

UDC 595.792.23(536.2)

## NEW AND FORMERLY UNKNOWN ORMYRIDAE SPECIES FROM THE UNITED ARAB EMIRATES (HYMENOPTERA, CHALCIDOIDEA)

M. D. Zerova<sup>1</sup>, L. Ja. Seryogina<sup>1</sup>, A. Van Harten<sup>2</sup>

<sup>1</sup> Schmalhausen Institute of Zoology NAS of Ukraine,  
B. Chmielnicky str., 15, Kyiv, 01601 Ukraine  
E-mail: zerova@izan.kiev.ua

<sup>2</sup> UAE Insect Project, P.O.Box 63700, Sharjah,  
United Arab Emirates  
E-mail: tonyvanharten@gmail.com

Received 14 April 2011

Accepted 10 November 2011

**New and Formerly Unknown Ormyridae Species from the United Arab Emirates (Hymenoptera, Chalcidoidea).** Zerova M. D., Seryogina L. Ja., Van Harten A. — Three new species (*Ormyrus qurrayahi* Zerova, sp. n., *O. punctellus* Zerova, sp. n. and *O. novus* Zerova, sp. n.) are described. Two first species belong to *diffinis* species group (female gaster without dorsal median keel). *O. novus* sp. n. belongs to *orientalis* species group (female gaster with dorsal median keel). In addition, two Palaearctic species of the genus *Ormyrus* are recorded from the United Arab Emirates for the first time. A key to Palaearctic *Ormyrus* species is provided.

Key words: Hymenoptera, Ormyridae, new species, United Arab Emirates.

**Новые и ранее неизвестные виды семейства Ormyridae (Hymenoptera, Chalcidoidea) из Объединённых Арабских Эмиратов.** Зерова М. Д., Серёгина Л. Я., Ван Хартен А. — Описаны три новых для науки видов хальцид семейства Ormyridae (*Ormyrus qurrayahi* Zerova, sp. n.; *O. punctellus* Zerova, sp. n. и *O. novus* Zerova, sp. n.), по материалам, полученным от А. ван Хартена (A. van Harten, United Arab Emirates). Первые два из указанных новых видов относятся к группе *diffinis*, у представителей которой брюшко самки не имеет дорсального продольного кия. *O. novus* sp. n. относится к группе *orientalis*, самки которого имеют продольный дорсальный киль на брюшке. Кроме того, для Объединённых Арабских Эмиратов указаны два палеарктических вида *Ormyrus*, ранее неизвестные с этой территории. Приведена таблица для определения палеарктических видов *Ormyrus*.

Ключевые слова: Hymenoptera, Ormyridae, новые виды, Объединённые Арабские Эмираты.

Three new species of Chalcidoidea wasps of the genus *Ormyrus* Westwood, 1832 are found in material collected by Mr. Antonius van Harten and his colleagues of the UAE Insect Project. No Ormyridae have been hitherto recorded in entomological publications from the United Arab Emirates. The holotypes and paratypes of the new species are deposited in the collection of the Schmalhausen Institute of Zoology National Academy of Sciences of Ukraine (Kyiv). Furthermore, two Palaearctic *Ormyrus* species are recorded for the first time for UAE fauna.

Abbreviations: T1–T7 are used in the key for the gasteral tergites 1–7. POL — distance between lateral ocelli; OOL — distance from lateral ocellus to eye border.

### Descriptions of new species

#### *Ormyrus qurrayahi* Zerova, sp. n.

Material. Holotype ♀, United Arab Emirates: Qurrayah, 19.03.2007, sweep-net (N 8157), coll. F. Menzel and A. Stark. Paratypes: 3 ♀, 1 ♂ with the same labels.

Female (fig. 1, 1–3). Length 1.8–2.0 mm (holotype 1.9 mm). Body dark-green with some metallic reflection, mesosoma and metasoma equal in colour, only epipy-

gium dark brown; antennal scape yellow, pedicellus and flagellar segments brownish-yellow, club some darker. Wings hyaline, venation yellow; coxae the same colour as body, all femora brownish-green, tibia brown, tarsi yellow. Head and dorsal thorax surface with very fine sculpture, abdomen with thin reticulation, without pits and rows of foveae.

Head from above slightly broader than pronotum; width to length 40 : 16; temple much shorter than height of eye; POL longer than OOL in ratio 7 : 2; occipital carina very thin, hardly visible. Head in frontal view wider than height in ratio 40 : 27, anterior margin of clypeus straight, eyes bare, gena almost two times shorter than longitudinal eye diameter (9 : 20). Antenna inserted much below middle of face, some higher the lower eyes level, scape thin and long, pedicellus as long, as three anelli and the first flagellar segment combined; flagellum with 3 very small anelli, short and stout, flagellum notably narrowed basally, all funicular segments transverse, club not wider than flagellum, some shorter than three previous flagellar segments.

Mesosoma bulging, the surface of pronotum, mesoscutum and scutellum with very thin reticulation; pubescence of thorax very short; scutellum twice as long as broad, narrowed to apex. Propodeum subvertical, short, smooth. Coxa and tibia without distinct sculpture, smooth; fore wing with very short, feebly visible pilosity; cubital and basal hairline not clear, basal cell bare, postmarginal vein long, nearly three times as long as radial.

