

Two interesting antlion (Neuroptera: Myrmeleontidae) species from Romania

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Abstract

Two myrmeleontid species, *Neuroleon microstenus* (MCLACHLAN, 1898) and *Gymnocnemia variegata* (SCHNEIDER, 1845) were collected first time in Romania. *G. variegata* hitherto was not reported neither from this country, nor from the whole Carpathian region. In addition to the generally used distinctive features of the two discussed species, newly recognized details of male and female genitalia of *N. microstenus* and the related *N. nemausiensis* (BORKHAUSEN, 1791) are given.

Rezumat

Două specii interesante de leul-furnicilor (Neuroptera: Myrmeleontidae) din România

Două specii noi de mirmeleonide, *Neuroleon microstenus* (MCLACHLAN, 1898) and *Gymnocnemia variegata* (SCHNEIDER, 1845) sunt semnalate pentru prima dată din România. *G. variegata* nu a mai fost semnalată nici măcar în Bazinul Carpatic. Au fost adăugate noi caractere de diagnoză a genitaliilor masculine și femele ale speciei *N. microstenus*, în comparație cu specia apropiată *N. nemausiensis* (BORKHAUSEN, 1791).

Key words: Myrmeleontidae, Romania, Carpathian region, new findings, male and female genitalia.

Introduction

Recently I have the possibility to investigate a small, but valuable antlion collection of L. RAKOSY, president of the Romanian Entomological Society. Large part of the examined specimens was collected in Dobrogea (SZIRÁKI & HÖLZEL 2000), while others in the delta of Danube and in the Carpathian region. Two of the determined antlion species, namely: *Neuroleon microstenus* (MCLACHLAN, 1898) and *Gymnocnemia variegata* (SCHNEIDER, 1845) are worth to discuss, as they were not reported earlier from Romania.

Taxonomic part

Neuroleon microstenus (MCLACHLAN, 1898)

Insects belonging to the large genus *Neuroleon* are living in the Palaearctic, Oriental and Afrotropic regions. About 50 species is known from the whole Palaearctis (KRIVOKHATSKY 1998), 8 from Europe (ASPÖCK et al. 1980), and one species, the *Neuroleon nemausiensis* (BORKHAUSEN, 1791) was earlier reported from Romania as well (KIS et al. 1970).

Two of the eight European species, namely the *N. nemausiensis* and *N. microstenus* occur in Balkan Peninsula and Crimea as well. Consecvently, occurrence of *N. microstenus* in Romania also was rather probable, and now it really was found (SZIRÁKI cf.). In addition to the above-mentioned peninsulas, the latter species is known from the semiarid territories from Algeria to the northern part of Iran (ASPÖCK et al. cf.).

The most obvious differences between these two, partly sympatric species are the altering pattern and venation of forewing. While in *N. nemausiensis* the distal gradate series of crossveins is complete and regular, and marked with a thin, dark line across about seven veins from the CuA₁ (KIS et al. cf.: Fig. 152a, ASPÖCK et al. cf.: Fig. F. 235), in *N. microstenus* the distal gradate series incomplete, and there is a separate dark spot around the first 2-3 distal crossveins before the CuA₁ (ASPÖCK et al. cf.: Fig. F. 238). The different pattern of prothorax was emphasized in the original description of *N. microstenus* (MCLACHLAN 1898). However, this character seems to be rather variable and uncertain in this genus. As regards the other eidonomical features of males, the abdomen is

