

Lasius (Chthonolasius) nitidigaster Seifert, 1996 - a new ant species (Hymenoptera: Formicidae) for the Hungarian fauna

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LŐRINCZI, G.: *Lasius (Chthonolasius) nitidigaster* Seifert, 1996 - a new ant species (Hymenoptera: Formicidae) for the Hungarian fauna.

Abstract: *Lasius (Chthonolasius) nitidigaster* Seifert, 1996, a temporary social parasite, is recorded as new for Hungarian myrmecofauna. Its main diagnostic characters, distribution and biology are briefly discussed.

Keywords: *Lasius (Chthonolasius) nitidigaster*, Formicidae, Hungary, new record.

Introduction

The myrmecofauna of Hungary is relatively well-known due to intensive myrmecological studies over the course of the last decades (e.g. GALLÉ 1979, CSÓSZ and TARTALLY 1998, CSÓSZ 2000, CSÓSZ et al. 2002, GALLÉ et al. 1998, 2005). The last checklist of Hungarian ants reports 125 species (CSÓSZ et al. 2011), including 20 *Lasius* species, eight of which belong to the subgenus *Chthonolasius*.

Chthonolasius species are temporary social parasites in the nests of the subgenera *Lasius* s.str. and *Cautolasius* (SEIFERT 1988, SCHLICK-STEINER et al. 2002). Their host specificity is generally not very restricted, with most species having a number of suitable host species (DEKONINCK et al. 2004, SEIFERT 2007). Due to their hypogaeic life habits and low densities in comparison to their host species, data on biology of *Chthonolasius* species are in general scarce (SEIFERT and BUSCHINGER 2001).

Materials and methods

Three dealate gynes of *Lasius (Chthonolasius) nitidigaster* Seifert, 1996 were collected in July 2010 using pitfall traps in a habitat of loess steppe patches near Gyula, close to the Hungarian-Romanian border (latitude 46° 35' 04,0" N, longitude 21° 17' 27,6" E). The specimens are deposited in the collection of the Department of Ecology, University of Szeged.

Co-occurring ant species were *Camponotus atricolor* (Nylander, 1849), *Formica cunicularia* Latreille, 1798, *F. rufibarbis* Fabricius, 1793, *Lasius carnolicus* Mayr,

1861, *L. fuliginosus* (Latreille, 1798), *L. paralienus* Seifert, 1992, *Myrmica gallienii* Bondroit, 1920, *M. scabrinodis* Nylander, 1846, *M. slovacica* Sadil, 1952, *M. specioides* Bondroit, 1918, *Plagiolepis pygmaea* (Latreille, 1798), *Polyergus rufescens* (Latreille, 1798), *Ponera coarctata* (Latreille, 1802), *P. testacea* Emery, 1895, *Solenopsis fugax* (Latreille, 1798), *Tapinoma erraticum* (Latreille, 1798), *T. madeirense* Forel, 1895 and *Tetramorium* cf. *caespitum*.

The identification of the specimens was carried out using the keys of SEIFERT (1988, 1997, 2007).

Notes on the species

The gynes of *L. nitidigaster* are well-separable from other Central European members of the subgenus *Chthonolasius*. The cuticular surface of their body is brilliantly shining, with very sparse pubescence and very long, erect hairs (SEIFERT 1997, 2007).

L. nitidigaster is distributed in Southern and Central Europe, from the Balkans to Poland, where it inhabits xerothermous grasslands (SEIFERT 1997, CZECHOWSKI et al. 2002). According to SEIFERT (1997) its nests frequently have soil mounds, but without carton lined chambers seen in some other *Chthonolasius* species. The alates have been found in the nests from mid June till early September, the bulk between mid July and late August.

No data on host use by *L. nitidigaster* has been recorded. However, on the basis of pitfall trap captures, *L. paralienus* could be suspected as a host species, since it is the most abundant and general *Lasius* species in the examined area (LÓRINCZI et al., 2011), including the habitat where *L. nitidigaster* gynes were found.

Acknowledgements

I would like to thank László Gallé for discussions and comments on the manuscript. I also thank Judit Márton for helpful suggestions. This work was supported by the project HURO/0801/194.

