucek) in having ovipositor about 0.54-0.56x metasoma, and Ovipositor index around 0.96-1.11; pedicel plus flagellum 2.7x as long as scape. But *Idiomacromerus zeynepbanuae* sp. nov. differs from *I. nitens* in having antenna with scape yellow, in apical half dorsally testaceous, pedicel and flagellum black; Head from the front 1.23x as wide as height; marginal vein 2.64x as long as stigmal vein and 1.48x postmarginal vein (in *I. nitens* antennae black; segments of funicle transverse; head from the front as long as height, marginal vein 3.8x as long as stigmal vein and 2.7x postmarginal vein).

***Idiomacromerus papaveris* (Förster, 1856)**

(Figs. 5j,6k, 7k)

Lochites papaveris Förster, 1856: 44, 120. female, male syntypes, Germany, (?NMW), USNM.

Distribution: Germany; Hungary (Szelenyi 1957); Italy (Masi 1916); Spain (Nieves Aldrey & Chicote 1986), France (Askew & Nieves 1988), Ukraine, Crimea (Zerova & Seregina, 1999; 2001).

Turkey (**New record**): Sivas: 4 females, Uni.Campus, 17.-27. viii.-07.ix. 1992; 3 females, Hara, 25.viii.-16.ix. 1992, the specimens were swept from pasture by L. Gencer; 1 female, Gaziantep, Oğuzeli, Keçikuyusu, 28.iv. 2012; 5 females, 5 males, Adiyaman, Gölbaşı, 20 km to Malatya, 24. v. 2007, 2 males, Şanlıurfa, Bozova,

Kangörmez, 24.iv. 2007, the specimens were swept from pasture by M. Doğanlar. length 2.4 mm+ovipositor 0.67 mm.

Comments: The diagnostic characters of *Idiomacromerus papaveris* were given in the key.

***Idiomacromerus gozuaciki* sp. nov.**

(Figs. 5f, 6f, 7f, 9k)

Etymology. The name is derived from the name of Assistant Prof. Dr. Celalettin Gözüaçık, who collected the types.

Diagnosis. Ovipositor 0.75x metasoma; ovipositor index 1.04; marginal vein almost 2.36x longer than radial vein, 1.5x postmarginal vein; antenna with pedicel plus flagellum 2.5x as long as scape; the latter about 4x as long as width, and 1.5x as long as club; flagellum slightly clavate, F6 1.25x as wide as F1; anelli strongly transverse, funicular segments slightly transverse, F1-F2 about 1.33x as wide as long; F3-F5 almost quadrate, F6 1.25x as wide as long; club 1.76x as long as width. Body black with greenish reflection, scape, tibiae fuscous, tarsi yellow except claws black, forewing hyaline, veins yellow; hind femora 3.1x as long as wide.

Description:

Female. Body (Fig. 5f) black with metallic green reflexion, antenna with scape fuscous, dorsally greenish reflexion, flagellum brown, coxae and femora concolorous with body, except apical 2/5 of femora, fore tibiae, both ends of mid and hind tibiae and tarsi yellow, forewing hyaline, veins pale yellow. Length 2.9 mm+ovipositor 0.85 mm.

Head in dorsal view 0.9x as wide as mesoscutum, width to length 45:22; POL 3x OOL; OOL a diameter far from lateral ocellus. Head in frontal view 1.15x as wide as high in ratio 46:40; dorsal margin of torulus slightly above lower margin of eye; malar space consists 0.26x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6f) with pedicel plus flagellum 2.5x as long as scape; the latter about 4x as long as width, and 1.5x as long as club; flagellum slightly clavate, F6 1.25x as wide as F1; anelli strongly transverse, funicular segments slightly transverse, F1-F2 about 1.33x as wide as long; F3-F5 almost quadrate, F6 1.25x as wide as long; club 1.76x as long as width; linear sensilla in 1.5 rows on each funicle segment.

Mesosoma (Fig. 5f) with pronotum and mesoscutum bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum short in side view, 0.35x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7f) with basal cell and speculum closed by dense setae, basal cell with 2 rows long setae on upper side; speculum broad, but reaching beginning of marginal vein; forewing with 3 rows of long setae below marginal vein; marginal vein 2.36x as long as stigmal vein and 1.5x postmarginal vein, having area between postmarginal and stigmal vein broad with 2 rows of setae.

Metasoma (Fig. 5f) excluding ovipositor slightly than rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; Ovipositor 0.75x metasoma. Ovipositor index 1.04; Hind femora 3.1x as long as wide.

