

FRAGMENTA FAUNISTICA

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| Fragm. faun. | Warsaw, 30.12.1999 | 42 | 11 | 115-121 |
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Alexander RADCHENKO*, Wiesława CZECHOWSKA**, Wojciech CZECHOWSKI**,
Ewa SIEDLAR**

Four species of the ant genus *Lasius* F. new to Poland, with additions to the records for previously reported species (Hymenoptera, Formicidae)

Abstract. The distribution in Poland of species of the genus *Lasius* F. are reviewed. First records are described for *Lasius psammophilus* SEIFERT, *L. paralienus* SEIFERT (subgenus *Lasius* s.str.), *L. rabaudi* BONDROIT, and *L. jensi* SEIFERT (subgenus *Chthonolasius* RUZSKY). New localities for the rare *Chthonolasius* species, *Lasius mixtus* (NYLANDER), *L. distinguendus* (EMERY), *L. meridionalis* (BONDROIT), *L. bicornis* (FOERSTER), and *L. affinis* (SCHENCK) are reported, together with data on the distribution of some more widespread species.

Key words: ants, *Lasius psammophilus*, *Lasius paralienus*, *Lasius rabaudi*, *Lasius jensi*, faunistics, Poland

Authors' addresses: *Institute of Zoology, UNAS, B. Khmelnytsky 15, Kiev-30, 01-601 UKRAINE;
e-mail rad@usenc.kiev.ua

**Museum and Institute of Zoology, PAS, Wilcza 64, 00-679 Warszawa,
POLAND; e-mail wcz@robal.miiz.waw.pl

Prior to this study, 12 ant species of the genus *Lasius* F. have been recorded from Poland (CZECHOWSKI, CZECHOWSKA 1997). During a recent inspection of the Polish section of the myrmecological collection in the Museum and Institute of Zoology, PAS in Warsaw, four species of this genus that were new to Poland were discovered. Also, the state of knowledge on the occurrence in Poland of several other species (mostly rare ones) was increased.

SPECIES NEW TO POLAND

Lasius (Lasius) psammophilus SEIFERT, 1992 (Fig. 1)

- 1) Kampinoska Forest (Mazovian Lowlands), 1 V 1956, 2♀♀, leg. B. PISARSKI;
- 2) Warszawa-Radość (Mazovian Lowlands), 24 VIII 1960, 1♀, leg. E. KIERYCH;
- 3) Reserve "Skowronno" ad Pińczów (Małopolska Uplands), 12♀♀, leg. B. PISARSKI [formerly identified as *L. alienus* (FOERST.), det. B. PISARSKI];
- 4) Kazimierz Dolny ad Puławy (Lubelska Uplands), 14 VII 1951, 1♀, leg. B. PISARSKI [formerly identified as *L. alienus* (FOERST.), det. B. PISARSKI].

Lasius (Lasius) paralienus SEIFERT, 1992 (Fig. 1)

- 1) Trzebnów ad Zawiercie (Jura Krakowsko-Częstochowska, a subregion of the Krakowsko-Wieluńska Uplands), 10 VIII 1960, 1♀, leg. J. PRÓSZYŃSKI;
- 2) Piwniczna ad Nowy Sącz (Western Beskidy Mts), 16 VIII 1956, leg. A. KOSTROWICKI [formerly identified as *L. alienus* (FOERST.), det. B. PISARSKI];
- 3) Lesko (Eastern Beskidy Mts), 15 VI 1960, 1♀, leg. B. PISARSKI [formerly identified as *L. alienus* (FOERST.), det. B. PISARSKI].

Lasius (Chtonolasius) rabaudi BONDROIT, 1917 (Fig. 2)

- Kazimierz Dolny ad Puławy (Lubelska Uplands), 8 VII 1962, 13♀♀, leg. B. PISARSKI.

Lasius (Chtonolasius) jensi SEIFERT, 1982¹ (Fig. 2)

- 1) Gardno (island Wolin, the Baltic Coast), 15 VIII 1961, 1♂, 1♀, 20♀♀, leg. B. PISARSKI [formerly identified as *L. rabaudi* (BONDR.), det. B. PISARSKI];
- 2) Kazimierz Dolny ad Puławy (Lubelska Uplands), 16 VII 1951, 1♀, leg. B. PISARSKI [formerly identified as *L. umbratus* (NYL.) and then as *L. rabaudi* (BONDR.), det. B. PISARSKI]; 7 VII 1962, 3♂♂, 2♀♀, 78♀♀, leg. B. PISARSKI [formerly identified as *L. rabaudi* (BONDR.), det. B. PISARSKI];
- 3) Wąwóz Sobczański (Sobczański Gorge; Pieniny Mts), 14 VIII 1965, 1♀, leg. W. BAZYLUK.

