

Results of the Czechoslovak - Iranian entomological expeditions to Iran with a new species of *Enicmus* (Coleoptera: Latridiidae)

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Abstract. *Enicmus gorganicus* sp. nov. is described and illustrated. The new species is a member of the *E. rugosus* group. Records on distribution of 14 species of Latridiidae are presented including first records from Iran for the following species are provided: *Cartodere (Aridius) nodifer* (Westwood 1839), *Corticaria quadrimaculata* Mannerheim, 1844 and *Melanophthalma distinguenda* (Comolli, 1837).

INTRODUCTION

Faunistic data on the family Latridiidae from Iran have been reported sporadically in the past (Johnson 1977, 1986, Otto 1978, Růcker 2006, Růcker & Johnson 2007, Ardeshir 2012, Nasserzadeh et al. 2015, Saluk 2015). A more complete overview of the number of species of this family was given by Palaearctic Coleoptera (Johnson et al. 2007) and Růcker (2020), but without precise data. The exact status is given only in the Checklist of Latridiidae of Iran by Otero & Ghahari (2017), which lists a total of 34 species from 9 genera of the Latridiidae from Iran. Since then, this number continues to be supplemented thanks to Růcker (2018, 2021), Farashiani et al. (2022), and also this paper will contribute to the knowledge of the Latridiids of Iran. Data on other species of the Latridiidae family can be expected in Iran in the near future, either new or other known species from the surrounding destinations of the Caucasus, Turkey, Afghanistan.

MATERIAL AND METHODS

In the present paper a list of material of the family Latridiidae, collected during the three Czechoslovak-Iranian entomological expedition to Iran in 1970, 1973 and 1977 of the Department of Entomology of the National Muzeum in Prague is provided. The basic data about the expeditions, including detailed description of collecting localities, collection methods, maps and photos can be seen in Hoberlandt (1974, 1981, 1983). Results of this expedition are supplemented by data from material deposited in the National Museum Prague (NMPC) and from the collection of the author (PM).

Author of drawings: Figs. 1-5 and photo P. Míka, Prague, 6-8 W. H. Růcker, Neuwied.

TAXONOMY

Enicmus gorganicus sp. nov.

(Figs. 1-5)

Type material. Holotype (♂): Iran bor., Mazandaran Province, 36°42'N, 54°37'E, Robate-Ghozlog, 10 km S of Gorgan, 500 m, 26.VII.1970, (Loc.n. 74), (NMPC). Paratypes: (1 ♂): same data as holotype, (NMPC); (1 ♂): Iran bor., Gilan Province, Western Alborz Range, Navis Valley, 500 m, 10.VIII.1973, leg. S. Vit, (PM), labelled: „hollow trunk of Fagus“.

Description. Body length 1.75-1.85 mm, almost the entire beetle except the edges of the elytra black with a purple-brown tinge. Legs and antennae orange-brown. Habitus (Fig. 1).

Head. Transverse, wider than long (1:0.7), anterior concave, width 0.35-0.38, length 0.23-0.27 mm. Eyes large, black, bulging and finely faceted, longitudinal eye diameter 0.11-0.13 mm. Temples clear, 1/4 of the diameter of the eye long, 0.025-0.029 mm, behind eyes very lightly convex to posterior margin of head. The entire surface between the eyes regularly strongly and coarsely punctate, towards the front the surface is smoother and the punctures smaller, the entire head almost black with a slight purple-brown tinge, matte glossy, without setae.

Antennae. With eleven segments, antennal club 3-segmented, light orange-brown, length 0.48-0.52 mm.

Pronotum. Width 0.33-0.40, length 0.47-0.56 mm, transverse, wider than long (1:0.7), the widest in the middle, from where the sides converge more rounded anteriorly, slightly narrower posteriorly. Pronotal base convex, descending to the flat side margins, the sides rounded, evenly very finely serrated. Pronotum in the middle with a smaller circular depression, before the posterior margin with a well developed transverse depression, bounded in front of the posterior corners by deep circular punctures. Hind angles of pronotum moderately toothed. The surface of the pronotum is like the head entirely coarsely and strongly punctured, space between punctures matte glossy, without setae. Base almost black, front, back and wider side edges slightly purple-brown.