References

- CZECHOWSKI, W., RADCHENKO, A., CZECHOWSKA, W. 2002: The ants (Hymenoptera, Formicidae) of Poland. MIZ PAS, Warszawa, 200 pp.
- CSÖSZ, S. 2000: Hangya-faunisztikai adatok a Körös-Maros Nemzeti Parkból: A mályvádi erdők. - *Crisicum* 3: 183-187.
- CSÖSZ, S., TARTALLY, A. 1998: Adatok a Körös-Maros Nemzeti Park hangyafaunájához. - *Crisicum* 1: 180-194.
- CSÖSZ, S., MARKÓ, B., KISS, K., TARTALLY, A., GALLÉ, L. 2002: The ant fauna of the Fertő-Hanság National Park (Hymenoptera: Formicoidea). - In: The fauna of the Fertő-Hanság National Park. Hungarian Natural History Museum, Budapest, pp. 617-629.
- CSÖSZ, S., MARKÓ, B., GALLÉ, L. 2011: The myrmecofauna (Hymenoptera: Formicidae) of Hungary: an updated checklist. - *North-Western Journal of Zoology* 7(1): on-first (article no. 111104).

- DEKONINCK, W., BOER, P., MAELFAIT, J.-P. 2004: *Lasius platythorax* Seifert, 1991 as a host of several *Chthonolasius* species, with remarks on the colony foundation of the parasites (Hymenoptera: Formicidae). - *Myrmecologische Nachrichten* 6: 5-8.
- GALLÉ, L. 1979: Adatok a Bakony hegység hangyafaunájának ismeretéhez (Hymenoptera, Formicidae). - *Veszprém Megyei Múzeumok Közleményei* 14: 239-244.
- GALLÉ, L., CSÓSZ, S., TARTALLY, A., KOVÁCS, É. 1998: A check-list of Hungarian ants (Hymenoptera: Formicidae). - *Folia Entomologica Hungarica* 59: 213-220.
- GALLÉ, L., MARKÓ, B., KISS, K., KOVÁCS, É., DÜRGÓ, H., KÖVÁRY, K., CSÓSZ, S. 2005: Ant fauna of Tisza river basin (Hymenoptera: Formicidae). - In GALLÉ, L. (ed.) *Vegetation and Fauna of Tisza River Basin I. Tiscia Monograph Series* 7: 149-197.
- LŐRINCZI, G., BOZSÓ, M., DUMA, I., PETRESCU, M., GALLÉ, R., TORMA, A. 2011: Preliminary results on the invertebrate fauna (Araneae, Orthoptera, Heteroptera and Hymenoptera: Formicidae) of alkaline grasslands of the Hungarian-Romanian border. - In: KÖRMÖCZI, L. (ed.): *Ecological and socio-economic relations in the valleys of river Körös/Criş and river Maros/Mureş. Tiscia Monograph Series* 9, Szeged-Arad, pp. 159-173.
- SCHLICK-STEINER, B. C., STEINER, F. M., SEIFERT, B. 2002: *Lasius flavus* - A host species of *Lasius mixtus*. - *Sociobiology* 39: 141-143.
- SEIFERT, B. 1988: A revision of the European species of the ant subgenus *Chthonolasius* (Insecta, Hymenoptera, Formicidae). - *Entomologische Abhandlungen Staatliches Museum für Tierkunde Dresden* 51: 143-180.
- SEIFERT, B. 1997: *Lasius nitidigaster* n. sp. - a new ant of the subgenus *Chthonolasius* Ruzsky (Hymenoptera: Formicidae). - *Annales Zoologici* 46: 201-205.
- SEIFERT, B. 2007: *Die Ameisen Mittel- und Nordeuropas*. Lutra-Verlags-und Vertriebsgesellschaft, Görlitz, 368 pp.
- SEIFERT, B., BUSCHINGER, A. 2001: Pleometrotische Koloniegründung von *Lasius meridionalis* (Bondroit, 1920) bei *Lasius paralienus* Seifert, 1992, mit Bemerkungen über morphologische und ethologische Anpassungen an die sozialparasitische Koloniegründung (Hymenoptera: Formicidae). - *Myrmecologische Nachrichten* 4: 11-15.