Male. Similar to female except as follows: length 1.5 mm. Antenna (Fig. 9k) with 3 anelli, 5 funicular segments, 3-segmented club. Pedicel plus flagellum 2.86x scape, the latter wider basally.

Material examined: Holotype, female, Turkey: Ağrı, Taşlıçay, Aşağı Toklu, 18.vii.2012, C. Gözüaçık, swept from pasture, on card, forewing and left antenna

slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 male, same data as the holotype; 1 Female, 1 Male, Nişancı, Erciş, Van, 04.vii.2010, 39 03 N, 43 17 E, O. Doğanlar.

Distribution: Turkey: Ağrı, Van.

Host: Unknown.

Comments: Female: *Idiomacromerus gozuaciki* sp. nov. is similar to *Idiomacromerus papaveris* (Förster) in having ovipositor 0.75 metasoma, and funicular segments slightly transverse. But *I. gozuaciki* sp. nov. differs from *I. papaveris* in having marginal vein 2.82x as long as stigmal vein and 1.43x postmarginal vein; antenna with pedicel plus flagellum 2.5x as long as scape (in *papaveris*, marginal vein 2.7x as long as stigmal vein and 2.0x postmarginal vein; antenna with pedicel plus flagellum 2.96x as long as scape).

***Idiomacromerus hasandagus* sp. nov.**

(Figs. 5g, 6g, 7g, 9l)

Etymology. The name is derived from the name of the highest mountain of Niğde from where the holotype was collected.

Diagnosis. Ovipositor 0.80x length of metasoma; flagellum slightly clavate; ovipositor index 1.4; Antenna with scape 4.6x as long as width, 1.1x as long as club; pedicel plus flagellum 2.5x as long as scape; flagellum slightly clavate, F6 1.5x as wide as F1; pedicel 1.4x as long as width, 0.73x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 twice, F6 1.7x as wide as long; club 2.5x as long as width; marginal vein 2.0x longer than radial vein, 1.2x postmarginal vein. Body black with violet reflexion, antenna with scape yellow, pedicel and flagellum black, coxae and femora concolorous with body, except apical 1/5 of fore and mid femora, 1/4 of hind femora, tibiae and tarsi yellow. Hind femora 3.75x as long as width.

Description:

Female. Body (Fig. 5g) black with violet reflexion, antenna with scape yellow, pedicel and flagellum black, coxae and femora concolorous with body, except apical 1/5 of fore and mid femora, 1/4 of hind femora, tibiae and tarsi yellow. length 2.6 mm+ovipositor 1.12 mm.

Head in dorsal view slightly wider than mesoscutum, width to length 30:17; POL 2.4x OOL; OOL 1.4 diameter far from lateral ocellus. Head in frontal view as wide as high in ratio 30:30; dorsal margin of torulus at lower margin of eye; malar space consists 0.33x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6g) with scape 4.6x as long as width, 1.1x as long as club; pedicel plus flagellum 2.5x as long as scape; flagellum slightly clavate, F6 1.5x as wide as F1; pedicel 1.4x as long as width, 0.73x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 twice, F6 1.7x as wide as long; club 2.5x as long as width; linear sensilla in a row on each funicle segment.

Mesosoma (Fig. 5g) twice as long as width, 0.72x as long as metasoma, with pronotum and mesoscutum bulged, propodeum sharply declined, almost vertical, not visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long in side view, 0.7x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7g) with basal cell and speculum closed by dense setae, basal cell almost bare on upper side; speculum broad, reaching beginning of stigmal vein; below marginal vein almost 3 rows of sparse long setae; marginal vein 2.0x longer

than radial vein, 1.2x postmarginal vein; having area between postmarginal and stigmal vein narrow, with one row of setae.

Metasoma (Fig. 5g) excluding ovipositor as long as rest of the body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; ovipositor 0.80x length of metasoma; ovipositor index 1.4; hind femora 3.75x as long as wide.

Male. Similar to female except as follows: length 1.62 mm. Antenna (Fig. 9l) both anelli distinctly transverse, flagellar segments widening towards tip, F6 1.57x as wide as F1; club 1.67x as wide as long.

Material examined: Holotype, female, Turkey: Niğde, 11.vi.2008, O. Doğanlar, swept from pasture, on card, deposited in the Insect collection of Research Station of Biological Control, Adana.

Distribution: Turkey: Niğde

Host: Unknown.