Elytra. Width in the middle 0.73-0.82, length 1.02-1.16, width/length ratio 1: 1.4. Oval shape, widest at the middle and almost parallel, regularly rounded tapered towards apex. Elytra strongly convex, around the entire perimeter with a thin flat margin, punctured in rows, punctures fine, shallow, interstitials almost flat, punctures with very fine, short, setae. Elytra like head and pronotum black with a slight purple-brown tinge, matte glossy. Humeri and thin margins slightly purple-brown.

Legs. Color of legs is the same as color of antennae, light orange-brown.

Ventral side. Color of underside darker orange-brown, turning darker brown or purple in places. Underside finely micro sculptured. First ventrite with almost direct, distinct coxal lines reaching approximately two thirds of length of ventrite.

Aedeagus. Total length including fibula 0.90-1.012 mm, penis length 0.36-0.40 mm (Figs. 2-3). Large, asymmetrical, in ventral view narrowed regularly and on last third more bevelled to apex, that terminated by a spherically rounded point. Divided along the entire length approximately in the middle by a longitudinal keel, in front of narrowed apex on the

right side with a distinctive orifice. Laterally bent to an obtuse angle, similar to aedeagus of *E. rugosus* Herbst and *E. barimani* Rucker (Figs. 6-8).

Sexual dimorphism. All tibiae of males with a small pointed tooth at the distal end, as with other species of the *Enicmus rugosus* group. Female unknown. Tibiae of females of other species *Enicmus rugosus* group without tooth.



Fig. 1. Dorsal habitus of *Enicmus gorganicus* sp. nov. (male holotype).

Figs. 2-3. Detailed photo of *Enicmus gorganicus* sp. nov. (male holotype): 2- aedeagus ventral; 3- aedeagus lateral.

Figs. 4-5. Details of *Enicmus gorganicus* sp. nov. (male holotype): 4- aedeagus ventral; 5- aedeagus lateral. Scale bars = 0.5 mm.

Figs. 6-8. Details of *Enicmus* species: *E. barimani* Rucker, 2018: 6- aedeagus lateral; 7- aedeagus ventral; *E. rugosus* (Herbst, 1793): 8- aedeagus lateral. Scale bars = 0.5 mm. (according to Rucker (2018)).



Differential diagnosis. The shapes, dimensions and colors in the description are almost the same as in *Enicmus barimani* Rucker, 2018 recently described also from northern Iran, and in larger and darker specimens of *Enicmus rugosus* Herbst, also known from Iran (Johnson 2007, Fernandez 2014, Otero & Ghahari, 2017). This is the most common species of this group, widespread throughout the Palearctic. It occasionally occurs in large numbers, and there is variability in the size and color of some specimens (Rucker 2018). Therefore the most demonstrable approach for safe determination is to compare the shape of the aedeagus. The aedeagus of *Enicmus gorganicus* sp. nov. can be distinguished from the two nearest species by longitudinal keel, asymmetric apical hole and spherically rounded apex.

Distribution. This species is known only from the type localities. The finding of one paratype from the province of Gilan indicates that *E. gorganicus* sp. nov. likely inhabits the entire area of the Alborz Mountains.

Bionomy and ecology. All three specimens *Enicmus gorganicus* sp. nov. were found in lower lying wooded localities, the paratype from the province of Gilan in a hollow tree. Like related species from the *E. rugosus* group, the new *E. gorganicus* sp. nov. lives in a forest biotope. It is very likely that the way of life is identical with these two species and the beetles inhabit slime and dust mushrooms (*Lycoperdaceae*, *Myxomycetes*), on tree fungi (*Polyporaceae*) (Hinton 1945, Otero & Ghahari 2017, Rucker 2018, and also on mildewed drying parts of trees and plants. Native vegetation in the valley of a small river with stony banks; includes *Parrotia persica*, *Ulmus scabra*, *Pterocarya fraxinifolia*, *Vitis venifera*, *Ruscus hyrcanus* and *Hedera pastuchowii*.

Etymology. A new species named after the region Gorgan, in which the types were collected.

FAUNISTIC

Subfamily Latridiinae Erichson, 1842

***Cartodere (Aridius) nodifer* (Westwood 1839).** Iran.bor., Tehran Province, 32°32'N, 50°20'E, Reshtehe Kuhhaye Alborz (Elburz Mountains West), Rudbarak, Plain of the Kalardasht, Alam Kuh massif, 1500 m, 12.VII.1970 (Loc.n. 91), 1 ♂, (NMPC).

