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**NOTES ON THE DISTRIBUTION OF THE GENUS *PLAGIOLEPIS*
MAYR, 1861 (HYMENOPTERA: FORMICIDAE) IN DOBROGEA,
AND THE FIRST RECORD OF *PLAGIOLEPIS OBSCURISCAPA*
SANTSCHI, 1923 IN ROMANIA**

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Abstract. Distribution points along with short taxonomic characters descriptions of three species of the genus *Plagiolepis* Mayr, 1861 (Hymenoptera: Formicidae) are given from the region of Dobrogea, Romania. Two of the species were previously known to be distributed in Romania: *Plagiolepis pygmaea* (Latreille, 1798) and *Plagiolepis taurica* Santschi, 1920 and one species is recorded for the first time in the ant fauna of Romania: *Plagiolepis obscuriscapa* Santschi, 1923.

Résumé. On offre les points de distribution ainsi que quelques caractères taxonomiques de trois espèces du genre *Plagiolepis* Mayr, 1861 (Hymenoptera: Formicidae) trouvées en Dobrogea, Roumanie. Deux de ces espèces avaient déjà été connues en Roumanie, à savoir *Plagiolepis pygmaea* (Latreille, 1798) et *Plagiolepis taurica* Santschi, 1920, tandis que la troisième est mentionnée pour la première fois dans la faune de fourmis de Roumanie: *Plagiolepis obscuriscapa* Santschi, 1923.

Key words: *Plagiolepis*, Dobrogea, Romania, new record.

INTRODUCTION

The genus *Plagiolepis* Mayr, 1861 (Hymenoptera: Formicidae: Formicinae) is represented in Romania by two species according to the recent checklist: „A comprehensive list of the ants of Romania (Hymenoptera: Formicidae)“ by Bálint Markó, Botond Sipos, Sándor Csösz, Klára Kiss, István Boros & László Gallé, published in 2006. The two species are: *Plagiolepis pygmaea* (Latreille, 1798) and *Plagiolepis taurica* Santschi, 1920, the latter being formerly known as *P. vindobonensis* Lomnicki, 1925 (Radchenko, 1989). Notes on their distribution in Dobrogea and short descriptions of taxonomic characters are given in the present paper. Another species: *Plagiolepis obscuriscapa* Santschi, 1923 (formerly *Plagiolepis pygmaea* var. *obscuriscapus* Santschi, 1923, and raised to species by Agosti & Collingwood, 1987) is given as a new record for the Romanian fauna, also with points of distribution in Dobrogea and a short description.

MATERIAL AND METHOD

The ants that are the subject of this paper were collected in Dobrogea, Romania, in the years 2005, 2008 as part of the field work supporting the PhD thesis „The diversity of the family Formicidae in Romania, and their ecological and ethological significance“. The collecting points (Fig. 1) are: Vadu (Chituc Sandbar Nature Reserve) and Hagieni Forest Nature Reserve, sampled in 2005; Babadag Forest Nature Reserve, Gura Dobrogei Nature Reserve and Dumbrăveni Forest Nature Reserve, sampled in 2008.

The habitat of Vadu consists of unspoiled marine sand dunes with characteristic vegetation; of Gura Dobrogei, of xerothermophilous grassland with

