East Asiatic species of the genus *Neurocrassus* (Hymenoptera: Braconidae)

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The taxonomic position of *Neurocrassus* Šnoflak, 1945 is discussed. Four new species and one subspecies from the Primorsk Territory (Russian Far East) and Vietnam with the first recognition of females of this genus are described and figured: *N. mariae* sp. n. (Russia, Vietnam), *N. tentorialis* sp. n. (Russia, Vietnam), *N. fabimaculatus* sp. n. (Russia), *N. crassineris* sp. n. (Vietnam) and *N. rarus indomalayicus* sap. n. (Vietnam). The forma *abnormis* f. n. of *N. crassineris* with unusual absence of enlargement of the male fore wing is described. The new combination *Neurocrassus rarus* (Belokobylskij, 1982) (from Onsira) is established. A key to species of *Neurocrassus* is given.

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**Introduction**

The genus *Neurocrassus* Šnoflak (with the type species *N. tesari* Šnoflak) was described from Czechoslovakia (Šnoflak, 1945) and included in Exothecinae. The next information about this genus was received from North America (Whitfield, 1988) when *Neurocrassus* was recorded for the first time for this region.

Dr. C. van Achterberg examined the holotype of *N. tesari* Šnoflak in Brno and considered that this genus should be included in Doryctinae s. str. (pers. comm.). The specimen of *N. tesari* has lateral part of fore tibiae with a row of distinct spines absent in exothecines. Also this species is a parasite of wood-boring larvae of *Stenostola* sp. (Cerambycidae), whereas Exothecinae are mostly parasites of Lepidoptera. After examination of the five species discussed in this paper I agree with the new position of this genus in Doryctinae s. str.

The genus *Neurocrassus* is very closely related to *Balbonervus* (Afrotropical Region: Shenefelt, 1969), because it has a similar enlargement of the fore wing of male. It differs by the presence of first radiomedial vein of fore wing (*Balbonervus* without such vein), the equilateral or almost equilateral ocellar triangle (*Balbonervus* has ocellar triangle with base 1.5 times longer than its sides), the hind coxa with distinct basoventral tooth (*Balbonervus* without such tooth), and the presence of the usually distinct dorsal tentorial pits near antennal sockets (these pits absent in *Balbonervus*).

The morphological terms are used as defined by Tobias (1986). The following abbreviations are used: POL — postocellar line, OOL — ocellar-ocellar line, Od — maximal diameter of lateral ocelli. All type specimens of the new species are deposited in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZIN).

**Neurocrassus** Šnoflak, 1945


**Description.** Head weakly transverse or subcubical. Ocelli usually in equilateral triangle
Figs 2, 10, 20, 27. Dorsal tentorial pits near antennal sockets usually large, distinct and narrow, but sometimes small and round, rarely indistinct. Occipital carina distinct and usually not joined to hypostomal carina near mandible. Subocular suture absent. Eye without hairs. Maxillary palpi 6-segmented, labial palpi 4-segmented. Antennae slender, filiform. Meso- scum highly elevated above prothorax (Fig. 4). Notauli deep, complete, crenulate. Prepectal carina distinct. Sternauli deep and usually smooth. Propodeum with distinct areas (Fig. 12). Radial cell of fore wing unshortened (Figs 7, 15, 24, 31, 37, 39, 40). First and second radiomedial veins present. Recurrent vein postfurcal, antefurcal or almost interstitial. Nervulus distinctly postfurcal. Brachial cell closed distally. Parallel vein not interstitial. Fore wing of male usually with stigma-like enlargement of basal and first abscessa of cubital vein (Figs 17, 24, 31, 37, 39). Submedial cell of hind wing large; recurrent vein present (Figs 8, 16, 25, 32, 38). Hind coxa with distinct basoventral tooth (Fig. 42). Fore tibia with spines. All femora thickened. First abdominal tergite with distinct dorsore, spiracles near its middle or in basal third. Second tergite without depressions and areas. Third tergite with shallow and usually distinct transverse depression. Second suture usually weak and curved (Figs 6, 14, 18, 23, 30, 36). Otio- positor sheath not longer than abdomen. Vertex smooth, rarely granulate. Mesoscutum densely granulate. Distribution. Palaearctic, Nearctic and Oriental Regions.