Metasoma twice as long as mesosoma (55 : 25) (in profile), all abdominal tergites covered with small shallow punctures and long white bristles.

Male. Length 1.4 mm. The colour and sculpture as by female.

Discussion. *Ormyrus qurrayahi* sp. n. belongs to the *diffinis* species group (female gaster without dorsal median keel). Three Palaearctic species of this group have 3 anelli in antennae: *O. parvulus* Zerova, 1985; *O. lanatus* Zerova, 1985; *O. similis* Zerova, 1985. *O. bicolor* Zerova, 2006 from Yemen is also close to this group. The new species is most similar to *Ormyrus similis* Zerova, 1985, described from Uzbekistan. Both species have three very small anelli and fine sculpture on abdominal tergites, but new species differs from *O. similis* by having more transverse funicular segments, much longer abdomen in both sexes, and especially longer epipygium and postmarginal vein. The sculpture of abdominal tergites is more clear in a new species and colour of body much darker.

Etymology. The name of the new species is derived from its type locality.

### ***Ormyrus punctellus* Zerova, sp. n.**

Material. Holotype ♀, United Arab Emirates: North of Ajman, 16.09.2006, water traps (N 10858), coll. A. van Harten. Paratype: 1 ♀, United Arab Emirates, Sharjah Desert Park, 08.04.2007, light trap (N 10853) coll. A. van Harten.

Female (fig. 1, 7–10). Length 1.6 mm (both, holotype and paratype). Head and mesosoma dark-green with some golden reflection; metasoma with abdomen dark-brown with light green reflection; scape and pedicellus yellow, flagellar segments and club some darker — light brown; coxae and femora the same colour as mesosoma, tibia light brown with green reflection; wings hyaline, venation light yellow. Head and dorsal thorax surface with very fine reticulation, abdomen with fine punctuation and rows of sparse, shallow foveae in the middle of 3–5 tergites. Head and thorax dorsally with short white pubescence.

Head from above some broader than pronotum, width to length 32 : 14, temple much shorter than height of eye, POL longer than OOL in ratio 11 : 3, occipital carina very thin. Head in frontal view wider than high in ratio 32 : 25, anterior margin of clypeus straight, eyes bare, gena almost three times shorter than longitudinal eye diameter (5 : 17).

Antenna inserted some lower the middle part of face on the lower eyes level, scape do not reach the mid ocellus, pedicellus length almost so long as 3 anelli with the first

