

Orijinal araştırma (Original article)

A review of *Ceranisus* (Hymenoptera: Eulophidae) of Ukraine, with description of two new species¹

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Summary

Five species of *Ceranisus* Walker, 1841 (Hymenoptera: Eulophidae: Entedoninae) were collected recently in Ukraine: *C. pacuvius* (Walker, 1841), *C. menes* (Walker, 1839), *C. planitianus* Erdős (a new record for Ukraine), and two new species *C. ukrainensis* sp. n. from Cherkas'ka (Kaniv National Reserve) and Khersonska (Black Sea Biosphere Reserve) oblasts, and *C. jabanitarlensis* sp. n. from Kiev and Donetsk oblast (Khomutovska Step National Reserve). *Ceranisus ukrainensis* is a third known species of the genus having female antenna with a three-segmented club. An identification key to the Ukrainian species of *Ceranisus* is provided.

Key words: Hymenoptera (Eulophidae), *Ceranisus*, new species, Ukraine

Anahtar sözcükler: Hymenoptera (Eulophidae), *Ceranisus*, yeni türler, Ukrayna

Introduction

The thrips-attacking genus *Ceranisus* Walker, 1841 (Hymenoptera: Eulophidae: Entedoninae) has been recorded from all over the world; its species are larval parasitoids of thrips (Thysanoptera) (Schauff, 1991; Triapitsyn & Headrick, 1995; Loomans, 2003; Triapitsyn, 2005; Triapitsyn & Morse, 2005; Doğanlar & Triapitsyn, 2007; Doğanlar et al., 2009; Doğanlar et al., 2010).

The genus contains 21 species from all zoogeographical regions, viz. Palearctic (9), Afrotropical (2), Nearctic (4), Neotropical (4), Oriental (5), and Australasian (3) regions (Doğanlar, 2003; Triapitsyn & Morse, 2005; Triapitsyn, 2005; Doğanlar & Triapitsyn, 2007; Noyes, 2010; Doğanlar et al., 2009; Doğanlar et al., 2010). There are some more undescribed species from various countries in the Palearctic region, as well as in other parts of the world. Loomans & van Lenteren (1995) provided an overview of the described thrips

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parasitoids and discussed their importance for biological control of thrips pests. Taxonomy and systematics of species of *Ceranisus* has been studied by several authors in the world (Graham, 1963; Erdős 1966; Cameron et al., 2004; Triapitsyn & Headrick, 1995; Triapitsyn & Morse, 2005; Triapitsyn, 2005; Doğanlar & Triapitsyn, 2007). Doğanlar et al. (2009) and Doğanlar et al. (2010) studied the DNA sequences of some European species of *Ceranisus*, provided the phylogenetic trees for the *menes* and *pacuvius* groups of *Ceranisus*, and described a new species from Turkey.

In the course of this study specimens of *Ceranisus* were collected from some parts of Ukraine, and this small collection shows that Ukraine has a rich fauna of the genus including some undescribed species. Five species of *Ceranisus* are recorded and two of them are described as new.

Material and Methods

Morphological terminology follows Gibson (1997) and Triapitsyn (2005). This study is based upon examination and identification of the specimens collected in 2008, mainly from Kiev ("Lysa Hora" area), Kaniv (Kaniv Nature Reserve, "Maryina Hora" and Pekari village), Kherson Oblast (Chornomorsky Nature Reserve), Donetsk Oblast ("Khomutovska Step" Nature Reserve near Telmanovo), and the Crimea (Karadag Nature Reserve and its vicinity).

The specimens were collected by total sweeping sampling technique, when the whole contents of the sweep-net are preserved in a high-percent ethanol followed by rigorous sorting afterwards.

Individual specimens killed in ethanol were taken from the collected samples and some of them were then slide-mounted in Canada balsam.

The examined specimens were deposited in the collections indicated by the following acronyms: ICMKU, Insect Museum of Plant Protection Department, Agriculture Faculty, Mustafa Kemal University, Antakya, Hatay, Turkey; SIZK, Schmalhausen Institute of Zoology, National Academy of Sciences, Kiev, Ukraine; and UCRC, Entomology Research Museum, Department of Entomology, University of California, Riverside, California, USA. Abbreviations used in the key and descriptions are: C, club segment; F, funicular segment; mv, marginal vein; st, stigmal vein; pmv, postmarginal vein; l_1 , space between the tip of forewing and the level of connection point of the stigmal and marginal veins; l_2 , space between the tip of submarginal vein and the level of connection point of the stigmal and marginal veins (Fig. 9F).

Genus *Ceranisus* Walker, 1841

Ceranisus Walker, 1841: vi, pl. N, fig. 2. Type species: *Cirrospilus pacuvius* Walker, 1841; by monotypy.

Diagnosis. The diagnostic characters of the genus were given in detail by Triapitsyn (2005) and Doğanlar & Triapitsyn (2007). In the Ukrainian species female flagellum has 2 funicle segments and a distinct 2-or 3-segmented club (usually 2-segmented but 3-segmented in *C. kanivensis* sp. n.), and male antenna often has a swollen scape, except for *C. menes* and *C. planitianus* having a slender scape, male flagellum with a 2-segmented funicle and a 3-segmented club.