Key to Palaearctic and Oriental species of Neurocrassus

1(8). Female.

2(3). Dorsal tentorial pits indistinct (Fig. 2). Vertex, frons and mesopleurae densely granulate. Radial vein of fore wing arising before middle of pterostigma. Recurrent vein distinctly postfurcal (Fig. 7). Hind femur thick, 2.6-3 times as long as wide (Fig. 5). 2.2-2.9 mm. Russia (Primorsky Terr.), Vietnam. ......... N. mariae sp. n.

3(2). Dorsal tentorial pits distinct (Figs 10, 20). Vertex, frons and (usually) mesopleurae smooth. Radial vein of fore wing arising from middle of pterostigma. Recurrent vein interstitial or (rarely) antefurcal (Figs 15, 24). Hind femur thinner, 3.3-4 times as long as wide (Figs 13, 22).

4(7). Dorsal tentorial pits near antennal sockets very small and round (Fig. 10). Scutellum almost smooth. 5(6). Temple 1.5-1.8 times shorter than transverse diameter of eye. Eye height 3.2-3.8 times less than height of eye. Abdomen 1.1-1.2 times shorter than head and thorax combined. Length of first abdominal tergite nearly equal to (or rarely) slightly less than its apical width. Head reddish brown. 2.1-3.3 mm. Russia (Primorsky Terr.), Ukraine. ... N. rarus rarus (Belokobylskij)

6(5). Temple 1.4 times shorter than transverse diameter of eye. Head height 2.5 times less than height of eye. Abdomen 1.4 times shorter than head and thorax combined. Length of first abdominal tergite 1.2 times greater than its apical width. Most of head light brown. 1.8 mm. Vietnam. ......... N. rarus indomalayicus sp. n.

7(4). Dorsal tentorial pits near antennal sockets large and narrowly oval (Fig. 20). Scutellum granulate. First abdominal tergite narrow, its length 1.1-1.2 times greater than apical width. 2.5-2.9 mm. Russia (Primorsky Terr.), Vietnam. ......... N. tentorialis sp. n.

8(1). Male.

9(12). Fore wing with rather small and nearly round enlargement (Figs 17, 24). Length of first abdominal tergite 1.4-1.5 times greater than its apical width (Figs 18, 23).

10(11). Dorsal tentorial pits near antennal sockets large and narrowly oval (Fig. 20). Head more transverse, its width 1.7 times its medial length (Fig. 20). Penultimate segment 2.8 times as long as wide. 2.3 mm. Russia (Primorsky Terr.), Vietnam. ......... N. tentorialis sp. n.

11(10). Dorsal tentorial pits near antennal sockets small and almost round. Head less transverse, its width 1.4 times its medial length. Penultimate segment 4.5 times as long as wide. 1.8 mm. Vietnam. ......... N. rarus indomalayicus sp. n.

12(9). Fore wing usually with rather large and almost bean-like enlargement (Figs 31, 37, 39), rarely without enlargement (Fig. 40).

13(14). Dorsal tentorial pits near antennal sockets small and round. Temple 1.2 times shorter than or almost equal to transverse diameter of eye (Fig. 27). Enlargement of fore wing medially wide (Fig. 31). Length of first abdominal tergite nearly equal to its apical width (Fig. 30). Head black, yellowish brown ventrally.

15(16). Temple strongly roundly narrowed behind eye. Recurrent vein of fore wing strongly postfurcal. Nervulus departing from basal vein at distance almost 3 times its own length. First abdominal tergite distinctly narrowed from apex to base. Second abdominal tergite in distal third and third tergite completely smooth. Parasite of Stenosolus (Cerambycidae). 2.3 mm. Crochia. ......... N. tesari Sonoitak

16(15). Temple almost parallel-sided anteriorly, weakly roundly narrowed posteriorly (Fig. 25). Recurrent vein of fore wing weakly postfurcal. Nervulus departing from basal vein at distance 1.5 times its own length (Fig. 29). First abdominal
tergite weakly narrowed from apex to base. Second abdominal tergite completely and third tergite medially in transverse depression rugose (Fig. 2B). 2.4 mm. Russia (Primorsky Terr.). ……………………………………. N. fabimaculatus sp. n.

