

FIRST RECORD OF *GONATOCERUS NOVICKYI* SOYKA (HYM.: MYMARIDAE) IN ROMANIA, WITH NOTES ON OTHER SPECIES OF *GONATOCERUS* (*LITORALIS* GROUP)

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Abstract. In this paper we present *Gonatocerus novickyi* Soyka, a species new to Romanian fauna. We also compare *Gonatocerus novickyi* with *G. chrysis*, *G. litoralis* and *G. near litoralis*; all species belong to the *litoralis* group.

Keywords: *Gonatocerus novickyi*, distribution, taxonomy, first record, Romania.

Rezumat. Prima mențiune a speciei *Gonatocerus novickyi* Soyka (Hym.: Mymaridae) din România, cu note adiționale referitoare la alte specii de *Gonatocerus* (*litoralis* group). În această lucrare prezentăm specia *Gonatocerus novickyi* Soyka și o menționăm ca nouă pentru fauna României. Comparăm astfel specia *Gonatocerus novickyi* cu *G. chrysis*, *G. litoralis* și *G. lângă litoralis*; toate speciile aparțin grupului *litoralis*.

Cuvinte cheie: *Gonatocerus novickyi*, distribuție, taxonomie, prima semnalare, România.

Introduction

The genus *Gonatocerus* Nees, 1834 contains more than 251 nominal species in the world, 47 of which have been recorded in the Palearctic region (Huber, 1986; Noyes and Valentine, 1989; Zeya & Hayat, 1995). An important work for the Nearctics was published by Triapitsyn (2006). After Matthews (1986), Huber (1988), Baquero and Jordana (2002), Donev (2005), in Europe are present 24 valid species of *Gonatocerus*. After Pricop (2007, 2009, 2009a), only 8 species occur in Romania, 9 species with the addition of *Gonatocerus novickyi* Soyka, a species new to the Romanian fauna; a total of 10 *Gonatocerus* species if we consider *G. intermedius* Botoc, 1962 a valid species. We also mention Boțoc (1962). Contributions to the study of *Mymaridae* fauna from Moldova (Romania) had been made in the past by: Dimitriu (2001) and Pricop (2007, 2008, 2009, 2009a and 2010). For the species distribution: all countries are arranged in alphabetical order (Noyes, 2003).

Material and Methods

This paper is a result of fauna investigation, the species have been collected with an entomological sweep-net and with yellow pan-traps in grass-land vegetation, between 2005 to 2009. The material was collected from some areas of Moldova (Romania). The specimens were mounted in *Faure's medium* and examined with the optical microscope. We have illustrated some female antennae, wings and habitus; the illustrations were made using a digital camera attached to the microscope. Some drawings were made with the camera lucida.

Abbreviations used: coll. = collected; elev. = elevation; FWL/FWW = forewing length/forewing wide; F1-F8 = funicle segments (articles); Leg. = the collector; ovip. = ovipositor; O/T2 = ovipositor length/mid-tibia length.

Results and Discussions

Subfamily Mymarinae

Tribe Ooctonini

Genus *Gonatocerus* Nees (= *Lymaenon* Walker)

Diagnosis: *Gonatocerus* – *litoralis* group: lateral lobes of pronotum widely separated by lightly sclerotised medial lobe; dorsellum of metanotum strap-like (Fig. 1a); propodeum without carinae but with fine denticles (Fig. 1a); projection of radial vein of forewing truncated (Fig. 2b, c).

