

FAVNISTIČNI ZAPISKI / FAUNISTICAL NOTES

ANTLION *DENDROLEON PANTHERINUS* (FABRICIUS, 1787) (NEUROPTERA: MYRMELEONTIDAE) IN SLOVENIA

Dušan DEVETAK¹, Jan PODLESNIK² and Franc JANŽEKOVIČ¹

¹ Department of Biology, Faculty of Natural Sciences and Mathematics, University of Maribor, Koroška cesta 160, 2000 Maribor, Slovenia

E-mail: dusan.devetak@guest.arnes.si

² Borova vas 12, 2000 Maribor, Slovenia

E-mail: podlesnik.jan@gmail.com

Abstract - The distribution of the European antlion species, *Dendroleon pantherinus* (Fabricius), in Slovenia with some notes on biology is presented.

KEY WORDS: Neuroptera, antlions, Myrmeleontidae, *Dendroleon pantherinus*, distribution, Slovenia

Izvlecek - VOLKEC VRSTE *DENDROLEON PANTHERINUS* (FABRICIUS, 1787) (NEUROPTERA: MYRMELEONTIDAE) V SLOVENIJI

Predstavljena je razširjenost volkca vrste *Dendroleon pantherinus* (Fabricius) v Sloveniji z nekaterimi podatki o njeni biologiji.

KLJUČNE BESEDE: Neuroptera, volkci, Myrmeleontidae, *Dendroleon pantherinus*, razširjenost, Slovenija

Introduction

Antlions (Myrmeleontidae) are medium-sized to large neuropterans, widely distributed in warmer and dry regions. About 2000 valid species in ca. 350 genera are known (Aspöck et al., 2001; Stange, 2004). In Europe, there have been ca. 50 species recorded (Aspöck et al., 2001; Pantaleoni et al., 2010). In the northwestern part of the Balkan Peninsula, 19 species in 13 genera occur (Aspöck et al., 1980, 2001; Devetak, 1992a).

Dendroleon pantherinus (Fig.1) was described by Fabricius in 1787 under the name *Myrmeleon pantherinum*. Later, the species was placed in the genus *Dendroleon* Brauer, 1866. Typical for adults is an eye spot-pigmentation close to the hind edge of fore wings (Fig.1). Larval morphology of *D. pantherinus* has not yet been sufficiently investigated. The larva was partly described by Brauer (1867) and is characterized by lateral scoli and the presence of a tuft of setae medially on the mesonotum. The larvae do not construct pits. The species inhabits warm and dry oak forests with older trees. The vertical distribution of the species is usually limited to habitats under 500 m above sea level (Aspöck et al., 1980). Larvae inhabit detritus in tree holes (Gepp & Hölzel, 1989; Mansell, 1996).

Dendroleon pantherinus is thermophilous Siberian element (Aspöck et al., 1980, 2001). In the Balkan countries, the species is widely distributed (Devetak, 1992a). The first record of the species for Slovenia dates back to 1906 when priest G. Strobl (1906) noted it for Celje. Later the species was mentioned for two other places in Slovenia (Devetak, 1984). The aim of our study is to present information on the biology and distribution of the antlion species in Slovenia.

Material and methods

Twenty dried or in alcohol preserved adults from the insect collection of the first author were examined (Fig.1). The distribution of the species is shown in the UTM map of Slovenia and localities are listed in the UTM coordinates.

Distribution of *Dendroleon pantherinus* (Fabricius) in Slovenia

Literature records: Strobl (1906): Celje. Devetak (1984): Brestrnica pri Mariboru; Haloze: Belski vrh.

Material examined:

Central Slovenia: surroundings of Ljubljana /locality could not be confirmed exactly/, J. Titovsek leg.; Dramlje: Pletovarje, WM32, 14. 8. 1983, B. Kmecl leg.; Goricko: Čepinci, WM99, 7. 1997; Haloze: Belski vrh pri Zavrću, WM83, 29. 8. 1983, 8. 7. 1986, 29. 8. 1986, F. Janžekovic leg.; Ig: Kamenica, VL69, 1. 8. 1981, S. Brelih leg.; Kamnica pri Mariboru, WM46, 7. 1995, B. Mencinger leg.; Komen: Brje pri Komnu, VL07, 16. 7. 1989, M. Gogala leg.; Maribor, WM56, 27. 7. 2007, D. Devetak leg.; Maribor: Brestrnica, WM46, 16. 7. 1982, 19. 7. 1983, M. Zavec leg.; Maribor: Brestrnica: Jelovec, WM46, 16. 7. 1986, M. Zavec leg.; Piran, UL84, 8. 1996, D. Devetak leg.; Prekmurje: D. Bistrica, XM05, 20. 8. 1988, F. Janžekovic leg.; Slovenske gorice: Zg. Velka, WM67, 28. 6. 2000, V. Lesjak leg.; Šentjur pri Celju, WM32, 29. 7. 1983, B. Kmecl leg.; Vurberk: Dvorjane, WM65, 7. 1985, 7. 2000, F. Janžekovic leg.

Distribution of the species is shown in Fig.2. Adults were collected in deciduous woodland habitats or in their vicinity. Dominant tree species in the habitats were *Quercus*, *Carpinus* and *Fagus*.