Key to species in Ukraine

- 1-Female.....2
- Male.....6
- 2- Club 3-segmented (Fig. 8D); first funicular segment distinctly shorter than the second (Fig. 8D).....*C. ukrainensis* sp. n.
- Club 2-segmented (Figs 2C, 6C); first funicular segment almost as long as the second (Fig. 2C).....3
- 3- Forewing blade with a distinct semi-oval bare area at posterior margin behind base of marginal vein, demarcated anteriorly by a sinuate line of setae (Figs 3E, 4B).....4
- Forewing blade either without such bare area or, if a narrow bare area present along posterior margin behind base of marginal vein, it is demarcated anteriorly by a more or less straight cubital setal line (Fig. 4A).....5.
- 4- Gaster yellow or light brown; malar groove entire and straight; pedicel plus flagellum about 2.7 times as long as scape.....*C. menes* (Walker)
- Gaster completely dark brown or black; malar groove split (Y-shaped); pedicel plus flagellum at most twice as long as scape (Fig. 3).....*C. planitianus* Erdős
- 5- Club including spicula twice as long as wide; forewing about 2.5 times as long as wide; width of forewing equal to l_2 ; l_1 slightly shorter than l_2 ; postmarginal vein twice as long as stigmal vein, marginal vein+parastigma 3-3.5 times as long as postmarginal vein, and about 6.4-7 times as long as stigmal vein.....*C. pacuvius* (Walker)
- Club including spicula 2.9 times as long as long as wide; forewing about 2.9 times as long as wide; width of forewing 0.8 times as long as l_2 ; $l_1 = l_2$; postmarginal vein 2.6 times as long as stigmal vein, marginal vein+parastigma 2.1 times as long as postmarginal vein, and about 5.4 times as long as stigmal vein.....*C. jabanitarlensis* sp.n.
- 6- Scape slender, not swollen, or slightly dilated, at least 3 times as long as wide; forewing blade with a distinct semi-oval bare area at posterior margin behind base of marginal vein, demarcated anteriorly by a sinuate line of setae (Fig. 4B)7
- . Scape strongly swollen (Figs. 5B; 7B); forewing blade without such bare area, it is demarcated anteriorly by a more or less straight cubital setal line (Fig. 4A)8
- 7-. Legs pale; malar groove entire and straight.....*C. menes* (Walker)
- Legs at least pale brown; malar groove split (Y-shaped).....*C. planitianus* Erdős

- 8- Scape petiolate basally (Fig. 9A,B).....**C. ukrainensis sp. n.**
 -- Scape not petiolate basally (Fig. 5B, 9B).....9
 9- Antennal scape half moon shaped (Fig. 5B, D), 1.4-1.7 times as long as wide; pedicel plus flagellum 1.5 times as long as scape..**C. pacuvius** (Walker)
 -- Antennal scape drop-shaped (Fig. 7B); twice as long as wide; pedicel plus flagellum about 1.8 times as long as scape.....**C. jabanitarlensis sp.n.**

Menes species group

Ceranisus menes (Walker, 1839)

(Figs 1, 2, 4B)

Type locality. – Near London, England, UK.

Material examined: (ICMKU, SIZK). - UKRAINE, Cherkas'ka oblast, Kaniv Nature Reserve, Maryina Hora, 3.VII. 2008, 8 ♀♀, M. Doğanlar; Cherkas'ka oblast, Pekari Village, 4.VII.2008 (swept from flowers of *Asclepias syriaca*), 24 ♀♀, M. Doğanlar; Kiev, Lysa Hora, 23.VII.2008, 11 ♀♀, M. Doğanlar; Crimea, nr. Feodosiya, Karadag Nature Reserve (biostation), 15-19.VII.2008, 65 ♀♀, M. Doğanlar and A. Gumovsky; ibid. 20.VII.2008 (collected from flowers of *Capparis spinosa*), 3 ♀♀; Crimea, nr. Koktebel, 18.VII.2008, 13 ♀♀, M. Doğanlar and A. Gumovsky; between Karadag Nature Reserve and Schchebetovka, swept from pastures on banks of Otuzka River, 13 ♀♀, M. Doğanlar and A. Gumovsky (ICMKU and SIZK); Khmelnytska oblast, Kamianets-Podilsky region, near Sakhkamin' Village, 17.VII.1997, 1 ♀, Gumovsky (SIZK).

Detailed description was given by Triapitsyn & Headrck (1995) and male genitalia was figured by Triapitsyn (2005).

The following figures based on the Ukrainian specimens: Head as seen (Fig.1) antenna with scape slender, about 5 times as long as wide; pedicel plus flagellum (Fig. 2). Mesosoma (Fig. 1B). – Almost as long as metasoma; mesoscutum, scutellum, and axilla with light engraved sculpture, without metallic luster. Forewing (Fig.4 B) with marginal setae at least twice as long as stigmal vein;; width of forewing 0.8-0.9 times l_2 ; l_1 distinctly shorter than l_2 ; Hind wing about 8.5 times as long as wide marginal cilia about 1.5 times as long as wing's maximal width. Coxae lightly sculptured (with long cells).

Metasoma (Fig 1A) – Petiole about 1.2 times as wide as long. Ovipositor occupying about 4/5 length of gaster, slightly exserted; ovipositor length/metatibia length ratio 4:3.