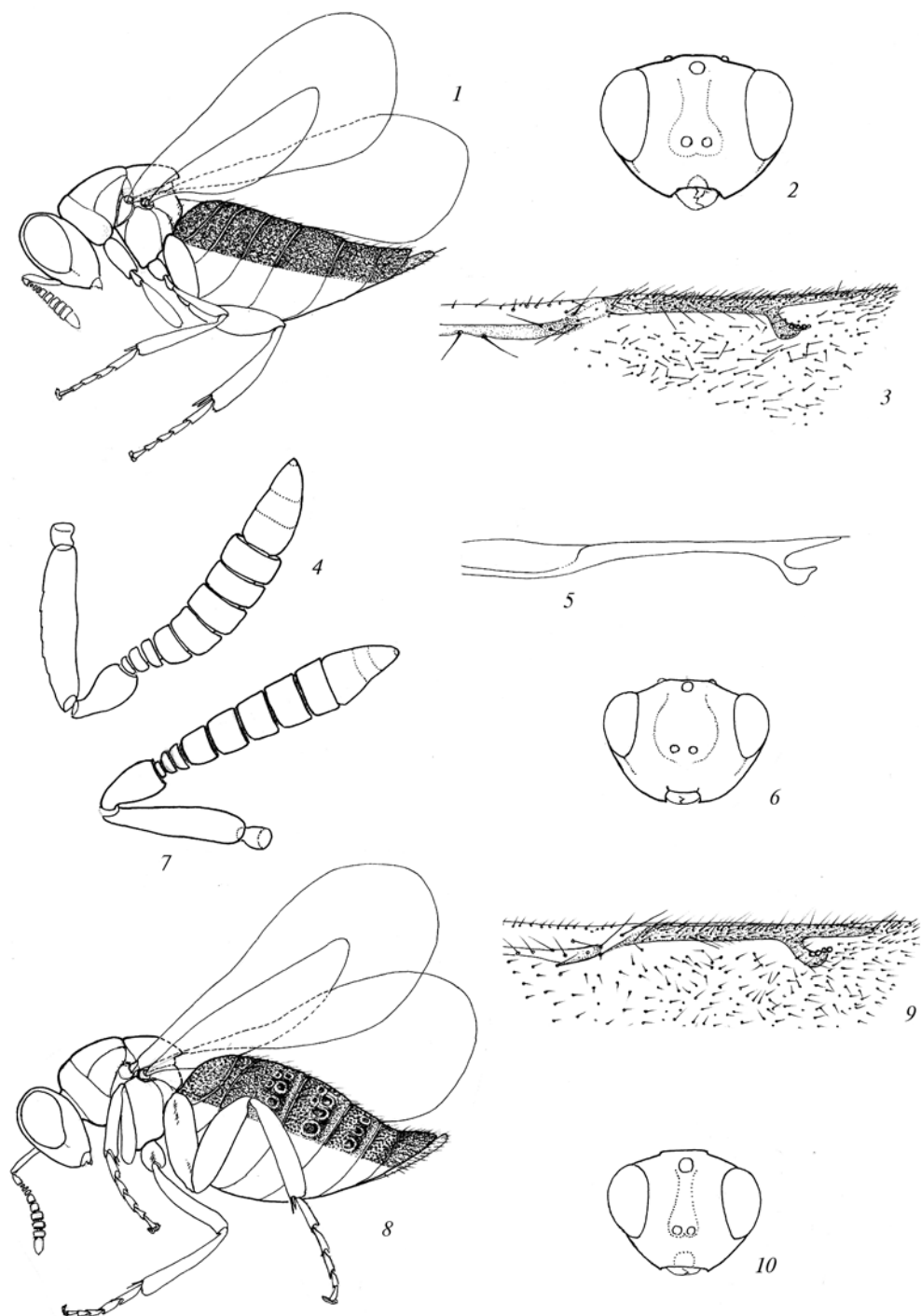


Fig. 1. *Ormyrus qurrayahi* (1-4): 1 - female, lateral view; 2 - head, frontal view; 3 - forewing venation; 4 - antenna, female; *O. similis* (5, 6): 5 - forewing venation; 6 - head, frontal view; *Ormyrus punctellus* sp. n. (7-10): 7 - antenna, female; 8 - female, lateral view; 9 - forewing venation; 10 - head, frontal view.

Рис. 1. *Ormyrus qurrayahi* (1-4): 1 - самка, вид сбоку; 2 - голова спереди; 3 - жилкование передних крыльев; 4 - усик самки; *O. similis* (5, 6): 5 - жилкование передних крыльев; 6 - голова спереди; *Ormyrus punctellus* sp. n. (7-10): 7 - усик самки, 8 - самка, вид сбоку, 9 - жилкование передних крыльев; 10 - голова спереди.

flagellar segment; anelli especially the first, very small, all flagellar segments transverse; club not wider than the last flagellar segment, pubescence of flagellum very short, poorly visible.

Mesosoma (in profile) gibbous, sculpture on pronotum, mesoscutum and scutellum consisting of very thin cross-striation, formed by numerous fine strips, the surface of thorax shining, pubescence of thorax short and dense. Scutellum 1,3 times longer than broad, its apex rounded. Propodeum subvertical, short, smooth. Coxa with very fine reticulation, femora and tibia with the same surface as by coxa. Fore wing with very dense pilosity, cubital and basal hairlines are not visible, basal and costal cells bare; postmarginal vein twice as long as radial.

Metasoma stout and robust, twice as long as mesosoma (in profile) — (57 : 27); the surface of T1 with very fine but distinct reticulation, T2 very short, distinctly not visible, T3–T5 with the same reticulation as on T1, but more with one row of shallow foveae; all tergites (except of T1) with long bristles.

Male unknown.

Discussion. *Ormyrus punctellus* sp. n. belongs to the *diffinis* species group (female gaster without dorsal median keel). In this group, the new species is close to *Ormyrus bicolor* Zerova, 2006, described from Yemen. It differs from *O. bicolor* by shorter metasoma, shorter postmarginal vein and whole dark-brown abdomen, by *O. bicolor* abdomen dorsally is with great yellow spot.

Etymology. The name of the species reflects the peculiarities of its abdominal sculpture.

### ***Ormyrus novus* Zerova, sp. n.**

Material. Holotype ♀, United Arab Emirates, Wadi Madaq, 14.01.2006, water traps (N 10113), coll. A. van Harten. Paratypes: 9 ♀, United Arab Emirates, Wadi Wurayah, 13–28.01.2006, water traps (N 10821, 10113), coll. A. van Harten; 1 ♀, United Arab Emirates, Wadi Madaq, 21.03.2007, sweep-net (N 8155), coll. F. Menzel and A. Stark; 2 ♂, United Arab Emirates, Wadi Madaq, 14–25.01.2006, water traps (N 10113), coll. A. van Harten.

Female (fig. 2, 1–4). Length 2.1–2.5 mm. Holotype 2.5 mm. Body dark green with some copper reflection especially on abdomen; scape and pedicellus dark brown with some green reflection; all coxae, femora and tibia dark green, tarsi yellow, mandibles brown, tip of ovipositor dark brown with green reflection; antenna dark brown with green reflection; wings hyaline, venation yellow. Head and dorsal thorax surface with very fine sculpture, the T1 of abdomen with distinct punctuation, T2–T5 with fine reticulation and shallow pits and rows of foveae; T2–T6 with long dense pubescence.

