



THE TEMPORARY SOCIAL PARASITE *LASIUS BICORNIS* (FÖRSTER, 1850) NEW TO SLOVENIA, AND *MYRMICA BESSARABICA* NASSONOV, 1889 CORRECTED INTO *M. SPECIOIDES* BONDROIT, 1918
(HYMENOPTERA: FORMICIDAE)

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Abstract - The Western Palaearctic ant *Lasius* (*Chthonolasius*) *bicornis* (Förster, 1850) is reported for Slovenia for the first time. The temporary social parasite is very rare species throughout its distribution range. The presented record originates from a deciduous forest aside a small brook, which sporadically inundates the site. This type of habitat was so far unknown to be inhabited by *L. bicornis*. Due to recent taxonomic changes, *Myrmica bessarabica* Nasonov, 1889, listed for Slovenia by Bračko (2000) must be substituted by *M. specioides* Bondroit, 1918.

KEY WORDS: ants, faunistics, *Lasius bicornis*, *Myrmica specioides*, Slovenia.

Izvleček – ZAČASNI SOCIALNI PARAZIT *LASIUS BICORNIS* (FÖRSTER, 1850), NOVA VRSTA ZA SLOVENIJO, IN *MYRMICA BESSARABICA* NASSONOV, 1889, POPRAVLJENA V *M. SPECIOIDES* BONDROIT, 1918 (HYMENOPTERA: FORMICIDAE)

Zahodnopalearktična mravlja vrste *Lasius* (*Chthonolasius*) *bicornis* (Förster, 1850) je bila prvič najdena v Sloveniji. Tačasno socialno parazitska vrsta je precej redka na celotnem območju njene razširjenosti. Najdena je bila v listnatem gozdu

blizu majhnega potoka, ki občasno poplavlja okolico. Do sedaj še ni bilo znano, da bi vrsta *L. bicornis* prebivala v takem habitatu. Zaradi novejših taksonomskih sprememb je potrebno vrsto *Myrmica bessarabica* Nasonov, 1889, ki je navedena v seznamu za Slovenijo (Bračko 2000), zamenjati z *M. specioides* Bondroit, 1918.

KLJUČNE BESEDE: mravlje, favnistika, *Lasius bicornis*, *Myrmica specioides*, Slovenija.

The twelve European species of the subgenus *Chthonolasius* are temporary social parasites. Hosts are species of the subgenus *Lasius* s.str. (Seifert 1988a) and presumably species of *Cautolasius* (Schlick-Steiner et al. 2002). Like social parasites in general, *Chthonolasius* species have much lower densities than their hosts (Buschinger 1971). Their hypogaean life habit (Seifert 1996) makes them difficult to be found. Furthermore, the determination of some of the species remains one of the most difficult tasks within European ants. These aspects result in a general scarcity of data on faunistics, ecology and biology (Seifert & Buschinger 2001).

From 5 June to 12 July 2001, pitfall traps were exposed in a *Quercus petraea-Carpinus betulus* forest beside the small, strongly meandering brook Virje at Dobrava, NE of Brežice (Slovenia, 45°56'N/15°40'E, 160 m a.s.l.). The crown closure was high, the herbaceous layer was weak with little patches of direct light reaching the ground. The soil was sandy, with local patches of clay. Rotten wood was present, but its density was low. The water regime was highly dynamic during the trapping period: A strong inundation flooded the pitfall traps in early June, but already at the end of June the brook was completely drained and the stand had a dry-warm appearance.

The catches contained a single worker of *Lasius (Chthonolasius) bicornis* (Förster, 1850). Cooccurring ant species were *Myrmica rubra* (Linnaeus, 1758), *M. specioides* Bondroit, 1918, *Leptothorax crassispinus* Karawajew, 1926, *Myrmecina graminicola* (Latreille, 1802), *Stenammina debile* (Förster, 1850), *Lasius platythorax* Seifert, 1991, *Formica gagates* Latreille, 1798 and *F. fusca* Linnaeus, 1758. In Bračko (2000) *Myrmica specioides* had been referred to as *Myrmica bessarabica* Nasonov, 1889, which was recently classified as „*Myrmica incertae sedis*“ (Seifert 2002); the characters of *M. specioides* according to Seifert (1988b) and Seifert (1996), do however apply to all records of „*M. bessarabica*“ in Bračko (2000).

Lasius bicornis has a Western Palaearctic distribution (Seifert 1988a), but is a very rare and only locally occurring species throughout its range (Seifert 1996). The species nests in rotten logs of dead and living trees (Seifert 1988a), and occasionally in the ground (Mei 1984, Seifert 1988a). Little is known about the feeding habits of *L. bicornis*, but once the lachnid *Schizodryobius pallipes* Hartig, obviously a trophobiotic partner, was found inside a nest (Mei 1984). No direct observation of a host use by *L. bicornis* has been accomplished by now, but *Lasius brunneus* (Latreille, 1798) is the most probable host (Seifert, unpublished data). Determination of all castes, as an exception within *Chthonolasius*, is comparatively easy and unequivocal (Seifert 1988a). From an ecological point of view this record of *L.*

bicornis is interesting, as the species has so far not been found in a sporadically inundated habitat. In faunistic respect the record is not surprising as *L. bicornis* occurs in the countries neighbouring Slovenia, for which recent faunistic data are available, i.e. Italy (Poldi et al. 1995), Hungary (Gallé et al. 1998) and Austria (Steiner et al. 2003).

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