Neurocrassus mariae sp. n.
(Figs 1-8)


**Description.** Female. Body length 2.2–2.9 mm; fore wing length 2–2.4 mm. Head width 1.5-1.6 times its medial length. Temple weakly roundly narrowed behind eye, 1.7–2 times shorter than transverse diameter of eye. Occiput weakly concave. Ocelli small; POL almost equal to Od, twice shorter than OOL. Dorsal tentorial pits near tentorial sockets indistinct. Eye 1.2 times as high as broad. Cheek height 2.3–2.4 times less than height of eye, 1.1–1.3 times less than basal width of

Figs 1-8. Neurocrassus mariae sp. n. 1, head, frontal view; 2, head, dorsal view; 3, basal segments of antenna; 4, thorax, lateral view; 5, hind femur; 6, abdomen, dorsal view; 7, fore wing; 8, hind wing.
mandible. Face width almost equal to eye height and 1.3 times the height of face and Clypeus combined. Subocular suture indistinct. Clypeal suture weak. Hypoclypeal depression weakly oval, its width equal to or 1.4 times shorter than distance from edge of depression to eye.

Antennae 21-23-segmented. First flagellar segment 5.2-5.6 times as long as its apical width, 1.1-1.2 times as long as second segment. Penultimate segment 3.5 times longer than width almost as long as apical segment.

Thorax. Length 1.9-2 times its height. Ante-
scutellar depression shallow, sculptured, with 1-3 weak median carinae, 2.8-3.3 times shorter than scutellum. Scutellum weakly convex, without lateral carinae. Postscutellum without postscutellar depression. Subalar depression shallow, rugulose. Sternauli short, granulate, occupying half of lower part of mesopleurae.

Wings. Radial vein of fore wing arising before middle of pterostigma. Second radial abcissa 3-3.2 times first abcissa, 1.5-1.8 times shorter than third abcissa, 1.3-1.4 times first radio-

medial vein. Second radiomedial cell 2.8-3.2 times longer than its maximum width. Recurrent vein distinctly postfurcal. Distance from nerv-

ulus to basal vein 0.3-1 times nervulus length. Parallel vein arising slightly before middle of vein in distal part of brachial cell. In hind wing, first abcissa of mediocubital vein 1.1-1.2 times shorter than second abcissa.

Legs. Hind femur 2.6-3 times as long as wide. Hind tarsus almost as long as hind tibia. Second tarsal segment 1.8-2 times shorter than basi-
tarsus, 1.25 times fifth segment (without pre-
tarsus).

Abdomen equal to or 1.3 times longer than thorax. First tergite distinctly widened from base to apex, with distinct dorsal carinae in basal half. Apical width of first tergite 2.3-2.6 times its minimum width, equal to or slightly less than its length. Second suture very weak. Length of second tergite 2.2-2.4 times less than its basal width, almost equal to length of third tergite. Length of second and third tergites combined 1.4 times less than maximum width of third tergite, 1.2 times less than basal width of second tergite. Ovipositor sheath 1.6-2.1 times longer than first abdominal tergite, 1.2-1.4 times shorter than abdomen.

Sculpture. Vertex, frons and temple dorsally granulate, face weakly granulate laterally or mostly, other parts of head smooth. Scutellum and mesopleurae densely granulate. Propo-
deum densely granulate almost completely, with weak rugae in distal half and distinct medial carina in basal third or half, areola narrow or wide and long. First and second abdominal tergites completely almost striate. Other parts of abdomen smooth.


Male unknown.