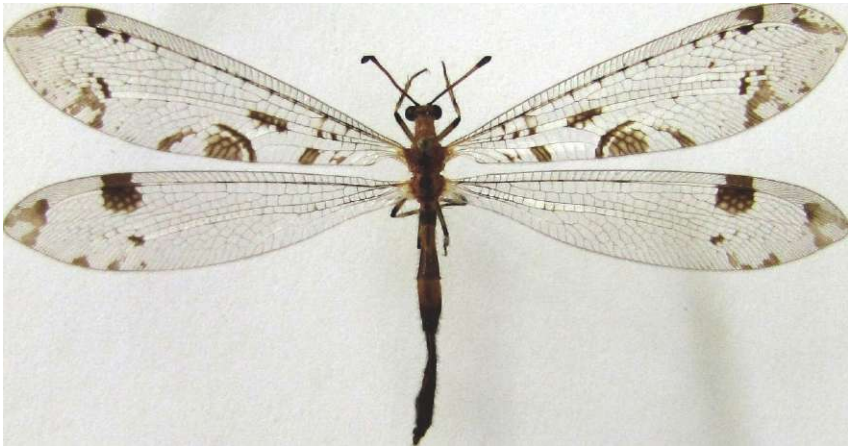


Fig. 1: *Dendroleon pantherinus* (Fabricius, 1787).

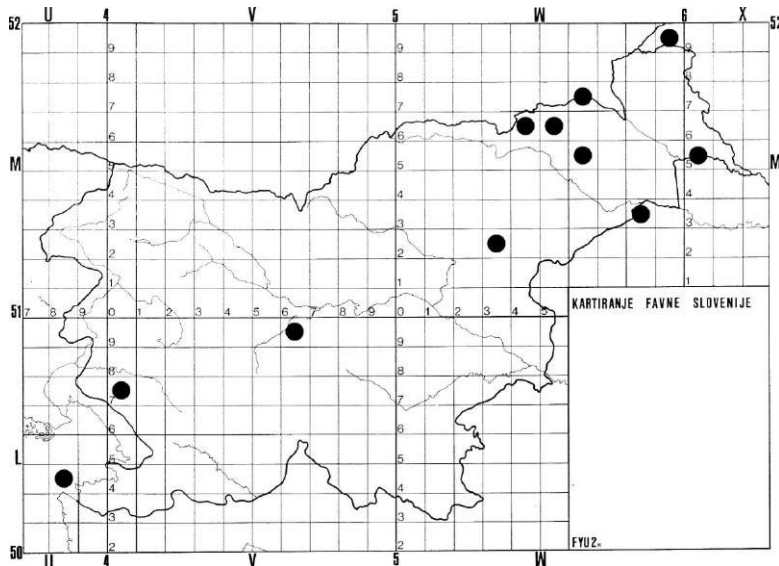


Fig. 2: Distribution of *Dendroleon pantherinus* in Slovenia.

Discussion

Dendroleon pantherinus is included in the Red List of Endangered Neuroptera of Slovenia as Indeterminate (I) species because its biology and role in the habitat is insufficiently known (Devetak, 1992b). Our findings concerning characteristics of deciduous woodland habitats are in accordance with literature data (Gepp & Hölzel, 1989).

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References

- Aspöck, H., Aspöck, U., Hölzel, H.** (Mitarb. **Rausch, H.**), 1980: *Die Neuropteren Europas. Eine zusammenfassende Darstellung der Systematik, Ökologie und Chorologie der Neuropteroidea (Megaloptera, Raphidioptera, Planipennia) Europas*. 2 vols, 495 & 355 pp. Goecke & Evers, Krefeld.
- Aspöck, H., Hölzel, H., Aspöck, U.**, 2001: Kommentierter Katalog der Neuropterida (Insecta: Raphidioptera, Megaloptera, Neuroptera) der Westpaläarktis. *Denisia* 02: 1-606.
- Brauer, F.M.**, 1867: Beschreibung und Verwandlung des *Dendroleon pantherinus* Fbr. und Vergleich der bis jetzt bekannten Myrmeleoniden- und Ascalaphiden-Larven. *Verh. Zool.-bot. Ges. Wien*, 17: 963-966.
- Devetak, D.**, 1984: Megaloptera, Raphidioptera and Planipennia in Slovenia (Yugoslavia). Faunistical contribution. *Neuroptera Int.*, 3:55-72.
- Devetak, D.**, 1992a: Present knowledge of the Megaloptera, Raphidioptera and Neuroptera of Yugoslavia (Insecta: Neuropteroidea). In: Canard, M., Aspöck, H. & Mansell, M.W. (eds.): *Current Research in Neuropterology*. Toulouse, pp. 107-118.
- Devetak, D.**, 1992b: Rdeči seznam ogroženih mrežekrilcev (Neuroptera s.l.) v Sloveniji. The Red List of Endangered Neuroptera s.l. in Slovenia. *Varstvo narave*, 17: 111-115.
- Gepp, J. & Hölzel, H.**, 1989: *Ameisenlöwen und Ameisenjungfern - Myrmeleonidae*. Ziemsen Verlag, Wittenberg Lutherstadt, 108 pp.
- Mansell, M.W.**, 1996: Predation strategies and evolution in antlions (Insecta: Neuroptera: Myrmeleontidae). In: Canard, M., Aspöck, H. & Mansell, M.W. (eds.): *Pure and Applied Research in Neuropterology*. Toulouse, pp. 161-169.
- Pantaleoni, R.A., Cesaroni, C. & Nicoli Aldini, R.**, 2010: *Myrmeleon mariaemathildae* n. sp.: a new Mediterranean pit-building antlion (Neuropterida Myrmeleontidae). *Bull. Insectology*, 63: 91-98.
- Stange, L.A.**, 2004: A systematic catalog, bibliography and classification of the world antlions (Insecta: Neuroptera: Myrmeleontidae). *Memoirs Am. Entomol. Inst.*, 74: 1-565.
- Strobl, G.**, 1906: Neuropteroiden (Netzflügler) Steiermarks (und Niederösterreichs). *Mitt. Naturwiss. Ver. Steiermark*, 1905 (42): 225-226.

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