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A REVIEW OF THE CARPATHIAN EPHIALTINI PARASITOIDS (HYMENOPTERA, ICHNEUMONIDAE, PIMPLINAE) ASSOCIATED WITH SPIDERS

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A Review of the Carpathian Ephialtini Parasitoids (Hymenoptera, Ichneumonidae, Pimplinae) Associated with Spiders. Varga, O. — A list of the Carpathian species of the tribe Ephialtini associated with spider hosts is provided. Totally, 33 species are present in the region, 27 of them in the Ukrainian part and 22 in Romania. *Acrodactyla quadrisculpta* (Gravenhorst, 1820), *Clistopyga canadensis* Provancher, 1880, *Schizopyga frigida* Cresson, 1870, the genus *Sinarachna* Townes, 1960, with two species, *S. nigricornis* (Holmgren, 1860) and *S. pallipes* (Holmgren, 1860), *Tromatobia lineatoria* (Villers, 1789), and *Zatyptota discolor* (Holmgren, 1860) are recorded for Ukraine for the first time. *Clistopyga sziladyi* Kiss, 1959 and *Polysphincta vexator* Fitton, Shaw & Gauld, 1988 are new Romanian records. *Polysphincta longa* Kasparyan, 1976 is a new record for Ukraine and Romania. A redescription of *Schizopyga coxator* Constantineanu, 1973 and illustrated comparative notes about *S. coxator* and *S. circulator* (Panzer, 1800) are provided. The paper also contains an illustrated key to European species of the genus *Clistopyga* Gravenhorst, 1829.

Key words: new records, taxonomy, key, Ukraine, Romania.

Introduction

The Ephialtini Hellén, 1915 is a large tribe of the subfamily Pimplinae with 29 genera and 157 known species in Europe, of which 15 genera and 58 species are associated with spider hosts (Yu et al., 2012; Fritzen & Fjellberg, 2014; Fritzen, 2014; Matsumoto, 2016). The genus *Brachyzapus*, with a single species, *B. tenuiabdominalis* (Uchida, 1941), recorded from Turkey, is not reported in the list of European species by Yu et al. (2012), probably because Turkey is considered formerly out of European borders. In any case, the record is questionable (Varga et al., 2018). Nine genera were placed in the tribe Polysphinctini Hellén, 1915 by most authors (e. g., Kasparyan, 1981; Constantineanu & Pisciă, 1977). Further studies have shown that all these genera belong to a clearly monophyletic group (*Polysphincta* group), nesting within the Ephialtini (Gauld et al., 2002; Gauld & Dubois, 2006). Gauld & Dubois (2006) recognized a clade *Clistopyga*+*Zaglyptus* as a sister lineage to the *Polysphincta* group. Recently, *Clistopyga* was found to occupy a more isolated position and not to form a clade with either *Zaglyptus* or the *Polysphincta* group and it seems, that parasitism of spiders (eggs in egg-sacs) in *Clistopyga* has a different origin from that of the lineage including *Tromatobia* and *Zaglyptus*. (Matsumoto, 2016).

Biologically, all species of the *Polysphincta* genus-group develop as koinobiont ectoparasitoids of spiders (e. g., Kasparyan, 1981), while two sister genera, *Tromatobia* and *Zaglyptus*, attack spider egg sacks and should be called pseudo-parasitoids rather (Dubois et al. 2002). The details of biology of the genus *Clitopyga* are obscure, at least one species may develop by feeding on a spider in a *Polysphincta*-like manner (Wahl & Gauld, 1998) whereas others may feed in egg sacs, after subduing a spider guarding them (Fitton et al., 1988).

By far, 21 species of the target group have been recorded from Ukraine (mainly eastern and central parts) by Kasparyan (1981). The Ukrainian Carpathian species are reviewed here for the first time. The summarized data on the Romanian ephialtines, associated with spiders contain 35 species (Pisică & Popescu, 2009). Unfortunately, the collection of M. Constantineanu is unavailable for study (see: Varga, 2015, 2017). The collection of C. Pisică deposited at the Faculty of Biology (Alexandru Ioan Cuza University of Iasi) is the only accessible ichneumonid collection in Romania now and contains 22 species of the target parasitoids. Thus, only the species from this collection have been used for the present list.

Material and methods

This study is mainly based on specimens collected by sweep netting and using Malaise (MT) and Tereshkin (TT) traps by the author in various locations of the Ukrainian Carpathians and adjacent territories in 2009–2017. Specimens deposited in the collections of the I. I. Schmalhausen Institute of Zoology (SIZK, Ukraine) and the Alexandru Ioan Cuza University of Iasi (UAIC, Romania) were also studied. The most common collecting sites of the Ukrainian Carpathians and respective abbreviations are reported below:

Ivano-Frankivsk Region (IF): Mochary — Mochary, 5 km NE of Bogorodchany, 315 m, mixed forest (48.837078 N, 24.581379 E); Dibrova — Dibrova, 5 km SW of Bogorodchany, 310 m, oak forest (48.772054 N, 24.511657 E); Zhbyr — Zhbyr, 8 km SW of Bogorodchany, 405 m, mixed forest (48.777922 N, 24.456837 E); Gorgany 1 — Gorgany, 4 km SW of Stara Guta, 1050 m, coniferous forest (48.614163 N, 24.157944 E); Gorgany 2 — Gorgany, 10–12 km SW of Stara Guta, 950 m, coniferous forest (48.558808 N, 24.196656 E); Gorgany 3 — Gorgany, m. Igrovets, 7 km SW of Stara Guta, 1375 m, border between coniferous forest and subalpine zone (48.598571 N, 24.130344 E); Gorgany 4 — Gorgany, m. Igrovets, 7.5 km SW of Stara Guta, 1500 m, subalpine zone (48.598571 N, 24.130344 E); Elmy — Gorgany, Elmy, 15 km SW of Yaremche, 950 m, coniferous forest (48.415462 N, 24.418878 E).

