

## New *Oracula* Novák, 2019 species from North Vietnam (Coleoptera: Tenebrionidae: Alleculinae: Alleculini)

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**Taxonomy, new species, descriptions, Coleoptera, Tenebrionidae, Alleculinae, Alleculini, *Oracula*, *Duocula*, Laos, Vietnam, Oriental Region**

**Abstract.** New species of the Alleculine genus *Oracula* Novák, 2019 are described as follows: *Oracula (Duocula) incauta* sp. nov., *Oracula (Oracula) backanica* sp. nov. and *Oracula (Oracula) timida* sp. nov. from North Vietnam and *Oracula (Oracula) pervulgata* sp. nov. from Laos and North Vietnam. The new species are illustrated including male genitalia and keyed together.

### INTRODUCTION

The genus *Oracula* was introduced by Novák (2019) with *Oracula bicolor* Novák, 2019 as a type species. Species of this genus living in southeastern Palaearctic Region (Novák 2020) and in the Oriental Region (Novák 2019). In present we know four species from Nepal and Yunnan Province in China (Novák 2019, 2020 and 2021) and further six species are known from the Oriental Region (Novák 2019). Species of the genus *Oracula* have elongate *Leptura* shaped body, space between eyes is almost narrower than diameter of one eye, males have long and hollow tarsal claws with many teeth from both sides of hollow claw (subgenus *Duocula* Novák, 2019) or teeth only on one side of hollow claw (subgenus *Oracula* s. str.).

New species are described as follows: *Oracula (Duocula) incauta* sp. nov., *Oracula (Oracula) backanica* sp. nov. and *Oracula (Oracula) timida* sp. nov. from North Vietnam and *Oracula (Oracula) pervulgata* sp. nov. from North Vietnam and Laos. All new species are illustrated (including male genitalia) and keyed together.

### MATERIAL AND METHODS

Two important morphometric characteristics used for the descriptions of species of the subfamily Alleculinae, the 'ocular index' dorsally (Campbell & Marshall 1964) and 'pronotal index' (Campbell 1965), are used in this paper as well. The ocular index equals  $(100 \times \text{minimum dorsal distance between eyes}) / (\text{maximum width of head across eyes})$ . The pronotal index is calculated as  $(100 \times \text{length of pronotum along midline}) / (\text{width across basal angles of pronotum})$ .

'Type material' information is taken from recent locality labels.

In the list of type material, a slash (/) separates data in separate rows, a double slash (//) separates different labels.

The following collection codes is used:

- ASGG private collection of Andre Skale, Gera, Germany;
- KMTJ private collection of Kimio Masumoto, Tokio, Japan;
- MNFI collection of Museo di Storia Naturale, Firenze, Italy;
- NMEG collection of Naturkundemuseum, Erfurt, Germany;
- NMPC collection of National Museum, Praha, Czech Republic;
- NMTJ collection of National Museum, Tokio, Japan;
- VNPC private collection of Vladimír Novák, Praha, Czech Republic.

Measurements of body parts and corresponding abbreviations used in text are as follows: AL - total antennae length, BL - maximum body length, EL - maximum elytral length, EW - maximum elytral width, HL - maximum length of head (visible part), HW - maximum width of head, OI - ocular index dorsally, PI - pronotal index dorsally, PL - maximum pronotal length, PW - pronotal width at base, RLA - ratios of relative lengths of antennomeres 1-11 from base to apex ( $3=1.00$ ), RL/WA - ratios of length / maximum width of antennomeres 1-11 from base to apex, RLT - ratios of relative lengths of tarsomeres 1-5 respectively 1-4 from base to apex ( $1=1.00$ ).

Other abbreviations used in the text: bl= beige label.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with Soft Imaging System AnalySIS. Snapshots were taken by using camera Canon EOS 550 D and Canon Macro Photo Lens MP-E and software Helicon Focus 7.7.5.

## TAXONOMY

### genus *Oracula* Novák, 2019

**Type species:** *Oracula bicolor* Novák, 2019.

### Subgenus *Duocula* Novák, 2019

**Type species:** *Oracula (Duocula) clara* Novák, 2019.

### *Oracula (Duocula) incauta* sp. nov.

(Figs. 1-4)

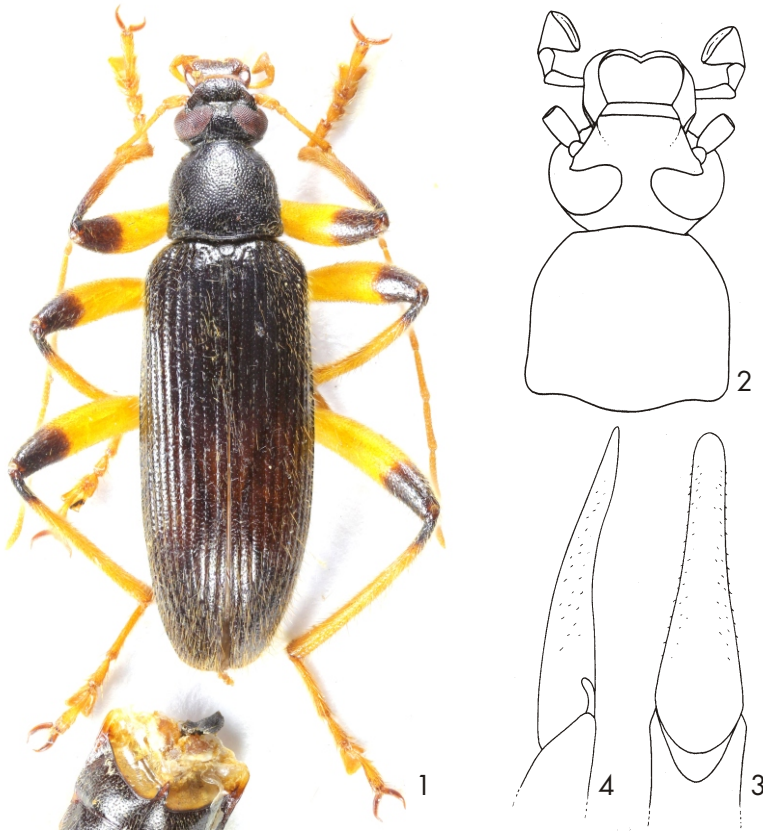
**Type locality.** North Vietnam, Vinh Phu Province, Tam Dao.