Measurements– Body length: 0.8 mm. Relative measurements, as length or length/width: Antenna: scape: 20/4; pedicel: 10/4, F1: 5.5/3, F2: 5.5/3, club: 17+3/6, C1: 8, C2: 8, spicula: 4. Forewing: 56/18, longest marginal cilia: 10. Hind wing: 51/6, longest marginal cilia: 9. Ovipositor: 24.

Male. – Not known in Ukraine.

Host. – Various Thripidae, the detailed lists of the hosts mentioned by Loomans & van Lenteren (1995) and Triapitsyn (2005).

Distribution. – Cosmopolitan (Loomans & van Lenteren, 1990, 1995; Triapitsyn & Headrick, 1995; Triapitsyn & Morse, 2005; Triapitsyn, 2005).

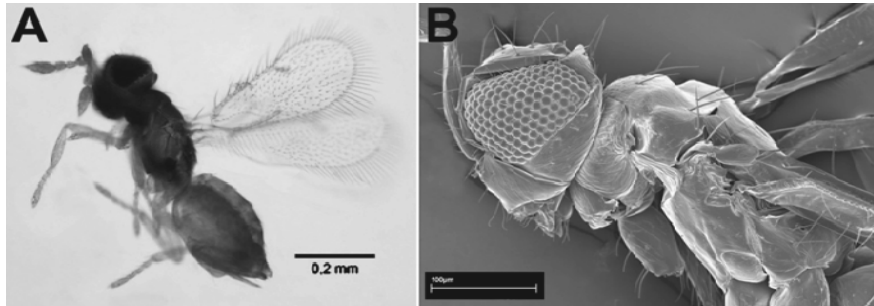


Fig. 1. *Ceranisis menes* Walker: A, habitus (specimen from the Crimea, Ukraine); B, head and anterior mesosoma (specimen from Stuttgart, Germany) (Original).

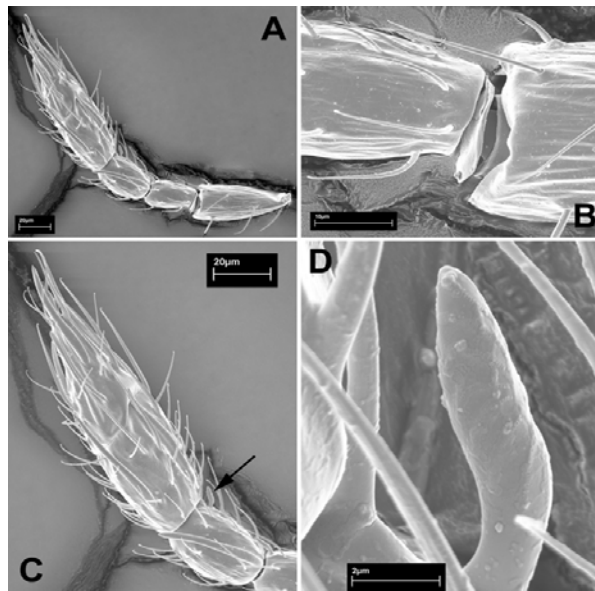


Fig. 2. *Ceranisis menes* Walker (same specimen as in 1B): A, Antennal pedicel and flagellum; B, junction of pedicel and F1; C, F2 and club enlarged; D, Sensillum arrowed on C (Original).

***Ceranisis planitianus* Erdős, 1966**

Fig. 3

Type locality. – Hungary.

See Triapitsyn & Headrick (2005) for the diagnosis and illustrations of *C. planitianus* and also Triapitsyn (2005) for the list of its synonyms, distribution,

etc. Loomans & van Lenteren (1995) listed the known hosts of this species. The species was recorded from Turkey by Doğanlar & Triapitsyn (2007)

Material examined: UKRAINE: Cherkas'ka oblast, Kaniv (Maryina Hora), 2.VII.2008, 8 ♀♀, 4 ♂♂, M. Doğanlar (in alcohol, ICMKU); Poltavaska oblast, Kremenchug region, near Pidubne Village, 14-15.VII.1997, 2 ♀♀, 1 ♂, A. Gumovsky (SIZK).

Redescription based on Ukrainian specimens: – Female. – Body (Fig.3 A,C) dark; metasoma basally pale brown, antennae brownish; legs brown, except tibiae and tarsi light brown, venation yellow.

Head (Fig. 3A). – Vertexal and frontal sutures broadly V-shaped behind posterior ocelli. Malar sulcus split. Antenna (Fig. 3B) with scape slender, about 4.5-5.0 times as long as wide, pedicel plus flagellum 1.7-1.9 times length of scape. Mesosoma (Fig. 3A). – About as long as metasoma; mesoscutum, scutellum, and axilla with light reticulation, without metallic luster; Forewing as seen (Fig. 3E). Forewing as wide as l_2 ; l_1 slightly longer than l_2 ; longest marginal cilia 0.25-0.3 of maximal forewing width; Hind wing about 7-8 times as long as wide; blade uniformly setose, hyaline; longest marginal cilia as long as or slightly longer than the wing's maximal width. Metasoma. – Petiole slightly more than twice as wide as long. Ovipositor occupying about 3/4 of length of gaster; ovipositor length/metatibia length ratio 1.2:1.