Transcarpathian Region (ZAK): Kvasy — Sydovets, 2–3 km NW of Kvasy, 750 m, beech forest (48.144694 N, 24.270809 E); Sheshul — Chornogora, Sheshul, 6–7 km NE of Kvasy, 1450 m, subalpine zone (48.157193 N, 24.363658 E); Marmarosy — Marmarosy, 11–12 km SE of Dilove, 1550 m, subalpine zone (47.925407 N, 24.311800 E); Chornogora — Chornogora, 900–1200 m, forest; Rakhiv — Rakhiv, 800–900 m, beech forest; Kuziy — Kuziy, 450–700 m, beech forest; Kvasnyi — Marmarosy, Kvasnyi, 900–1500 m; Ugolka — Mala Ugolka, 500–1000 m, beech forest.

All the specimens from Pisică's collection (UAIC) were sorted and identified or re-identified (for misidentification see comments under each species). The diagnostic remarks or/and illustrations were provided only for rare and most difficult for identification species. The remaining species can be easily identified using keys of Kasparyan (1981), Fitton et al. (1988) and Zwakhals (2006). Morphological terminology used in the study follows that of Gauld (1991). Photographs of specimens were taken with a Leica stereomicroscope 205A with DFC 500 camera, combined with Zerene* software (at UAIC) and Leica Z16 APO microscope equipped with Leica DFC 450 camera and processed by LAS Core software (at SIZK).

Acrodactyla carinator (Aubert, 1965)

Material. **Ukraine:** IF: Mochary, sweeping, 1.08.2009, 1 ♀, 11.08.2010, 1 ♀ (Varga) (SIZK). **No examined material from Romania.**

Distribution. Palaearctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Acrodactyla degener (Haliday, 1838)

Material. **Ukraine:** ZAK: Chornogora, sweeping, 5.08.1994, 1 ♀ 6.08.1994, 1 ♀, 7.08.1994, 1 ♀; Kuziy, sweeping, 12.08.1994, 1 ♀ (Kotenko) (SIZK). **No examined material from Romania.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Acrodactyla quadrisculpta (Gravenhorst, 1820)

Material. **Ukraine:** IF: Mochary, sweeping, 18.08.2013, 1 ♀; Gorgany 1, sweeping, 20.06.2013, 1 ♀ (Varga); ZAK: Rakhiv, sweeping, 3.08.1994, 1 ♀, 15–16.07.1995, 1 ♀; Kuziy, sweeping, 12.08.1994, 1 ♀

(Kotenko); Sheshul, MT, 29.06–18.07.2014, 2 ♂, 1 ♀, 18.07–10.08.2014, 2 ♀ (Varga) (SIZK). **No examined material from Romania.**

Distribution. Holarctic, Oriental and Australasian Regions (Yu et al., 2012): Romania (Pisică & Popescu, 2009), **new record for Ukraine.**

Key to European species of *Clistopyga*

1. Metapleuron punctate (figs 1, 1, 3). Male face yellow or at least with yellow spots (figs 2, 1, 2). 2
- Metapleuron smooth or granulate (figs 1, 5, 7). Male face black (figs 2, 3, 4). 3
2. Ovipositor more-or-less uniformly up-curved, the length is about 1.5 × length of hind tibia (fig. 1, 4).
Metapleuron uniformly punctate (fig. 1, 3). Hind coxa and femur without yellow marks. Male face with yellow spots (fig. 2, 1). *C. rufator*
- Ovipositor strongly apically up-curved, the length is about 1.8–1.9 × length of hind tibia (fig. 1, 2).
Metapleuron more densely punctate distally, often impunctate proximally (fig. 1, 1). Hind coxa and femur at least partly yellow. Male face entirely yellow (fig. 2, 2). *C. incitator*
3. Metapleuron smooth, impunctate (fig. 1, 5). Hind femur entirely red. Ovipositor weakly apically up-curved, the length is about 1.4–1.5 × length of hind tibia (fig. 1, 6). *C. canadensis*
- Metapleuron granulate (fig. 1, 7). Hind femur red, apically fuscous. Ovipositor strongly uniformly up-curved, the length is about 1.2 × length of hind tibia (fig. 1, 8). *C. sziladyi*

Clistopyga canadensis Provancher, 1880 (figs 1, 5, 6; 2, 3)

Material. **Romania:** Suceava County: Dormisoara, 30.08.1968, 1 ♀ (? Pisică) (UAIC). **Ukraine:** Ternopil Region: Seretskyi hydrological reserve, swamp, ex *Clubiona* sp egg sack, collected 21.07.1985, reared 5.08.1985, 1 ♂, 4 ♀ (Guryanova) (SIZK).

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), **new record for Ukraine.**

Clistopyga incitator (Fabricius, 1793) (figs 1, 1, 2; 2, 2)

Material. **Romania:** Iasi County: Birlad, 2.11.1970, 1 ♀, 5.11.1970, 1 ♀; Mehedinti County: Valea Mraconia, Orsova, 4.08.1968, 1 ♀; Timis County: Satchinez, on cane, 7.05.1984, 1 ♀; Tulcea County: Uzlina, Danube delta, 17.06.1968, 1 ♀, 8.06.1984, 1 ♀ (?Pisică) (UAIC). **Ukraine: IF:** Gorgany 3, MT, 24.05–13.06.2014, 1 ♀, 13.06–2.07.2014, 1 ♀, 2–20.07.2014, 3 ♀, 20.07–8.08.2014, 1 ♀; Gorgany 4, MT, 24.05–13.06.2014, 1 ♀, 13.06–2.07.2014, 1 ♀, 2–20.07.2014, 3 ♀, 8–28.08.2014, 1 ♀; **ZAK:** Sheshul, MT, 10.08–1.09.2014, 1 ♀; Kvasy, TT, 7.05–5.06.2014, 1 ♀; Vynogradiv District: Chorna Gora, 280 m, oak forest, 48.138338 N, 23.073689 E, MT, 10.06–2.07.2017, 1 ♂, 1 ♀, 2–22.07.2017, 1 ♀ (Varga) (SIZK).

Distribution. Palaearctic and Afrotropical Regions (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. One female specimen was identified by C. Pisică as *Clistopyga canadensis*.