Two of the species new to Poland, *Lasius psammophilus* and *L. paralienus*, belong to the subgenus *Lasius* s.str. and are sibling species of *L. alie-*

¹ The species has de facto been reported from Poland. In his revision of the subgenus *Chtonolasius* SEIFERT (1988) writes: "A worker series with a queen from xerothermous limestone grassland near Kazimierz, distr. Puławy/Poland, leg. PISARSKI 7 VII 1962, determined by PISARSKI himself as *meridionalis*, is definitely *jensi*." In the collection of the MIZ PAS there is a series of *L. jensi* specimens which must have been the source of the material which was made available to B. SEIFERT by B. PISARSKI (the locality and the date of collecting are the same). The series, however, bears original determination labels with "*L. rabaudi*". Moreover, the collection contains a female specimen of a "genuine" *L. meridionalis* from the same site in the Małopolska Lowlands (see the text).

nus, from which they were separated only quite recently by SEIFERT (1992) using morphological and biological differences. For a key to their identification, and a description of the biological and ecological characteristics of these species see also SEIFERT (1996). The original *L. alienus* has been recorded in Poland since the end of the 19th century (see PISARSKI 1975). It is the most common and the most widely distributed species of the Western-Palaeartic *alienus* complex: a literature review shows it being present in many regions: the Baltic Coast, the Pomeranian and the Masurian Lake Districts, the Wielkopolsko-Kujawska and the Mazovian Lowlands, Podlasie (including the Białowieska Forest), Lower and Upper Silesia, the Krakowsko-Wieluńska Uplands, the Świętokrzyskie Mts, the Lubelska Uplands, Roztocze, the Sandomierska Lowlands, the Western Beskidy, the Bieszczady and the Pieniny Mts (CZECHOWSKI et al., in prep.). However, it is possible that some of these older records refer to some of the sibling forms described

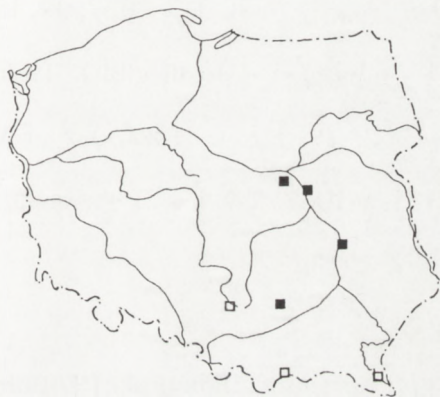


Fig. 1. Localities of *Lasius (Lasius) psammophilus* SEIFERT (■) and *L. (L.) paralienus* SEIFERT (□) in Poland.

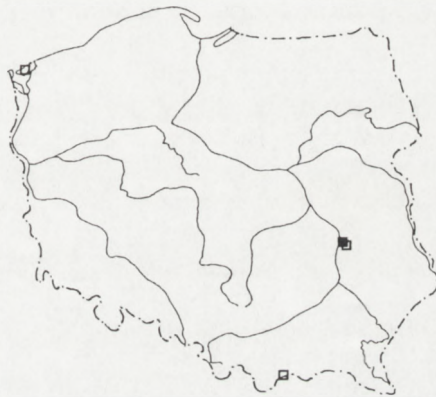


Fig. 2. Localities of *Lasius (Chthonolasius) rabaudi* BONDROIT (■) and *L. (Ch.) jensi* SEIFERT (□) in Poland.

later by SEIFERT. However, specimens in the collection of the MIZ PAS confirm the occurrence of *L. alienus* (in the new sense of SEIFERT) in the following regions: the Baltic Coast, the Pomeranian Lake District, the Wielkopolsko-Kujawska Lowlands, Lower Silesia, the Świętokrzyskie Mts, the Lubelska Uplands, the Sandomierska Lowlands, and the Western Beskidy Mts. It also contains specimens collected from two regions of Poland where it had not previously been recorded, namely the Małopolska Uplands and the Eastern Beskidy Mts (see below).