Male – Similar to female except as follows: metasoma black, with brown basal spot; antenna (Fig. 3C,D) with pedicel plus flagellum nearly twice longer than scape; Mesosoma (Fig. 3C) twice longer than broad, fore wing about 2.5 times as long as width, setae on marginal vein slightly longer than stigmal vein, Hind wing about 7 times as long as wide, longest marginal cilia as long as wing's maximal width. Metasoma (Fig. 3C) slightly shorter than mesosoma, twice as long as broad; petiole slightly shorter than broad.

Hosts. – Unknown.

Distribution. – Western Europe, Israel, USA, Canada (Triapitsyn, 2005), newly recorded for Ukraine.

Pacuvius species group

***Ceraninus pacuvius* (Walker, 1841)**

Figs. 4A, 5

Type locality. – Near London, England, UK.

Material examined: – UKRAINE, Kiev, Gryshko Botanical Garden of NASU, 05.V.2006, 1 ♀, 3 ♂♂, A. Gumovsky (SIZK).

Comparative material: – TURKEY, Diyarbakır, Aslanlı köyü, Silvanyolu, 05.V.2006, 5 ♀♀, 2 ♂♂(ICMKU), M. Doğanlar; Gaziantep, Akyokuş Geçidi,

23.IV.2008 1 ♀, 2 ♂♂ (SIZK), M. Doğanlar; Şanlıurfa, Birecik, Aratdağı,
04.V.2006 5 ♀♀, 2 ♂♂, M. Doğanlar (ICMKU).

This species was redescribed and illustrated in detail by Triapitsyn (2005). Some brief diagnosis based on Ukrainian specimens is given: – Female. Antenna (Fig. 5A) with pedicel plus flagellum 1.6-1.9 times as long as scape; Mesosoma. – about 0.8 times as long as metasoma; mesoscutum, scutellum, and axillae with light reticulation, without metallic luster. Forewing (Fig. 4A) with longest marginal setae about 0.3 times as long as maximal width of forewing; forewing about as wide as l_1 ; l_1 slightly shorter than l_2 ; longest marginal cilia about 0.2 of maximal forewing width. Metasoma. – Petiole strongly transverse, ovipositor 0.8 times as long as gaster, 1.6-1.8 times as long as hind tibia.

Male. – Body length about 0.7 mm. Similar to female, excepts as follows: forewing about 2.6 times as long as wide; antenna (Fig. 5B,D) with scape distinctly swollen, half moon shaped, 1.4–1.8 (1.6) times as long as wide; pedicel plus flagellum 1.9 times as long as scape. Mesosoma distinctly longer than metasoma. Forewing venation as in Fig. 4A. Relative measurements, as length or length/width: Antenna: scape: 25/18; pedicel: 11/5; F1: 6/4; F2: 6/6; club: 21+3/7, C1: 6.5, C6.5, C3: 5, spicula: 3 . Aedeagus as in Fig. 5C, each digitus with two spines.

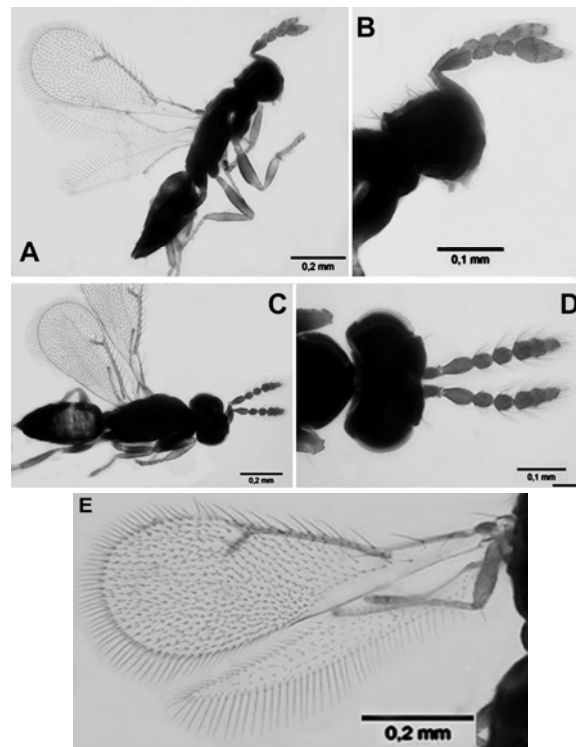


Fig. 3. *Ceranisus planitianus* Erdős: A, B,E, female. A, habitus, lateral view; B, head with antennae, C, D, male: C, habitus in dorsal view; D, head with antenna dorsal view; E, female wings (Original).

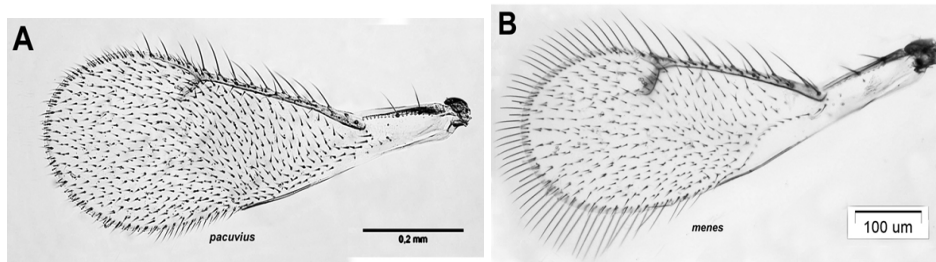


Fig. 4. Fore wings: A, *Ceranisis pacuvius* Walker (marginal cilia broken); B, *C. menes* (Original).