Clistopyga rufator Holmgren, 1856 (figs 1, 3, 4; 2, 1)

Material. **Romania:** Mehedinti County: Valea Mraconia, Orsova, 9.08.1967, 1 ♀; Tulcea County: Murighiol, 25.07.1980, 1 ♂ (? Pisică) (UAIC). **No examined material from Ukraine.**

Distribution. Palaearctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. Male specimen was identified by C. Pisică as *Polysphincta rufipes* Gravenhorst, 1829.

Clistopyga sziladyi Kiss, 1959 (figs 1, 7, 8; 2, 4)

Material. **Romania:** Mehedinti County: Valea Mraconia, Orsova, 3.08.1967, 1 ♀ (? Pisică) (UAIC). **No examined material from Ukraine.**

Distribution. Palearctic (Yu et al., 2012): **new record for Romania.**

Remarks. This specimen was identified by C. Pisciă as *Clistopyga rufator*.

Iania pictifrons (Thomson, 1877)

Material. **Romania:** Mehedinti County: Valea Mraconia, Orsova, 12.08.1967, 2 ♀; Gura vaii-Varciorova, 5.07.1969, 1 ♂; Olt County: Potcoava, 3.06.1974, 1 ♀ (? Pisciă); Suceava County: Vatra Dornei, 28.07.1972, 1 ♂ (Nemec) (UAIC). **Ukraine: IF:** Elmy, sweeping, 22.08.2009, 1 ♂; **ZAK:** Kvasy, MT, 10.08–1.09.2014, 1 ♀ (Varga); Kuziy, sweeping, 12.08.1994, 2 ♀; Kvasnyi, sweeping, 19.07.1995, 1 ♀ (Kotenko) (SIZK).

Distribution. Palearctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), Ukraine (Kasparyan, 1981).

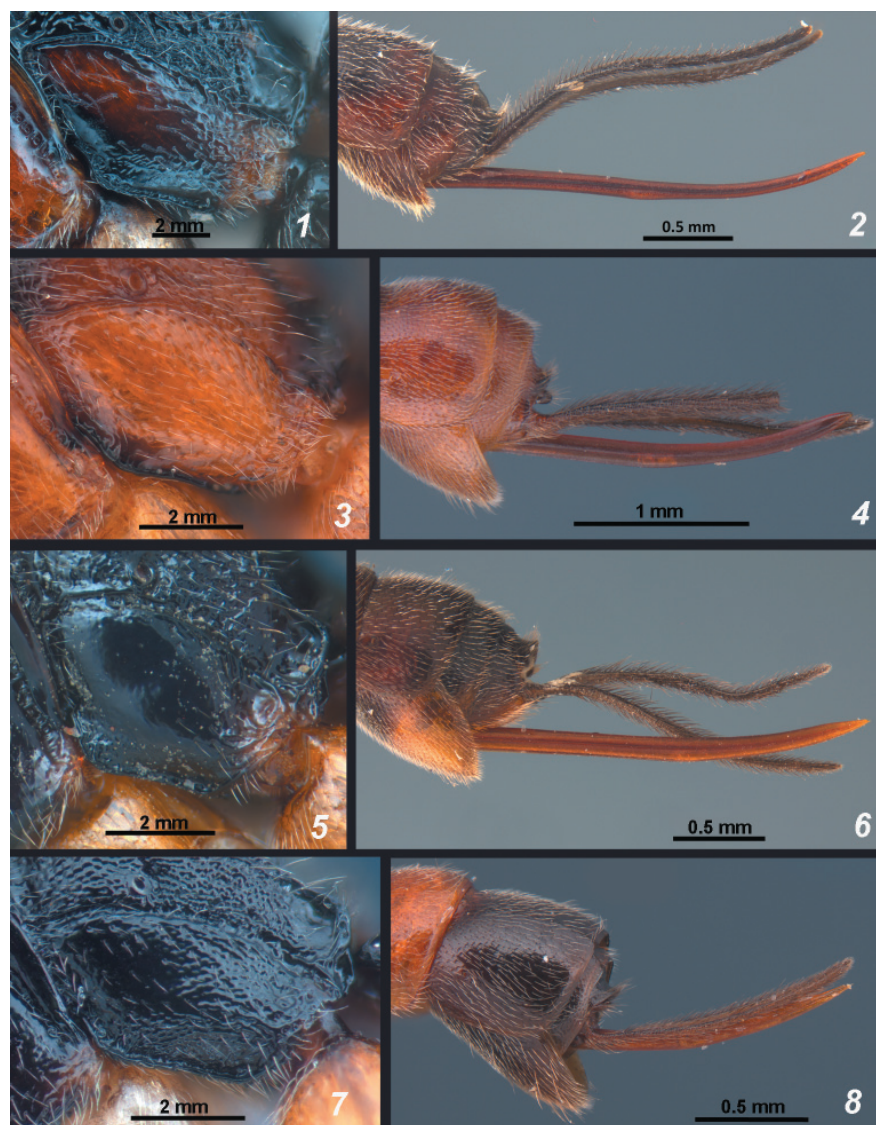


Fig. 1. *Clistopyga*, ♀. 1, 3, 5, 7 — metapleuron (lateral view): 1 — *C. incitator*; 3 — *C. rufator*; 5 — *C. canadensis*; 7 — *C. sziladyi*; 2, 4, 6, 8 — ovipositor (lateral view): 1 — *C. incitator*; 3 — *C. rufator*; 5 — *C. canadensis*; 7 — *C. sziladyi*.

