

**A new species and a new record of *Neotrechus* from Albania
(Coleoptera: Carabidae: Trechinae)**

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Abstract. A new species of *Neotrechus* J. Müller, 1913 - *N. vonickai* sp. nov. from the Albanian Alps is described, illustrated and distinguished from similar species. New data on distribution of *Neotrechus suturalis pentheri* Winkler, 1926 from Albania are presented.

INTRODUCTION

The genus *Neotrechus* J. Müller, 1913 comprises 51 species and subspecies distributed in a quite narrow band along the Adriatic Coast from the Velebit Mts. in the north to the Albanian Alps in the south (Hlaváč et al. 2017). A first revision of the genus with a key to the species was published by Winkler (1926). A detailed redescription of *Neotrechus* with a comprehensive discussion of the origin and current distribution of the genus was presented by Jeannel (1928). Later Scheibel (1936) and Meschnigg (1937) published descriptions of additional species and subspecies of *Neotrechus*. Janák (2009) revised Croatian species and described a new species from Biokovo Mts. A catalogue of subterranean Balkanic Coleoptera including pictures of some *Neotrechus* was recently published (Hlaváč et al. 2017).

In the present paper, we present results of collecting trip undertaken by the second author to the Albanian Alps in 2012, with a description of a new species and a new record of an already described species.

MATERIAL AND METHODS

Dry-mounted specimens were studied under an MBS 10 binocular stereomicroscope. Microsculpture was observed at 56 × magnification. Habitus images were taken with a Canon EOS 700D in combination with a Canon MP-E65 1-5x macro lens. Resulting images were focus stacked using Zerene Stacker and then postprocessed in Paint.Net, Paint, XnView and Live Photogallery. Measurements were taken with the stereomicroscope using an ocular scale.

Locality labels for the material examined are cited in the original version and marked with quotation marks (“ ”).

The material examined is deposited in the following collections:
HMNH Hungarian Museum of Natural History, Budapest (Győző Szél);
JJRC coll. Jiří Janák, Rtyň nad Bílinou, Czech Republic;
LBVC coll. Lukáš Blažej, Varnsdorf, Czech Republic;
PMLC coll. Pavel Moravec, Litoměřice, Czech Republic;
PVLC coll. Pavel Vonička, Liberec, Czech Republic.

Abbreviations: HT- holotype, AL- mean length of both antennae, HW- greatest width of head, HL- greatest length of head measured from the base of neck to apices of clypeus, MTL- mean length of metatarsus (without claws), PW- greatest width of pronotum, PL- length of pronotum measured along the midline, PBW- greatest width of pronotum base, EW- greatest width of elytra, EL- length of elytra measured along the suture from deepest point of humeral angle to the elytral apex. Total body length was measured from apical margin of mandibles in closed position to apices of elytra. Length of antennomeres was measured as greatest length of each segment. For details and examples of measurement see Janák (2009) and Hürka et al. (1989).

TAXONOMY

Neotrechus vonickai sp. nov.

(Figs. 1-4, 7)