Comments: Female: *Idiomacromerus hasandagus* sp. nov. is similar to *Idiomacromerus turhalensis* sp. nov., in having ovipositor 0.80 metasoma (in *I. turhalensis* sp. nov. 0.86x length of metasoma). But it differs from *I. turhalensis* sp. nov. in having marginal vein 2.0x longer than radial vein, 1.2x postmarginal vein; pedicel plus flagellum 2.5x as long as scape (in *I. turhalensis* marginal vein 5.0x longer than radial vein, 2.5x postmarginal vein; pedicel plus flagellum 3.1x as long as scape).

***Idiomacromerus turhalensis* sp. nov.**

(Figs. 5h, 6h, 7h)

Etymology. The name is derived from the name of Tokat, Turhal, from where the types were collected.

Diagnosis. Ovipositor 0.86x length of metasoma; flagellum clubed, funicular segments almost filiform, club wider; Ovipositor index 1.32; Antenna with scape 5.0x as long as width, 1.25x as long as club; pedicel plus flagellum 3.1x as long as scape; flagellum clubed, funicular segments almost filiform, F6 1.2x as wide as F1; pedicel 1.67x as long as width, 0.84x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 1.45x, F6 2.5x as wide as long and 1.25x as wide as F1; club 1.6x as long as width; marginal vein 5.0x longer than radial vein, 2.5x postmarginal vein. Body black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except apical 1/5 of femora, both ends of tibiae and tarsi yellow, except last two segment brown. Hind femora 4.0x as long as width.

Description:

Female. Body (Fig. 5h) black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except apical 1/5 of femora, both ends of tibiae and tarsi yellow, except last two segment brown. length 1.63 mm+ovipositor 0.63 mm

Head in dorsal view almost as wide as mesoscutum, width to length 50:22; POL 2.44 OOL; OOL 1.12 diameter far from lateral ocellus. Head in frontal view as wide as high in ratio 30:30; dorsal margin of torulus at level of lower margin of eye; malar space consists 0.38x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6h) with scape 5.0x as long as width, 1.25x as long as club; pedicel plus flagellum 3.1x as long as scape; flagellum clubed, funicular segments almost filiform, F6 1.2x as wide as F1; pedicel 1.67x as long as width, 0.84x as long as anelli plus F1; anelli transverse, funicular segments slightly transverse, almost same length, slightly widening towards tip, F1 1.45x, F6

2.5x as wide as long and 1.25x as wide as F1; club 1.6x as long as width; linear sensilla in a row on each funicle segment.

Mesosoma (Fig. 5h) 1.85x as long as width, 1.2x as long as metasoma, with pronotum and mesoscutum bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum short in side view, 0.4x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7h) with basal cell and speculum closed by sparse setae, basal cell with a few long setae on upper side; speculum broad, reaching beginning of marginal vein; below marginal vein almost 6 rows of sparse long setae; marginal vein 5.0x longer than radial vein, 2.5x postmarginal vein; having area between postmarginal and stigmal vein narrow, bare.

Metasoma (Fig. 5h) excluding ovipositor slightly shorter than rest metasoma; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 3/5 length metasoma; ovipositor 0.86x length of metasoma; ovipositor index 1.32; hind femora 4.0x as long as width.

Male. Unknown.

Material examined: Holotype, female, Turkey: Tokat, 11.v.1989, H. Çam, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, same data as the holotype, except date 15. viii. 1989; 1 Female, from Gölbaşı to Adıyaman Araban road connection, 02.v. 2008, swept from lent field.

Distribution: Turkey: Tokat, Adıyaman.

Host: Unknown.

Comments: Female: *Idiomacromerus turhalensis* sp. nov. is similar to *Idiomacromerus gozuaciki* sp. nov., *I. pulcher* (Zerova et Seryogina) and *I. papaveris* (Förster) in some respects. having ovipositor 0.75 metasoma, and funicular segments slightly transverse. But *I. turhalensis* sp. nov. differs from 3 of them in having ovipositor 0.86x length of metasoma (in those species ovipositor at most 0.75x length of metasoma). It also similar to *I. karakurtansis* sp. nov. in having legs concolorous with body, pedicel plus flagellum 3.1x as long as scape. But *I. turhalensis* n.sp. differs from *I. karakurtansis* sp. nov. in having antenna with scape 4.5x as long as width, almost as long as club, and flagellum moderately clavate, F6 1.33x as wide as F1 (in *I. karakurtansis* sp. nov. antenna with scape 5.0x as long as width, 1.25x as long as club, and funicular segments almost filiform, F6 1.2x as wide as F1).

***Idiomacromerus karakurtansis* sp. nov.**

(Figs. 5i, 6i, 7i, 9m)

Etymology. The name is derived from the name of Erzurum, Horasan, Karakurt, from where the holotype was collected.