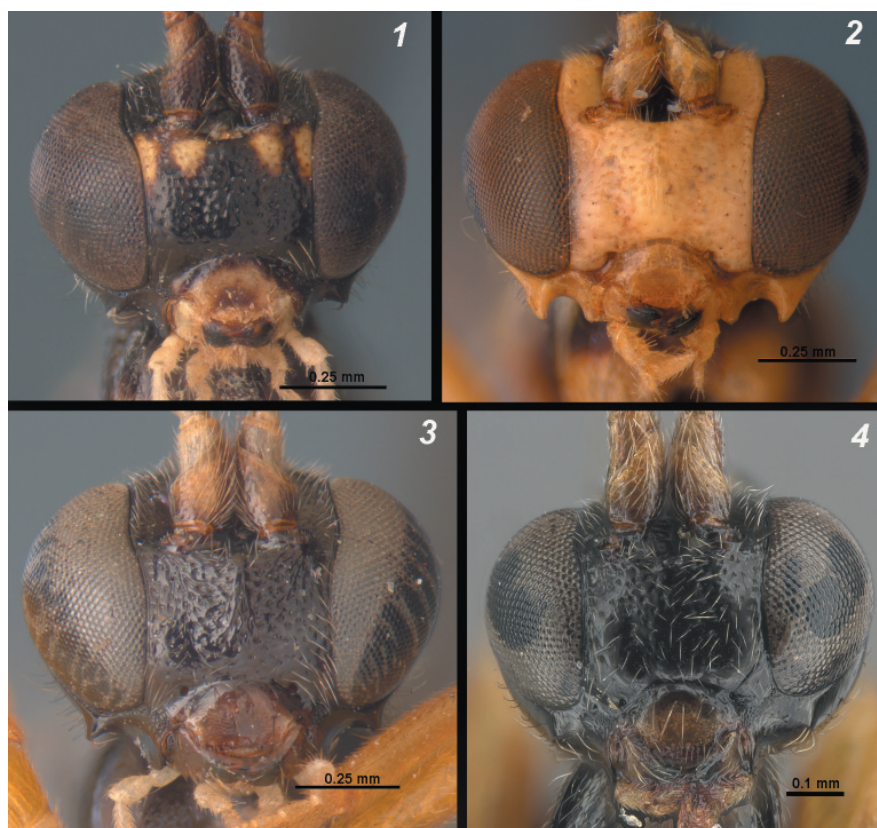


Fig. 2. *Clistopyga*, face (frontal view), ♂: 1 — *C. rufator*; 2 — *C. incitator*; 3 — *C. canadensis*; 4 — *C. sziladyi*.

Megaetaira madida (Haliday, 1838)

Material. **Ukraine:** **ZAK:** Chornogora, sweeping, 6.08.1994, 1 ♀; Kvasnyi, sweeping, 20–21.07.1995, 1 ♀; Ugolka, sweeping, 3.07.1995, 1 ♀ (Kotenko) (SIZK). **No examined material from Romania.**

Distribution. Palearctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Oxyrrhexis carbonator (Gravenhorst, 1807)

Material. **Ukraine:** **IF:** Mochary, TT, 13–29.07.2014, 1 ♀; Zhbyr, TT, 15–31.05.2013, 1 ♀, 13–25.07.2013, 1 ♀ (Varga); **ZAK:** Kuziy, sweeping, 12.08.1994, 1 ♀ (Kotenko); Dilove, 450–500 m, beech forest, sweeping, 11.06.2008, 1 ♂ (Bidychak) (SIZK). **No examined material from Romania.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Polysphincta boops Tschek, 1869

Material. **Ukraine:** **ZAK:** Rakhiv, sweeping, 3.08.1994, 1 ♂; Kuziy, sweeping, 12.08.1994, 1 ♂ (Kotenko); Marmarosy, sweeping, 6–9.08.2012, 4 ♀ (Varga) (SIZK). **No examined material from Romania.**

Distribution. Palearctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

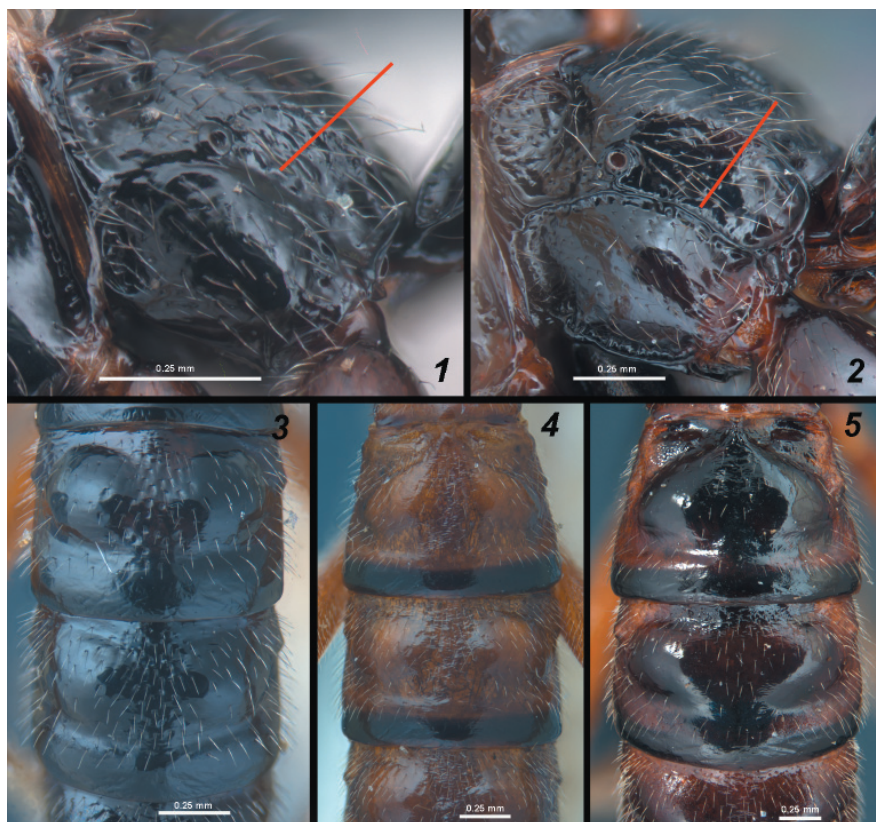


Fig. 3. *Polysphincta*, ♀. 1–2 — metapleuron (lateral view): 1 — *P. tuberosa*; 2 — *P. vexator*; 3–5 — metasoma (dorsal view): 3 — *P. tuberosa*, tergites III–IV; 4 — *P. rufipes*, tergites II–IV; 5 — *P. vexator*, tergites II–IV.