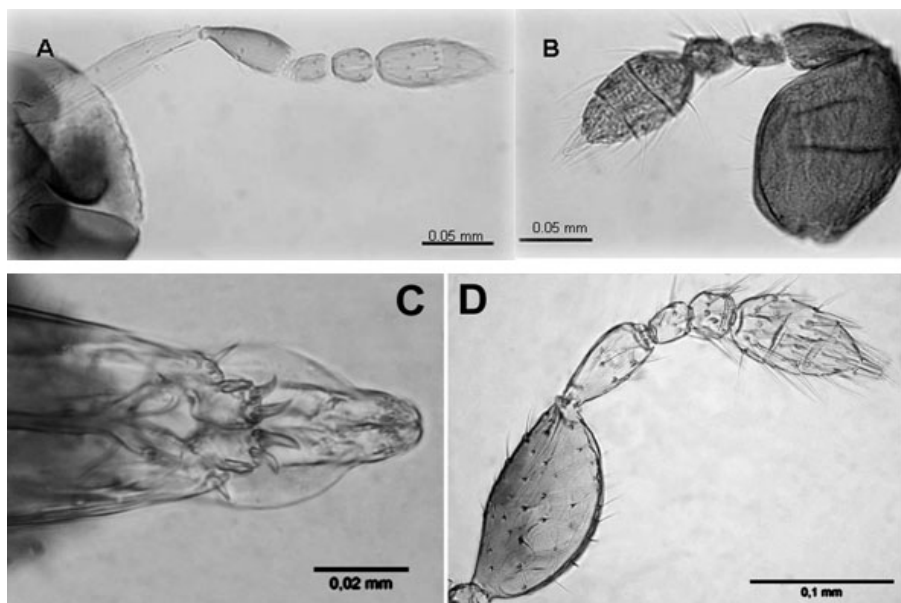


Fig. 5. *Ceranisis pacuvius* Walker: A, female antenna (specimen from Gaziantep, Turkey); B-D, male: B, D, antennae (B, specimen from Arat Mnt, Birecik, Turkey); D, specimen from Kiev, Ukraine), C, aedeagus (same specimen as for D) (Original).

***Ceranisis jabanitarlensis* sp. n.**

Figs. 6, 7.

Type material: – Holotype: female, labeled: UKRAINE: Kiev, Lysa Hora, 13.VII.2008 (on a slide, in Canada balsam) (SIZK). Paratypes: 1 ♀, 1 ♂, Donetsk Oblast, nr. Telmanovo, Khomutovska Step Reserve, 24-26.V.2003, A. Gumovsky (ICMKU); 6 ♀♀, Kiev, Lysa Hora, 13.VII.2008 (in alcohol); 4 ♀♀, ibid. (on a slide, in Canada balsam) (ICMKU, SIZK).

Description. – Female (Fig. 6A,B) (holotype). Body, head and mesosoma dark brown, metasoma apically brown, basally light brown, non-metallic; antenna and legs yellow, venation and pretarsi light brown.

Head. – Vertexal suture broadly V-shaped (Fig. 6F). Malar sulcus split (Fig. 6E). Antenna (Fig. 6C) with pedicel plus flagellum 1.6-1.8 (1.73) times as long as scape; scape slender, about 5 times as long as wide; pedicel 1.8-2.2 (1.9) times as long as long as wide; F1 0.6 times as long as F2; F1 and F2 slightly longer than broad to quadrate; F1 without sensilla, F2 with 1 sensillum; club including spicula 2.9 times as long as long as wide, C1 0.7 times as long as C2; spicula 0.3 times as long as C2.

Mesosoma (Figs. 6A,B) slightly shorter than metasoma; smooth, 1.6 times as long as long as broad; midlobe of mesoscutum with 2 pairs and scutellum with 1 pair setae. Forewing (Fig. 6D) about 2.9 times as long as long as wide; width of forewing 0.8 times as long as l_2 ; $l_1 = l_2$; longest marginal cilia 0.3 times wing's maximal width; blade hyaline, with a narrow, small speculum, continuing along 1/5 length of marginal vein, basal cell bare, other parts uniformly covered with numerous microtrichia; submarginal vein with 2 strong, long bristles on upper side and 2-3 small bristles opposite to basal bristles; postmarginal vein 2.6 times as long as stigmal vein, marginal vein+parastigma 2.1 times as long as postmarginal vein, and about 5.4 times as long as stigmal vein, the latter distinctly sessile. Hind wing about 7 times as long as wide; blade uniformly setose, transparent; longest marginal cilia slightly longer than wing's maximal width.

Metasoma (Fig. 6B) 1.9 times as long as long as wide; petiole about twice as wide as long. Ovipositor 0.8 times as long as gaster, slightly exerted; ovipositor 1.7 times as long as hind tibia.