Diagnosis. Ovipositor almost equal to the length of metasoma; ovipositor index 1.87. Antenna with scape 4.5x as long as width, almost as long as club; pedicel plus flagellum 3.1x as long as scape; flagellum clavate, F6 1.33x as wide as F1; pedicel 1.43x as long as width, as long as anelli plus F1; anelli transverse, funicular segments distinctly transverse, almost same length, distinctly widening towards tip, F1 1.5x, F6 twice as wide as long and 1.33x as wide as F1; club 2.25x as long as width; Marginal vein 4.75x longer than radial vein, 2.9x postmarginal vein; Body black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except fore tibiae testaceous, apical 1/5 of

femora, both ends of mid and hind tibiae and tarsi yellow, except last two segment brown. Hind femora 5.0x as long as width.

Description:

Female. Body (Fig. 5i) black with metallic green reflexion, antenna brown with greenish reflexion, legs concolorous with body, except apical 1/6 of femora, fore tibiae, both ends of mid and hind tibiae and tarsi yellow, except last two segment brown, forewing hyaline, veins pale yellow. Length 1.6 mm+ovipositor 0.62 mm.

Head in dorsal view 1.12x wider than mesoscutum, width to length 45:20; POL twice OOL; OOL 1.66 diameter far from lateral ocellus. Head in frontal view as wide as high in ratio 45:45; dorsal margin of torulus slightly above lower margin of eye; malar space consists 0.53x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6i) with scape 4.5x as long as width, almost as long as club; not reaching median ocellus; pedicel plus flagellum 3.1x as long as scape; flagellum clavate, F6 1.33x as wide as F1; pedicel 1.43x as long as width, as long as anelli plus F1; anelli transverse, funicular segments distinctly transverse, almost same length, distinctly widening towards tip, F1 1.5x, F6 twice as wide as long and 1.33x as wide as F1; club 2.25x as long as width; linear sensilla in a row on each funicle segment.

Mesosoma (Fig. 5i) 1.4x as long as height, shorter than metasoma, 0.7x as long as metasoma, with pronotum and mesoscutum distinctly bulged, propodeum declined, distinctly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine reticulation; pronotum long in side view, 0.8x as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Forewing (Fig. 7i) with basal cell closed by dense sparse setae, with 4 setae on upper side; speculum open, broad, reaching beginning of marginal vein; with 3 rows of long setae below marginal vein; marginal vein 4.75x longer than radial vein, 2.9x postmarginal vein; having area between postmarginal and stigmal vein broad, with 2 setae.

Metasoma (Fig. 5i) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 4/5 length metasoma; Ovipositor almost equal to the length of metasoma. Ovipositor index 1.87; Hind femura 5.0x as long as wide.

Male. Similar to female except as follows: length 1.55 mm. Antenna (Fig. 9m) with one anellus and 7 funicular segments; scape 3.7x as long as width, slightly shorter than club; pedicel plus flagellum 3.7x as long as scape; flagellum slightly clavate, F7 1.2x as wide as F1; pedicel almost quadrate, as long as anellus plus F1; anellus transverse, funicular segments distinctly transverse, almost same length, slightly widening towards tip, F1 and, F7 twice as wide as long; club twice as long as width.

Material examined: Holotype, female, Turkey: Kars, Sarıkamış, Karakurt, 12.vii.2012, M. Doğanlar, swept from pasture, on card, forewing and left antenna slide mounted in Canada balsam, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, 3 males, same data as the holotype.

Distribution: Turkey: Kars, Sarıkamış

Host: Unknown.

Comments: Female: *Idiomacromerus karakurtensis* sp. nov. is similar to *Idiomacromerus papaveris* (Förster) and *I. akdenizeus* in having flagellum moderately clavate. But *I. karakurtensis* sp. nov. differs from *I. papaveris* in having ovipositor almost equal to the length of metasoma and Ovipositor index 1.87; (in *I. papaveris* Ovipositor 0.73x metasoma; Ovipositor index 1.35). It differs from *I. akdenizeus* in having marginal vein 4.75x longer than radial vein,

2.9x postmarginal vein; antenna with pedicel plus flagellum 3.1x as long as scape (in *I. akdenizeus* marginal vein 2.70- 3.0x longer than radial vein and 1.37-1.57x postmarginal vein; antenna with pedicel plus flagellum 2.4x as long as scape).

***Idiomacromerus akdenizeus* (Doganlar, 1989)**

(Figs. 5k, 6j, 7j)

Ameromicrus akdenizeus Doganlar 1984: 144-145. Holotype female, (IMBC).