Discussion. This species differs from all species of Neurocrassus in having the vertex, frons and mesopleurae densely granulate, radi-

al vein arising distinctly before middle of ptero-

stigma, dorsal tentorial pits indistinct, hind femur thick, and first abdominal tergite short and wide.

I have named this species after my daughter Maria.

Neurocrassus rarus rarus (Belokobylskij, 1982), comb. n.
(Figs 9-16)

Ontsira rara Belokobylskij, 1982:66 (holotype: ♀
Primorski Terr., 15 km NW Partizansk, forest, 14.VII.
1979 (S. Belokobylskij); ZIN; examined).

Material. Russia, Primorski Terr.: 1 ♀ (paratype), 10
km N Chuguevka, forest, 30.VI.1979 (S. Belokobyl-

skij); 1 ♀ (paratype), 30 km NW Spassk-Dalnij, forest, 24.VIII.1981 (S. Belokobylskij); 1 ♀, Spassk-Dalnij, forest edge, shrubs, forest, 10.VI.1989 (S. Belokobyl-

skij); 1 ♀, Spassk-Dalnij, glades, forest, 27.VII.1991 (S. Belokobylskij); 2 ♀, 20 km SE Ussuriysk, forest,

glades, 4.VIII.1991 (S. Belokobylskij); 1 ♀, Anisimovka, forest, glades, 10.VIII.1991 (S. Belokobylskij); 1 ♀, 15

km S Partizansk, forest, 20.VI.1990 (S. Belokobylskij).

Ukraine: 1 ♀ (paratype), Lesnec, W Odessa, 13.VI.
1974 (O. Kasparian).

Description. Female. Body length 2.1-3.3

mm; fore wing length 2-2.9 mm. Head width 1.4-1.5 times its medial length. Temple rounded narrowed behind eye, 1.5-1.8 times shorter than transverse diameter of eye. Occup weakly concave. Ocelli small; POL almost equal to or 1.2 times longer than Od, 2-2.3 times shorter than OOL. Dorsal tentorial pits near antennal sockets small and round. Eye 1.2-1.3 times as high as broad. Cheek height 3.2-3.8 times less than height of eye, 1.4-2 times less than basal width of mandible. Face

width equal to eye height and 1.3 times the
Figs 9-18. Neurocrassus rarus rarus (Belokobylskij) (female; 9-16) and N. rarus indomalayicus sp. n. (male; 17, 18). 9, head, frontal view; 10, head, dorsal view; 11, basal segments of antenna; 12, areas of propodeum; 13, hind femur; 14, 18, abdomen, dorsal view; 15, 17, fore wing; 16, hind wing.
height of face and clypeus combined. Subocular suture weak or absent. Clypeal suture distinct. Hypoclypeal depression almost round, its width nearly equal to or 1.2 times longer than distance from edge of depression to eye.

Antennae 25-32-segmented. First flagellar segment 4.3-4.8 times as long as its apical width, 1.1-1.2 times as long as second segment. Penultimate segment 2.5-3 times as long as wide, 1.1-1.2 times shorter than apical segment.

Thorax. Length 1.6-3.7 times its height. Ante-
scutellar depression deep, weakly sculptured, with distinct mesial carina, 2.5-3 times shorter than scutellum. Scutellum convex, with weak lateral carinae. Postscutellum with obtuse pro-
tubercles. Subalar depression deep, rugose. Sternauli short, smooth, occupying nearly half of lower part of mesopleurae.

Wings. Radial vein of fore wing arising from middle of pterostigma. Second radial abcissa 2.3-3.8 times first abcissa, 2-2.3 times shorter than third abcissa, 1-1.3 times first radial medial vein. Second radiomedial cell 2.3-2.8 times longer than its maximum width. Recurrent vein antefurcal, sometimes interstitial. Distance from nervulus to basal vein 1-2 times nervulus length. Parallel vein arising before middle of vein in distal part of brachial cell or from its middle. In hind wing, first abcissa of mediocubital vein 1.1-1.3 times longer than second abcissa.