Measurements (holotype). Body length: 0.8 mm. Relative measurements (as length or length/width): Antenna: scape: 11/2; pedicel: 5/2.3; F1: 1.5/1.3; F2: 2.5/2; club: 8+1.5/2.5, C1: 3, C2: 3.5, spicula: 1.5. Forewing: 47/16; l_1 19; l_2 19; hind wing: 42/6, longest marginal cilia: 7. Mesosoma 24; metasoma 27; Ovipositor: 22.

Male (Fig. 7A). – Body similar to female, excepts as follows: Antenna (Fig. 7B) with scape distinctly swollen, drop shaped, 2.1 times as long as wide; pedicel plus flagellum 1.77 times as long as long as scape. Mesosoma distinctly shorter than metasoma, about 0.89 times as long as metasoma. Forewing (Fig. 7C) about 2.5 times as long as wide; forewing venation as in Figs 7A,C. Body length about 0.76 mm. Relative measurements, as length or length/width: Antenna: scape: 78/37; pedicel: 43/17; F1: 14/12; F2: 18/18; club: 52+12/24, C1: 18, C18, C3: 16, spicula: 12.

Diagnosis. – This species is similar to *C. pacuvius* in the structure of antennae of both sexes. *Ceranisus jabanitarlensis* differs from *C. pacuvius* in having club including spicula 2.9 times as long as long as wide (club including spicula twice

as long as wide in *C. pacuvius*); in *jabanitarlensis* the postmarginal vein is 2.6 times as long as stigmal vein (postmarginal vein twice as long as stigmal vein in *C. pacuvius*); in *jabanitarlensis* the forewing is about 2.9 times as long as long as wide; width of forewing 0.8 times as long l_2 ; $l_1 = l_2$ (forewing about 2.5 times as long as wide; width of forewing equal to l_2 ; l_1 slightly shorter than l_2 in *C. pacuvius*); in *jabanitarlensis* the marginal vein+parastigma 2.1 times as long as postmarginal vein, and about 5.4 times as long as stigmal vein (marginal vein+parastigma 3-3.5 times as long as postmarginal vein, and about 6.4-7 times as long as stigmal vein in *C. pacuvius*); in *jabanitarlensis* male antenna with scape drop shaped (half-moon shaped in *C. pacuvius*).

Hosts. – Unknown.

Etymology. – The species epithet is a derivation from Turkish “jaban tarla” (a “wild filed”, or in Ukrainian “Dyke Pole”), a common name of the area inhabited by the nomadic Turkish tribes in the past, and where Donetsk oblast is located now.

Unplaced species

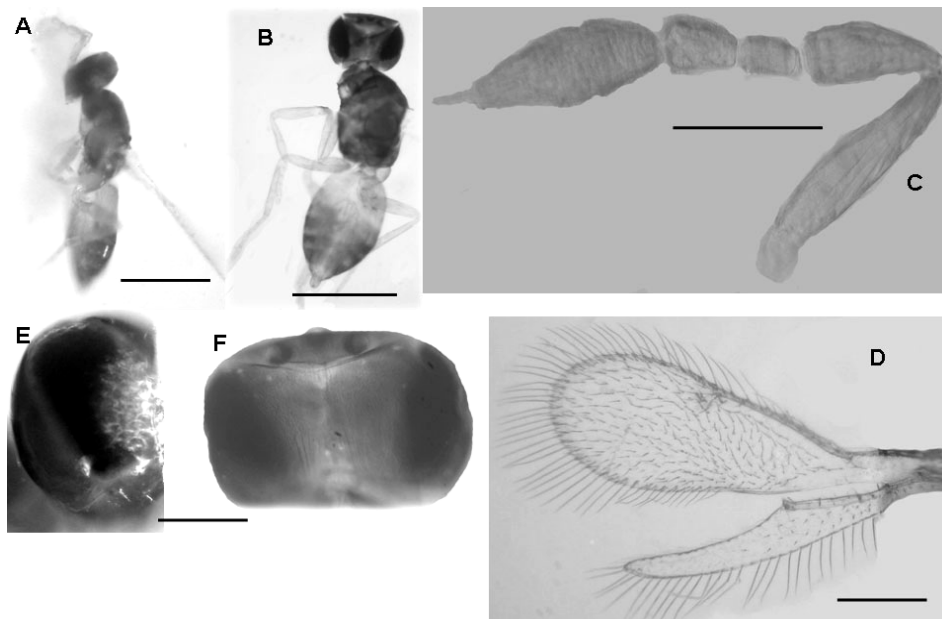


Fig. 6. *Ceranisus jabanitarlensis*, Doğanlar, Gumovsky, Doğanlar, sp. n., female: A, B, habitus; C, antenna; D, fore wing; E, head in lateral view, arrow indicated split of malar sulcus; F, head, post occipital view. (Scale bar for A,B 0.5 mm, for for others 0.25 mm) (Original).

