FIRST RECORD OF FORMICA GLAUCA RUSZKY, 1895 (HYMENOPTERA: FORMICIDAE) IN ROMANIA

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Abstract. The first record of Formica glauca Rusky, a xerotermophilous ant species, rare in Central Europe but a common steppe element throughout Eurasia, related to F. rufibarbis F. and F. cunicularia Latr., is reported from Romania. Workers of F. glauca occurred in Todirescu grassland protected area in the Rârșu Mountain (in the northern part of the Eastern Carpathians).

Keywords: ants, Formica glauca, Romania.

Introduction

The taxonomic history of this ant species is unfortunately quite intricate and its status still unclear, depending on the author. The first available use of the name glauca was Formica rufibarbis var. glauca Ruzsky, 1896 (originally F. fusca subsp. rufibarbis var. glauca, 1895; unavailable name). For dozens of years this taxon was considered to be a variety or subspecies, at first of Formica rufibarbis F., thereafter of F. cunicularia Latr. and F. rufibarbis F., in Romania. Lucrators of this species were unaware of the synonymy with F. cunicularia by Agosti & Collingwood and than in 1992 synonymized with F. cunicularia by Atanassov & Dlussky.

Nevertheless, Seifert (Seifert 1997) described from Germany a new European ant species F. lusatica and synonymized it with the ants that he formerly named F. rufibarbis x cunicularia, F. rubescens and F. glauca. Nevertheless, Seifert admitted that the fact of F. lusatica is conspecific with F. glauca or that they are good allopatric species is still an open question (see Czechowska et al., 2004a).

Glaucu-like ants were found in Europe and recognized as morphologically undistinguishable from ants common in steppes of southern Ukraine (Czechowski & Radchenko, 2000) that, in turn, are identical with specimens from the Asiatic part of their range. These are both kept in Russian and Ukrainian museum collections and are in unanimous opinion of the myrmecologists that glauca ants (Czechowska et al., 2004b).
Because of this it was decided that the ants that are the center of the present paper be presented as *F. glauca* based on the species status given by Agosti & Collingwood and their key to Balkan ants (Agosti & Collingwood, 1987a).

**Material and Methods**

The ants analyzed for this paper were collected in the summer of 2005 from Todirescu grassland protected area in the Rarău Mountain (Fig. 1a) as part of a Nature 2000 biodiversity assessing project, coordinated by “Speology Foundation Bucovina”.

The ants were kept in 70% alcohol and determined using the key and list for the Balkan ants of Agosti & Collingwood mentioned before. The photographs in the paper were made with a Canon 520 digital camera using a Kruss binocular.

**Results and Discussion**

The morphologic characters used to discriminate the ants were body colouring, shape of clypeus, light reflecting properties of the frontal triangle, proportions between last maxillary palps segments, between antenal scape and length of head, body hairs (presence and distribution) (Fig. 4) and the cephalic index \(CI=HWx100 / HL\) (head width, head length).

*Formica glauca* is a bicoloured species (Fig. 2) with a red alitrunk, the anterior margin of the clypeus being rounded and entire and also the posterior margin of the head evenly rounded with a slightly convex occipital border (Fig. 3a).

The frontal triangle is dull, not reflecting light (Fig. 3b) and the terminal and penultimate maxillary palps segments are equal in length (Fig. 5).
Figure 2. Body color of *Formica glauca*.  

Figure 3. Frontal aspect of head.  

Among the Romanian ant fauna this species most closely resemble *Formica rufibarbis* F. and *F. cunicularia* Latr. However it differs from this two by several features amongst beeing these:

- *F. rufibarbis* has usually a more hairy apearance with the alitrunk hairs extending also on the epinotum (Bernard, 1968).
- *F. cunicularia* has the alitrunk predominantly dark apart from the sutures, sometimes with red spots expanded but always dull red whilst *F. glauca* has a bright red midbody.
- *F. cunicularia* may present a few short clavate hairs on the pronotum whilst *F. glauca* always has a few pairs of short pronotal bristles.

Figure 4. Body hairs in contrasting light.  

Figure 5. Maxillary palps in contrasting light.  

Conclusions

In this paper a new ant for the Romanian fauna, *F. glauca*, is reported based on individuals collected in a grassland on the Rarău Mountain (Fig. 1b) and analyzed through the taxonomic informations provided by Agosti & Collingwood and their key to Balkan
ants (Agosti & Collingwood, 1987b). However the status of this species is still under debate amongst the leading myrmecologists and might suffer modifications in the future.

References