

Short communication

**Genus *Trichis* (Coleoptera: Carabidae) and its new
synonymies in Iran**
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جنس *Trichis* (Coleoptera: Carabidae) و مترادف‌های جدید آن در ایران
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چکیده

در این مقاله گونه‌های *T. iranica* Mandl, 1973 و *Trichis petrovitzi* Mandl, 1973 به عنوان مترادف گونه *T. maculata* Klug, 1832 معرفی می‌شوند.

واژگان کلیدی: *Carabidae*, *Trichis*, ایران و مترادف.

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Trichis petrovitzi Mandl, 1973 and *T. iranica* Mandl, 1973 are tentatively recognized as junior synonyms for *T. maculata* (Anichtchenko *et al.*, 2017).

We studied syntypes of *Trichis maculata*, and the holotypes of *T. petrovitzi* and *T. iranica*. *Trichis petrovitzi* had been described based on a female which is housed in Basel with the label read "Ahwaz Khuzestan/ leg. Petrovitz// Holotype Trichis petrovitzi Mandl (red label)// Holotype Trichis petrovitzi (handwritten)// Holotype Trichis petrovitzi (typed)// Trichis maculata det. Morvan 1975 (handwritten)."

The description of *Trichis iranica* was also based on a single female, preserved in Basel with the following labels: Badar Abass Süd-Iran/ leg. Petrovitz// Holotype Trichis iranica Mandl (red label)// Holotype Trichis iranica (handwritten)// Holotype Trichis iranica (typed)// Trichis maculata Klug det. Morvan 1975 (handwritten).

The syntype of *Trichis maculata* is the only available specimen of this species in Berlin (pers. comm. B. Jäger). According to the labels pinned to the specimens of *T. petrovitzi* and *T. iranica*, Morvan had concluded that these species were synonyms of *T. maculata* but he had not published the synonymy.

We studied as many as 149 specimens of *Trichis maculata* from several places along the Iranian coast of the Persian Gulf labelled as: Busher, Khalij-e Nayband/ 27.XI.1998, Ghayourfar, Barari & Mofidi leg.; Baluchistan, Zahedan/ 2.VI.1977// Safahi, Pazuki & Abai leg.; Hormozgan, Rud-e Kol riv./ 25.III.2007// Muilwijk leg.,/ Khuzestan, Ahvaz/

V.2003// Shafiei leg.; Fars, Bakhtegan/ 7.VII.1970// Czechoslovak-Iranian entomological expedition. In order to study the genital characters, we compared the aedeagi of ten males of *T. maculata* and found no differences among them, although different colourations in the pattern of the elytral spots and body pubescence were observed.

Mandl (1973) mentioned the differences of *Trichis petrovitzi* (figure 1) with *T. maculata*, but provided no collecting data of associate specimens. The heads were black and brown in *T. maculata* and *T. petrovitzi* respectively. In the drawings by Klug (1832), the colour of the head is brown. The elytra of *T. maculata* and *T. petrovitzi* had black-brown patterns. Either species has a spot near the scutellum, a band just before the apex and also a middle band. The middle band is interrupted by the yellow background colour of elytra in *T. maculata*, while it is continuous in *T. petrovitzi*. Bedel (1907) described variations in the pattern of the middle band. Considering some differential characters such as the width of the head and the length of the antennae mentioned by Mandl (1973), *T. petrovitzi* has a narrower head, and shorter antennae.



Fig. 1. *Trichis petrovitzi*, holotype

Trichis iranica (figure 2) was briefly described by Mandl (1973) who compared *T. iranica* only with *T. petrovitzi*. The colour of the head which is dark in *T. iranica* and brown in *T. petrovitzi*. *T. iranica* differs with *T. maculata* in the pattern of elytral spots. However, these differences seem to be the intraspecific variations of *T. maculata*. We follow Morvan's treatments of the synonymy of *T. petrovitzi* and *T. iranica* and consider them as subjective synonyms for *T. maculata*.



Fig. 2. *Trichis iranica*, holotype, scale bar = 2mm.

***Trichis pallida* Klug 1832**

Head and pronotum brownish, elytra pale yellow with 2 preapical dark zig-zag bands, pronotum slightly cordiform, lateral margin with one seta (*T. maculata* 4–5); hind angles of the pronotum weakly sharpened; elytra with parallel sides. Among the collected material of the Czechoslovak-Iranian entomological expeditions, three specimens of *T. pallida* Klug 1832 (figure 3) were found. These specimens are labelled Bushehr, Ziarat// 23 km. NWN Sila/ 14–15.V.1977// Exped. Nat. Mus. Praha and Baluchistan, Tis/ 6–7.IV.1973// Exped. Nat. Mus. Praha.

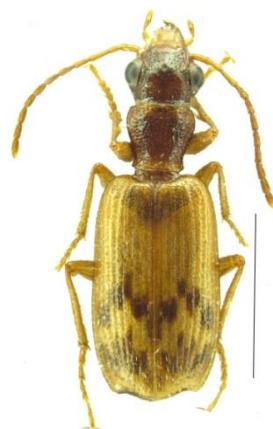


Fig. 3. *Trichis pallida* (Ziarat), scale bar = 2mm.

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References

- Anichtchenko A. et al.** (Eds.) (2017) Carabidae of the World. Available from: <http://www.Carabidae.org> (accessed 16 Februari 2017).
- Bedel L.** (1907) Catalogue raisonné des Coléoptères du nord de l'Afrique. Paris: Société Entomologique de France. 402 pp.
- Azadbakhsh, S. & Nozari, J.** (2015) Checklist of the Iranian Ground Beetles (Coleoptera; Carabidae). Zootaxa 4024 (1), 1–108.
- Löbl, I. & Smetana, A.** (Eds.) (2003) Catalogue of Palaearctic Coleoptera. Volume 1. Archostemata - Myxophaga - Adephaga. 819 pp. Stenstrup: Apollo Books.

- Klug, J. C. F.** (1832) Decas tertia; Sheets a-f, pl. xxi–xxx In: *Symbolae Physicae, seu icones et descriptiones insectorum, quae ex itinere per Africam borealem et Asiam occidentalem Friderici Guilelmi Hemprich et Christiani Godofredi Ehrenberg studio novae aut illustratae redierunt*. Berlin: Mittler, 42 unn. Sheets + 50 pl.
- Mandl, K.** (1973) Bausteine zur Kenntnis der Familie Carabidae (Col.). *Entomologische Arbeiten aus dem Museum G. Frey* (24), 88–100.