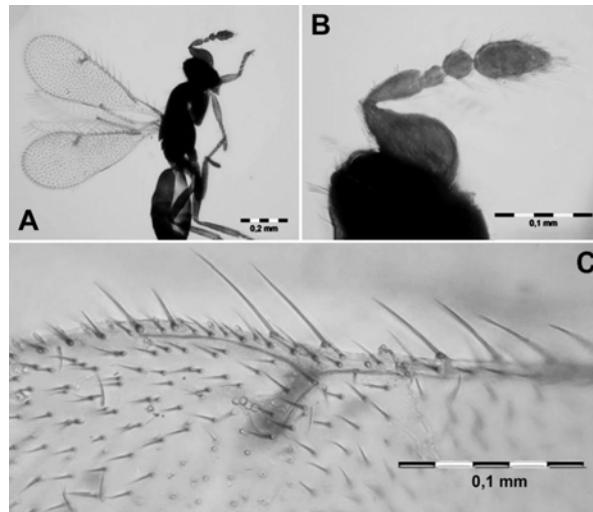


Fig.7. *Ceranisus jabanitarlensis*, Doğanlar, Gumovsky, Doğanlar, sp. n., male: A, habitus; B, antenna; C, forewing veins (Original).

***Ceranisus ukrainensis* sp. n.**

Figs 8, 9.

Type material. – Holotype female (on slide, SIZK), labeled: “UKRAINE, Kaniv Reserve, 3.VII.2008, M. Doganlar & A. Gumovsky. Mounted in Canada balsam”. Paratypes: 1 ♂, 2 ♀♀ (on a slide, in Canada balsam, ICMKU) (same collection data as the holotype); Kaniv, Gryshchentsi Village (swept from *Medicago* field) 2 ♀, 1 ♂, 13.VII.2008, M. Doğanlar (ICMKU). (3 ♀♀, UCRC; 5 ♀♀, SIZK), Kherson Region, Chernomolsky Biosphere Reserve, 19.V.2000, 2 ♀♀, 1 ♂, A. Gumovsky (in alcohol, SIZK).

Description. – Female (holotype) (Fig. 6A). – Body dark brown, except basal half of metasoma yellow; scape yellow, flagellum pale brown, legs and venation yellow.

Head (Fig. 8B). – Vertexal suture broadly C-shaped. Antenna (Fig. 8D) with scape slightly dilated and curved in the middle, about 3.4 times as long as wide; pedicel 1.9 times longer than wide; pedicel plus flagellum slightly more than twice as long as scape; F1 notably shorter and narrower than F2, 0.6 times as long as and 0.7 times as wide as F2, without sensilla; F2 with 1 sensillum, 1.2 times as long as long as wide; club including spicula 2.8 times as long as long as wide, C1 distinctly shorter than C2, 0.8 times as long as long as wide; C2 longest club segment, quadrate; C3 equal in length to C1, 1.1 times as long as long as broad, C1 and C2 with two sensilla each and C3 with three sensilla.

Mesosoma (Fig. 8B). – Mesosoma distinctly shorter than metasoma, 0.8 times as long as long as metasoma; mesoscutum, scutellum, and axilla with light engraved sculpture, without metallic tinge; midlobe of mesoscutum with 2 pairs, and scutellum with one pair of setae. Forewing (Fig. 8C) 3 times as long as long

as wide; width of forewing 0.9 times as long l_2 ; $l_1 = l_2$; longest marginal cilia about half of maximal forewing width; blade transparent, uniformly covered with numerous setae; submarginal vein with 2 strong, long bristles on upper side and 2 bristles opposite to basal bristles; postmarginal vein 0.7 times as long as stigmal vein, marginal vein+parastigma 4.8 times as long as stigmal vein, the latter distinctly petiolate. Hind wing about 7 times as long as long as wide; blade uniformly setose, hyaline; longest marginal cilia about 1.3 times as long maximal width of hind wing.

Metasoma (Fig. 8A). – Metasoma twice as long as broad; petiole about 2 times as wide as long. Ovipositor occupying about 2/3 length of gaster, slightly exerted; ovipositor length/metatibia length ratio 3:2.

Measurements (holotype). – Body length: 0.8 mm. Relative measurements, as length or length/width: Antenna: scape: 41/12; pedicel: 26/14; F1: 9/9; F2: 14/12; club: 40+5/16, (C1: 12/15, C2: 16/16, C3: 12/11, spicula: 5, seta: 4). Forewing: 94/31; longest marginal cilia: 15; mv: 34; st: 7; pmv: 5. Hind wing: 85/12; longest marginal cilia: 15. Ovipositor: 75; hind tibia: 50.

Male (Figs. 9A-F). – Body (Figs. 9A,C) similar to female except for normal sexually dimorphic features, as follows. Antenna (Fig. 9B) with scape 1.5 times as long as long as wide; pedicel 1.9 times as long longer than wide; pedicel plus flagellum 1.6 times as long as long as scape; flagellum as in female but F1 slightly narrower. Body length: 0.7 mm. Relative measurements (paratype on slide, as length or length/width): Antenna: scape: 39/26; pedicel: 17/9; F1: 6/5; F2: 9/7; club: 26+7/8, C1: 9/7, C2: 9/8, C3: 8/6, spicula: 7; seta: 3.

