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The Nearctic species *Margarinotus (Ptomister) immunis* (Erichson, 1834) discovered in Slovakia (Coleoptera: Histeridae)

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The species *Margarinotus (Ptomister) immunis* (Fig. 1) was described by Erichson in 1834 as *Hister immunis*. Erichson (1834: 143) stated its type locality as “Nordamerika” and this species has been always treated exclusively as an element of the Nearctic fauna (see e.g. Mazur 1997, Bousquet & Laplante 2006 or Mazur 2011). Bousquet & Laplante (2006: 317) state that it inhabits eastern North America from Prince Edward Island and Nova Scotia to the Ontario Peninsula, southern Manitoba, and Saskatchewan, south to Florida and that the provincial record of British Columbia given by Davies (1991: 139) is likely erroneous. According to Bousquet & Laplante (2006: 317) the species *M. (P.) immunis* is normally found in forest litter and on carrion.

During a recent survey of Slovakian localities conducted by our colleague prof. Oto Majzlan, this species was discovered in central Slovakia (Fig. 7). Exact collecting data are: 1 male, Slovakia, Rokoš natural preserve near Nitrianske Rudno, Biele Skaly, 10.vii.2008, lgt. O. Majzlan; in coll. T. Lackner. The Rokoš natural preserve has been included in Natura 2000, which is an ecological network of protected areas in the territory of the European Union, because of its well-preserved fauna and flora. It is covered mostly by deciduous forests, with open xerothermic slopes as well as dark, colder valleys and ravines. Based on personal communication with O. Majzlan, the Slovakian specimen was found in a Malaise trap on a xerothermic slope called “Biele Skaly” (Fig. 8). The occurrence of this exclusively Nearctic species in central Slovakia is rather surprising. It is very likely that the species has been introduced, and apparently this introduction has been a successful one. New species to Slovakia and to the entire Palaearctic Region.

Among the Central European species of the subgenus *Ptomister* Houlbert & Monnot, 1922, of the genus *Margarinotus* Marseul, 1853 the species *M. (P.) immunis* closely resembles *Margarinotus (Ptomister) merdarius* (Hoffmann, 1803), which occurs in the Palaearctic as well as Nearctic Regions (see e.g. Mazur 2011 for details). Both *M. (P.) merdarius* and *M. (P.) immunis* are similar by the configuration of the two lateral pronotal striae, but the inner pronotal stria of *M. (P.) merdarius* is distinctly bisinuate, while in *M. (P.) immunis* the striae are sub-parallel, furthermore, the posterior half of the striae are heavily punctate in *M. (P.) merdarius* (Fig. 3) while in *M. (P.) immunis* they are impunctate (Fig. 2). The median lobes of the aedeagi of the two species are likewise very different between the two species (compare Figs. 5 and 6); see also Key to the members of the subgenus *Ptomister* Houlbert & Monnot, 1922 of the genus *Margarinotus* Marseul, 1853 for details (below).

According to Kryzhanovskij & Reichardt (1976) *M. (P.) merdarius* has been introduced into Canada and the United States and subsequently spread widely there. It is interesting to remark that *M. (P.) merdarius* is also normally found in forest litter, though it is less likely to be sampled on carrion. According to the literature data (see e.g. Kryzhanovskij & Reichardt 1976: 347) as well as personal observations by the senior author, *M. (P.) merdarius* lives in the moist substrate of hollow trees, especially oaks.

Key to species of the subgenus *Ptomister* Houlbert & Monnot, 1922 of the genus *Margarinotus* Marseul, 1853 known from Continental Europe

- 1 (2) Outer lateral pronotal stria shortened, reaching approximately mid-length of the pronotum posteriorly; elytra with three complete dorsal striae, fourth dorsal elytral stria reaching approximately to mid-length of the elytra anteriorly (Fig. 9)..... *Margarinotus (Ptomister) terricola* (Germar, 1824).