Legs. Hind femur 3.3-4 times as long as wide. Hind tarsus slightly longer than hind tibia. Second tarsal segment 2.5-2.6 times shorter than basitarsus, 1.2-1.3 times fifth segment (without pretarsus).

Abdomen 1.1-1.2 times shorter than head and thorax combined. First tergite distinctly widend from base to apex, with distinct dorsal carinae in basal half. Apical width of first tergite 2-2.4 times its minimum width, nearly equal to its length, rarely slightly greater than it. Second suture weak, but distinct. Length of second tergite 1.5-1.7 times less than its basal width, almost equal to length of third tergite or slightly greater. Length of second and third tergites combined 1.2 times basal width of second tergite, slightly less or greater than maximum width of third tergite. Ovipositor sheath 1.6-2.8 times longer than first abdominal tergite, 1.2-1.5 times shorter than abdomen.

Sculpture. Head smooth, face weakly punctulate medially. Mesoscutum weakly granulate. Scutellum (usually) and mesopleurae smooth. Propodeum sparsely rugose, almost smooth in basal quarter, with distinct medial carina in basal third or quarter, areola long and narrow. First and second abdominal tergites completely striate, but second tergite in distal third rugulose. Sometimes third tergite rugose in narrow transverse depression near middle. Other parts of abdomen smooth.


Male unknown.

Distribution. Russia (Primorsk Terr.), Ukraine.

Neurocrassus rarus indomalayicus ssp. n. (Figs 17-18)


Description. Female. Body length 1.8 mm; fore wing length 2 mm. Temple 1.4 times shorter than transverse diameter of eye. POL 3.2 times shorter than OOL. Cheek height 2.5 times less than height of eye, 1.2 times less than basal width of mandible. Subocular suture absent. Antennae 22-segmented. First flagellar segment 4.5 times as long as its apical width. Pen-
ultimate segment 3.3 times as long as wide, almost equal to apical segment.

Thorax. Ante-
scutellar depression almost smooth, 2.25 times shorter than scutellum. Sub-
alar depression distinct, weakly striate.

Wings. Second radial abcissa 4 times first abcissa, 1.7 times shorter than third abcissa. Second radiomedial cell 3 times longer than its maximum width. Recurrent vein slightly postf
rucal. First abcissa of mediocubital vein of hind wing almost equal to second abcissa. Legs. Hind femur 3.6 times as long as wide. Abdomen as long as thorax. 1.4 times shorter than head and thorax combined. Apical width of first tergite 1.9 times its minimum width, 1.2 times less than its length. Ovipositor sheath 1.7 times longer than first abdominal tergite, 1.6 times shorter than abdomen.

Sculpture. Second abdominal tergite in basal two thirds rugulose, distal third almost smooth. Colour. Head light brown, darker dorsally. Male. Body length 1.8 mm; fore wing length
1.6 mm. Temple 1.7 times shorter than transverse diameter of eye. POL 1.5 times Od, twice shorter than OOL. Cheek height 3 times less than height of eye. Antennae thinner and 21-segmented. First flagellar segment 5.5 times as long as its apical width. Penultimate segment 4 times as long as wide. Length of thorax 1.9 times its height. In fore wing, second radial abscessa 3 times first abscessa. Second radiomedial cell 2.7 times longer than its maximum width. Recurrent vein distinctly anastomosed. Small oval enlargement occupying anterior third of basal vein and half of first abscessa of medial vein. Hind tarsus slightly shorter than hind tibia. Second tarsal segment 3 times shorter than basitarsus, 1.2 times shorter than fifth segment (without pretarsus). Abdomen almost as long as head and thorax combined. Apical width of first tergite 1.7 times its minimum width, 1.5 times less than its length. Length of second tergite 1.1 times less than its basal width, 1.4 times greater than length of third tergite. Length of second and third tergites combined 1.5 times basal width of second tergite. Otherwise similar to female.

Discussion. The differences between sub-species of this species are indicated in the key.