Detailed morphological characteristics and notes on the biology of the European species of the subgenus *Chthonolasius* RUZSKY, including *Lasius rabaudi* and *L. jensi*, recorded here as new to Poland, and keys for their identification are presented in a revision of this subgenus (SEIFERT 1988, see also SEIFERT 1996).

With the inclusion of the four species new to Poland (above) and *Lasius platythorax* SEIFERT and *L. neglectus* VAN LOON, BOOMSMA et ANDRASZALVY simultaneously reported by RADCHENKO et al. (1999) and CZECHOWSKA, CZECHOWSKI (1999) respectively, there are now 18 species of the genus *Lasius* recorded from Poland (compare PISARSKI 1975 and CZECHOWSKI, CZECHOWSKA 1997).

NEW LOCALITIES OF RARE SPECIES IN POLAND
(regions new for the species are marked with an asterisk)

Lasius (*Chthonolasius*) *mixtus* (NYLANDER, 1846)

Lasius umbratus mixtus: KULMATYCKI 1920b.

Lasius umbratus mixtus var. *mixto-umbrata*: KULMATYCKI 1922.

- 1) Mszana Dolna ad Limanowa (*Western Beskidy Mts), 1 X 1957, 1♀, leg. A. RIEDEL;
- 2) Ustrzyki Górne (Bieszczady Mts), 1970 (detailed date illegible), 1♀ (no collector's name);
- 3) Dwernik (Bieszczady Mts), 6–10 XI 1962, 1♀, leg. C. DZIADOSZ et W. STARĘGA;
- 4) Czarny Staw Gąsienicowy (*Tatra Mts), 8 IX 1967, 2♀♀, leg. B. PISARSKI.

Lasius (*Chthonolasius*) *distinguendus* (EMERY, 1916)²

Lasius umbratus subsp. *distinguendus*: PISARSKI 1975.

- 1) Międzywodzie (island Wolin) or Pustki ad Kamieniec Pomorski [(?)Baltic Coast] or Pustkowie ad Szczecin [(?)Pomeranian Lake District]³, VII 1905, 1♀, leg. G. SCHROEDER;
- 2) Krzyżanowice ad Pińczów (*Małopolska Uplands), 11 VIII 1952, 1♀, leg. group of IZ PAS, 3 IX 1952, 1♀, leg. group of IZ PAS⁴;
- 3) Forest "Grabowiec" ad Pińczów (*Małopolska Uplands), 28 VI 1955, 1♀, leg. K. WINNIK, 24 VIII 1956, 2♀♀, leg. group of IZ PAS;
- 4) Kazimierz Dolny ad Puławy (*Lubelska Uplands), 16 V 1950, 5♀♀, leg. B. PISARSKI, 29 IX 1950, 3♀♀, leg. B. PISARSKI, 7 VII 1951, 1♀, leg. B. PISARSKI, 14 VII 1951, 1♀, leg. A. RIEDEL, 18 VII 1952, 2♀♀, leg. B. PISARSKI, 9 VIII 1961, 1♀, leg. B. PISARSKI;

² So far, only a female collected in the Bieszczady Mts has been recorded from Poland (PARAPURA, PISARSKI 1971).

³ Precise identification of the locality is impossible now. „Heidebrink” given on the label as the name of the place of collection is misleading because in the formerly German part of Poland there are three localities bearing that old name and these are: Międzywodzie, Pustki and Pustkowie.

⁴ Institute of Zoology, PAS – a former name of the present Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw.

5) Wułskie ad Sanok (*Eastern Beskidy Mts), 17 VI 1954, 1♀, leg. B. PISARSKI;

6) Sromowce Wyżne ad Krościenko (*Pieniny Mts), 27 VIII 1955, 1♀, leg. B. PISARSKI.

Lasius (Chtonolasius) meridionalis (BONDROIT, 1919)

Lasius umbratus: PISARSKI 1953 (part.; misidentification).

1) Gdańsk-Górki Wschodnie (Pomeranian Lake District), 10 VIII 1970, 1♀, leg. B. PISARSKI;

2) Lisie Jamy ad Pisz (*Masurian Lake District), 17 VII 1967, 2♀♀, 5♀♀, leg. B. PISARSKI.

Lasius (Chtonolasius) bicornis (FOERSTER, 1850)⁵

1) Nieborów ad Łowicz (*Mazovian Lowlands), 9 X 1960, 1♀, leg. B. BURAKOWSKI;

2) Krzyżanowice ad Pińczów (*Małopolska Uplands), 30 VIII, 1952, 1♂, leg. group of IZ PAS.