**Type material.** Holotype (♂): Vietnam, Tam dao / 27.5.-2.6.1986 / Vinh phu prov. / Jan Horák lgt., (VNPC). Paratypes: (1 ♂): Vietnam Tam dao / 27.5.-2.6.1986 / Vinh phu prov. / lgt. J. Rybníček, (VNPC); (1 ♂): N VIETNAM: Cao Bang Prov., / Mt. Pia Oac (1600-2000 m) / 14-16.VI.2012 - at light / L. Bartolozzi, S. Bambi, / F. Fabiano, E. Orbach! / (numero Mag. 2924), (MNFI). The types are provided with a printed red label: '*Oracula (Duocula) incauta* sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 1, body large, elongate, *leptura* shaped, shiny, from yellow to black, dorsal surface with pale setation, punctuation and fine microgranulation, BL 10.38 mm. Widest near middle elytra length; BL/EW 3.71.

Head (Fig. 2) black, almost as long as wide, through the eyes distinctly wider than anterior margin, narrower than base of pronotum. Dorsal surface shiny with a few long, pale setae and dark setae behind eyes, dense, coarse punctuation, punctures medium sized and microgranulation. Apex of anterior part ochre yellow. Clypeus wide, transverse, half heart shaped, dark reddish brown with apex excised in middle. Dorsal surface with punctures as large as those in head, long, pale setae and very fine microgranulation, shiny. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.47 mm; HW/PW 0.78; HL (visible part) 1.44 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; OI equal to 18.45.

Antenna. Long, narrow, ochre yellow, rather matte (AL 8.45, distinctly exceeding three quarters body length - AL/BL 0.81). Surface with short and dense, recumbent, pale setation, microgranulation and small punctures. Antennomere 2 shortest, antennomeres 4-11 shorter than antennomere 3.



Figs. 1-4. *Oracula (Duocula) incauta* sp. nov. (holotype): 1- habitus; 2- head and pronotum; 3- apical piece of aedeagus, dorsal view; 4- apical piece of aedeagus, lateral view.

RLA(1-11): 0.41 : 0.17 : 1.00 : 0.92 : 0.88 : 0.91 : 0.87 : 0.87 : 0.83 : 0.79 : 0.84.

RL/WA(1-11): 2.21 : 1.25 : 8.90 : 8.20 : 8.72 : 8.05 : 8.11 : 6.74 : 5.92 : 7.15 : 7.14.

Maxillary palpus ochre yellow, semimatte, with pale setation and fine microgranulation. Palpomerites 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Fig. 2) black, shiny, convex, widest in base, distinctly narrower than elytra in humera. Disk with two small and shallow oblique impressions from both sides between middle and posterior angles. Dorsal surface with sparse and long, pale and dark setae, very fine microgranulation and dense, medium sized tubercles, intervals between them almost wider than diameter of tubercles. PL 1.76 mm; PW 1.88 mm; PI equal to 93.62. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins finely excised in basal part, slightly arcuate in apical part. Base finely bisinuate, anterior margin slightly arcuate in middle, anterior and posterior angles obtuse.

Elytra. Blackish brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with long, pale setation. EL 7.18 mm; EW 2.80 mm; EL/EW 2.56. Elytral striae with rows of coarse punctures, larger than those in pronotum. Elytral intervals finely convex, with very fine

microgranulation and very small punctures.

Scutellum. Blackish brown, pentagonal, shiny, with shallow punctures, microrugosities and long, pale setae.

Elytral epipleura well-developed, dark brown, with punctures and pale setae, relatively wide in basal part, distinctly narrowing to ventrite 1, then relatively wide and parallel in apical part.

Legs. Long and narrow, yellow, apex of femora and base of tibiae from dark brown to black. Dorsal surface with fine microgranulation and small, shallow punctures. Femora with dark setae, tibiae with denser pale setae, straight, normally shaped. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.54 : 0.65 : 0.95 : 1.64 (protarsus), 1.00 : 0.46 : 0.48 : 0.66 : 1.27 (mesotarsus), 1.00 : 0.47 : 0.41 : 0.77 (metatarsus).

Tarsal claws large, both protarsal claws with more than 30 visible teeth from both sides of hollow claw.

Ventral side of body dark brown with pale setae and small punctures. Abdomen blackish brown with pale setation, small, shallow punctures and fine microgranulation. Ultimate ventrite slightly paler than penultimate - brown.

Aedeagus (Figs. 3, 4) ochre yellow. Basal piece strong, slightly rounded laterally and narrowing in dorsal view. Apical piece elongate triangular with rounded top from dorsal view, beak shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.58.

**Female** unknown.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=3). BL 11.75 mm (10.38-13.48 mm); HL 1.69 mm (1.44-1.94 mm); HW 1.72 mm (1.47-1.97 mm); OI 19.05 (17.92-20.77); PL 2.01 mm (1.76-2.33 mm); PW 2.21 mm (1.88-2.57 mm); PI 90.64 (89.06-93.64); EL 8.03 mm (7.18-9.21 mm); EW 3.20 mm (2.80-3.60 mm).