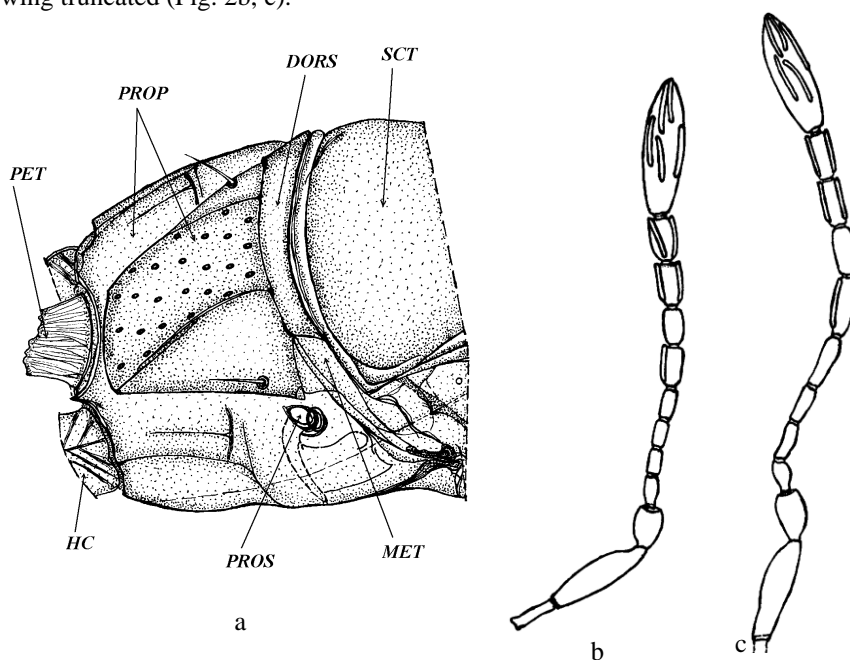


Figure 1. Some thorax features and female antennae: a – important thorax features, *litoralis* group, semi-profile view: DORS = dorsellum, HC = hind coxa, MET = metanotum, PET = petiole, PROP = propodeum, PROS = propodeal spiracle, SCT = scutellum; b – *G. litoralis* Haliday; c – *G. novickyi* Soyka (original).

1. *Gonatocerus novickyi* Soyka, 1946 (= *L. fossarum* Hincks, 1952) (Figs 1, 2)

Material examined: 1♀ coll. on 25.07.2009 from the landfill - garbage dump of Tomesti (locality near the city Iasi), Iasi county, Moldova (Romania), at 40m elev.; Leg. L. Buzdugan; method of coll.: yellow pan-traps. This is the easternmost point of the species areal.

Hosts: Unknown.

Distribution: England, Germany and now Romania.

Note: In the Romanian fauna are mentioned until now only 9 valid species belonging to *Gonatocerus*: *G. ater*, *G. chrysis*, *G. litoralis*, *G. longicornis*, *G. ovicenatus*, *G. pictus*, *G. sulphuripes*, *G. thyrides* and *G. novickyi*.

Diagnosis: Female: Soyka (1946) in his original description of *Gonatocerus novickyi* mention some important features: female body brown, long - 1,6mm; abdomen twice as long as the thorax, FWL/FWW about 4. Later Matthews (1986), mentions other important features: ovipositor about 2.7x as long as mid-tibia, exerted beyond apex of gaster.