Distribution. This species is common in the Palearctic Region including Northern Africa, and the Oriental and Nearctic Regions. It is considered cosmopolitan (Johnson 2007, Rucker 2020). New to Iran.

***Enicmus histrio* Joy & Tomlin, 1910.** Iran.bor., Tehran Province, Reshtehe Kuhhaye Alborz (Elburz Mountains East), Eyn Varzan, 2000 m, 2.-3.VIII.1970 (Loc.n. 83), 1 ♀, (NMPC); Iran.bor., Tehran Province, 32°32'N, 50°20'E, Reshtehe Kuhhaye Alborz (Elburz Mountains West), Rudbarak, Plain of the Kalardasht, Alam Kuh massif, 1500 m, 12.VIII.1970 (Loc.n. 91), 1 ♀, (NMPC).

Distribution. This species is common in the Palearctic, Oriental and Australian Regions (Johnson 2007, Rücker 2020), in major parts of Europe east to Azerbaijan, Afghanistan (Johnson 1977) and Iran (Otero & Ghahari 2017).

***Enicmus testaceus* (Stephens, 1830).** Iran.bor., Mazandaran Province, 37°22'N, 55°51'E, 20 km NW Dash Golestan Forest - Mazarli, 530 m, 19.-21.VI.1977 (Loc.n. 376), 1 ex., (NMPC); Iran.bor., Mazandaran Province, 36°42'N, 54°37'E, Robate-Ghozlog, 10 km S of Gorgan, 500 m, 26.VII.1970, (Loc.n. 74), 1 ex., (NMPC).

Distribution. This species is known from Europe, North Africa and the Canary Islands, Turkey (Tüven & Varli 2024) and Iran (Johnson 2007; Rücker 2018, 2021, Farashiani et al. 2022).

***Latridius perminutus* Johnson, 1977.** Iran.bor., Tehran Province, 36°01'N, 51°28'E, Reshtehe Kuhhaye Alborz (Elburz Mountains Central), valley of the stream Darband Sar, 2000-2500 m, 15.VII.1970 (Loc.n. 57), 1 ♂, (NMPC); Iran.bor., Talysh mts., Elborz mts. env., („Transcaucasus, Talysh Geb.“), 1 ♂, 1 ♀, leg. Leder, Reitter, (NMP).

Distribution. This species is known from Afghanistan, Azerbaijan, Turkey and Iran (Johnson 1977, 2007, Ardeshir, 2012, Nassarzadeh et al., 2015, Otero. & Ghahari 2017).

Subfamily *Corticariinae* Curtis, 1829

***Corticaria elongata* (Gyllenhal, 1827).** Iran.bor., Mazandaran Province, 35°56'N, 52°08'E, Reshtehe Kuhhaye Alborz (Elburz Mountains Central), Damavand, 3000-3500 m, 22.VII.1970 (Loc.n.66), 1 ex., (NMPC); Iran.bor., Mazandaran Province, 36°44'N, 51°08'E, Abbas-abad, costal area of Caspian Sea, 11.VIII.1970 (Loc.n. 88), 1 ex. (NMPC). Iran.bor., Tehran Province, 32°32'N, 50°20'E, Reshtehe Kuhhaye Alborz (Elburz Mountains West), Rudbarak, Plain of the Kalardasht, Alam Kuh massif, 1500 m, 12.VIII.1970 (Loc.n. 91), 1 ex. (NMPC); Iran mer.or., Baluchestan Province, 25°44'N, 61°32'E, 68 km S of Rask, Bahu-Kalat, 3.-4.IV.1973 (Loc.n. 147), 1 ex. (NMPC).

Distribution. This species is known from North Africa, Afrotropical and Oriental Regions; Europe: Azerbaijan, Asia: Mongolia, Nepal, Pakistan, Siberia, Saudi Arabia, Turkey (Johnson 2007, Rücker 2020) and Iran (Samin et al. 2015, Otero & Ghahari 2017).

***Corticaria fulva* (Comolli, 1837).** Iran.bor., Tehran Province, 36°01'N, 51°28'E, Reshtehe Kuhhaye Alborz (Elburz Mountains Central), valley Darband Sar, 2000-2500 m, 15.VII.1970 (Loc.n. 57), 1 ♀, (NMPC).

Distribution. This species is known from Europe, Afghanistan, the Canary Islands, Iraq, Kazakhstan, Madeira, Morocco, Tajikistan, Tunisia, Turkey (Johnson 2007, Rücker 2020) and Iran (Otero & Ghahari 2017).