Neurocrassus tentorialis sp. n.
(Figs 19-25)


Description. Male. Body length 2.3 mm; fore wing length 2.2 mm. Head width 1.7 times its medial length. Temple strongly and roundly narrowed behind eye, 1.5 times shorter than transverse diameter of eye. Occiput distinctly concave. Ocelli small; POL 1.2 times Od, twice shorter than OOL. Dorsal tentorial pits near antennal sockets large and narrowly oval. Eye 1.2 times as high as broad. Cheek height 2.3 times less than height of eye, slightly greater than basal width of mandible. Face width slightly greater than eye height and 1.4 times the height of face and clypeus combined. Subocular suture weak. Clypeal suture distinct. Hypoclypeal depression weakly oval, its width slightly longer than distance from edge of depression to eye.

Antennae 24-segmented. First flagellar segment 4.8 times as long as its apical width, 1.2 times as long as second segment. Penultimate segment 2.8 times as long as wide, slightly shorter than apical segment.

Thorax. Length 1.9 times its height. Antecutellar depression deep, almost smooth, with 3 distinct carinæ, 2.3 times shorter than scutellum. Scutellum almost plane, without lateral carinæ. Postscutellum without protuberance. Subalar depression deep, rugulose. Sternalu short, almost smooth, occupying half of lower part of mesopleuræ.

Wings. Radial vein of fore wing arising from middle of pterostigma. Second radial abscessa 2.4 times first abscessa, 2.2 times shorter than third abscessa, almost equal to first radiomedical vein. Length of second radiomedical cell 2.5 times its maximum width. Recurrent vein almost interstitial. Small oval enlargement occupying anterior third of basal vein and half of first abscessa of medial vein. Distance from nervulus to basal vein 1.5 times nervulus length. Parallel vein arising from middle of vein in distal part of brachial cell. In hind wing, first abscessa of mediocubital vein slightly longer than second abscessa.

Legs. Hind femur 3.5 times as long as wide. Hind tarsus slightly shorter than hind tibia. Second tarsal segment 2.5 times shorter than basitarsus, as long as fifth segment (without pretarsus).

Abdomen as long as head and thorax combined. First tergite weakly widened from base to apex, with distinct dorsal carinæ in basal two thirds. Apical width of first tergite 1.8 times its minimum width, 1.4 times less than its length. Second suture weak. Length of second tergite 1.3 times less than its basal width, 1.1 times length of third tergite. Length of second and third tergites combined equal to maximum width of third tergite, 1.5 times basal width of second tergite.


Colour. Body dark reddish brown, head ventrally and abdomen medially light reddish brown. Palpi yellow. Antennæ black, two

Female. Body length 2.5–2.9 mm; fore wing length 2.6–3.2 mm. Temple 1.6–1.9 times shorter than transverse diameter of eye. Antennae 24–28-segmented. Radial vein of fore wing sometimes arising before middle of pterostigma. Second radial abscessa 1.1–1.3 times first radiomedial vein. Length of second radiomedial cell 2.5–2.9 times its maximum width. Recurrent vein very slightly antefurcal or almost interstitial. Apical width of first abdominal tergite 1.9–2 times its minimum width, 1.1–1.2 times less than its length. Length of second tergite 1.5–1.7 times less than its basal width, almost equal to length of third tergite. Length of second and third tergites combined 1.2–1.3 times basal width of second tergite. Ovipositor sheath 1.8–2.4 times longer than first abdominal tergite, 1.5–2 times shorter than abdomen. Sometimes most of head yellowish brown. Abdomen (without first tergite) (light) reddish brown. Pterostigma brown, lighter basally and (usually) apically. Otherwise similar to male.

Discussion. This new species is related to *Neurocrassus fabimaculatus* sp. n. and differs by the more transverse head, strongly narrowed temple, almost interstitial position of recurrent vein and small enlargement of fore wing, long first abdominal tergite. The female of this species is very closely related to that of *N. furus* (Belokobylskii) and differs by the dorsal tentorial pits near antennal sockets being large and narrowly oval, the first abdominal tergite longer and narrower, and the scutellum granulate.