Head from above slightly wider than pronotum; width to length 45 : 23, temple much shorter than height of eye; POL to OOL as 12 : 4; occipital carina very thin but distinct. Head in frontal view wider than high in ratio 45 : 40, eyes bare, gena two times shorter than longitudinal eye diameter (12 : 25); external clypeus margin some gibbous, almost straight, eyes bare, face with very thin reticulation. Antenna inserted some lower the middle of face and a little higher the lower eyes level, scape thin do not reach the mid ocellus, flagellum with two very short and flat anelli; funicular segments almost transverse, club not wider than flagellum, some longer than two previous flagellar segments.

Mesosoma (in profile) bulging, the surface of pronotum, mesoscutum and scutellum with very thin cross-striation, formed by numerous fine strips, the surface of thorax shining, pubescence short and dense. Scutellum with distinct brim at the apex. Propodeum subvertical, smooth. Coxa, femora and tibia with very thin reticulation.

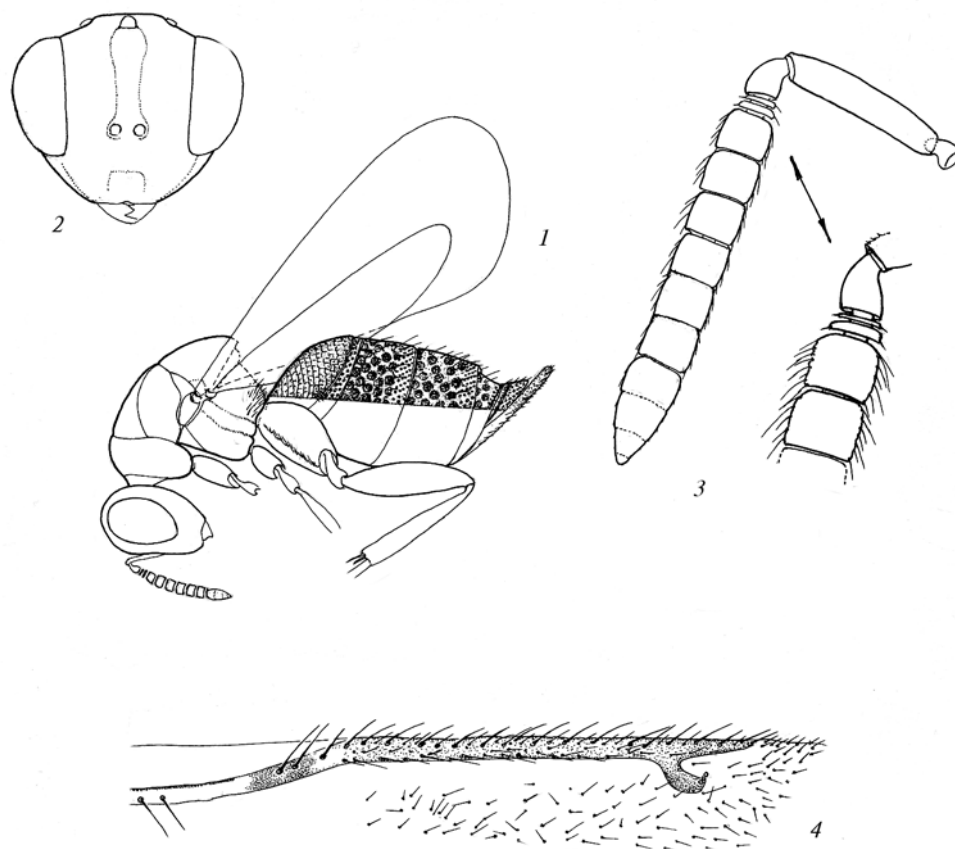


Fig. 2. *Ormyrus novus*: 1 — female, lateral view; 2 — head, frontal view; 3 — antenna, female, 4 — forewing venation.

Рис. 2. *Ormyrus novus*: 1 — самка, вид сбоку; 2 — голова спереди; 3 — усик самки; 4 — жилкование передних крыльев.

Fore wing with very dense pilosity, cubital and basal hairlines weakly visible, basal and costal cells bare, postmarginal vein 2 times longer than radial.

Metasoma longer than mesosoma in ratio 50 : 35 (in profile); female gaster dorsally with longitudinal median carina, but carina is smooth (not very sharp); the surface of T1 with distinct punctuation, T2–T5 with shallow pits and rows of foveae, T6 — with distinct reticulation, all tergites (except the T1) with long bristles.

Male. Length 1.5–1.7 mm. The colour and sculpture as by female.

Discussion. *Ormyrus novus* sp. n. belongs to *orientalis* species group (female gaster with dorsal median keel). From all species of this group *O. novus* sp. n. differs by very short and flat anelli.

Etymology. The name of the new species means that it is new for science.

First record of these Palearctic *Ormyrus* species in the United Arab Emirates:

***Ormyrus aridus* Zerova, 2005**

Material examined: 4 ♀, 1 ♂, United Arab Emirates, N of Ajman, 16.09.–17.10.2006, water traps, coll. A. van Harten (N 10858).

Distribution: Israel, UAE.