Polysphincta longa Kasparyan, 1976

Material. Romania: Iasi County: Iasi, Barnova forest, 9.10.1966, 1 ♀ (? Pisciă) (UAIC). **Ukraine: IF:** Mochary, MT, 22.05–8.06.2015, 1 ♀; Dibrova, sweeping, 8.10.2013, 1 ♀ (Varga) (SIZK).

Distribution. Palaearctic and Oriental Regions (Yu et al., 2012, Varga & Reshchikov, 2015): **new record for Romania and Ukraine.**

Remarks. The specimen from Romania was identified by C. Pisciă as *P. boops*.

Polysphincta rufipes Gravenhorst, 1829 (fig. 3, 4)

Material. Romania: Timis County: Satchinez, 1.06.1983, 1 ♀; Tulcea County: Murighiol, 15.06.1960, 1 ♀ (? Pisciă) (UAIC). **Ukraine: ZAK:** Sheshul, sweeping, 9.07.2011, 1 ♂ (Varga) (SIZK).

Distribution. Palaearctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), Ukraine (Kasparyan, 1981).

Polysphincta tuberosa Gravenhorst, 1829 (figs 3, 1, 3)

Material. Romania: Neamt County: Ceahlau, 16.07.1968, 1 ♀ (? Pisciă) (UAIC). **Ukraine: IF:** Mochary, sweeping, 29.07.2009, 1 ♀; Dibrova, sweeping, 8.10.2013, 2 ♀, 11.10.2013, 1 ♀; Pidhyrya, ex undetermined spider, collected 28.07.2011 (as larva on spider), reared 3.08.2011, 1 ♂; Zhbyr, sweeping, 13.09.2011, 2 ♀; Gorgany 3, MT, 13.06–2.07.2014, 1 ♀; Gorgany 4, MT, 13.06–2.07.2014, 1 ♀, 2–20.07.2014, 2 ♀; Nadvirna District: Chornogora, m. Goverla, 48.166071 N, 24.508975 E, subalpine zone, 1500 m, sweeping, 28.07.2012, 2 ♀ (Varga); **ZAK:** Chornogora, sweeping, 8.08.1994, 2 ♀ (Kotenko); Dilove, 450–500 m, beech forest, sweeping, 07.2008, 1 ♂ (Bidychak) (SIZK).

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Polysphincta vexator Fitton, Shaw & Gauld, 1988 (figs 3, 2, 5)

Material. **Romania:** Suceava Country: Poiana Stampei, 13.08.1974, 1 ♀, 14.08.1974, 1 ♂, 15.08.1974, 1 ♂, 2 ♀, bog, 17.8.1974, 1 ♀ (? Pisică) (UAIC). **No examined material from Ukraine.**

Distribution. Europe (Yu et al., 2012): **new record for Romania.**

Remarks. Male specimen was identified by C. Pisică as *Glypta mensurator* (Fabricius, 1775) (Banchinae) and one female specimen was identified by C. Pisică as *Zaglyptus varipes* (Gravenhorst, 1829). According to key provided by M. Fitton and co-authors (1988) *P. vexator* has similar coloration with *P. tuberosa*, but differs in having unbanded subbasally hind tibiae and complete pleural carina (as in *P. rufipes*). Additionally, all the three species differ in sculpture of metasomal tergites II–IV (fig. 3).

Schizopyga circulator (Panzer, 1800) (figs 4, 2, 5)

Material. **Romania:** Iasi Country: Breazu, 17.08.2000, 1 ♀ (UAIC). **No examined material from Ukraine.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Schizopyga coxator Constantineanu, 1973 (figs 4, 1, 3, 4)

Material. **Romania:** Tulcea Country: Murighiol, 27.08.1980, 1 ♀ (? Pisică) (UAIC).

Diagnosis. *S. coxator* (fig. 4, 1) is similar in coloration to *S. circulator*, but it can be distinguished by the partly yellow face (fig. 4, 3) (completely black in *S. circulator* (fig. 4, 2)), pale yellow fore and middle coxae (red with black marks in *S. circulator*), hind tibia with only apical dark band (subbasally and apically dark banded in *S. circulator*), weakly raised anterior part of pronotum (fig. 4, 4) (sharply raised in *S. circulator* (fig. 4, 5)).

Re-description. Female (figs 4, 1, 3, 4): Body length approximately 8 mm.

Head (figs 4, 3, 4): smooth, shining, and densely pubescent. Antenna with 22 flagellomeres, first flagellomere 3 × the length of the second. Diameter of lateral ocellus 0.5 × the length of the ocellar-ocular distance. Face about 1.3 × as long as wide, granulate, densely pubescent. Clypeus 0.5 × as long as wide, fused with the face and together forming a swollen surface, apically rounded. Malar space about 0.7 × the basal width of mandible. Upper tooth of mandible longer than lower tooth (lower tooth almost invisible). Occipital carina complete. Temple long, straight, narrowed behind eye.

Mesosoma (fig. 4, 4): Pronotum smooth, impunctate, with only upper hind corner and anterior to epomia pubescent. Epomia present, almost reaching upper margin of pronotum. Pronotum weakly raised anteriorly (not sharply raised as in other species). Mesoscutum smooth, densely pubescent, weakly punctate. Notauli present, deeply impressed on anterior 0.8 of mesoscutum. Scutellum punctate and pubescent as mesoscutum; lateral carinae absent. Mesopleuron smooth, impunctate on upper part, densely pubescent and punctate (weakly granulate between punctures) on lower part. Epicnemial carina present on lower 0.5 of mesopleuron. Metapleuron smooth, densely, but weakly punctate, granulate between punctures, and densely pubescent; submetapleural carina present. Propodeum with dorsal longitudinal carinae present but weak, reaching closed area apicalis, pleural parts punctate and pubescent as metapleuron, dorsal part basally (0.4) densely punctate and pubescent, the remaining smooth and impunctate, all surface granulate. Propodeal spiracle round. Legs stout, hind leg with femur 2.5 × long as wide, second tarsomere about as long as the fifth tarsomere.