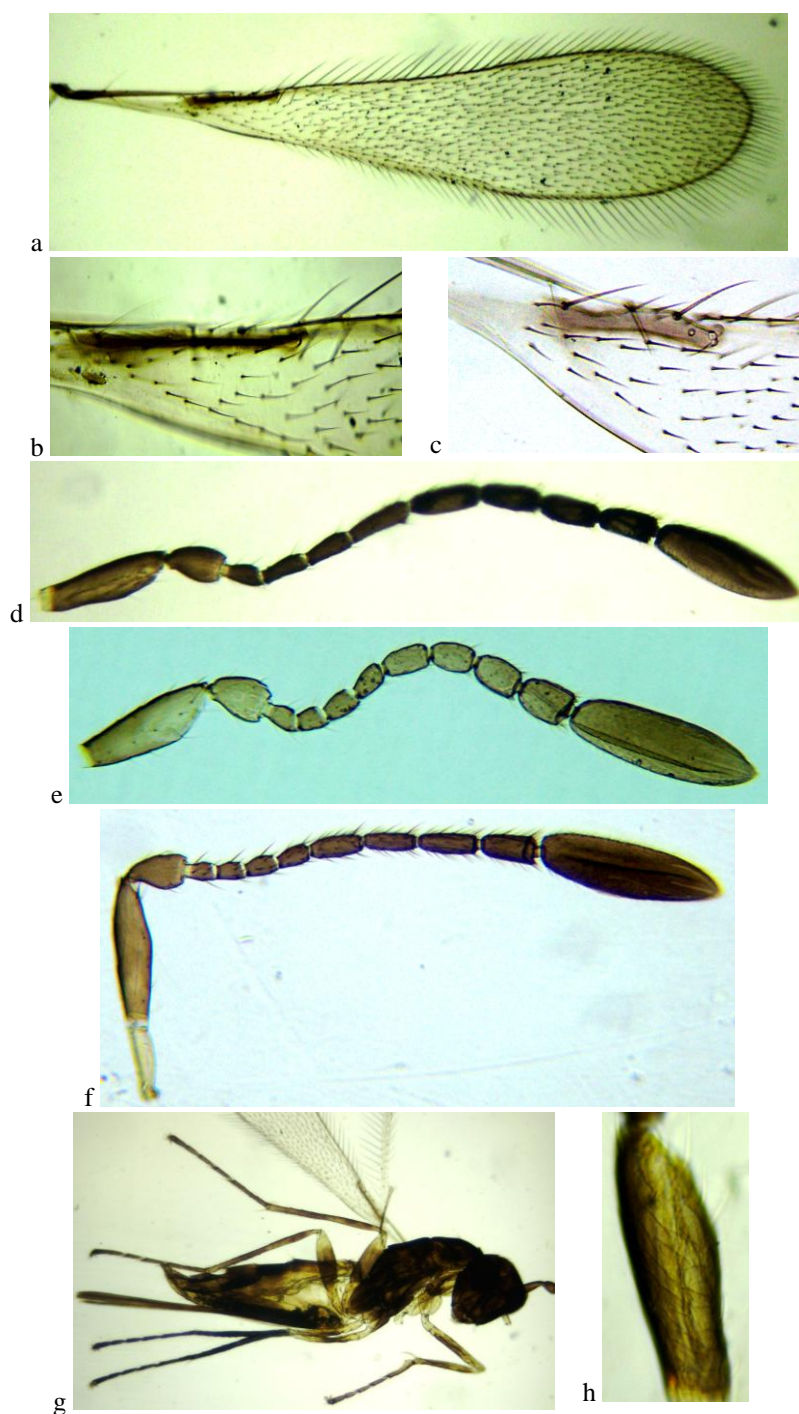


Figure 2. Forewing, antennae and habitus of *Gonatocerus* spp.: a – *G. novickyi*; b, c – bases of forewings, b – *G. novickyi*, c – *G. litoralis*; d – *G. novickyi*; e – *G. near litoralis*; f – *G. chrysis*; g, h – habitus and scape of *G. novickyi* (original).

Taxonomical notes: Female: *Gonatocerus novickyi* – general color dark brown with shades of yellow (Fig. 2g). Female body length: 1,504mm; Antennae: sensory ridges: F1(0), F2(0), F3(0), F4(0), F5(1), F6(0-1), F7(2), F8(2), clava(10) (Fig. 1c); spindle shaped-sensilla: F1(0), F2(0), F3(0), F4(0-1), F5(1), F6(1-2), F7(1), F8(0) (Fig. 1c).

In *G. novickyi* scape is evidently cross-linked, striated (with cross-ridges) (Fig. 2h). Antennal clava notably shorter than the total length of first four segments of antennal funicle (F1, F2, F3 and F4 length combined) (Fig. 1c); but in the case of *G. litoralis*, the antennal clava is longer or almost equal to the total length of F1, F2, F3 and F4 combined (Fig. 1b). Forewing long and narrow, with short marginal cilia (Fig. 2a); FWL/FWW = 4,5; setation of forewing between marginal vein and cubital line of hairs as dense as over the rest of the disc (Fig. 2b). Ovipositor exerted beyond metasomal apex – 0, 26mm (Fig. 2g); Ovipositor length = 0,902mm; mid-tibia length = 0,338mm; O/T2 = 2,66.

G. novickyi is different from *G. litoralis* and *G. chrysis* because it is a large species (body length: 1.5-1.6mm) and has a long ovipositor that protrudes beyond the abdominal apex (Fig. 2g). I had the good opportunity to examine a lectotype and a paralectotype from the Vienna Museum, Austria (Fig. 3).

My specimen has the wings a little wider and the female antennal segments are a little longer compared with Soyka's original material (Fig. 1,2,3). **Important references:** Soyka (1946), Hincks (1952), Graham (1982), and Matthews (1986).