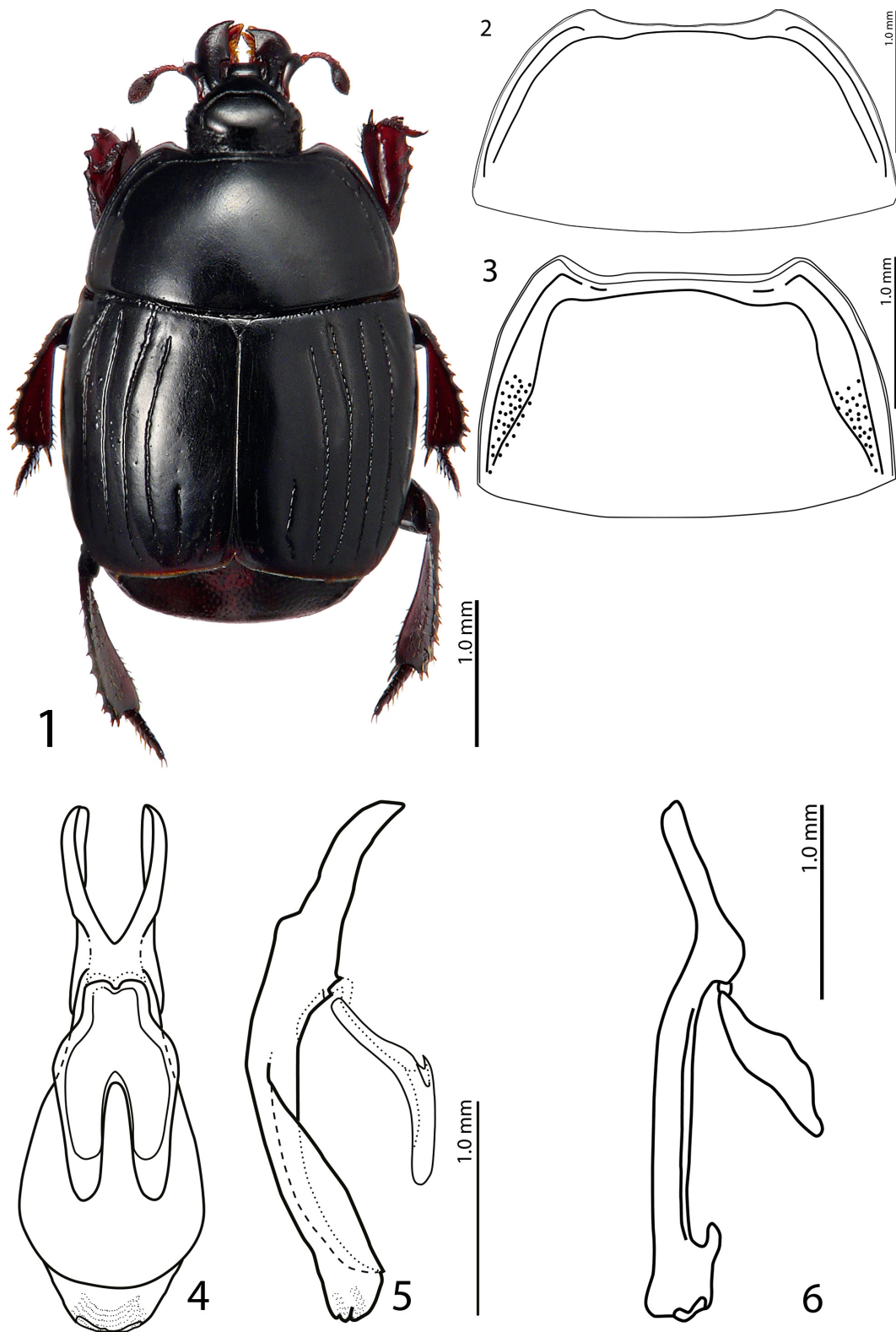
- 2 (1) Outer lateral pronotal stria approximately of the same length as inner lateral pronotal stria, both striae terminate approximately at 4/5 of the pronotal length posteriorly (Fig. 1); fourth dorsal elytral stria usually complete, can be interrupted occasionally.
- 3 (6) Fifth dorsal elytral stria with an apical short appendix or a small fovea (Fig. 11).
- 4 (5) Propygidium and pygidium covered with very dense small punctures, separated by their own or less than their diameter, larger, elongate species, 4.50-7.00 mm (Fig. 10)..... *Margarinotus (Ptomister) brunneus* (Fabricius, 1775).
- 5 (4) Propygidium and pygidium covered with large and coarse punctures separated by about twice their own diameter, smaller, more round species, 3.70-5.00 mm (Fig. 11)..... *Margarinotus (Ptomister) distinctus* (Erichson, 1834).
- 6 (3) Fifth dorsal elytral stria present only on apical half or less of the elytron, without short basal appendix or fovea (Fig. 1).
- 7 (8) Outer subhumeral stria reaching to the elytral base, apical protibial tooth much larger than the remaining ones, margin between the apical and pre-apical tooth deeply sinuate *Margarinotus (Ptomister) integer* (Brisout de Barneville, 1866).
- 8 (7) Outer subhumeral stria abbreviated basally, not reaching to the elytral base, all protibial teeth equal in size, uniformly distributed
- 9 (10) Propygidium and pygidium with dense small punctures separated by less than their diameter; bases of third and fourth dorsal elytral striae with distinct, albeit shallow depression (Fig. 12) *Margarinotus (Ptomister) striola* ssp. *succicola* (Thomson, 1862).
- 10 (9) Propygidium and pygidium with more sparse punctures separated by more than their diameter; bases of third and fourth dorsal elytral striae without depression (Fig. 1).
- 11 (12) Lateral pronotal striae approximate apically, inner lateral stria distinctly bisinuate, apical half of striae with distinct punctures (Figs. 3, 13); median lobe of the aedeagus Fig. 6..... *Margarinotus (Ptomister) merdarius* (Hoffmann, 1803).
- 12 (11) Lateral pronotal striae almost sub-parallel, only slightly approximate apically, inner lateral stria not bisinuate (Figs. 1, 2); median lobe of the aedeagus Fig. 5..... *Margarinotus (Ptomister) immunis* (Erichson, 1834).