Fig. 4. *Schizopyga* and *Sinarachna*, ♀. 1–5 — *Schizopyga*: 1 — *S. coxator*, habitus (lateral view); 2 — *S. circulator*, face (frontal view); 3 — *S. coxator*, face (frontal view); 4 — *S. coxator*, pronotum (lateral view); 5 — *S. circulator*, pronotum (lateral view); 6–7 — *Sinarachna*, tergites III–IV of metasoma (dorsal view): 6 — *S. pallipes*; 7 — *S. nigricornis*.

Wings: Fore wing with vein *3rs-m* absent; hind wing with distal abscissa of *Cu1* present, meeting *cu-a* more or less equidistant between *M* and *A1*.

Metasoma (fig. 4, 1) generally granulate and densely pubescent: first tergite about $1.2 \times$ as long as apically wide, with dorsolateral carina complete and dorsal median carina extending on basal 0.3; second tergite about as long as apically wide; tergites 2–3 with weak basal and apical oblique grooves, forming central weakly swollen areas. Ovipositor upcurved, ovipositor sheath about $0.5 \times$ the length of the hind tibia; proximal end of lower valve of ovipositor expanded to form a lobe (invisible), tip of lower valves with oblique ridges.

Colour. Head and mesosoma generally black, except for antenna basally (4–5 segments), base of mandible, palpi, clypeus, face in part and tegula, which are yellow. The rest of antenna reddish. Legs generally reddish, fore and mid coxae pale yellow, middle and hind tibia and hind femora apically banded with black, tarsomere 5 of all legs, and hind tarsomeres 1–2 apically brownish. Pterostigma brownish. Metasomal tergites reddish, with tergites 2–5 apically brownish, remaining tergites black. Ovipositor yellowish with sheaths black.

Distribution. Europe (Yu et al., 2012): known only from Romania (Pisică & Popescu, 2009).

Schizopyga podagrica Gravenhorst, 1829

Material. **Romania:** Mehedinti Country: Ogradena, 12.08.1967, 1 ♀ (? Pisciă); Suceava Country: Frumoasa, 4.05.1968, 1 ♂ (Nemec) (UAIC). **Ukraine: IF:** Gorgany 2, sweeping, 17–19.08.2011, 1 ♀; **ZAK:** Sheshul, MT, 29.06–18.07.2014, 1 ♂ (Varga) (SIZK).

Distribution. Palaearctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. One male was identified by C. Pisciă as *S. frigida*.

Schizopyga frigida Cresson, 1870

Material. **Ukraine: IF:** Mochary, sweeping, 15.08.2011, 1 ♂, 18.05.2012, 8 ♂, 19.05.2012, 6 ♂; Dibrova, sweeping, 16.09.2011, 1 ♂, 8.10.2013, 1 ♀, 11.10.2013, 1 ♀, 13.10.2013, 2 ♀; Gorgany 1, sweeping, 8–9.06.2012, 1 ♀; Elmy, sweeping, 22.08.2009, 1 ♂; **ZAK:** Kvasy, sweeping, 16.08.2009, 2 ♂, 1 ♀, 23.08.2009, 7 ♂, 5.06.2010, 1 ♀, 10.07.2011, 1 ♂, 16.06.2013, 1 ♀, MT, 24.06–14.07.2013, 1 ♀ (Varga); Rakhiv, sweeping, 3.08.1994, 1 ♀; Tyachiv District: Ust Chorna, sweeping, 6.8.1963, 1 ♀ (Kotenko); Svalyava District: Polyana, abandoned apple orchard, 9.07.1986, sweeping, 1 ♂; Ukllyn, 10.07.1986, sweeping, 1 ♂ (Tolkanitz) (SIZK). **No examined material from Romania.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), **new record for Ukraine.**

Sinarachna nigricornis (Holmgren, 1860) (fig. 4, 7)

Material. **Romania:** Suceava Country: Ponoare, 10.06.1972, 1 ♀ (? Pisciă) (UAIC). **Ukraine: IF:** Gorgany 2, sweeping, 13.07.2012, 1 ♀ (Varga); **ZAK:** Rakhiv, sweeping, 29.07.1994, 3 ♀, 31.07.1994, 1 ♀, 4.08.1994, 1 ♀; Kostylyvka, 800–900 m, beech forest, sweeping, 22.07.1995, 1 ♀ (Kotenko); 8–9 km E of Yasinya, 920 m, coniferous forest, sweeping, 30.06.1975, 1 ♀ (Ermolenko) (SIZK).

Distribution. Palaearctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), **new record for Ukraine.**

Sinarachna pallipes (Holmgren, 1860) (fig. 4, 6)

Material. **Ukraine: ZAK:** Rakhiv, sweeping, 29.07.1994, 1 ♂, 3.08.1994, 1 ♀ (Kotenko); Tyachiv District: Tyachiv, 6.08.1963, 1 ♀ (SIZK). **No examined material from Romania.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), **new record for Ukraine.**

Remarks. The genus *Sinarachna* is recorded from Ukraine for the first time. The two Ukrainian species can be distinguished as follows by the difference in pubescence of metasoma (figs 4, 6, 7): densely pubescent in *S. nigricornis* and sparsely pubescent in *S. pallipes*. Additionally, *S. pallipes* has paler hind coxae and basal antennal segments.

Tromatobia lineatoria (Villers, 1789)

Material. **Romania:** Bucuresti, 19.11.1962, 1 ♀; Iasi Country: Iasi, 6.07.1967, 1 ♀; Birlad, 2.11.1970, 1 ♀, 5.11.1970, 1 ♂, 6.11.1970, 1 ♀ (? Pisciă) (UAIC). **Ukraine: IF:** Mochary, sweeping, 17.05.2009, 1 ♀ (Varga); **ZAK:** Rakhiv, sweeping, 4.08.1994, 1 ♀, 15–16.07.1995, 1 ♀ (Kotenko) (SIZK).

Distribution. Europe (Yu et al., 2012): Romania (Pisciă & Popescu, 2009), **new record for Ukraine.**

Tromatobia ornata (Gravenhorst, 1829)

Material. **Romania:** Bacau Country: Comanesti, barber trap, 14–20.05.2014, 1 ♀ (Pintionale); Mehedinti Country: Dubova, Orsova, 14.05.1967, 1 ♀; Suceava Country: Poiana Stampei, 17.08.1974, 1 ♀ (Pisciă) (UAIC). **Ukraine: IF:** Mochary, sweeping, 19.06.2010, 1 ♀, 3.05.2011, 1 ♀, 3.08.2011, 1 ♀, TT, 13–29.07.2014, 1 ♀ (Varga) (SIZK).