**Differential diagnosis.** *Oracula (Duocula) incauta* sp. nov. distinctly differs from other known species from North Vietnam by having teeth on both sides of hollow claw (belongs to subgenus *Duocula*); while *Oracula (Oracula) backanica* sp. nov., *Oracula (Oracula) pervulgata* sp. nov. and *Oracula (Oracula) timida* sp. nov. have teeth only on one side of hollow claw (all belonging to subgenus *Oracula*).

Most similar *Duocula* species is *Oracula (Duocula) tenebrosa* Novák, 2019 from China (Yunnan Province).

*O. (D.) incauta* clearly differs from similar species *O. (D.) tenebrosa* mainly by narrower body (BL/EW approximately 3.6) and narrower pronotum (PI approximately 91.4), by dark reddish brown clypeus and by shape of apical piece of aedeagus (as in Figs. 3 and 4); while *O. (D.) tenebrosa* has wider body (BL approximately 3.3) and wider pronotum (PI approximately 77.9), clypeus is pale brown or pale reddish brown and apical piece of aedeagus is as in Novák 2019: 70: figs. 19 and 20.

**Etymology.** From Latin *incauta* (it means 'careless').

**Distribution.** North Vietnam (Vinh Phuc Province).

## Subgenus *Oracula* Novák, 2019

**Type species:** *Oracula bicolor* Novák, 2019.

### *Oracula (Oracula) backanica* sp. nov. (Figs. 5-8)

**Type locality.** North Vietnam, Bac Kan Province, Ba Bé National Preserve, 22°27'09''N, 105°34'11''E, 150 m.

**Type material.** Holotype (♂): N-VIETNAM Bac Kan Prov. / Ba Bé NP. (waterfall), 19.V. / 22°27'09''N, 105°34'11''E / 150m, leg. A. Skale, 2014, (ASGG). Paratypes: (1 ♂, 1 ♀): same data as holotype, (ASGG, VNPC); (1 ♂): N-VIETNAM Bac Kan Pr. / Ba Be National Park SW / of entry 18.V.2014 / N22°24', 105°37' E, 250- / 280m, leg. A. Weigel, (NMEG); (1 ♂): N-VIETNAM Vinh Phuc Pr. / vic. Tam Dao Town, Tam / Dao NP, 02.-5.V.2013 / 21°27'N, 105°38' E, 700- / 1000m, leg. A. Weigel, (VNPC). The types are provided with a printed red label: 'Oracula / (Oracula) backanica sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 5, body large, elongate, *leptura* shaped, shiny, from ochre yellow to black, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 11.61 mm. Widest near middle elytra length; BL/EW 3.57.

Head (Fig. 6) black, approximately as long as wide, through the eyes distinctly wider than anterior margin, narrower than base of pronotum. Dorsal surface shiny with sparse, long, pale setae, dense and coarse punctuation, punctures large. Anterior part with very fine microgranulation. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with shallow punctures, long and dense, pale setae and microgranulation, shiny. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.77 mm; HW/PW 0.81; HL (visible part) 1.75 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; narrower than length of antennomere 1, OI equal to 20.80.

Antenna. Long and narrow, ochre yellow, rather matte (AL 9.43, distinctly exceeding three quarters body length - AL/BL 0.81). Surface with pale setation, microgranulation and small, shallow punctures. Antennomere 2 shortest, antennomeres 4-11 longer than antennomere 3.

RLA(1-11): 0.66 : 0.19 : 1.00 : 1.22 : 1.04 : 1.22 : 1.15 : 1.12 : 1.12 : 1.05 : 1.18.

RL/WA(1-11): 2.86 : 1.00 : 5.50 : 8.22 : 6.00 : 7.79 : 8.18 : 7.61 : 7.61 : 7.94 : 8.59.

Maxillary palpus ochre yellow or pale brown, rather matte, with pale setae and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex with a few long pale brown setae, ultimate palpomere widely triangular.

Pronotum (Fig. 6) black, shiny, convex, widest in base, distinctly narrower than elytra in humera. Base with small, shallow almost indistinct oblique impressions between middle and posterior angles from both sides. Dorsal surface with sparse and long, mostly erect, pale setae, very fine microgranulation and punctuation, punctures medium sized, intervals between punctures almost wider than diameter of punctures. PL 1.97 mm; PW 2.19 mm; PI equal to 90.41. Border lines very narrow, margins conspicuous from dorsal view, only in the middle of anterior margin not clearly conspicuous. Base finely bisinuate, anterior margin slightly arcuate in middle, anterior and posterior angles obtuse, posterior angles rounded.

Elytra. Black, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with long and dense, mostly erect, pale setation. EL 7.89 mm; EW 3.25 mm; EL/EW 2.43. Elytral striae with rows of coarse punctures as large as those in pronotum, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals slightly convex, with very fine

microgranulation and sparse, small punctures.

Scutellum. Black, pentagonal, slightly shiny, elevated up level of elytra, with a few shallow punctures and microgranulation.