Diagnosis. – *C. ukrainensis* is similar to the North American *C. russelli* (Crawford) and the Palearctic *C. hirsutus* Doğanlar & Triapitsyn in having a 3-segmented club of the female antenna; thus it would key together with *C. russelli* in the world key to females of *Ceranisus* by Triapitsyn (2005), and key together with *C. hirsutus* in the key to species of *Ceranisus* by Doğanlar & Triapitsyn (2007), if the setal pattern of *C. hirsutus* is ignored. *Ceranisus ukrainensis* differs from *C. russelli* in having mesoscutum with two pairs of setae (mesoscutum with one pair of setae in *C. russelli*); female antenna with F1 distinctly shorter than F2, and F1 and F2 distinctly separated from each other (female antenna with F1 slightly shorter than F2, and F1 and F2 closely attached to each other in *C. russelli*); male antenna with scape strongly swollen and having a distinct petiole basally. At present it cannot be assigned to any species group defined for *Ceranisus* by Triapitsyn (2005). The new species combines the features found in *C. russellii*, *C. pacuvius*, and *C. hirsutus*.

Etymology. – This species is named after the country where it was found.

Hosts. – Unknown.

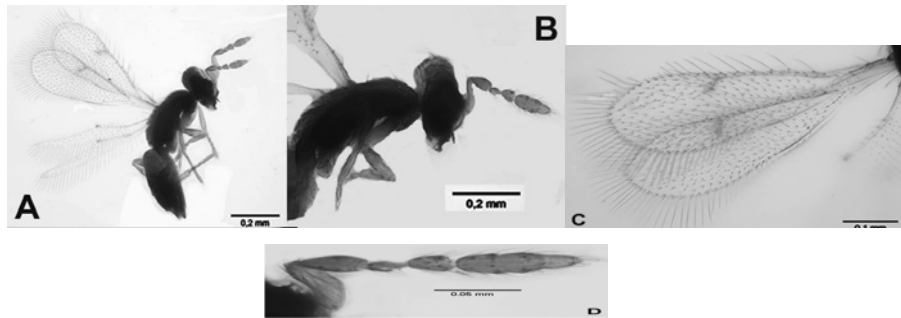


Fig. 8. *Ceranisus ukrainensis* Doğanlar, Gumovsky, Doğanlar, sp.n., female A, habitus; B, anterior head and mesosoma; C, forewings; D, antenna.

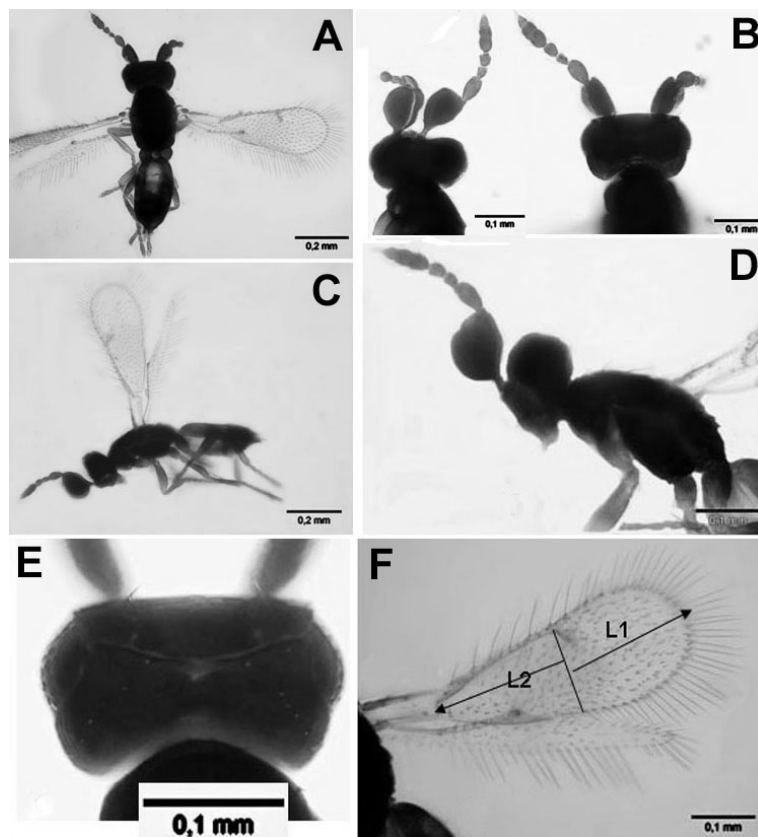


Fig. 9. *Ceranisus ukrainensis* Doğanlar, Gumovsky, Doğanlar, sp. n. male: A, C, habitus (A. dorsal view; C, lateral view); B, head and views; D, head and mesosoma; E, head in dorsal view; F, forewing.

Özet

Ukrayna *Ceranisuus* (Hymenoptera: Eulophidae)'ın Revizyonu ile yeni türlerin tanımlanması

Ukrayna'da *Ceranisuus* Walker, 1841 (Hymenoptera: Eulophidae: Entedoninae)'a ait beş tür yeni olarak toplanmıştır. Bu türler: *C. pacuvius* (Walker, 1841), *C. menes* (Walker, 1839), *C. planitianus* Erdős 1966 (Ukrayna için yeni kayıt), ve iki yeni tür, *C. ukrainensis* sp. n. Cherkas'ka (National Kaniv reserve) ve Khersonska (Black-sea Biosphere reserve) oblasts'dan, ile Kiev and Donetska oblast (National reserve "Khomutovska Step")'dan *C. jabanitarlensis* sp. n. Bunlardan *C. ukrainensis* cinsin bilinen türleri içinde dişi anteninde 3 segment ihtiva eden üçüncü türdür. Ukrayna türleri için bir teşhis anahtarı oluşturulmuştur.

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