**Neurocrassus fabimaculatus** sp. n.
(Figs 26–32)


**Description.** Male. Body length 2.4 mm; fore wing length 2.3 mm. Head width 1.4 times its medial length. Temple almost parallel-sided anteriorly, roundly narrowed posteriorly, 1.2 times shorter than transverse diameter of eye. Occiput weakly concave. Ocelli small; POL 1.3 times Od, almost twice shorter than OOL.
Dorsal tentorial pits near antennal sockets small and round. Eye 1.3 times as high as broad. Cheek height almost 3 times less than height of eye, 1.2 times less than basal width of mandible. Face width slightly greater than eye height and 1.3 times the height of face and clypeus combined. Subocular suture weak. Clypeal suture distinct. Hypoclypeal depression oval, its width 1.2 times longer than distance from edge of depression to eye.

Antennae 23-segmented. First flagellar segment 4.5 times as long as its apical width, 1.2 times as long as second segment. Penultimate segment almost 3 times as long as wide, slightly shorter than apical segment.


Wing. Radial vein of fore wing arising from middle of pterostigma. Second radial abscissa 2.7 times first abscissa, twice shorter than third abscissa, 1.3 times first radiomedial vein. Second radiomedial cell 2.3 times shorter than its minimum width. Recurrent vein postfurcal. Large, bean-shaped and sclerotized enlargement occupies most of basal and first abscissa of medial veins. Distance from nervus to basal vein 1.5 times nervus length. Parallel vein arising from almost middle of vein in distal part of brachial cell. In hind wing, first abscissa of mediocubital vein slightly longer than second abscissa.

Legs. Hind femur 3.4 times as long as wide. Hind tarsus almost as long as hind tibia. Second tarsal segment 2.25 times shorter than basitarsus, as long as fifth segment (without pretarsus).

Abdomen slightly shorter than head and thorax combined. First tergite distinctly widened from base to apex, with distinct dorsal carinae in basal third. Apical width of first tergite 1.9 times its minimum width, slightly less than its length. Second suture weak. Length of second tergite 1.3 times less than its basal width, 1.3 times longer than length of third
tergite. Length of second and third tergites combined slightly greater than apical width of third tergite, 1.3 times basal width of second tergite.

Sculpture. Head smooth, face below weakly punctulate. Scutellum almost smooth. Mesopleurae smooth. Propodeum rugulose, almost smooth basally, with distinct medial carinae in basal quarter, areola narrow and long. First abdominal tergite striate, but irregularly rugulose between dorsal carinae. Second tergite completely rugulose and third tergite rugulose in narrow medial transverse depression only. Other parts of abdomen smooth.


Female unknown.

Discussion. This new species is closely related to N. rarus (Belokobylskyi) and differs by the shape of head, long temple, long second tarsal segment of hind legs and second abdominal tergite, distinctly postfurcal position of recurrent vein. This species is related also to N. tesarii Šnofflak (Czechia) (Šnofflak, 1945), differing from it in the shapes of head and first abdominal tergite, slightly postfurcal recurrent vein of fore wing, completely rugose second abdominal tergite, and partly rugulose third tergite.

Neurocrassus crassinervis sp. n.

(Figs 33–42)

Holotype 6, Vietnam: prov. Vinh Phu, Tam Dao, 1000 m, forest, 10.XI.1990 (S. Belokobylskyi).

Paratypes, 4♂, Vietnam: prov. Vinh Phu, Tam Dao, 1000 m, forest, 10. and 15.XI.1990 (S. Belokobylskyi) (including 2♂ of forma abnormis f. n.).