Distribution. Palaearctic and Oriental Regions (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Tromatobia ovivora (Boheman, 1821)

Material. **Romania:** Calimani Mountains, 30.08.1968, 1 ♂; Bihor Country: Beius, 1.10.1985, 1 ♀; Iasi Country: Iasi, Barnova forest, 25.11.1974, 4 ♀; Breazu, 28.09.1961, 1 ♀; Birlad, 3.11.1970, 1 ♂, 1 ♀, 20.10.1970, 1 ♀; Suceava Country: Slatioara, 18.09.1962, 1 ♀ (? Pisică) (UAIC). **Ukraine: IF:** Ivano-Frankivsk, sweeping, 15.10.2010, 1 ♀; Bogorodchany District: Bogorodchany, 48.806131 N, 24.537854 E, sweeping, 19.10.2013, 1 ♀; Mochary, sweeping, 8.05.2010, 2 ♂, 19.06.2010, 1 ♀, 23.09.2010, 1 ♀, 3.09.2011, 1 ♀, 18.05.2012, 1 ♂, 19.05.2012, 1 ♂, 17.08.2013, 1 ♀, TT, 26.05–9.06.2014, 1 ♀, 29.07–15.08.2014, 1 ♀, 14.09–26.10.2014, 1 ♀; Dibrova, sweeping, 23.06.2011, 1 ♀, 4.07.2012, 1 ♀, 8.10.2013, 1 ♀; Zhbyr, sweeping, 2.10.2013, 2 ♀, 24.06.2012 1 ♀, TT, 30.06–12.07.2013, 1 ♀; Gorgany 2, sweeping, 13.07.2012, 1 ♀; Gorgany, m. Syvulya, 12–13 km SW of Stara Guta, 48.531433 N, 24.132609 E, 1425 m, subalpine zone, sweeping, 14.07.2012, 1 ♀; Nadvirna District: Mykulychyn, 600–700 m, coniferous forest, sweeping, 1 ♀ (Varga); **ZAK:** Rakhiv District: Marmarosy, Mika-Mare, 1500–1600 m, subalpine zone, sweeping, 6–10.08.2012, 1 ♂ (Reshchikov) (SIZK).

Distribution. Holarctic and Neotropical Regions (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. Two females were identified by C. Pisică as *Scambus brevicornis* (Gravenhorst, 1829).

Tromatobia variabilis (Holmgren, 1856)

Material. **Romania:** Bihor Country: Beius, 1.10.1985, 1 ♀; Constanta Country: Tatlageac, 2.09.1983, 1 ♂; Iasi Country: Iasi, 21.08.1979, 1 ♀; Iasi, Barnova forest, 25.11.1974, 4 ♀; Breazu, 28.09.1961, 1 ♀, 17.08.2000, 1 ♂; Birlad, 11.09.1970, 1 ♀; Tulcea Country: Murighiol, 5.07.1983, 1 ♀, 24.07.1981, 1 ♀, 24.07.1980, 1 ♀, 25.07.1980, 2 ♀, 27.08.1980, 1 ♀; Uzlina, Danube Delta, 7.07.1984, 1 ♂; Mehedinti Country: Orsova, 10.08.1967, 1 ♂; Teleorman Country: Dobrotesti, 12.08.1960, 1 ♂; Timis Country: Satchinez, 1.06.1983, 1 ♀ (? Pisică) (UAIC). **Ukraine: IF:** Bogorodchany, 48.806131 N, 24.537854 E, Bystrytsya Solotvynska river bank, sweeping, 19.07.2013, 1 ♂ (Varga) (SIZK).

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. Two females were identified by C. Pisică as *Endromopoda arundinator* (Fabricius, 1804) and five females as *Scambus rufator* Aubert, 1964.

Zabrachypus primus Cushman, 1920

Material. **Romania:** Constanta Country: Agiea, 31.07.1969, 1 ♀ (? Pisică) (UAIC). **No examined material from Ukraine.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Zaglyptus multicolor (Gravenhorst, 1829)

Material. **Romania:** Bihor Country: Beius, 1.10.1985, 1 ♀; Botosani Country: Stefanesti, 6.09.1974, 1 ♀; Constanta Country: Eforie-Sud, 2.08.1968, 1 ♀; Iasi Country: Iasi, 8.10.1956, 1 ♀; Breazu, 29.06.1964, 1 ♀; Birlad, 2.11.1970, 1 ♀ (? Pisică) (UAIC). **Ukraine: IF:** Mochary, sweeping, 29.07.2009, 1 ♀, 4.09.2011, 1 ♀; Dibrova, sweeping, 8.10.2013, 1 ♀, 11.10.2013, 1 ♀; Zhbyr, sweeping, 13.09.2011, 1 ♀ (Varga); **ZAK:** Rakhiv, sweeping, 2.08.1994, 1 ♀, 3.08.1994, 3 ♀; Kostylivka, 800–900 m, beech forest, sweeping, 22.07.1995, 1 ♀; Kuziy, sweeping, 12.08.1994, 3 ♀; Ugolka, sweeping, 30.07.1995, 1 ♀; Ust Chorna, sweeping, 5.08.1963, 1 ♂ (Kotenko); Svalyava District: Polyana, abandoned apple orchard, 9.07.1986, sweeping, 3 ♂, 12.07.1986, 1 ♂ (Tolkhanitz); Mizhgyrya District: Mizhgyrya, 13.08.1963, 3 ♂, 1 ♀ (SIZK).