***Corticaria quadrimaculata* Mannerheim, 1844.** Iran.bor., Mazandaran Province, 35°56'N, 52°08'E, Reshtehe Kuhhayeh Alborz (Elburz Mountains Central), Damavand, 3000-3500 m, 22.VII.1970 (Loc.n.66), 4 ex., (NMPC); Iran.bor., Mazandaran Province, 35°16'N, 52°08'E, Reshtehe Kuhhayeh Alborz (Elburz Mountains Central), Damavand, Lajran (Ab-Garm), 2400 m, 23.VII.1970 (Loc.n.68), 2 ex., (NMPC).

Distribution. This species is known from Armenia, Azerbaijan, Georgia, Russia (Caucasus), Ukraine; Turkmenistan, and Uzbekistan (Johnson 2007, Rucker 2020). New to Iran.

***Corticaria subpilosula* Reitter, 1898.** Iran.bor.or., North Khorasan Province, Kopet Dag Mts., Siaret (= Ziarat), 1160 m, V.1899, Hauser leg., 3 ex. (PM); Iran.bor.or., North Khorasan Province, Ala-Dagh (= Shah Jahan Mts.), Budschnurd (= Bojnurd), 1033 m, VI.1902, Hauser leg., 3 ex., (PM).

Distribution. This species is known from Armenia, Afghanistan, Iran, Oman, Turkmenistan, and Uzbekistan (Johnson 2007, Otero & Ghahari 2017, Rucker 2020).

***Melanophthalma distinguenda* (Comolli, 1837).** Iran.bor.occ., Azarbaijan Gharbi Province, 38°38'N 44°46'E, 10 km NW Faruraq, 1660 m, 20.X.1998, P. Chvojka leg., 2 ♂♂, (NMPC).

Distribution. This species is known from Europe, Madeira; Iraq, Turkey and the Nearctic Region (Johnson 2007, Rucker 2020, Tüven & Varli 2024). New to Iran.

***Melanophthalma extensa* Rey, 1889.** Iran.bor., Mazandaran Province, 37°22'N, 55°51'E, 20 km NW Dash Golestan Forest - Mazarli, 530 m, 19.-21.VI.1977 (Loc.n. 376), 1 ♂, (NMPC); Iran.bor., Guilan Province, 37°53'N, 48°55'E, Sheykh Mahalleh (Assalem), 160 m, 28.VI.-3.VII.1977 (Loc.n. 390), 1 ♀, (NMPC).

Distribution. This species is known from Portugal, Spain, France, Italy, Greece, Ukraine, Turkey (Johnson 2007, Rucker 2020) and Iran (Rucker & Johnson 2007, Otero & Ghahari 2017).

***Melanophthalma sericea* (Mannerheim, 1844).** Iran.mer.or., Baluchestan Province, 26°08'N, 60°11'E, 13 km SSE of Nikshahr, valley of the river Nikshahr (Rudkanehr), 3.-4. IV.1973 (Loc.n. 152), 1 ♂, (NMPC).

Distribution. This species is known from Southern Europe to the Czech Republic (Moravia), Hungary, Ukraine; North Africa, Afghanistan, Lebanon, Turkey (Johnson 2007) and Iran (Johnson 1986, Otero & Ghahari 2017).

***Melanophthalma taurica* (Mannerheim, 1844).** Iran bor., Gitan Province, Rasht env., („Kaspi.M.Gebiet, Rasano“), leg. Leder, Reitter, 1 ♂, 1 ♀, (NMPC).

Distribution. Eastern Europe: Ukraine, Azerbaijan, South Russia, Caucasus, Asia: Turkey, Afghanistan, Iran, Tajikistan (Rücker & Johnson 2007).

***Migneauxia lederi* Reitter, 1875.** Iran mer., Hormozgan Province, 27°19'N, 56°17'E, Issin, 28.4.-6.V.1977 (Loc.n. 320), 3 ex., (NMPC); Iran mer., Baluchestan Province, Bampur, 17.-27.VIII.1996, M. Kafka leg., 2 ex., (PM).

Distribution. This cosmopolitan species is known from Europe: Denmark, Germany, Spain, Sweden, Switzerland, Hungary, the Czech Republic (Míka 2021), Northern Africa, Asia: Afghanistan, Iran, Japan and all other zoogeographical regions (Otero & Ghahari 2017, Rücker 2020).

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