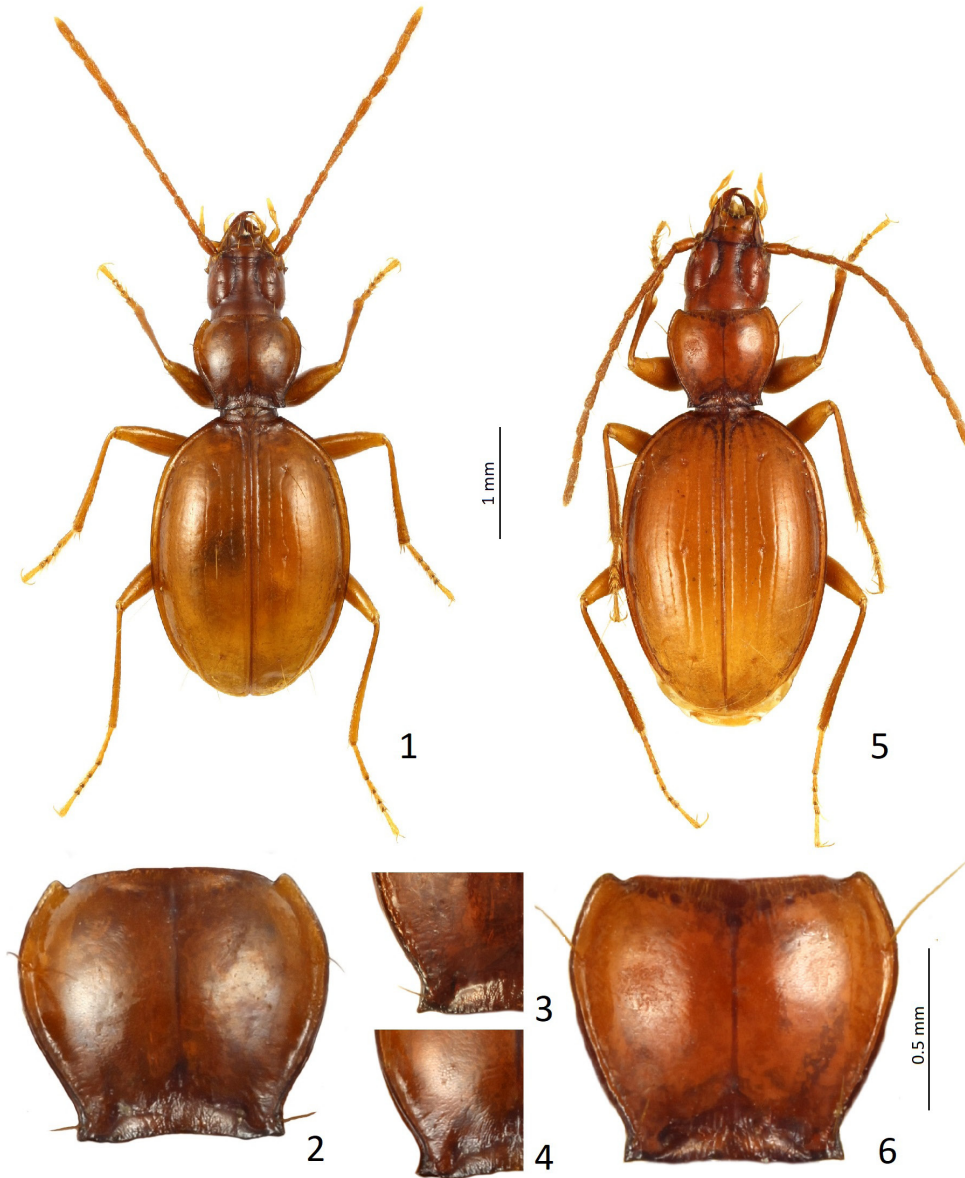
Type locality. Albania, North Albanian Alps, Nikç, about 42° 27' 42" N, 19° 42' 52" E.

Type material. Holotype (♀): "ALBANIA, North Alban. Alps, Nikç env., karstic spring area, 1700 m, 28.6.2012, P. Vonička lgt.", "HOLOTYPUS *Neotrechus vonickai* sp. nov. J. Janák & P. Moravec det. 2018" (PVLC). Paratypes: (1 ♀): same data as the holotype (JJRC); (1 ♀): same data as the holotype, but "P. Moravec lgt." (PMLC), both specimens with additional label: "PARATYPUS *Neotrechus vonickai* sp. nov. J. Janák & P. Moravec det. 2018".

Description. Total body length 4.80-4.90 mm (M = 4.85 mm, HT = 4.90 mm). Body short and broad (Fig. 1). Colour reddish, palpi and tarsi light yellow. Body glabrous, except for a few short setae on temples and in *Neotrechus* usual long setae. Head with distinct about isodiametric mesh, Pronotum with fine slightly transverse mesh. Elytra with very fine transverse waves.

Head (Fig. 1) narrow (HW/HL = 1.16-1.22, M = 1.19, HT = 1.20), markedly narrower than pronotum (PW/HW = 1.33-1.38, M = 1.35, HT = 1.38). Eyes completely absent. Frontal furrows complete, deep, uninterrupted. Temples at most very slightly convex, almost straight. Antennae very long and slender, slightly longer than elytra (AL/EL 1.04-1.07, M = 1.05, HT = 1.04). Mean ratios of antennomeres (HT) = 1.20 : 1.00 : 1.35 : 1.40 : 1.50 : 1.45 : 1.30 : 1.30 : 1.25 : 0.80 : 0.85.

Pronotum (Fig. 2) cordate, markedly convex and slightly transverse (PW/PL = 1.16-1.18, M = 1.17, HT = 1.16), markedly narrowed toward base (PW/PBW = 1.45-1.51, M = 1.49, HT = 1.51), lateral sides shortly and deeply sinuate before acute, slightly prominent posterior angles (Figs. 2-4). Middle furrow shallow, ending in large and deep basal impression. Basal impression near both posterior angles with short, very deep oblique furrow. Middle part of



Figs. 1-6. 1-4. *Neotrechus vonickai* sp. nov.; 1, 2- holotype; 3, 4- paratypes. 5, 6- *Neotrechus lonae* female. 1, 5- habitus; 2, 6- pronotum; 3, 4- left posterior angle of pronotum.

basal margin straight or slightly emarginate. Lateral gutter wide, widened in anterior third. Chaetotaxy of pronotum with anterior seta moved behind and situated in anterior third of pronotum; basal seta situated at about middle between narrowest part of pronotum and posterior angle.