Distribution. Palaearctic and Oriental Regions (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Zaglyptus varipes (Gravenhorst, 1829)

Material. **Romania:** Bihor Country: Beius, 1.10.1985, 1 ♀; Botosani Country, Stefanesti, 6.09.1974, 1 ♀; Constanta Country: Eforie-Sud, 2.08.1968, 1 ♀; Iasi Country: Iasi, 6.07.1967, 1 ♂; Iasi, Barnova forest, 25.11.1974, 4 ♀; Breazu, 28.09.1961, 1 ♀, 14.09.2000, 1 ♀; Dumesti, 11.10.1959, 1 ♀; Voinești, 11.09.1976, 1 ♀; Mehedinti Country: Valea Mraconia, Orsova, 5.08.1960, 1 ♀; Dubova, 9.08.1967, 1 ♀; Orsova, 10.08.1967, 1 ♂; Cazanele Mari, 22.04.1968, 1 ♀; Sibiu Country: Cisnatioara, 16.06.1958, 1 ♀; Suceava Country: Poiana Stampei, 14.08.1974, 1 ♀; Adincata, 11.05.1971, 1 ♀, 25.07.1971, 1 ♂; Tulcea Country, Razelm, 12.08.1964, 1 ♀ (? Pistică) (UAIC). **Ukraine:** IF: Mochary, sweeping, 28.06.2010, 1 ♀, 23.04.2012, 1 ♂; Dibrova, sweeping, 30.04.2012, 1 ♀; Zhbyr, sweeping, 4.05.2013, 1 ♀; Gorgany 1, sweeping, 8–9.06.2012, 1 ♀ (Varga); Nadvirna District: Chornogora, m. Goverla, subalpine zone, sweeping, 18.07.1980, 1 ♀ (Narolsky); **ZAK:** Kvasy, MT, 14.07–24.08.2013, 1 ♂ (Varga); Kuziy, sweeping, 18.07.1995, 1 ♂; Ugolka, sweeping, 30.07.1995, 1 ♂ (Kotenko); Vynogradiv District: Vynogradiv, Chorna Gora, sweeping, 5.06.1969, 1 ♀ (Tolkantiz) (SIZK).

Distribution. Holarctic and Neotropical Regions (Yu et al., 2012): Romania (Pistică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. One female were identified by C. Pistică as *Polysphincta rufipes* and 2 females as *P. tuberosa*.

Zatypota albicoxa (Walker, 1874)

Material. **Ukraine:** IF: Mochary, TT, 29.07–15.08.2014, 3 ♀, 15–31.08.2014, 8 ♀, 31.08–14.09.2014, 16 ♀, 14.09–26.10.2014, 1 ♀, MT, 15–31.08.2014, 1 ♀, 31.08–14.09.2014, 1 ♀; Dibrova, sweeping, 26.09.2010, 1 ♀; **ZAK:** Kvasy, MT, 5–29.06.2014, 1 ♀ (Varga); Kuziy, sweeping, 18.07.1995, 1 ♂; Ugolka, sweeping, 25.07.1995, 1 ♀ (Kotenko) (SIZK). **No examined material from Romania.**

Distribution. Palaearctic and Oriental Regions (Yu et al., 2012): Romania (Pistică & Popescu, 2009), Ukraine (Kasparyan & Khalaim, 2007).

Zatypota anomala (Holmgren, 1860)

Material. **Ukraine:** **ZAK:** Kvasy, MT, 10.08–1.09.2014, 1 \$ (Varga) (SIZK). **No examined material from Romania.**

Distribution. Holarctic and Neotropical Regions (Yu et al., 2012): Romania (Pistică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Zatypota bohemani (Holmgren, 1860)

Material. **Ukraine:** **ZAK:** Rakhiv, sweeping, 29.07.1994, 1 ♂, 4.08.1994, 4 ♀; Tyachiv District: Ust Chorna, sweeping, 6.8.1963, 1 ♀ (Kotenko) (SIZK). **No examined material from Romania.**

Distribution. Holarctic (Yu et al., 2012): Romania (Pistică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Zatypota discolor (Holmgren, 1860)

Material. **Romania:** Botosani Country: Rediu, 30.08.1954, 1 ♀; Iasi Country: Dumesti, 3.08.1958, 1 ♂ (? Pistică) (UAIC). **Ukraine:** IF: Mochary, sweeping, 29.07.2009, 1 ♂; **ZAK:** Kvasy, sweeping, 16.08.2009, 1 ♂ (Varga); Rakhiv, sweeping, 4.08.1994, 1 ♂ (Kotenko) (SIZK).

Distribution. Palaearctic (Yu et al., 2012): Romania (Pistică & Popescu, 2009), **new record for Ukraine.**

Remarks. Both Romanian specimens were identified by C. Pistică as *Z. anomala* (Holmgren, 1860).

Zatypota percontatoria (Muller, 1776)

Material. **Romania:** Mehedinti Country: Valea Mraconia, Orsova, 5.08.1971, 1 ♂; Tisovita, 11.08.1967, 1 ♀; Tulcea Country: Macin, 9.07.1976, 1 ♂ (? Pistică) (UAIC). **Ukraine:** IF: Ivano-Frankivsk, sweeping,

15.10.2010, 1 ♀; Mochary, sweeping, 9.07.2009, 1 ♂, 29.07.2009, 1 ♀, 1.08.2009, 1 ♀, 23.09.2010, 1 ♀, 15.08.2011, 1 ♀, 14.09.2011, 1 ♀, 18.05.2012, 1 ♂, TT, 26.05–9.06.2014, 1 ♀, MT, 14–28.09.2014, 1 ♀; Dibrova, sweeping, 26.09.2010, 3 ♀, 5.06.2013, 1 ♀, 8.10.2013, 2 ♀; Zhbyr, sweeping, 13.09.2011, 1 ♀, 20.09.2011, 1 ♀ (Varga); ZAK: Rakhiv, sweeping, 31.07.1994, 1 ♂ (Kotenko); Dilove, 450–500 m, beech forest, sweeping, 19.07.2009, 1 ♂ (Bidychak); Kvasnyi, sweeping, 19.07.1995, 1 ♀; (Kotenko) (SIZK).

Distribution. Holarctic (Yu et al., 2012): Romania (Pisică & Popescu, 2009), Ukraine (Kasparyan, 1981).

Remarks. One male was identified by C. Pisică as *Glypta lineata* Desvignes, 1856 (Banchinae) and two males as *Z. discolor*.

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