Lasius (Chtonolasius) affinis (SCHENCK, 1852)

1) Wilczy Dół ad Gorzów Wielkopolski (*Pomeranian Lake District), 26 VI 1910, 1♀, leg. E. SCHMIDT;

2) Szczecin-Osów (*Pomeranian Lake District), 1♀, 28 VII 1921, leg. J. HUIS;

3) Krzyżanowice ad Pińczów (*Małopolska Uplands), 3 IX 1952, 1♀ leg. group of IZ PAS.

NEW REGIONS OF THE OCCURRENCE IN POLAND OF SOME MORE COMMON SPECIES

Lasius (Lasius) alienus (FOERSTER, 1850)

Lasius niger alienus: KULMATYCKI 1920a,b, BISCHOFF 1925, GRIEP 1938.

Lasius niger alienus var. *alieno-nigra*: KULMATYCKI 1920a.

– Małopolska Uplands (excl. Świętokrzyskie Mts): Mt Zelejowa ad Chęciny, 27 IX 1953, 2♀♀, leg. A. RIEDEL; Skorocice ad Pińczów, 26 VI 1954, 2♀♀, leg. A. RIEDEL; Krzyżanowice ad Pińczów, 25 VIII 1954, 1♀, leg. Sz. NOWAKOWSKI; forest "Grabowiec" ad Pińczów, 17 V 1956, 4♀♀, leg. B. PISARSKI; Wodzisław ad Jędrzejów, 14 VIII 1956, 1♂, leg. W. BAZYLUK; reserve "Skowronno" ad

⁵ PISARSKI (1975) entertained doubts about the possibility of this species occurring in Poland. Up to date, the species has been reported only once, from the Wielkopolsko-Kujawska Lowlands (KULMATYCKI 1922).

Pińczów, 13 VI 1957, 1♀, leg. Sz. NOWAKOWSKI; Krzyżanowice ad Pińczów, no date, 2♂♂, leg. group of IZ PAS.

– Eastern Beskidy Mts: Lesko, 13 VI 1960, 6♀♀, leg. B. PISARSKI.

Lasius (Lasius) emarginatus (OLIVIER, 1791)

Lasius emarginatus var. *nigro-emarginatus*: KULMATYCKI 1920a,b.

– Baltic Coast: Chałupy ad Hel, 22 VIII 1967, 5♀♀, leg. B. PISARSKI.

Lasius (Chtonolasius) umbratus (NYLANDER, 1864)

Lasius umbratus subsp. *umbratus*: PISARSKI 1975.

– Eastern Beskidy Mts: Lesko, 13 VI 1960, 1♀, leg. B. PISARSKI.

Lasius (Dendrolasius) fuliginosus (LATREILLE, 1798)

Formica fuliginosa: SCHILLING 1839, SIEBOLD 1844, RUNGE 1870.

– Bieszczady Mts: Lutowiska, 7–9 VIII 1965, 1♂, leg. R. BAŃKOWSKA.

Complete data on the distribution of the above-mentioned species in Poland and a key for their identification will be included in a paper by CZECHOWSKI et al. (in prep.).

Acknowledgements. We thank Graham W. ELMES for improving the English.

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STRESZCZENIE

[Tytuł: Cztery nowe dla Polski gatunki z rodzaju *Lasius* F. i nowe dane o występowaniu gatunków wcześniej wykazanych (*Hymenoptera, Formicidae*)]

W wyniku przeglądu i weryfikacji oznaczeń krajowych materiałów z rodzaju *Lasius* F. ze zbiorów Muzeum i Instytutu Zoologii PAN w Warszawie wykazano cztery gatunki nowe dla Polski: *Lasius (Lasius) psammophilus* SEIFERT, *L. (L.) paralienus* SEIFERT, *L. (Chtonolasius) rabaudi* BONDR. i *L. (Ch.) jensi* SEIFERT. Uzyskano też dane poszerzające wiedzę o rozmieszczeniu w Polsce dziewięciu innych gatunków z tego rodzaju, w tym pięciu rzadkich i lokalnie występujących przedstawicieli podrodzaju *Chtonolasius* RUZSKY: *L. mixtus* (NYL.), *L. distinguendus* (EM.), *L. meridionalis* (BONDR.), *L. bicornis* (FOERST.) i *L. affinis* (SCHENCK).