(New status)

Idiomacromerus papaveris (Förster), misidentification by Zerova & Seregina (2001).

Distribution: Turkey: Adana: Yumurtalık, 15.viii. 1979, A.Beyarslan, as Holotype of *A. akdenizeus*; 6 females, 4 males, same locality, 20-22.viii.1982, M. Doğanlar, as Paratype of *A. akdenizeus*. Additional materials: Adana, Aladağ, 16. vii. 2001, M. Doğanlar; Gaziantep, Araban, 2 females, 02. v. 2008, M. Doğanlar; 1 female, Niğde, Gümüş, 27. vi. 2006, M. Doğanlar; Niğde- Adana road connection, 19.v. 2005, O. Doğanlar; Sivas: 1 female, Hara, 16.ix. 1992, 1 female, Paşabahçe, 05.ix.1992, 1 female, Türk-İş blok, 13. viii. 1992, 4 females, CÜ Campus, 16. viii.-07.ix.1992, all of the specimens from Sivas were collected by L. Gencer. All of the specimens were swept from pasture, and deposited in IMBC.

Comments: Length 2.0 mm+ovipositor 0.9 mm. The diagnostic characters of *Idiomacromerus akdenizeus* were given in the key.

***Idiomacromerus fursovi* sp. nov.**

(Figs. 5l, 6l, 7l, 9n)

Etymology. The name is derived from the name of Dr. Victor Fursov, who is a famous Ukrainian chalcidologist.

Diagnosis. Ovipositor 1.5x metasoma; ovipositor index 2.8. Fore wing with marginal vein 1.7x longer than radial vein and 1.35x postmarginal vein; antenna with scape 6.62x as long as width, 1.5x as long as club; pedicel plus flagellum 2.4x as long as scape; pedicel twice as long as width, 1.54x as long as anelli plus F1 combined; flagellum almost filiform, slightly widening apically, F6 1.3x as wide as F1; F1-F2 1.6x F3-F4 1.5x, F5-F6 1.55x as wide as long; club 2.5x as long as width; malar space 0.18x length of eye; Body violet, with copery reflexion; scape, except apically brown, both ends of tibiae, tarsi, yellow excepts claws black, hind femora 4.4x as long as wide.

Description:

Female. Body (Fig. 5l) violet, with copery reflexion; scape, except apically brown, both ends of tibiae, tarsi, yellow excepts claws black, forewing hyaline, veins pale yellow. Length 1.6 mm+ovipositor 0.95 mm.

Head in dorsal view 1.15x wider than mesoscutum, width to length 30:15; POL twice OOL; OOL 1.4 diameter far from lateral ocellus. Head in frontal view 1.2x as wide as high in ratio 30:25; dorsal margin of torulus slightly above lower margin of eye; malar space consists 0.18x height of eye. external margin of clypeus straight; face with fine sculpture. Antenna (Fig. 6l) with scape 6.62x as long as width, 1.5x as long as club, not reachin median ocellus; pedicel plus flagellum 2.4x as long as scape; pedicel twice as long as width, 1.54x as long as anelli plus F1 combined; flagellum almost filiform, slightly widening apically, F6 1.3x as wide as F1; F1-F2 1.6x F3-F4 1.5x, F5-F6 1.55x as wide as long; club 2.5x as long as width; linear sensilla in a row on each funicle segment.

Mesosoma (Fig. 5l) 1.42x as long as height, 0.8x as long as metasoma, with pronotum and mesoscutum distinctly bulged, propodeum declined, slightly visible from above; sculpture of pronotum, mesoscutum and scutellum with fine

reticulation; pronotum long in side view, 0.66 as long as mesoscutum; propodeum and mesosternum finely reticulated. All coxae with fine reticulation. Fore wing (Fig. 7l) with basal cell closed by sparse setae, with 4 setae on upper side; speculum closed, broad, reaching beginning of marginal vein; with 3 rows of long setae below marginal vein; marginal vein 1.7x longer than radial vein and 1.35x postmarginal vein; having area between postmarginal and stigmal vein narrow, with 2 setae.

Metasoma (Fig. 5l) excluding ovipositor as long as rest of body; basal tergite with posterior margin weakly incised medially; tip of hypopygium about 4/5 length metasoma; Ovipositor (Fig. 5l) 1.5x metasoma; Ovipositor index 2.8. Hind femura 4.4x as long as wide.

Male. Similar to female except as follows: length of body 1.5 mm. antenna (Fig. 9n) with 3 anelli, 5 funicular segments, anelli strongly transverse, F1 2.6x, F2- F3 about 2.1x, F4 1.53x, F5 1.67x as wide as width; club about twice as long as wide.