***Ormyrus rufimanus* Mayr, 1904**

Material examined. 5 ♀, 1 ♂, United Arab Emirates: Wadi Madaq, 14–25.01.2006, water traps, coll. A. van Harten (N 10113); 1 ♀, Wadi Wurayab, 13–28.01.2009, water traps, leg. A. van Harten (N 10821); 1 ♀, Wadi Madaq, 21.03.2007, sweep-net, leg. F. Menzel (N 8141).

Distribution: Southern Europe, UAE.

**Key to Palaearctic species of the genus *Ormyrus*****Таблица для определения Палеарктических видов рода *Ormyrus***

- 1 (52). Female gaster dorsally without longitudinal median carina. Number of anelli varies from 1 to 4.
- 2 (5). Body yellowish brown or orange.
- 3 (4). Body orange; fore wing infumate. Antenna with 3 anelli; ♀ 1.99 mm. Algeria. .... *O. oranensis* Erdős, 1964
- 4 (3). Body brownish yellow with green tinge on vertex. Antenna with 2 anelli, first funicular segment shorter than the second. Gastral tergites with thin reticulation. ♀, ♂ 1.9 mm. In galls of *Xestophanes potentillae* (Retzius) on *Potentilla impolita*. Europe. .... *O. destefanii* Mayr, 1904
- 5 (2). Body green, dark green, bluish green or black with metallic reflection, only by one species (*O. punctellus*) abdomen dark brown with green metallic reflection.
- 6 (15). Gastral tergites dorsally in both sexes with yellow or yellowish brown spots.
- 7 (8). Antenna with 2 anelli. Epipygium upturned, two times longer than the T6. Gaster of female S-like curved with pale yellow spot on T2–T4 and small elongate yellow spot on epipygium; rest part of gaster and also head and mesosoma green; sculpture of gaster light alveolate, with meshes of irregular shape, sparse pubescence recognizable only on T5 and T6 tergites. ♀ about 4 mm. In galls of *Stefaniola gigas* (Marikovsky) on *Haloxylon persicum*. Kazakhstan. .... *O. zoae* Zerova, 2005
- 8 (7). Antenna with 3 or 4 anelli.
- 9 (10). Metasoma of female 3 times as long as mesosoma in lateral view; apex of the gaster elongate and uplifted; epipygium 1.5 times longer than T6; sculpture of the gaster light, alutaceous. Antenna with 3 anelli. Head and mesosoma green, gaster basally and apically green-brown. Spots on T3–5 yellow. ♀ 1.7–2.25; ♂ 1.1–1.3 mm. Ex *Haplodiplosis palpata* (Marikovsky) on *Anabasis aphylla*. Kazakhstan. .... *O. lanatus* Zerova, 1985
- 10 (9)\*. Metasoma of female less than 3 times as long as mesosoma in lateral view.
- 11 (12). Spot on gaster rather pale, nearly white; rest of body green; gaster (lateral view) at least 2 times longer than mesosoma, with large shallow pits on the alutaceous background. Antennae inserted somewhat lower than middle of face, with three very small, flattened anelli, first funicular segment notably shorter than following ones, nearly as last anellus. ♀ 2.2 mm. In galls of a gall midge on *Haloxylon persicum*. Turkmenistan. .... *O. halimodendri* Zerova, 1985
- 12 (11). Spot on gaster brownish. Antennae inserted notably lower than middle of face.
- 13 (14). Antenna with 4 distinctly separate anelli. Body dark green, spots on T2–T3 brownish yellow; sculpture of gaster shallow, alutaceous. Gaster with sparse short pale pubescence; epipygium short, as long as T6. ♀ 1.5, ♂ 1.6 mm; ♂ 0.8–1.0 mm. Israel. .... *O. aridus* Zerova, 2005
- 14 (13). Antenna with 3 anelli. Body dark green, spot on gaster brownish; sculpture on T2–T4 alveolate, on T5–T7 alutaceous. Each tergum, except first, with row of comparatively long setae, virtually encircling tergites. Apex of the gaster narrowed, metasoma somewhat more than twice longer than mesosoma. ♀ 1.5–1.75 mm; ♂ 1.0 mm. In galls of Cecidomyiidae on *Anabasis salsa*. Kazakhstan. .... *O. parvulus* Zerova, 1985
- 15 (6). Gastral tergites dorsally without yellow spots in both sexes.
- 16 (21). Antennal flagellum with 1 anellus.
- 17 (18)\*\*. First gastral tergum (♀) smooth and shining. First funicular segment notably smaller than following ones, but much larger than the anellus and bears sensillae and pubescence; body green. T3–T6 with homogeneous fine sparse punctation, almost without pubescence. ♀ 2.6 mm. In galls of *Aulacidea subterminalis* Niblett on *Hieracium pilosella* Spain. .... *O. salmanticus* Nieves-Aldrey, 1984 (see also couplet 25)
- 18 (17). First tergum of gaster with punctation. First funicular segment as long as following ones.
- 19 (20). Metasoma of female 1.5 times as long as head plus mesosoma combined; epipygium (in lateral view) shorter than broad; T3–T5 closely punctate, with some round tubercles, T6 with punctation. Body bright green. ♀ 2.8–4.3 mm; ♂ 2.5–3.0 mm. In galls of many species of Tephritidae (*Urophora* spp.)