Acknowledgements

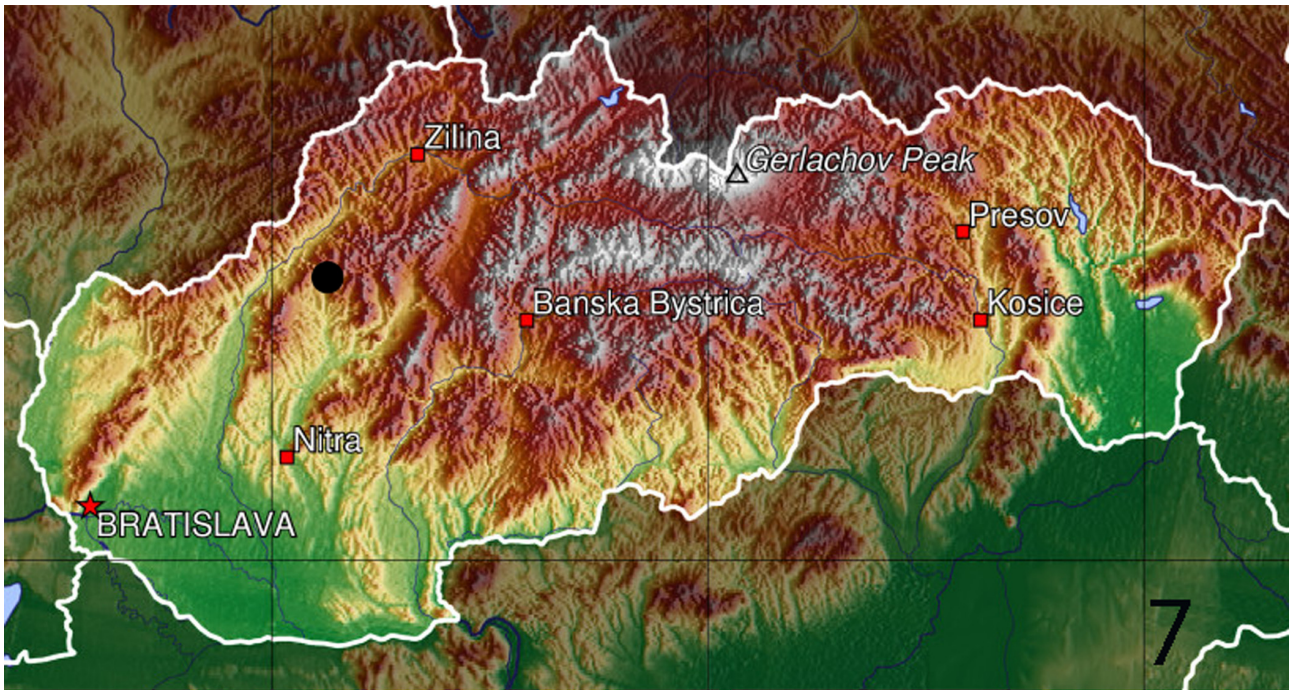
We thank prof. O. Majzlán (Bratislava, Slovakia) for the entrusted specimen and photo of the locality and F. Slamka (Bratislava, Slovakia) for the color images of all species. Special thanks to Y. Bousquet & S. Laplante (Montreal, Canada) for their permission to use the figures of the median lobe of *M. (P.) immunis* as well the wife of the senior author Pepina Artimová for the re-tracing the drawings used in this work with Adobe Illustrator. One reviewer and the editor for Histeroidea at Zootaxa are thanked for their critical remarks and input that resulted in a better work.