Elytra broad, rounded (Fig. 1), markedly longer than wide (EL/EW 1.38-1.43, M = 1.41, HT = 1.41), about three times as long as pronotum (EL/PL 2.96-3.11, M = 3.03, HT = 2.96) and almost two times as wide as it (EW/PW 1.84-1.91, M = 1.88, HT = 1.84), markedly convex, slightly flattened along suture, basal and apical impressions shallow, shoulders slightly prominent. Lateral gutter wide, striae in humeral and middle part of elytra very shallow, finely punctured, starting on 4th stria punctures getting much finer, 7th and 8th stria almost indistinct. Interstriae flat. Apical stria near apical angle of each elytron deep, connected with 5th stria.

Chaetotaxy of elytra: first discal setiferous puncture situated in third stria or in connection with third and fourth striae at level of second puncture of anterior umbilicate series, second discal puncture in third stria before middle of elytra length, markedly before first puncture of middle umbilicate series. Praeapical puncture situated at junction of second and third striae. Anterior (posthumeral) umbilicate series with first, third and fourth puncture far from lateral gutter and second puncture at inner margin of lateral gutter, punctures not equidistant, fourth puncture moved behind. Distance between anterior and median umbilicate series about 1.5-1.7 times larger than length of anterior series.

Legs long and slender (Fig. 1). Metatarsus long and narrow (EL/MTL = 2.49-2.69, M = 2.57, HT = 2.69). First segment slightly longer than segments 2-4 combined. Protibia with setae on inner side and shallow almost indistinct groove on outer side.

Male unknown.

Differential diagnosis. *Neotrechus vonickai* sp. nov. belongs to group I according to Jeannel (1928) characterised by pubescent temples together with *Neotrechus dalmatinus* (L. Miller, 1861), *N. malissorum* (J. Müller, 1915), *N. suturalis* (Schaufuss, 1864) and *N. lonae* (J. Müller, 1915). The new species differs from all species of this group by its very short, markedly convex elytra and by very shallow striae in humeral and outer part of elytra.

Etymology. The new species is dedicated to our friend and colleague, Pavel Vonička, entomologist and zoologist, who collected some type specimens.

Bionomics. The new species was collected under stones embedded in clay soil on banks of a karst spring running out from a limestone wall above the village Nikç at about 1700 a. s. l. (Fig. 7).

Distribution. *Neotrechus vonickai* sp. nov. is distributed in the Albanian Alps, in a karstic area near the village Nikç.

Additional Albanian material used for comparison.

Neotrechus malissorum (J. Müller, 1915): "Sopedha-NreGeg, N'Gur tBarzodhs, Zukali Albanie", 1 ♂, 1 ♀ (HNHM), "Albania, m. Cukali, C. Lona", "ex Coll. Bokor", 2 ♀♀ (HNHM), "Shpella Kodra Garit Thep", "Cukale", "Albania leg. Bischoff 1935", 1 ♀ (JJRC).

Neotrechus lonae (J. Müller, 1915): "Spella Gollë", "Cukule Massiv.", "Bischoff- 24-VII-36", 1 ♀ (HNHM).



Figs. 7-9. 7- Albanian Alps above Nikç, type locality of *Neotrechus vonickai* sp. nov., arrow indicates a place where type specimens were collected; 8- a cave in Cemit river canyon near Rrapsh with *N. suturalis pentheri*; 9- *N. suturalis pentheri* from the cave. Photo by Pavel Vonička (7, 8) and Antonín Kůrka (9).

Neotrechus suturalis pentheri Winker, 1926

Neotrechus suturalis pentheri Winkler, 1926: 85; Jeannel, 1928: 295, Guéorguiev 2007: 84.

Type locality. Albania, Rapsa.

Material examined: "ALBANIA, North Alban. Alps: Rrapsh env., canyon of Cemit-river, cave (200 m) 29.6.2012, P. Vonička lgt.," 8 specimens, (PVLC, JJRC), same data, but "P. Moravec lgt.," 11 specimens (PMLC), same data, but "L. Blažej lgt.," 2 specimens (LBVC).

Bionomics. The specimens were collected under stones in a cave in Cemit-river canyon near the village of Rrapsh.

Distribution. The subspecies is recorded only from surroundings of Rrapsh (= Rapshë, Rapsa) in the North Albanian Alps.

Notes. The approximate coordinates of the cave, where the examined specimens were collected are as follows: 42° 25' 34" N, 19° 31' 39" E. Last published specimens of this subspecies were collected by Bischoff in 1930' (Guéorguiev 2007).

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