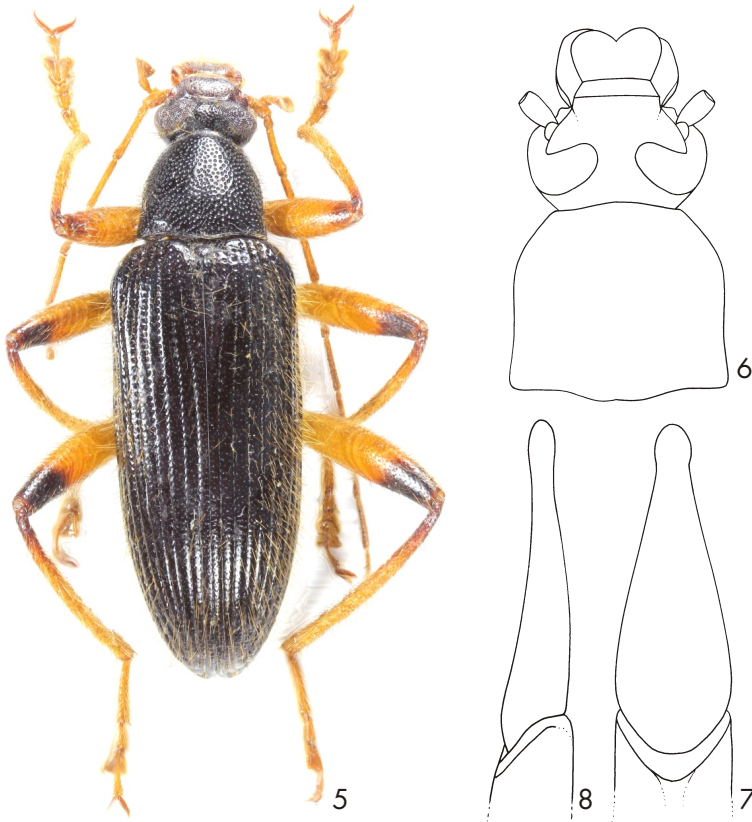
Elytral epipleura well-developed, brown, with large punctures in basal part distinctly narrowing to ventrite 1, then relatively narrow and parallel with distinctly smaller punctures in apical part.

Legs. Long and narrow, ochre yellow, dorsal surface with long and dense pale setation, small punctures and fine microgranulation. Base of tibiae and apex of femora from reddish brown to black. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.63 : 0.66 : 0.95 : 1.71 (protarsus), 1.00 : 0.54 : 0.55 : 0.73 : 1.00 (mesotarsus), 1.00 : 0.41 : 0.39 : 0.66 (metatarsus).

Tarsal claws large, both protarsal claws with 40 visible teeth in one side of hollow claw.

Ventral side of body dark brown with sparse, short, pale setae and punctures distinctly smaller than those in dorsal surface. Abdomen brown with fine microgranulation and sparse, small and shallow punctures. Ultimate and penultimate ventrites slightly darker.

Aedeagus (Figs. 7, 8) large, ochre yellow. Basal piece slightly rounded laterally and narrowing in dorsal view. Apical piece elongate triangular with rounded top from dorsal view, beak shaped laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.78.



Figs. 5-8. *Oracula (Oracula) backanica* sp. nov. (Figs. 5 and 6: holotype): 5- habitus; 6- head and pronotum; 7- apical piece of aedeagus, dorsal view; 8- apical piece of aedeagus, lateral view.

**Female.** Body slightly wider, protarsal claws with 15 visible teeth.

Measurements of female body. BL 11.59 mm; HL 1.82 mm; HW 1.86 mm; OI 21.20; PL 2.04 mm; PW 2.37 mm; PI 86.08; EL 7.73 mm; EW 3.78 mm; AL(1-11) 9.21 mm; AL/BL(1-11) 0.80; HW/PW 0.79; BL/EW 3.07; EL/EW 2.05.

RLA(1-11): 0.61 : 0.24 : 1.00 : 1.11 : 1.10 : 1.19 : 1.21 : 1.24 : 1.19 : 1.07 : 1.21.

RL/WA(1-11): 2.05 : 1.18 : 5.19 : 5.74 : 6.46 : 5.57 : 5.67 : 6.65 : 6.42 : 6.25 : 7.04.

RLT: 1.00 : 0.54 : 0.70 : 0.81 : 1.24 (protarsus), 1.00 : 0.50 : 0.44 : 0.55 : 0.93 (mesotarsus), 1.00 : 0.42 : 0.38 : 0.66 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n=4). BL 11.09 mm (10.75-11.61 mm); HL 1.68 mm (1.65-1.75 mm); HW 1.71 mm (1.67-1.77 mm); OI 16.62 (14.04-20.80); PL 1.88 mm (1.83-1.97 mm); PW 2.09 mm (2.02-2.19 mm); PI 89.96 (88.88-90.59); EL 7.53 mm (7.26-7.89 mm); EW 3.26 mm (3.15-3.38 mm).

**Differential diagnosis.** Similar species from North Vietnam are *Oracula (Oracula) pervulgata* sp. nov. and *Oracula (Oracula) timida* sp. nov.

New species of *Oracula (Oracula) backanica* sp. nov. clearly differs from the similar species *O. (O.) pervulgata* sp. nov. and *O. (O.) timida* sp. nov. mainly by lateral margins of pronotum distinctly excised before posterior angles and by anterior margin of pronotum not clearly distinct; while *O. (O.) pervulgata* and *O. (O.) timida* have lateral margins of pronotum rounded or straight and anterior margin is narrow but distinct.