Description. Male. Body length 2.2–3.2 mm; fore wing length 2.2–2.8 mm. Head width 1.5–1.6 times its medial length. Temple roundly narrowed behind eye, 1.6–1.9 times shorter than transverse diameter of eye. Occiput weakly concave. Ocelli small, in triangle with base 1.1–1.25 times longer than sides; POL 1.1–1.3 times longer than OD, 1.5–2 times shorter than OOL. Dorsal tentorial pits near antennal sockets large and narrowly oval. Eye 1.2–1.3 times as high as broad. Cheek height 2.7–3 times less than height of eye, 1.3–1.5 times less than basal width of mandible. Face width nearly equal to or slightly less than eye height and slightly less than height of face and clypeus combined. Subocular suture absent. Clypeal suture distinct. Hypoclypeal depression weakly oval, its width 1.1–1.3 times greater than or almost equal to distance from edge of depression to eye.

Antennae 21–30-segmented. First flagellar segment 4.5–5.5 times as long as its apical width, 1.1–1.3 times as long as second segment. Penultimate segment 3.3–3.5 times as long as wide, 1.1–1.2 times shorter than apical segment.

Thorax. Length 1.8–2.2 times its height. Anteclypeal depression deep, almost smooth, with 1–3 distinct medial carinae, 2.5–3 times shorter than scutellum. Scutellum convex, without lateral carinae. Postscutellar with distinct obtuse protuberance. Subalar depression rather deep, distinctly rugose. Serranuila short, smooth, occupying nearly half of lower part of mesopleurae.

Wings. Radial vein arising slightly before middle of pterostigma or from its middle. Second radial abscissa 2.5–3.6 times longer than first abscissa, 1.7–2 times shorter than third abscissa, 1.2–1.3 times longer than first radiomedical vein. Second radiomedical cell 2.4–3 times longer than its maximum width. Recurrent vein almost interstitial, slightly postfurcal or antefurcal. Rather large and narrow enlargement occupies anterior two-thirds or half of basal vein and first abscissa of medial vein. Distance from nervulus to basal-vein 1–1.5 times nervulus length. Parallel vein arising from near middle of vein in distal part of brachial cell or slightly before it. In hind wing, first abscissa of mediocubital vein almost equal to second abscissa.

Legs. Hind femur 3.3–6 times as long as wide. Hind tarsus slightly shorter than hind tibia. Second tarsal segment 2.3–2.5 times shorter than basitarsus, 1.1–1.2 times shorter than fifth segment (without pretarsus).

Abdomen almost as long as head and thorax combined. First tergite rather weakly widened from base to apex, with distinct dorsal carinae in basal two-thirds or five-sixths. Apical width of first tergite 1.6–2 times its minimum width, 1.3–1.5 times less than its length. Second suture distinct. Length of second tergite 1.2–1.3 times less than its basal width, 1.4–1.5 times length of third tergite. Length of second and third
Figs 33–42. *Neurocrassus crassinervis* sp. n. 33, head, frontal view; 34, head, dorsal view; 35, basal segments of antenna; 36, abdomen, dorsal view; 37, 39, 40, fore wing; 38, hind wing; 41, hind femur; 42, hind coxa.
tergites combined slightly less or greater than their maximum width, 1.2-1.5 times greater than basal width of second tergite.

Sculpture. Head smooth, face weakly or very weakly punctulate, sometimes aciculate near antennal sockets. Scutellum usually weakly granulate. Mesopleurae smooth. Propodeum rugulose, almost smooth in basal quarter or half, with distinct medial carina in basal third, areola usually narrow and long. First and second abdominal tergites distinctly and completely striate. Sometimes second tergite very weakly sculptured in distal half; third or third-fifth tergites sometimes with medial transverse rugulose bands. Other parts of abdomen smooth.


Female unknown.

*Forma abnormis* f. n. The specimens of this form have the fore wing without enlargement, but basal and first abscissa of medial veins in anterior halves slightly widened.

Discussion. This new species is closely related to *N. tentorialis* sp. n. and differs from it in the more cubical head, absence of wing enlargement, shorter cheek and temple, longer penultimate antennal segment, and aciculate sculpture of face near antennal sockets. This species is also related to *N. fabimaculatus* sp. n. and differing in the large and narrowly oval dorsal tentorial pits, long temple, thin basal antennal segments, narrow and medially constricted enlargement of the fore wing (or absence of this enlargement), long first abdominal tergite, and light brown head.

References


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