Material examined: Holotype, female, Turkey: Hacipaşa, Reyhanlı, Hatay, 25.vi. 1998, deposited in the Insect collection of Research Station of Biological Control, Adana. Paratypes: 1 female, 1 male, same data as the holotype.

Distribution: Turkey: Hatay, Reyhanlı.

Host: Unknown.

Comments: Female: *Idiomacromerus fursovi* sp. nov. is similar to *Idiomacromerus terebrator* (Masi) in having ovipositor about length of the metasoma plus 1/2 of mesosoma. But *I. fursovi* sp. nov. differs from *I. terebrator* in having ovipositor about 1.5x metasoma ovipositor index 2.8; antenna (Fig. 6j) with scape 1.5x as long as club; funicular segments distinctly transverse, F1-F2 1.6x F3-F4 1.5x, F5-F6 1.55x as wide as long; slightly widening apically, F6 1.3x as wide as F1 (in *I. terebrator* ovipositor about length of the metasoma plus 1/3 of mesosoma; ovipositor index 2.5; antenna with scape 1.23x as long as club; anelli wider than its length, sometimes square in front view, funicular segments quadrate, to longer than wide; club 2.44x as long as width).

Species unplaced into the identification key:

Idiomacromerus longicarpus (Abdul-Rassoul, 2000)

Liodontomerus longicarpus Abdul-Rassoul, 2000: 1, 3. Holotype, female, Allotype, male (Iraq Natural History Museum).

Diagnosis: Marginal vein about 6x stigmal vein, and about 4x postmarginal vein. Thorax twice as long as wide; fore and hind femora strongly swollen; legs dark violet, tip of tibiae and tarsi yellow, claws black (Abdul-Rassoul, 2000).

Descriptions of female and male were given by Abdul-Rassoul (2000).

Host: Unknown.

Distribution: Iraq: Diyala, Adhaim.

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Figure 1. *Idiomacromerus* spp. Female. Bodies a. *I. yunusi* sp. nov., b. *I. sebnemae* sp. nov., c. *I. gumusensis* sp. nov., d. *I. selimensis* sp. nov., e. *I. aladağensis* sp. nov., f. *I. erzurumensis* sp. nov., g. *I. golbasinensis* sp. nov., h. *I. lutfiyeae* sp. nov., i. *I. aslihanae* sp. nov., j. *I. zerovae* sp. nov. (Scale bar for (a,c, d, g)= 0.86 mm; for (b) 0.8 mm; for (d)= 1.2 mm; for (e)= 0.76 mm; for (f, h,j)= 0.67 mm).



Figure 2. *Idiomacromerus* spp. Female. Antennae. a. *I. yunusi* sp. nov., b. *I. sebnemae* sp. nov., c. *I. gumusensis* sp. nov., d. *I. selimensis* sp. nov., e. *I. aladagensis* sp. nov., f. *I. erzurumensis* sp. nov., g. *I. golbasinensis* sp. nov., h. *I. lutfiyee* sp. nov., i. *I. aslihanae* sp. nov., j. *I. zerovae* sp. nov. (Scale bar = 0.15 mm).

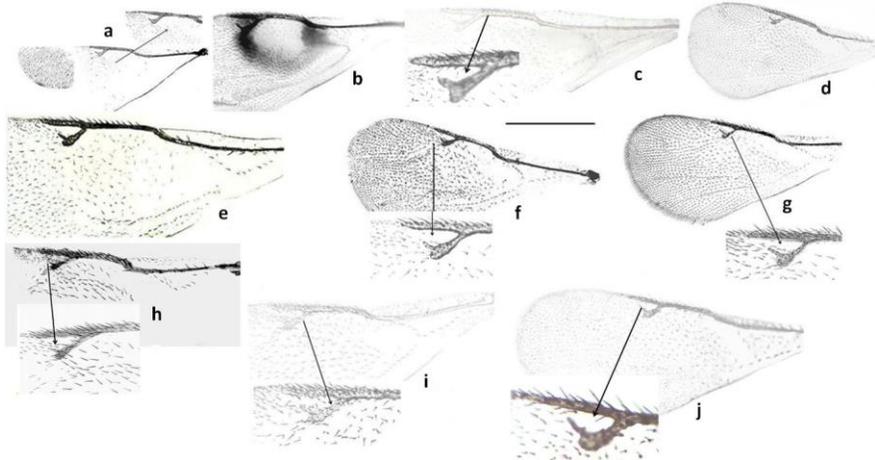


Figure 3. *Idiomacromerus* spp. Female. Fore wings. a. *I. yunusi* sp. nov., b. *I. sebnemae* sp. nov., c. *I. gumusensis* sp. nov., d. *I. selimensis* sp. nov., e. *I. aladagensis* sp. nov., f. *I. erzurumensis* sp. nov., g. *I. golbasinensis* sp. nov., h. *I. lutfiyee* sp. nov., i. *I. aslihanae* sp. nov., j. *I. zerovae* sp. nov. (Scale bar for a,b,e,f,g = 0.44 mm; c,d,h,i,j= 0.39 mm).