**Etymology.** Toponymic, named after the type locality Bac Kan Province in North Vietnam.

**Distribution.** North Vietnam (Bac Kan Province).

### *Oracula (Oracula) pervulgata* sp. nov.

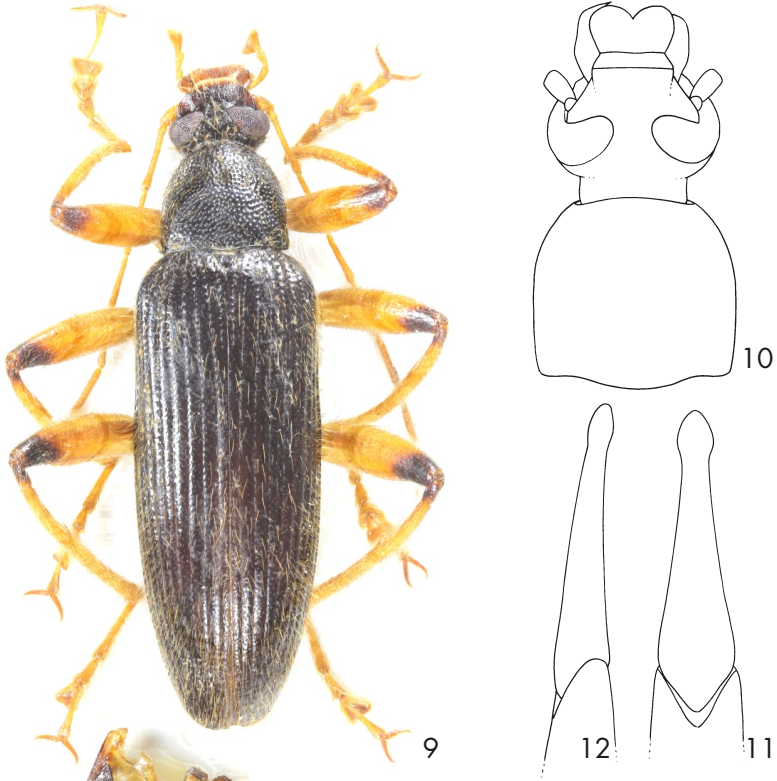
(Figs. 9-12)

**Type locality.** North Vietnam, Cao Bang Province, Vin Den vicinity, Nui Pia Oac Natural Preserve, 22°33'53"N, 105°52'53"E, 900-1300 m.

**Type material.** Holotype (♂): N-Vietnam, Cao Bang Prov. vic. / Vin Den, Nui Pia Oac Nat. Res. / 06.-10.V.2013, 22°33'53"N, 105° / 52'53" E 900-1300m A. Skale, (ASGG). Paratypes: (3 ♂♂, 3 ♀♀): same data as holotype, (ASGG, VNPC); (2 ♂♂): same data as holotype, but 10.-15.V.2014, (ASGG); (3 ♂♂, 1 ♀): N-VIETNAM Ninh Binh / Prov.90Km SW Hanoi, vic. / Cuc Phuong village, 160m / N20°14'01", E105°43'19" / 19.VI.2012, leg. A. Weigel, (NMEG, VNPC); (1 ♀): same data as penultimate, but 20.IV.2012, (NMEG); (1 ♀): N-VIETNAM Ninh Binh / Prov.90Km SW Hanoi, vic. / Cuc Phuong NP, 190m, / primates rescue centre, / N20°14'24", E105°42'53" / 19.-25.VI.2012, leg. A. Weigel, (NMEG); (1 ♂): VIETNAM, N, Ninh Binh / Pr. 90 Km SW Hanoi / Cuc Phuong NP, primate / rescue centre, 25.IV. // 2012, 190 m, 20°14'24" N / 105°42'53" E, leg. A. / Weigel, light trap, (NMEG); (1 ♂, 2 ♀♀): N-VIETNAM, Ninh Binh / Cuc Phuong NP, 270 m / N 20°17'57", E 105°40' / 05", 04.-09.V.2017 / leg. A. Weigel KL, (NMEG, VNPC); (1 ♀): N-VIETNAM, Ninh Binh Pr. / ca. 1,5 km S Cuc Phuong / NP, 150 m, 03.V.2019 / 20°14'11"N, 105°42'50" E / by Tilo, leg. A. Weigel KL, (VNPC); (1 ♀): N-VIETNAM, P: Ninh Binh / Cuc Phuong NP Xom Bong / 12./13.V.2019, 390 m, / 20°20'56"N, 105°35'44" E / leg. A. Weigel KL / primary forest, (NMEG); (1 ♂, 1 ♀): N-VIETNAM Bac Giang Prov., Tay / Yen Tu Nat. Res., Thanh So'n, / N21° 12.812' E106° 45.846', 86m / 18.5.-21.5.2015, leg. A. Skale, (ASGG, VNPC); bl: (1 ♂): N-VIETNAM Bac Giang / Prov Tay Yen Tu Nat.Res. / 6 km SW Thanh So'n / N21° 10.830' E106° 43.427', 86m / 18.5.-21.5.2015 light leg. / FCreutzburg, (NMEG); (1 ♂, 3 ♀♀): Mt. Tamdao / Near. Hanoi / N. Vietnam / V. 1993 / leg. Native, (KMTJ, NMTJ, VNPC); (2 ♂♂): Vietnam, Tam dao / Vinh phu pr. / 3.-11.6.1985 / J. Picka lgt., (VNPC); (2 ♂♂, 1 ♀): N-VIETNAM Vinh Phuc Pr. / vic. Tam Dao Town, Tam / Dao NP, 02.-5.V.2013 / 21°27'N, 105°38'E, 700- / 1000m, leg. A. Weigel, (NMEG, VNPC); (1 ♂): N-VIETNAM Vinh Phuc Pr., vic. / Tam Dao Town, Tam Dao NP, / Mt. Mo Qua, 03.05.V.2013, 22°34'41"N, / 105°52'48"E, 700-1000m, A. Skale, (ASGG); (1 ♂, 1 ♀): N-VIETNAM Thai Nguyen



Prov., / vic. Ngoc Thanh, Me Linh (IEBR / station), 12.V.2012, 21°23'3''N, / 105°42'44''E, 60-80 m, leg. A. Skale, (ASGG); (1 ♂, 1 ♀): N-VIETNAM: Vinh Phuc Prov. / Tam Dao National Park, 950 m / 5.-12.V.2010 L. Bartolozzi & / S. Bambi legit (n° Mag. 2894), (MNFI); (2 ♂♂): Ban Nape-Kaew Nua Pass (alt. 663m) / near border to Vietnam / N18 22. 352., E105. 09. 098 / Bolikhamsai Prov., C. Laos / 3~4-V-2016/H.Akiyama leg., (NMTJ, VNPC). The types are provided with a printed red label: '*Oracula* / (*Oracula*) *pervulgata* sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.



