

New records for the ground beetle fauna of Bulgaria (Coleoptera: Carabidae)



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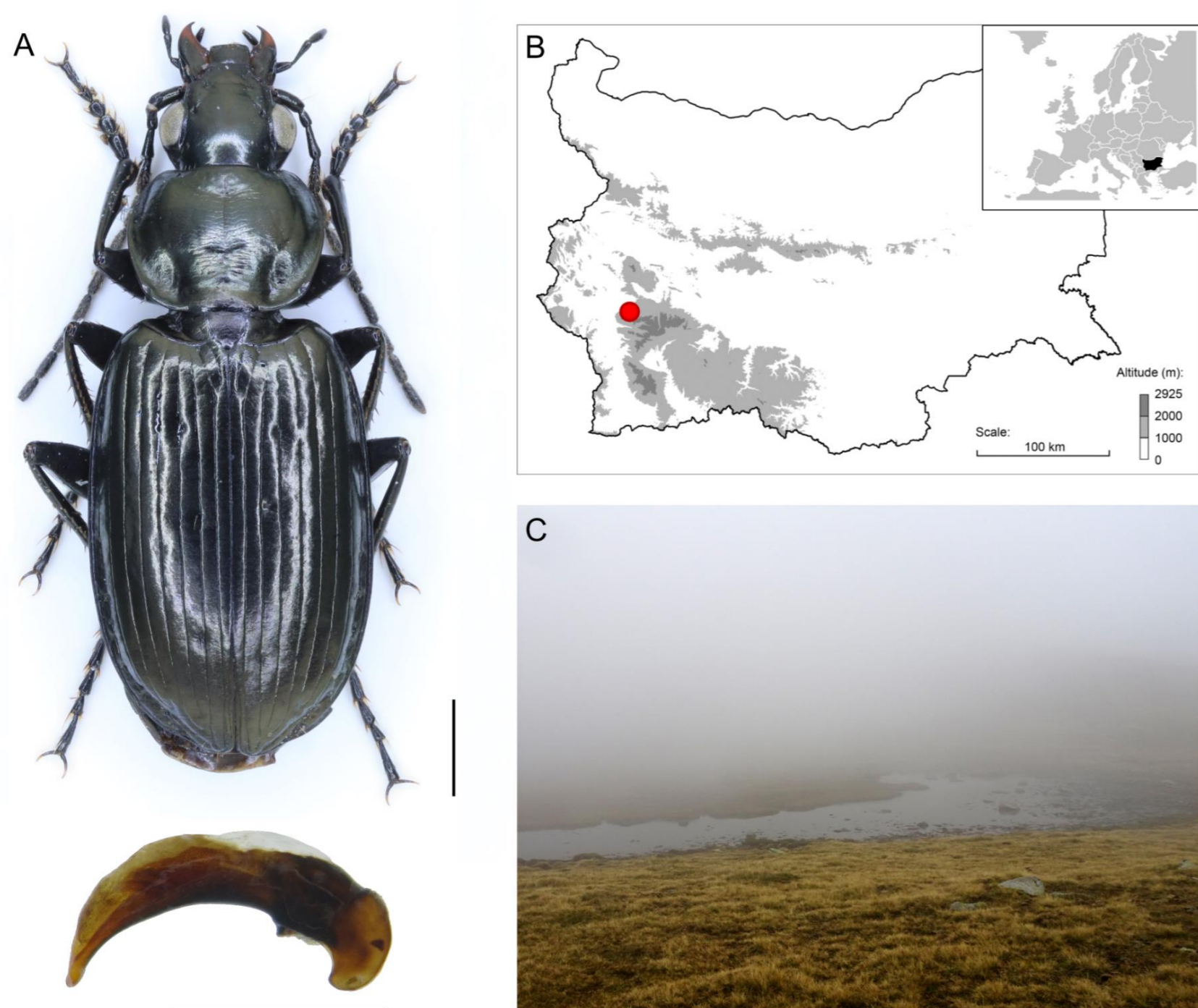
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INTRODUCTION & AIM