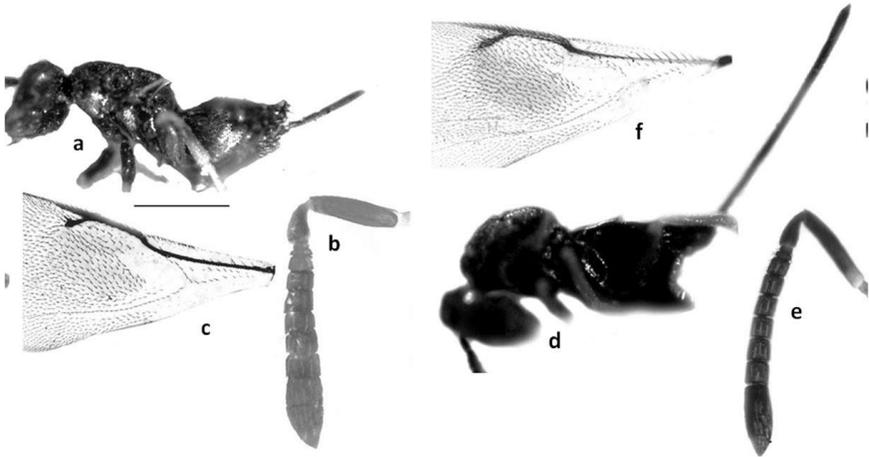


Figure 4. *Idiomacromerus* spp. Female. a,b,c. *I. haliti* sp. nov.; d,e,f. *I. nigdenensis* sp. nov., a, d. body; b,e. antennae; c,f. fore wing part (Scale bar for a = 0.75 mm, for d = 0.5 mm; for b,e = 0.12 mm; for c = 0.38mm; for f = 0.33 mm).

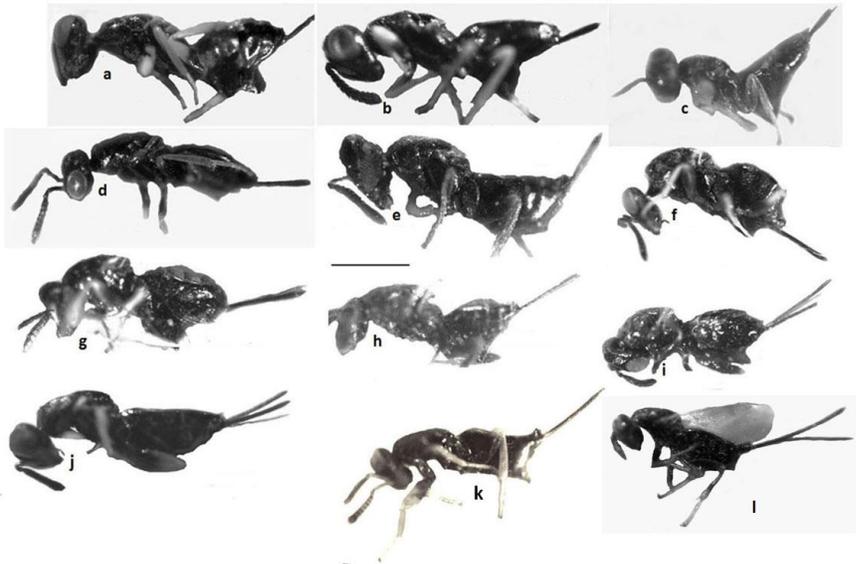


Figure 5. *Idiomacromerus* spp. Female bodies. a. *I. oguzhani* sp. nov., b. *I. mbahadiri* sp. nov., c. *I. uguranlari* sp. nov., d. *I. neslihanæ* sp. nov., e. *I. zeynepbanuæ* sp. nov., f. *I. gozuaciki* sp. nov., g. *I. hasandagus* sp. nov., h. *I. turhalensis* sp. nov., i. *I. karakurtensis* sp. nov., j. *I. papaveris* (Förster, 1856), k. *I. akdenizeus* (Doganlar, 1989), l. *I. fursovi* sp. nov. (Scale bar for a, e, h = 0.71 mm; for b,c= 0.6 mm; for d, j= 0.9 mm; for f,g=1.12 mm; for i, k= 0.82 mm).