Figs. 9-12. *Oracula pervulgata* sp. nov. (holotype): 9-habitus; 10-head and pronotum; 11-apical piece of aedeagus, dorsal view; 12-apical piece of aedeagus, lateral view.

**Description of holotype.** Habitus as in Fig. 9, body large, elongate, *leptura* shaped, shiny, from ochre yellow to black, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 11.48 mm. Widest near middle elytra length; BL/EW 3.35.

Head (Fig. 10) almost as long as wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface shiny with long, pale setation, very fine microgranulation and coarse punctuation. Posterior part black, darker than reddish brown anterior part. Clypeus wide, transverse, half heart shaped, reddish brown with apex excised in middle. Dorsal surface with sparse, shallow punctures, long and dense, pale setae, microgranulation and microrugosities, shiny. Mandibles reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.68 mm; HW/PW 0.81; HL (visible part) 1.66 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; slightly wider than length of antennomere 2; OI equal to 15.41.

Antenna. Long, narrow, ochre yellow, rather matte (AL 9.34, distinctly exceeding three quarters body length - AL/BL 0.81). Surface with long and dense, pale setation, microgranulation and



small punctures. Antennomere 2 shortest, antennomeres 4-11 longer than antennomere 3.

RLA(1-11): 0.53 : 0.23 : 1.00 : 1.31 : 1.07 : 1.21 : 1.10 : 1.06 : 1.02 : 1.01 : 1.07.

RL/WA(1-11): 2.06 : 1.81 : 6.20 : 10.80 : 7.77 : 9.38 : 7.16 : 7.28 : 6.30 : 7.81 : 10.15.

Maxillary palpus ochre yellow, rather matte, with long, pale setation and very fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere pale brown, widely triangular.

Pronotum (Fig. 10) black, shiny, convex, widest in base, distinctly narrower than elytra in humera. Dorsal surface with sparse and long, pale setae, very fine microgranulation and punctuation, punctures large and coarse, intervals between punctures mostly narrower than diameter of punctures. PL 1.88 mm; PW 2.07 mm; PI equal to 90.72. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins finely excised in basal part, slightly arcuate in apical half. Base finely bisinuate, anterior margin almost straight, very finely arcuate in middle, anterior and posterior angles obtuse.

Elytra. Black, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with dense and long, pale setation. EL 7.94 mm; EW 3.43 mm; EL/EW 2.32. Elytral striae with rows of coarse punctures, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals finely convex, with very fine microgranulation and small punctures.

Scutellum. Blackish brown, roundly triangular, shiny, with a few shallow punctures, microgranulation and long, pale setae.

Elytral epipleura well-developed, dark brown, with punctures and pale setae distinctly narrowing to ventrite 1, then relatively narrow and parallel in apical part.

Legs. Long and narrow, ochre yellow, dorsal surface with dense and long, erect, pale setation, fine microgranulation and very small, shallow punctures. Apex of femora darker. Tibiae straight, normally shaped, slightly widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RL: 1.00 : 0.49 : 0.78 : 0.71 : 1.37 (protarsus), 1.00 : 0.57 : 0.39 : 0.48 : 0.86 (mesotarsus), 1.00 : 0.48 : 0.41 : 0.82 (metatarsus).

Tarsal claws large, both protarsal claws with more than 40 teeth only in one side of hollow claw.

Ventral side of body dark brown with pale setae and small punctures. Abdomen blackish brown with sparse, pale setae, fine microgranulation and small, shallow punctures. Ultimate ventrite slightly paler than penultimate.

Aedeagus (Figs. 11, 12) large, ochre yellow. Basal piece strong, finely rounded laterally and slightly narrowing in dorsal view. Apical piece elongate triangular with rounded top from dorsal view, beak shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.16.

**Female.** Body and space between eyes slightly wider. Protarsal claws smaller with 14 visible teeth.

Measurements of female body. BL 12.20 mm; HL 1.71 mm; HW 1.75 mm; OI 26.24; PL 1.86 mm; PW 2.17 mm; PI 85.71; EL 8.63 mm; EW 3.59 mm; AL(1-11) 8.70 mm; AL/BL(1-11) 0.71; HW/PW 0.81; BL/EW 3.40; EL/EW 2.40.

RLA(1-11): 0.51 : 0.18 : 1.00 : 1.17 : 0.99 : 0.99 : 1.02 : 0.89 : 0.89 : 0.92 : 0.93.

RL/WA(1-11): 2.66 : 1.30 : 6.79 : 8.30 : 8.10 : 8.53 : 8.74 : 6.86 : 5.58 : 7.90 : 7.19.

RL: 1.00 : 0.46 : 0.65 : 0.85 : 1.69 (protarsus), 1.00 : 0.40 : 0.48 : 0.78 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 23). BL 11.22 mm (10.36-12.04 mm); HL 1.67 mm (1.61-1.73 mm); HW 1.69 mm (1.63-1.76 mm); OI 18.15 (15.41-19.54); PL 1.88 mm

(1.82-2.01 mm); PW 2.11 mm (2.07-2.20 mm); PI 89.36 (87.92-91.36); EL 7.73 mm (7.01-8.25 mm); EW 3.21 mm (3.12-3.43 mm). Females (n= 17). BL 11.92 mm (10.45-12.99 mm); HL 1.85 mm (1.71-1.98 mm); HW 1.88 mm (1.75-2.01 mm); OI 25.42 (23.46-26.33); PL 2.08 mm (1.86-2.16 mm); PW 2.39 mm (2.17-2.50 mm); PI 86.90 (85.71-88.43); EL 8.93 mm (8.17-9.08 mm); EW 3.74 mm (3.59-3.92 mm).