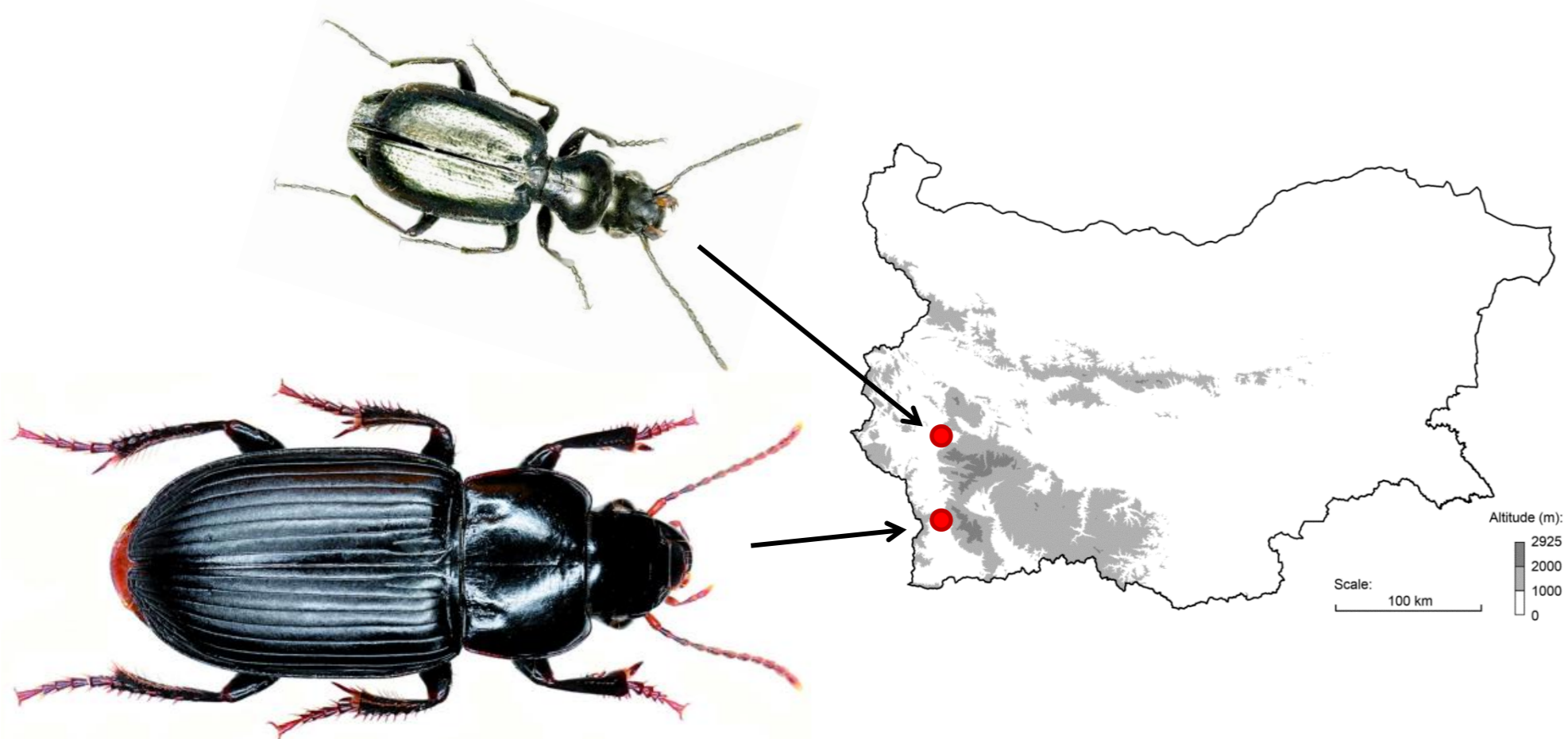
Bulgaria and the Balkan Peninsula represent one of the world's 25 most important biodiversity hotspots. The fauna, flora and mycota in the country are very rich and interesting. Bulgarian ground beetles (Coleoptera: Carabidae) have been studied especially intensively by many native and foreign scientists. Here, we present three new species for the country.

METHOD

The data was obtained between 2001 and 2021, on several field trips. Beetles were collected by hand.



Habitus, shape of the aedeagus, location and habitat of *A. carbonarium*



Habitus and locations of *L. fleischeri* (above) and *H. fuscipalpis* (down)

CONCLUSION

Many regions in Bulgaria are not well studied in relation to their carabid fauna, and the knowledge about the spreading of many species is not complete, as well. The study contributes by adding three species to the Bulgarian carabid fauna.

RESULTS & DISCUSSION

⚠ *Agonum carbonarium* Dejean, 1828 is a hygrophilous beetle with very disjunct populations dwelling bog-like habitats in the high-mountain belts. It inhabits a vast areal ranging from the Pyrenees over the mountains of Europe and the Caucasus to the Far East of Russia. It is a polytypic species with four subspecies. Populations of *A. carbonarium* from the Balkan Peninsula are with still unclear taxonomic status, mostly due to the lack of material. This species has wide pronotum and fovea-like setiferous pores on the 3rd elytral interval, and it cannot be mistaken with any other *Agonum* known in Bulgaria.

In September 2021, one male (presented at the figure) and six female specimens of *A. carbonarium* were collected on alpine meadows in the Rilski Manastir Natural Park, between Ivan Vazov Hut and Rila Monastery, at 2450 m.

⚠ *Lionychus fleischeri* Reitter, 1908 has a limited distribution in just few territories in Europe, where it is represented by three subspecies. The discovery of *L. fleischeri* in Bulgaria rises questions about its taxonomical belonging. Most probably it belongs to the ssp. *fleischeri*, but it is possible that it actually represents a separate form. The species differs from *Lionychus quadrillum* (which is widely distributed in Bulgaria and Europe) by the absence of spots on the elytra – they are unicoloured, black, glossy, with green metallic sheen, and by the hind angles of the pronotum which are without distinct denticles.

In July 2001, two specimens were collected in the Struma River valley between Bosnek vill. and Chuypetlovo vill., at about 1000–1250 m.

⚠ *Harpalus fuscipalpis* Sturm, 1818 has a wide distribution, from central Europe to China, and is also found in the Nearctic region. It has been considered a synonym of *H. fuscicornis* Sturm, 1818, but there are proven differences in their morphology and aedeagus, confirming their separation.

In May 2002, four specimens were collected in the Struma River valley, 7 km of Simitli, 12 km of Kresna, at about 300 m.