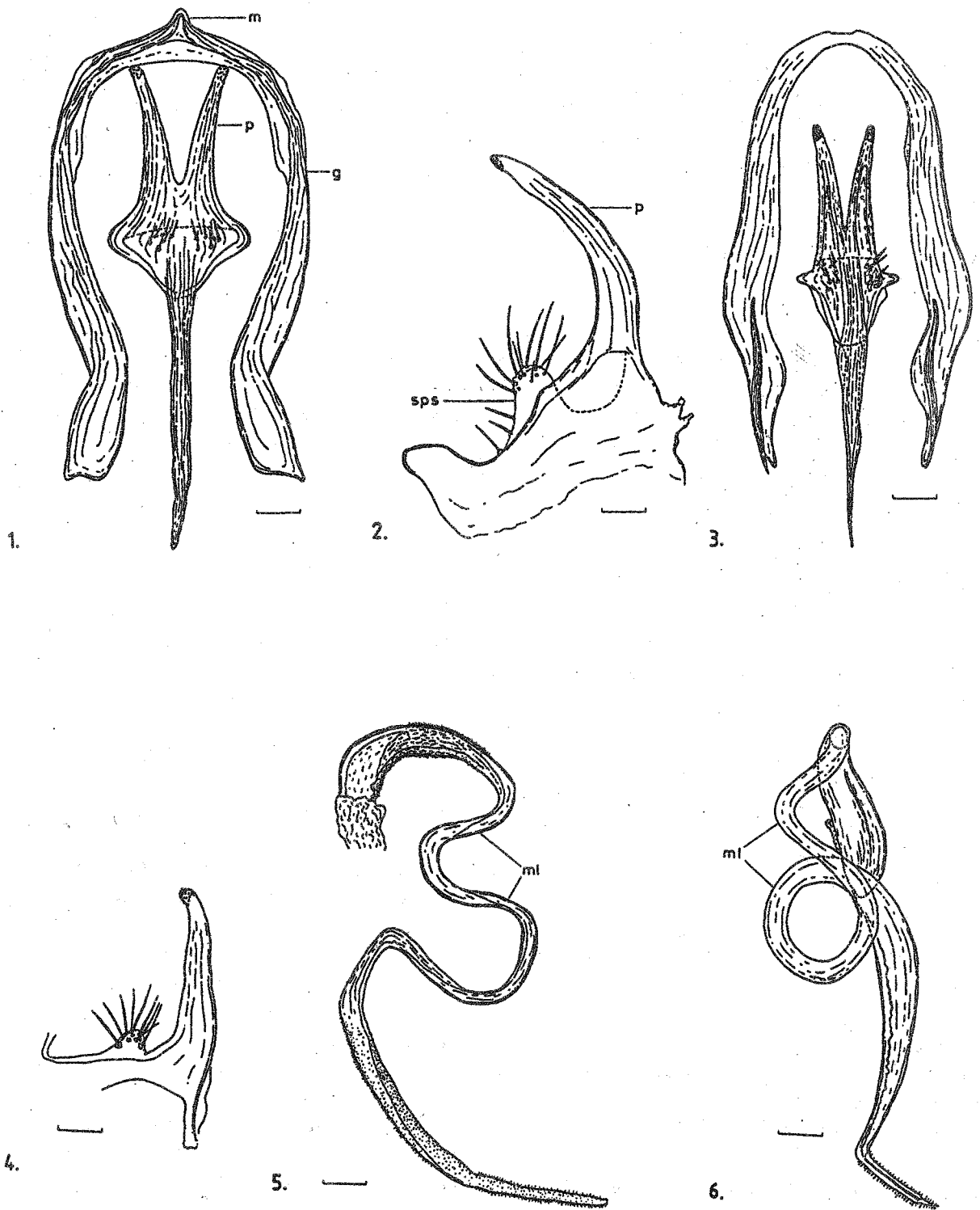


Fig. 1. Gonarcus and paramere of *Neuroleon microstenus*, ventro-caudal view.

Fig. 3. Gonarcus and paramere of *Neuroleon nemausiensis*, ventro-caudal view.

Fig. 5. Ductus seminalis of *Neuroleon microstenus*, dorsal view.

Fig. 2. Paramere and supraparameral sclerite of *Neuroleon microstenus*, lateral view.

Fig. 4. Paramere and supraparameral sclerite of *Neuroleon nemausiensis*, lateral view.

Fig. 6. Ductus seminalis of *Neuroleon nemausiensis* dorsal view.

Scale: 0.06 mm in Figs 1-4, 0.03 mm in Figs 5-6; g = gonarcus, m = mediuncus, ml = median loops of ductus seminalis, p = paramere, sps = supraparameral sclerite.

distinctly longer than the wings in *N. microstenus*, while in *N. nemausiensis* the male abdomen only nearly as long as the wings. A possible additional character for distinction of the two species, that the light tergal spots on the 5-7 abdominal segments are distinct and round in *N. microstenus* (especially in females), while elongated and/or indistinct in *N. nemausiensis* (at least in the examined specimens).

Neither the male, nor the female internal genitalia of *N. nemausiensis* and *N. microstenus* hitherto were not compared in detail. In course of our investigations it was found that in *N. microstenus* a small, but distinct mediuncus is attached to the gonarcus, the parameres widely separated apically, and - in lateral view - bent evenly (Figs 1-2). In *N. nemausiensis* the mediuncus indistinct, the parameres only slightly separated apically, and - in lateral view - curved before their tip only (Figs 3-4). In the female internal genitalia of *N. microstenus* the ductus seminalis well sclerotized, and the loops of its median part situated nearly along a plain (Fig. 5). This structure of *N. nemausiensis* moderately sclerotized, and its median loops has a more or less helicoid shape (Fig. 6).

Examined material: Romania, Greci, Mt. Măcin, 250-300 m. asl., 1-3 September 1997: 10 specimens; leg.: L. RÁKOSY.

Gymnocnemia variegata (SCHNEIDER, 1845)

The single valid species of the genus *Gymnocnemia* and the related *Megistopus flavicornis* (ROSSI, 1790) differ from all of the other European antlions because of their relatively long and thin legs. Within this, the 2-4th tarsal segments about as long as the 5th, while in other myrmeleontids much shorter.

The distinction between *M. flavicornis* (which species is rather frequent in Romania) and *G. variegata* may be sure, as *M. flavicornis* has distal spines on tibiae (KIS et al. cf.: Fig. 154d, ASPÖCK et al. cf.: Fig. 850b), while *G. variegata* has not (ASPÖCK et al. cf.: 850a). Besides, in *M. flavicornis* usually there is a distinct dark spot on the forewing, at distal end of the vein CuA₂ (KIS et al. cf.: Fig. 154a), while in *G. variegata* this spot is indistinct (ASPÖCK et al. cf.: Fig. F. 251), or almost absent.

Gymnocnemia variegata is a Mediterranean species, which occurs from Spain to Pamir

mountains in Central Asia (KRIVOKHATSKY 1998), but it is very rare everywhere. In a relative vicinity of Romania, this species hitherto was found in Greece (ASPÖCK et al. cf.), in Croatia and Slovenia (DEVETAK 1992) and in Crimea (ZAKHARENKO & KRIVOKHATSKY 1993), but earlier it was reported neither from Romania, nor from the whole Carpathian region.

Examined material: Romania, Baile-Herculane, Domogled mountains, 550 m. asl., 31 August 1997: 1 specimen; leg.: L. RÁKOSY.

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