**Differential diagnosis.** Similar species from North Vietnam are *Oracula* (*Oracula*) *backanica* sp. nov. and *Oracula* (*Oracula*) *timida* sp. nov.

*Oracula* (*Oracula*) *pervulgata* sp. nov. clearly differs from similar species *O.* (*O.*) *backanica* mainly by lateral margins of pronotum not excised before posterior angles (straight or finely rounded) and by anterior margin narrow but distinct, while *O.* (*O.*) *backanica* has lateral margins of pronotum before posterior angles slightly excised and anterior margin is not clearly distinct.

*O.* (*O.*) *pervulgata* is distinctly different from similar species *O.* (*O.*) *timida* mainly by smaller body (BL approximately 11.3 mm in males and 11.9 mm in females), by elytral epipleura with dense and long, pale setae and by shape of apical piece of aedeagus (as in Figs. 11 and 12); while *O.* (*O.*) *timida* has larger body (BL approximately 13.3 mm in males and 14.3 mm in females), elytral epipleura has sparse dark and pale setae and apical piece of aedeagus is as in Figs. 15 and 16.

**Etymology.** From Latin *pervulgata* (it means 'widespread').

**Distribution.** Laos (Bolikhamsai Province), North Vietnam (Bac Giang, Cao Bang Province, Ninh Binh, Thai Nguyen and Vinh Phuc Provinces).

### ***Oracula* (*Oracula*) *timida* sp. nov.**

(Figs. 13-16)

**Type locality.** North Vietnam, Tam Dao.

**Type material.** Holotype (♂): N. VIETNAM 900m / TamDao 13.-24. / 5 1989 A. Olexa, (VNPC). Paratypes: (1 ♂): N. VIETNAM / 30. V.1989 / Cuc Phuong / Blažiček lgt. (VNPC); (1 ♀): Vietnam bor., / Tam-Dao, 27. 5. - 2. 6. / J. Macek lgt. 1986, (NMPC); (1 ♂): N-Vietnam, Cao Bang Pr. / vic. Vin Den, Nui Pia Oac / Nature Res., 6.-10.V.2013 / 22°33'53"N, 105° / 52'53"E / 900-1300m leg. A. Weigel, (VNPC); (1 ♂): N-VIETNAM Vinh Phuc Pr. / vic. Tam Dao Town, Tam / Dao NP, 02.-5.V.2013 / 21°27'N, 105°38'E, 700- / 1000m, leg. A. Weigel, (NMEG); (3 ♀♀): N-VIETNAM Vinh Phuc Prov. / vic. Tam Dao Town, Tam / Dao NP, 02.-5.V.2013 / 21°27'N, 105°38'E, 700-1000m, A. Skale, (ASGG, VNPC); (1 ♀): N-VIETNAM Ninh Binh / Cuc Phuong NP, 270 m / N 20°17'57", E 105°40' / 05", 04.-09.V.2017 / leg. A. Weigel KL, (MMEG). The types are provided with a printed red label: '*Oracula* / (*Oracula*) *timida* sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 13, body large, elongate, *leptura* shaped, shiny, from ochre yellow to black, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 13.84 mm. Widest near middle elytra length; BL/EW 3.91.

Head (Fig. 14) black, almost as long as wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface shiny with long, pale setae, microgranulation and dense, coarse punctuation, punctures medium sized or large. Microgranulation of posterior part not clearly distinct. Clypeus wide, transverse, half heart shaped, reddish brown with pale apex excised in middle. Dorsal surface with dense punctuation, long, pale setation and fine microgranulation, shiny. Mandibles reddish brown with darker sides and apex, paler than clypeus, glabrous, shiny, with pale setae in sides. HW 1.88 mm; HW/PW

0.80; HL (visible part) 1.86 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; OI equal to 17.94.

Antenna. Long, narrow, ochre yellow, rather matte (AL 11.48, distinctly exceeding three quarters body length - AL/BL 0.83). Surface with microgranulation and small punctures, antennomeres 1-5 with longer, 6-11 with shorter pale setation. Antennomere 2 shortest, antennomeres 4-11 longer than antennomere 3.

RLA(1-11): 0.46 : 0.19 : 1.00 : 1.17 : 1.22 : 1.17 : 1.14 : 1.09 : 1.15 : 1.04 : 1.06.

RL/WA(1-11): 2.14 : 1.30 : 6.27 : 7.36 : 7.64 : 8.10 : 6.83 : 6.82 : 9.29 : 8.94 : 8.59.

Maxillary palpus ochre yellow, semimatte, with pale setation, microgranulation and small punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Fig. 14) black, shiny, convex, widest in base, almost as long as wide, distinctly narrower than elytra in humera. Dorsal surface with sparse, pale setae (denser near lateral margins), very fine microgranulation and dense punctuation, punctures large, intervals between punctures narrower than diameter of punctures. PL 2.24 mm; PW 2.34 mm; PI equal to 95.73. Border lines very narrow, margins conspicuous from dorsal view, only in the middle of anterior margin not clearly distinct. Lateral margins narrowing in basal part, arcuate in apical half. Base finely bisinuate, anterior margin arcuate, anterior angles indistinct, posterior angles obtuse.

Elytra. Black, narrow, elongate, slightly convex, shiny, widest in base. Dorsal surface with long, pale setation, dense near lateral margins. EL 9.74 mm; EW 3.54 mm; EL/EW 2.75. Elytral striae with rows of large and coarse punctures, approximately as large as those in pronotum, intervals between punctures in rows almost narrower than diameter of punctures. Elytral intervals finely convex, with very fine microgranulation and very small punctures.