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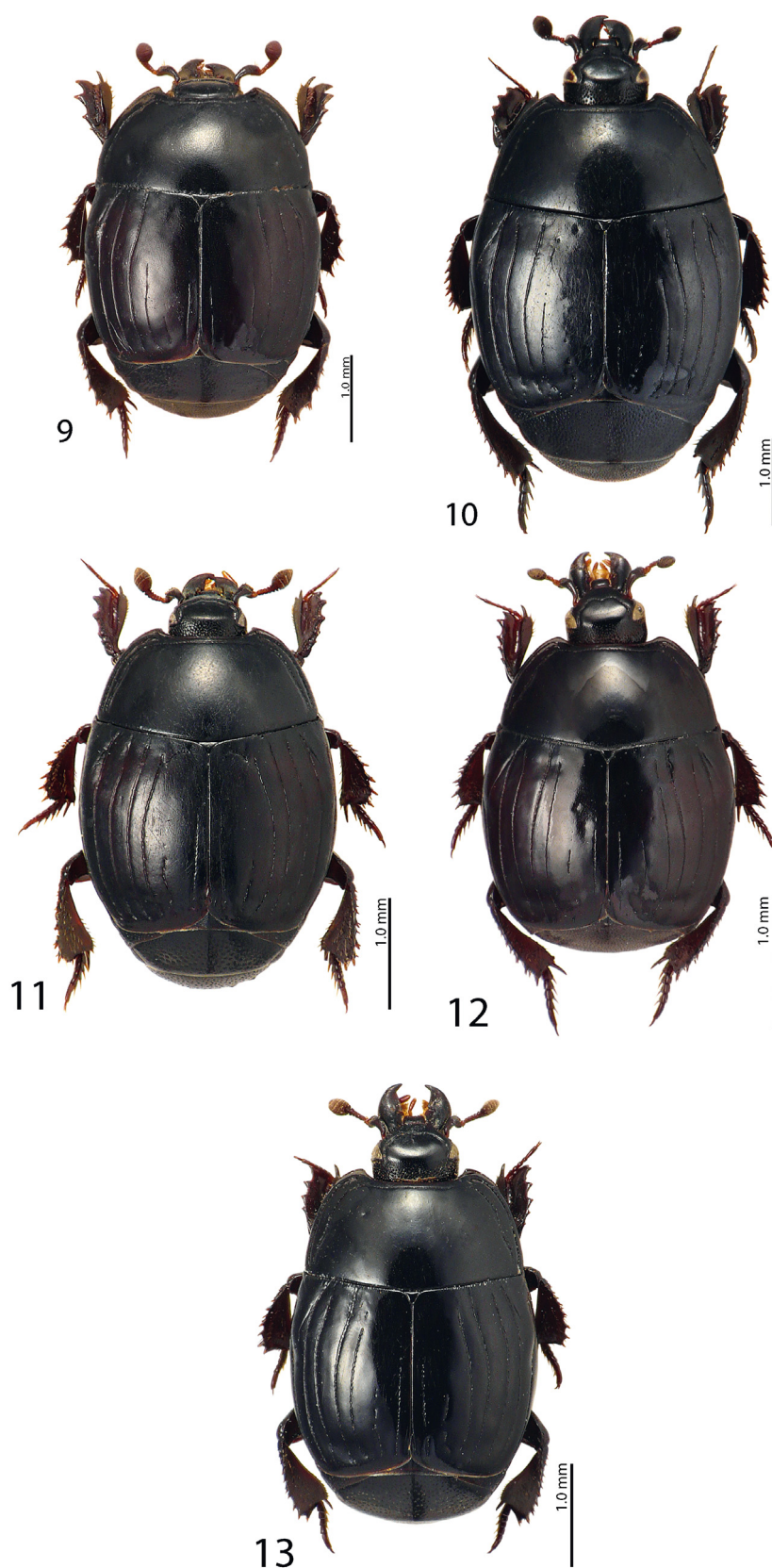
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FIGURES 1–6. Habitus and details of *Margarinotus* species. (1) *Margarinotus* (*Ptomister*) *immunis* (Erichson, 1834), habitus dorsal view; (2) *Margarinotus* (*Ptomister*) *immunis* (Erichson, 1834), configuration of the two lateral pronotal striae; (3) *Margarinotus* (*Ptomister*) *merdarius* (Hoffmann, 1803), ditto; (4) *Margarinotus* (*Ptomister*) *immunis* (Erichson, 1834), median lobe of the aedeagus, dorsal view (redrawn from Bousquet & Laplante, 1999); (5) Ditto, lateral view (redrawn from Bousquet & Laplante, 1999); (6) *Margarinotus* (*Ptomister*) *merdarius* (Hoffmann, 1803), median lobe of the aedeagus, lateral view (redrawn from Kryzhanovskij & Reichardt, 1976).



FIGURES 7–8. Distribution and habitat of *M. (P.) immunis* in Slovakia. (7) Occurrence of *M. (P.) immunis* in Slovakia; (8) Habitat at the locality “Biele Skaly” in Slovakia, where *M. (P.) immunis* was collected (photo by O. Majzlan).



FIGURES 9–13. Dorsal habitus images of *Margarinotus* species. (9) *M. (P.) terricola* (Germar, 1824); (10) *Margarinotus (Ptomister) brunneus* (Fabricius, 1775), (11) *Margarinotus (Ptomister) distinctus* (Erichson, 1834); (12) *Margarinotus (Ptomister) striola* ssp. *succicola* (Thomson, 1862); (13) *Margarinotus (Ptomister) merdarius* (Hoffmann, 1803).