\* There was one error in couplet 10(9) (Zerova, Seryogina, 2006): “metasoma of ♀ less than 3 times as long as mesosoma” must be read “instead of metasoma ♀ more than 3 times as long as mesosoma”.

\*\* Nieves-Aldrey (1984) noted that this species has two anelli, but the second anellus is near flagellar segments and bears sensillae.

- and Cynipidae (usually *Aylax* spp.) in flower heads of Asteraceae. Europe, Minor and Central Asia. .... *O. graciosus* (Förster, 1860)
- 20 (19). Metasoma of female twice as long as head plus mesosoma combined; epipygium longer than broad (in lateral view). T3–T6 with the same structure as in *O. graciosus*. Body bright green. ♀ 2.8–3.8 mm; ♂ 1.5–2.0 mm. Associated with herbaceous plants. Turkey. .... *O. tschami* Doğanlar, 1991
- 21 (16). Antennal flagellum with 2 or 3 anelli.
- 22 (41). Antennal flagellum with 2 anelli.
- 23 (26). Basal tergite of gaster smooth and shining in female.
- 24 (25). Both anelli transverse, ♀ 2.07 mm. Hungary. .... *O. speculifer* Erdős, 1946
- 25 (24). Only first anellus very short the second is like a funicular segment. ♀ 2.6 mm. Spain. .... *O. salmanticus* Nieves-Aldrey, 1984 (see also couplet 17)
- 26 (23). Basal tergite of gaster distinctly reticulate in female.
- 27 (30). Gaster with distinctly up-turned epipygium.
- 28 (29). Ovipositor strongly exerted, extending beyond apex of epipygium for a distance equal to half of hind tarsus. Body brownish-green; fore wing with hairs on lower surface of speculum and on cubital vein below speculum. ♀ 2.5–3.5 mm; ♂ 1.8–2.8 mm. In galls of *Aylax papaveris* Perris in seed capsule of *Papaver* spp. Europe, Minor Asia. .... *O. papaveris* (Perris, 1840)
- 29 (28). Ovipositor strongly extending beyond apex of epipygium for a distance equal to one-third of hind tarsus. Body, especially gaster violet; speculum of fore wing almost bare. ♀ 3.0–3.5 mm; ♂ 1.7 mm. Parasite of *Urophora repeteki* (Munro) in flower heads of *Cousinia hamadae*. Uzbekistan. .... *O. bucharicus* Zerova, 1985
- 30 (27). Gaster with non-turned epipygium.
- 31 (34). Female flagellum strongly expanded distally; club much broader than flagellum.
- 32 (33). First two funicular segments distinctly transverse, 3rd and 4th weakly transverse, 5th and 6th nearly quadrate. Body green, sculpture of gaster with smoothed reticulated sculpture, with unclear fine, weakly noticeable pits. ♀ 2 mm. In galls on *Haloxylon* sp. Turkmenistan. .... *O. laccatus* Zerova, 1985
- 33 (32). All funicular segments transverse. Body black with metallic tinge. Gasteral dorsum punctate all over. ♀ 4.7–2.1 mm. Associated with herbaceous plants. Turkey. .... *O. kazovaensis* Doğanlar, 1991
- 34 (31). Flagellum of female slightly expanded distally, club as broad as distal flagellar segments.
- 35 (36). Length of pedicel plus flagellum as long (♀) or longer (♂) than breadth of head; funicle segments subquadrate (♀) or slightly longer than broad (♂). Body dark green; gasteral tergites with fine reticulation. ♀ 2.7–3.5 mm; ♂ 2.4–3 mm. Europe, Minor Asia (Turkey). .... *O. longicornis* Bouček, 1970
- 36 (35). Length of pedicel plus flagellum shorter than breadth of head; funicle segments transverse.
- 37 (38). Postmarginal vein about 0.5 times as long as marginal vein. Speculum of fore wing partly closed by some hairs along cubital hairline. ♀ 2 mm; ♂ 1.7 mm. Turkey. Associated with herbaceous plants. Turkey. .... *O. yeschilirmaka* Doğanlar, 1991
- 38 (37). Postmarginal vein at most 0.33 times as long as marginal vein.
- 39 (40). Fore wing with at least distal half of basal cell closed below by hairs on cubital vein; speculum closed by hairs on upper surface. Body dark green with violet and reddish reflection. T3–T5 with doubled punctation: larger basally, finer distally. ♀ 1.8–3 mm; ♂ 1.5–2.5 mm. Parasite of *Neaylax salviae* (Giraud) and *Phanacis centaureae* Förster. Europe; Minor and Central Asia. .... *O. wachtli* Mayr, 1904
- 40 (39). Fore wing with speculum open below. Head and mesosoma dark green to weakly bluish green, metasoma very dark brown with bluish green reflections. T3–T5 evenly punctured, T5 with a row of larger rounded pits distally. ♀ 1.9–2.2 mm; ♂ 1.3–1.4 mm. In galls of *Aylax minor* Hartig in seed capsules of *Papaver* sp. Spain. .... *O. capsalis* Askew, 1994
- 41 (22). Antennal flagellum with 3 anelli.
- 42 (43). Gasteral tergites dark brown with slight green reflection. T3–T5 with rows of shallow fovea metasoma with abdomen twice as long as mesosoma (in profile). ♀ 1.6 mm. United Arab Emirates. .... *O. punctellus* sp. n.
- 43 (42). Gasteral tergites dark green.
- 44 (45). Anterior margin of clypeus bilobed. Gaster 1.7 times as long as rest of body. T3–T5 with transverse rows of foveae. Head and mesosoma dark green with blue-green to weakly bluish green reflections, gaster light brown dorsally, with metallic reflection. ♀ 2.0–2.2 mm; ♂ 1.3–1.8 mm. In galls of *Stefaniola salsolae* (Tavares) on *Gypsophila* sp. Spain. .... *O. monegricus* Askew, 1994
- 45 (44). Anterior margin of clypeus straight.
- 46 (47). T4 and T5 with one row of deep foveae basally. Gaster 1.15 times as long as head and mesosoma combined. Body black with metallic reflection. ♀ 2.8–3.8 mm; ♂ 1.5–2.0 mm. Associated with grasses on pastures. Turkey. .... *O. ardahanensis* Doğanlar, 1991
- 47 (46). All gastral tergites without rows of deep foveae. Body dark green.