Figure 6. *Idiogrammerus* spp. Female antennae. a. *I. oguzhani* sp. nov., b. *I. mbahadiri* sp. nov., c. *I. uguranlari* sp. nov., d. *I. neslihanæ* sp. nov., e. *I. zeynepbanuæ* sp. nov., f. *I. gozuaciki* sp. nov., g. *I. hasandagus* sp. nov., h. *I. turhalensis* sp. nov., i. *I. karakurtensis* sp. nov., j. *I. papaveris* (Förster, 1856), k. *I. akdenizeus* (Doganlar, 1989), l. *I. fursovi* sp. nov. (Scale bar = 0.5 mm).

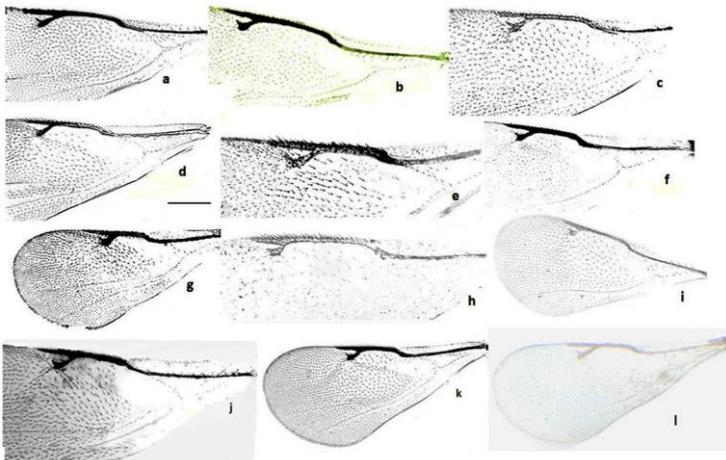


Figure 7. *Idiogrammerus* spp. Female fore wings. a. *I. oguzhani* sp. nov., b. *I. mbahadiri* sp. nov., c. *I. uguranlari* sp. nov., d. *I. neslihanæ* sp. nov., e. *I. zeynepbanuæ* sp. nov., f. *I. gozuaciki* sp. nov., g. *I. hasandagus* sp. nov., h. *I. turhalensis* sp. nov., i. *I. karakurtensis* sp. nov., j. *I. papaveris* (Förster, 1856), k. *I. akdenizeus* (Doganlar, 1989), l. *I. fursovi* sp. nov. (Scale bar for a, g= 0.23; for b, d= 0.2 mm; for c, e, f, h, j, l= 0.15 mm; for i=0.36 mm; for k= 0.27 mm).

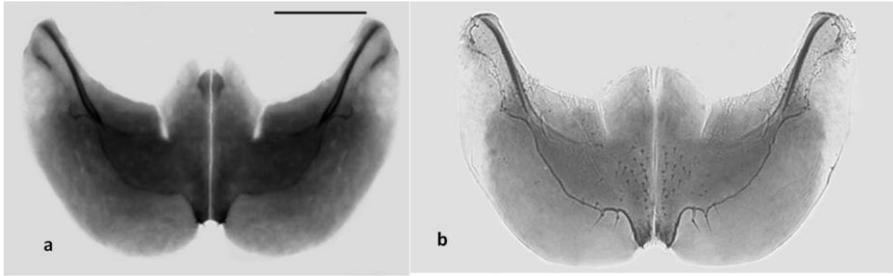


Figure 8. *Idiomacromerus* spp. Hypopygia. a. *I. papaveris* (Förster); b. *I. akdenizeus* (Doganlar) (Scale bar = 0.10 mm).



Figure 9. *Idiomacromerus* spp. Male antenna. a. *I. yunusi* sp. nov., b. *I. erzurumensis* sp. nov., c. *I. golbasinensis* sp. nov., d. *I. lutfiyeeae* sp. nov., e. *I. aslihanae* sp. nov., f. *I. nigdenensis* sp. nov., g. *I. haliti* sp. nov., h. *I. oguzhani* sp. nov., i. *I. neslihanae* sp. nov., j. *I. zeynepbanuae* sp. nov., k. *I. gozuaciki* sp. nov., l. *I. hasandagus* sp. nov., m. *I. karakurtensis* sp. nov., n. *I. fursovi* sp. nov. (Scale bar = 0.35 mm).