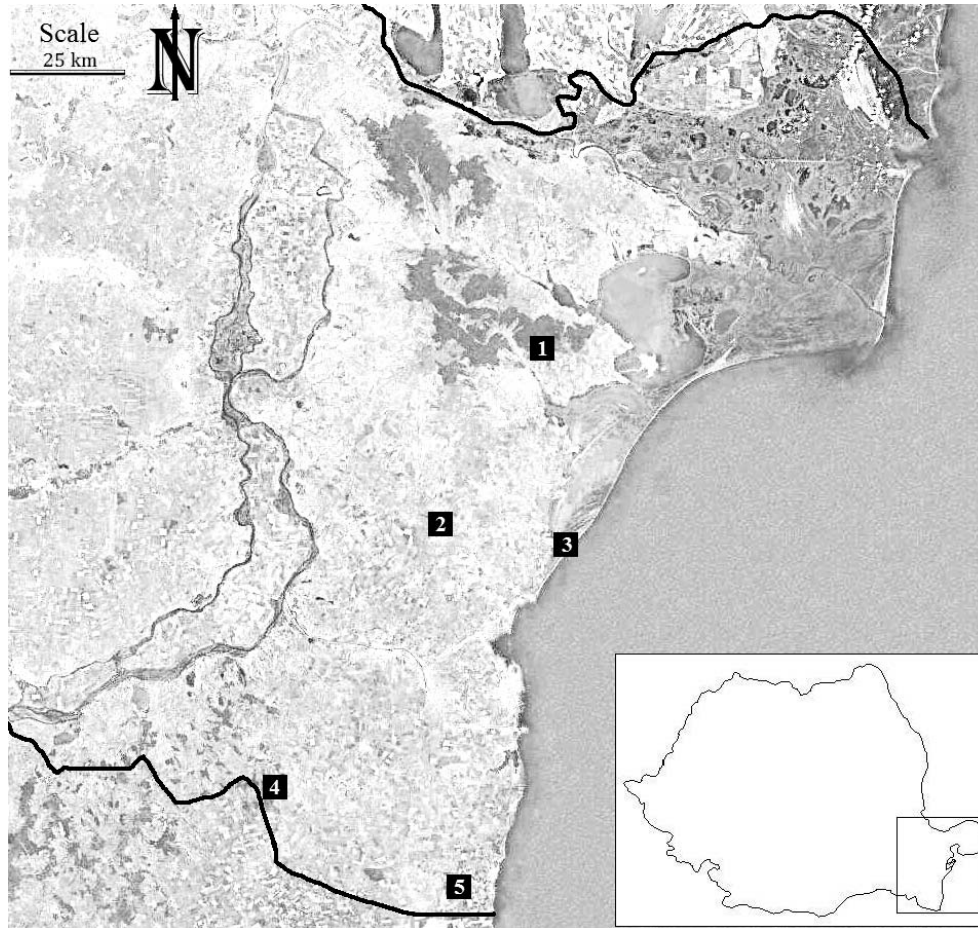


Fig. 1 – Map with the collecting sites in Dobrogea: 1 - Babadag, 2 - Gura Dobrogei, 3 - Vadu, 4 - Dumbrăveni, 5 - Hagieni.

characteristic shrubs and, of the rest of the sites, of xerothermophilous forest based on characteristic species of *Quercus*.

The ants were searched under rocks or on the bark of trees and the grass, than aspirated, killed with ether acetate and preserved in 70% alcohol, in plastic Ependorf vials. In the laboratory, they were dried and arranged on paper triangles in insect cases and identified using the following keys: Agosti & Collingwood, 1987; Bernard, 1968. The taxonomic history data were consulted on the site <http://www.antweb.org/>.

RESULTS

Collecting sites, biology, taxonomic history of the three species, that are subject of the present paper, are presented, with pictures of the new record species.

1. *Plagiolepis pygmaea* (Latreille, 1798)

Personal data. Collected in Dobrogea at Hagieni (43°48'21''N, 28°27'22''E; 10 m altitude) on 11-12 August 2005; Agigea (44°05'20''N, 28°38'34''E; 7 m altitude) on 15 August 2005; Dumbrăveni (43°59'22''N, 27°58'51''E) on 13 May 2008; Babadag (44°49'12''N, 28°42'32''E; 130 m altitude) on 14 May 2008.

Biology. Prefers open, xerothermous habitats where it nests in the soil or under the rocks.

Distribution of the species. Austria, Bulgaria, Czech Republic, European Turkey, France, Germany, Greece, Italy, Hungary, Macedonia, Portugal, Romania, Slovakia, Spain, Ukraine, islands of the Mediterranean.

Taxonomic history: *pygmaea*. *Formica pygmaea* Latreille, 1798, France. Senior synonym of *dufourii*. Current subspecies: nominal plus *bulawayensis*, *mima*, *minu* (<http://www.antweb.org/>).

2. *Plagiolepis taurica* Santschi, 1920

Personal data. Collected in Dobrogea at Gura Dobrogei (44°28'01''N, 28°28'57''E; 71 m altitude) on 14 May 2008.