- 48 (51). Flagellum of female notably narrowed basally, first funicular segment small, somewhat larger than the last (3rd) anellus.
- 49 (50). Metasoma weakly longer than mesosoma; gasteral tergites with light fine sculpture dorsally. ♀ 2 mm. In galls of *Stefaniola gigas* (Marikovsky) on *Haloxylon* sp. Uzbekistan. .... *O. similis* Zerova, 1985
- 50 (49). Metasoma twice longer than mesosoma, gasteral tergites with some fine sculpture, ♀ 1.8–2.0 mm, ♂ 1.4 mm. UAE. .... *O. qurrayahi* sp. n.
- 51 (48). Flagellum of female not narrowed basally, the first funicular segment notably larger than the last anellus; metasoma 1.7 times longer than mesosoma; gasteral tergites with homogeneous alveolate sculpture dorsally; sculpture the most distinct on T5. ♀ 1.2–2.7 mm; ♂ 1.1–2.0 mm. Parasite of *Aylax* and *Xestophanes* gall wasps. Europe, Minor and Central Asia. .... *O. diffinis* (Fonscolombe, 1832)
- 52 (1). Female gaster dorsally with longitudinal median carina. Flagellum with 2 anelli (*orientalis* species group).
- 53 (56). Epipygium notably up-lifted and rather elongate, longer than the gasteral T6.
- 54 (55). Body not more than 3 mm. Funicular segments transverse. First gasteral tergite with alutaceous sculpture, T3–T6 with dense fine sculpture, with rows of elongate white hairs, epipygium with dense alveolate sculpture, gaster of male with a lateral carina. Parasite of gall midges (Cecidomyiidae) in galls on *Suaeda monoica* (Chenopodiaceae). ♀ 1.9–2.4, ♂ 1.2–1.6 mm. Saudi Arabia. .... *O. desertus* Zerova et Dawah, 2004
- 55 (54). Body generally 4.5–5.0 mm, occasionally, 3 mm. Funicular segments longer than broad. First gasteral tergum smooth and shining anteriorly, with fine alveolate sculpture posteriorly; T3–T5 with doubled punctation, its meshes larger anteriorly, but finer posteriorly, T6 with dense punctation, epipygium finely punctured. Gaster of male with a lateral carina. Parasite of *Andricus*, *Cynips*, *Biorhiza* and other gall wasps (Cynipidae) associated with *Quercus*. Widespread in western Palearctic. .... *O. nitidulus* (Fabricius, 1804)
- 56 (53). Epipygium weakly up-lifted, not longer than the gasteral T6.
- 57 (58). Anterior margin of clypeus bilobed. Body dark, almost black, with coppery reflections. T1 with alutaceous sculpture, T4–T5 with transverse rows of deep punctures. Head and mesosoma dark green with blue-green to weakly bluish green reflections, gaster light brown dorsally, with metallic reflection finely grooved centrally, the first tergite alutaceously sculptured, T4–T5 with transverse rows deep punctures anteriorly. ♀ 2.1–3.0 mm. In galls of *Eurytoma gallephedrae* Askew, on *Ephedra nebrodensis*. Spain. .... *O. cupreus* Askew, 1998
- 58 (57). Anterior margin of clypeus straight.
- 59 (60). Both anelli very short and flat, at least three funicular segment almost quadrate, the last funicular segment transverse. Abdomen longer than mesosoma in ratio 50 : 35. T2–T5 with shallow pits and rows of foveae. ♀ 1.1–2.5 mm; ♂ 1.5–1.7 mm. UAE. .... *O. novus* sp. n.
- 60 (59). Anelli some longer and stouter.
- 61 (64). All funicular segments transverse.
- 62 (63). Metasoma of female 1.7–1.8 times as long as mesosoma, with sharp dorsal carina. T1 light finely reticulate, T2–T5 deeply alveolate, especially anteriorly. T6 evenly punctured; epipygium short, shining, not longer than its basal height. Postmarginal vein slightly more than twice as long as stigmal. ♀ 2.2–3.5 mm, generally 3 mm; ♂ 2–3 mm. Parasite of many gall wasps in flower heads of Asteraceae, and also some gall midges (*Lasioptera eryngii* Vallot). Palearctic and Oriental Regions. .... *O. orientalis* Walker, 1871
- 63 (62). Metasoma of female about 3 times longer than mesosoma, sculpture T1–T6 as in *O. orientalis*, but weakly smoothed. Epipygium elongate, shining, longer than its basal height. Postmarginal vein 1.8 times longer than stigmal. ♀ 4.2–4.1 mm; ♂ 2.1–3 mm. Israel. .... *O. discolor* Zerova, 2005
- 64 (61). At least first three funicular segments longer than broad or quadrate.
- 65 (70). First four funicular segments slightly longer than broad or (*O. rufimanus*) quadrate.
- 66 (67). T1 distinctly reticulate, T2–T6 with double puncture: larger anteriorly, finer posteriorly. Longitudinal dorsal keel on gaster smoothed. Fore tibiae greenish-brown. ♀ 1.5–4.5 mm, often about 3 mm; ♂ 1–3 mm. Parasite of many *Biorhiza*, *Andricus* and *Neuroterus* gall wasps on oak trees. Palearctic, Oriental Regions. .... *O. pomaceus* Geoffroy, 1871
- 67 (66). T1 tergum smooth and shiny in its anterior third; rest part with smoothed light puncture.
- 68 (69). T2–T5 with relatively large, but not very deep alveolate sculpture. Fore tibiae reddish-yellow, mid and hind mostly brown, with greenish tint. ♀ 1.6–4 mm, often about 3 mm; ♂ 1.5–3 mm. Parasite of gall wasps *Diastrophus rubi* Bouché, Europe. .... *O. rufimanus* Mayr, 1904
- 69 (68). T2–T5 with double puncture: larger anteriorly, finer posteriorly. Longitudinal dorsal keel on gaster smoothed. Fore and mid femora, and also tibiae and tarsi of all legs bright yellow. ♀ 2–2.2 mm; ♂ 1.2–2 mm. Parasite of *Dryocosmus*, *Neuroterus*, *Trichogolma* gall wasps on *Quercus serrata*. Japan, Korea. .... *O. flavitibialis* Yasumatsu et Kamijo, 1979