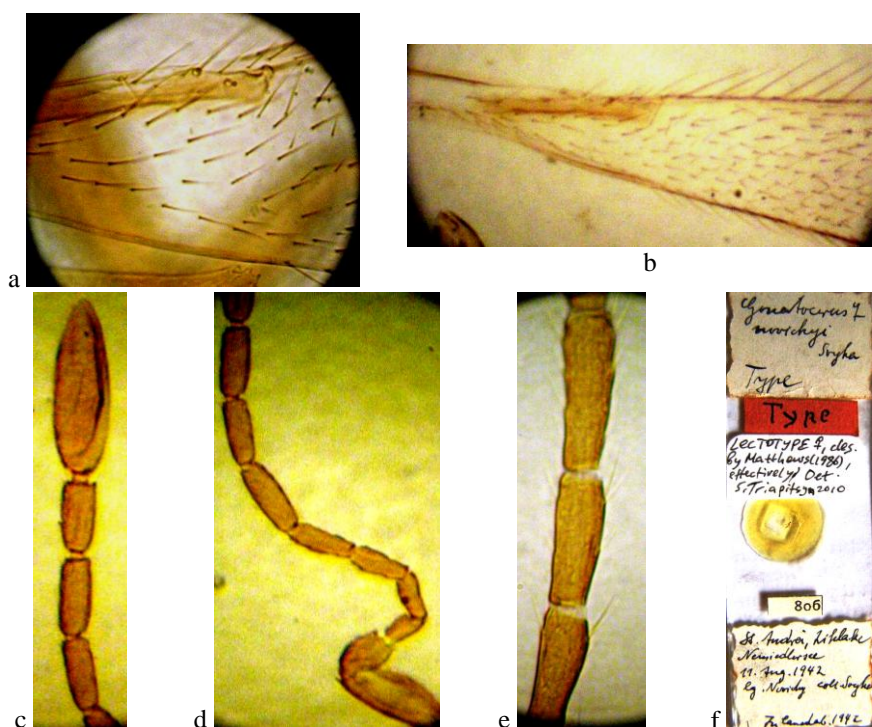


Figure 3. Some characters of *G. novickyi* Soyka: a, b – forewing base; c – F6 to F8 and the antennal clava; d – scape, pedicellus and F1 to F7 of female antenna; e – F2 to F4; f – examined lectotype (original).

2. *Gonatocerus chrysis* (Debauche, 1948) (= *G. gracilentus* Hellen, 1974)

Material examined: 1♀ coll. on 30.08.2005, from Tasca-Hamzoaia (near Ceahlau Mount.), at 900m elev. – Neamt county, Leg. E. Pricop (Fig. 2).

Diagnosis: Female: Clava with 6 sensory ridges. Forewing narrow with long marginal cilia, FWL/FWW = 5,1 to 5,4. Ovipositor about as long as foretibia. Ovipositor not exerted beyond metasomal apex. Head brown, with vertex, face and gena paler. Antenna uniformly light brown with radicle paler (Fig. 2f). Mesosoma brown with terga darker towards the middle. Legs uniformly light brown with the last tarsal segment dark. Metasomal terga light brown with the distal part darker. Ovipositor plates dark brown. Antennal sensory ridges present on F5, F6, F7 and F8. Density of discal microtrichia under marginal vein as dense as over the rest of the disc or only a little less than beyond venation. Forewings narrow with long marginal cilia.

Note: *G. chrysis* differs significantly from other *Gonatocerus* species by having clava with only 6 sensory ridges. **Important references:** Debauche (1948), Triapitsyn (1978), Matthews (1986), Baquero & Jordana (2002), Donev (2005), Triapitsyn *et al.* (2010).

3. *Gonatocerus litoralis* (Haliday, 1833) (= *Ooconus litoralis* Haliday, = *G. radiculatus* Ahlberg, 1925; = *Lymaenon arduennae* Mathot, 1969; = *L. cunctator* Mathot, 1969; = *L. paludis* Debauche, 1948; = *L. rhacodes* (Debauche, 1948); = *L. effusi* Bakkendorf, 1934) (Figs 1, 2).

Material examined: 2♀ and 1♂ coll. on 26.08.2005, from Tasca-Hamzoaia (near Ceahlau Mount.) at 900m elev. – Neamt county, Leg. E. Pricop (Fig. 1).

Diagnosis: Female: Head, mesosoma, funicle and clava brown; scape and pedicel light brown but lighter on lateral surfaces, metasoma except first valvifers lighter brown than mesosoma. Antennal sensory ridges usually present on F5(1), F6(0), F7(2), F8(2), clava(10) (Fig. 1b); probably reduced to F7(1), F8(2), in small specimens (Fig. 2e). Ovipositor not exerted beyond apex of gaster. Ovipositor about 1.6X as long as mid-tibia. Forewings wide with short marginal cilia. Setation of forewing between marginal vein and cubital line of hairs as dense as over the rest of the disc (Fig. 2c).

Note: In our specimens the ovipositor/mid-tibia index (O/T2) is smaller than 1.6X; and FWL/FWW = 3,5 to 3,7. **Important references:** Debauche (1948), Triapitsyn (1978), Matthews (1986), Baquero and Jordana (2002), Donev (2005).

Additional examined material and published distribution data from Romania, regarding the species *Gonatocerus litoralis* and *G. chrysis* was elaborated and studied in the last years by Pricop (2009, 2009a, 2010).

Acknowledgements

This study was supported by the research project POSDRU/88/1.5/S/47646 co-funded by the European Social Fund through the Sectorial Operational Programme – Human Resources and Development 2007-2013; I thank Prof. Dr. Ionel Andriescu and Prof. Dr. Ioan Moglan for the references, advices, laboratory conditions, scientific support, and also to Miss Livia Buzdugan for some material. We also thank to the curators of Vienna Natural History Museum, especially to Mag. Dr. Dominique Zimmermann because it allowed me to examine some material.

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