Biology. Abundant in the Mediterranean region, it nests under the stones in forests and open spaces up to 1500 m altitude on limestone substrate, and 1200 m altitude on substrates made of cooler rocks; very alert and combative, omnivores with a preference for sweet liquids.

Distribution. Central and Eastern Europe, Asia Minor.

Taxonomic history: *taurica*. *Plagiolepis maura* var. *taurica* Santschi, 1920, Ukraine. Variety of *pallescens*; of *pygmaea*. Raised to species: Radchenko, 1989. Senior synonym of *manczshurica*, *satunini* (<http://www.antweb.org/>).

3. *Plagiolepis obscuriscapa* Santschi, 1923

(Figs 2, 3)

Personal data. Collected at Vadu (44°29'23''N, 28°49'56''E; 0 m altitude) on 9 September 2005, three workers found on a shrub; at Dumbrăveni (43°59'22''N, 27°58'51''E) on 14 mai 2008, three workers from a nest under a stone; the nest was located on a limestone slope in an open *Quercus pubescens* forest. Collected at Babadag (44°49'12''N, 28°42'32''E; 130 m altitude) on 14 Mai 2008, four workers found foraging on the trunk of a *Quercus* sp.

Biology. Similar to *Plagiolepis pygmaea* Latreille, 1798

Distribution. Continental Italy, ex-Yugoslavia.

New record for the Romanian ant fauna.

Taxonomic history: *obscuriscapa*. *Plagiolepis pygmaea* var. *obscuriscapus* Santschi, 1923 Italy. Raised to species: Agosti & Collingwood, 1987 (<http://www.antweb.org/>).

DISCUSSIONS

Following, a description of conclusive taxonomic characters of the species *Plagiolepis obscuriscapa* Santschi, 1923 (Agosti & Collingwood, 1987), *new record*, is given, compared to the other two species:

- funiculus segments 2 and 3 are quadrate, subequal, each clearly shorter than 4th, by contrast to *Plagiolepis taurica* that has the funiculus segment 2 transverse or quadrate much shorter than 3rd or 4th which are subequal;



Fig. 2 – Dorsal view of a *Plagiolepis obscuriscapa* Santschi, 1923 worker.



Fig. 3 – Lateral view of a *Plagiolepis obscuriscapa* Santschi, 1923 worker.

- femora are dusky (Fig. 2); the queens also have the funiculus dark by contrast to *Plagiolepis pygmaea* that has the appendages pale grayish or yellow.

NOTE ASUPRA DISTRIBUȚIEI GENULUI *PLAGIOLEPIS* MAYR, 1861
(HYMENOPTERA: FORMICIDAE) ÎN DOBROGEA ȘI PRIMA MENȚIONARE A
SPECIEI *PLAGIOLEPIS OBSCURISCAPA* SANTSCHI, 1923 ÎN ROMÂNIA

REZUMAT

În această lucrare prezentăm puncte de distribuție în Dobrogea pentru 3 specii ale genului *Plagiolepis* (Hymenoptera: Formicidae: Formicinae): *Plagiolepis pygmaea* (Latreille, 1798), *Plagiolepis obscuriscapa* Santschi, 1923, *Plagiolepis taurica* Santschi, 1920. *Plagiolepis obscuriscapa* Santschi, 1923 este la prima menționare pentru fauna României.

LITERATURE CITED

- AGOSTI, D., C. A. COLLINGWOOD, 1987 - A provisional list of the Balkan ants (Hym., Formicidae) and a key to the worker caste. Bulletin de la Société Entomologique Suisse, 60: 51-62.
- BERNARD, F., 1968 - Les Fourmis (Hymenoptera, Formicidae) d'Europe Occidentale et Septentrionale. Faune de l'Europe et du bassin Méditerranéen. Masson et C^{ie} Editeurs, Paris.
- MARKÓ, B., B. SIPOS, S. CSÖSZ, K. KISS, I. BOROS, L. GALLÉ, 2006 - A comprehensive list of the ants of Romania (Hymenoptera: Formicidae). Myrmecologische Nachrichten, Wien, 9: 65-76.
- RADCHENKO, A. G., 1989 - Ants of the *Plagiolepis* genus of the European part of the USSR. Zoologicheskii Zhurnal, 68: 153-156.
- *** <http://www.antweb.org/>.

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