- 70 (65). All funicular segments longer than broad, but the 6th segment slightly longer than broad, almost quadrate.
- 71 (74). Body more than 5 (6–7) mm long.
- 72 (73). Fore wings darkened below marginal vein. Body bright blue-green; occiput with deep alveolate sculpture; T1 and T2 with distinct but sparse punctation, T3–T5 with fine puncture anteriorly and posteriorly, and widely alveolate medially, T6 widely alveolate anteriorly and finely alveolate posteriorly. Epipygium finely alveolate; its length exceeds its basal height. Associated with oak trees. Kuril Islands (Shikotan). ..... *O. ermolenkoi* Zerova, 2006
- 73 (72). Fore wings hyaline. Body black with metallic bluish green reflection. Gaster slightly less than twice as long as head plus mesosoma combined; T1 with distinct reticulation, T3–T5 with a row of longitudinal tubercles. Epipygium long, about 1.8 times as long as height (lateral view); oviposition about two-third as long as epipygium dorsally. ♀ 6.0–6.5 mm. In cynipid galls on *Quercus* sp. Turkey. .... *O. lingoeliensis* Doğanlar, 1991
- 74 (71). Body less than 5 (about 3–4) mm long. Fore wings hyaline. Body bright green. T1 smooth and shiny in anterior half, more alveolate in posterior part; T3–T5 with dense, distinct puncture and a row of shallow but large alveoli medially especially on T3 and T4; T6 with punctures larger in basal part of tergite; epipygium with same punctations as distal part of T6; epipygium as long as its basal height. Ex cynipid galls on *Quercus* sp. Japan (Honsu). ..... *O. ibaraki* Zerova, 2006

Zerova M. D. New species of parasitic hymenopterans of the genus *Ormyrus* (Hymenoptera, Ormyridae) from the arid regions of Palaearctic // Vestnik zoologii. — 1985. — N 1. — P. 11–19. — Russian : Зерова М. Д. Новые виды паразитических перепончатокрылых рода *Ormyrus* (Hymenoptera, Ormyridae) из аридных регионов Палеарктики.

Zerova M. D., Seryogina L. Ja. Review of Palaearctic Ormyridae (Hymenoptera, Chalcidoidea), with description of two new species // Vestnik zoologii. — 2006. — 40, N 1. — P. 27–40.

Zerova M. D., Seryogina L. Ja., Van Harten A. A new species of the Genus *Ormyrus* (Hymenoptera, Chalcidoidea, Ormyridae) from Yemen // Vestnik zoologii. — 2006. — 40, N 5. — P. 469–471.