Scutellum. Blackish brown, pentagonal, shiny, with small punctures, fine microgranulation and a few long, pale setae.

Elytral epipleura well-developed, blackish brown, with large punctures in basal part and long setae in apical part, distinctly narrowing to ventrite 1, then relatively wide and parallel in apical part.

Legs. Long and narrow, ochre yellow, apex of femora and base of tibiae blackish. Dorsal surface with dense and long, erect, pale setation, fine microgranulation and very small punctures. Tibiae straight, normally shaped, widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.60 : 0.48 : 1.04 : 1.75 (protarsus), 1.00 : 0.34 : 0.37 : 0.47 : 0.92 (mesotarsus), 1.00 : 0.41 : 0.45 : 0.81 (metatarsus).

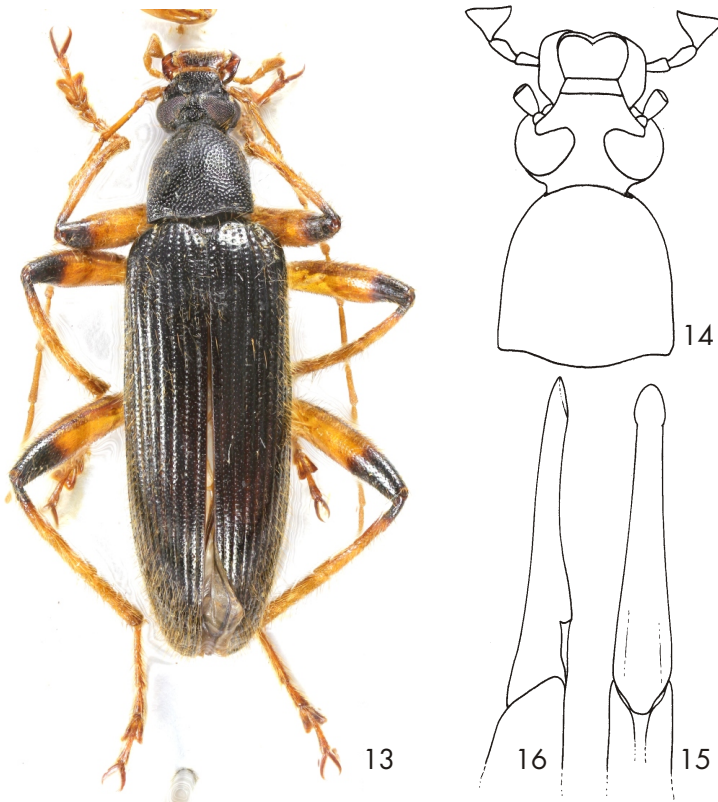
Tarsal claws large, both protarsal claws with more than 40 visible teeth only in one side of hollow claw.

Ventral side of body blackish brown, with pale setae and small punctures. Abdomen blackish brown with pale setae, fine microgranulation and small punctures.

Aedeagus (Figs. 15, 16) large, pale brown, shiny. Basal piece strong, rounded laterally and narrowing in dorsal view. Apical piece narrow, elongate, beak shaped from dorsal and lateral views. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.89.

**Female.** Body and space between eyes slightly wider. Protarsal claws with 17 teeth.

Measurements of female body. BL 14.09 mm; HL 2.08 mm; HW 2.10 mm; OI 26.88; PL 2.17 mm; PW 2.54 mm; PI 85.43; EL 9.84 mm; EW 4.07 mm; HW/PW 0.83; BL/EW 3.46; EL/EW 2.42.



Figs. 13-16. *Oracula (Oracula) timida* sp. nov. (holotype): 13- habitus; 14- head and pronotum; 15- apical piece of aedeagus, dorsal view; 16- apical piece of aedeagus, lateral view.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males ( $n=4$ ). BL 13.33 mm (12.55-14.48 mm); HL 1.80 mm (1.72-1.88 mm); HW 1.82 mm (1.75-1.90 mm); OI 18.65 (17.94-19.40); PL 2.10 mm (1.98-2.24 mm); PW 2.21 mm (2.08-2.34 mm); PI 95.04 (93.91-95.73); EL 9.50 mm (8.75-10.74 mm); EW 3.38 mm (3.07-3.75 mm). Females ( $n=5$ ). BL 14.28 mm (13.05-15.34 mm); HL 1.99 mm (1.80-2.16 mm); HW 2.01 mm (1.81-2.19 mm); OI 23.04 (20.65-26.88); PL 2.19 mm (2.00-2.37 mm); PW 2.54 mm (2.31-2.76 mm); PI 85.63 (84.34-86.56); EL 10.12 mm (9.25-10.84 mm); EW 3.99 mm (3.60-4.28 mm).

**Differential diagnosis.** Similar species from North Vietnam are *Oracula (Oracula) backanica* sp. nov. and *Oracula (Oracula) pervulgata* sp. nov.

*Oracula (Oracula) timida* sp. nov. clearly differs from similar species *O. (O.) backanica* mainly by lateral margins of pronotum not excised before posterior angles (straight or finely rounded) and by anterior margin narrow but distinct, while *O. (O.) backanica* has lateral margins of pronotum before posterior angles slightly excised and anterior margin is not clearly distinct.

*O. (O.) timida* is distinctly different from similar species *O. (O.) pervulgata* mainly by larger body (BL approximately 13.3 mm in males and 14.3 mm in females), by elytral epipleura with sparse dark and pale setae and by apical piece of aedeagus as in Figs. 15 and 16; while *O. (O.)*

*pervulgata* has smaller body (BL approximately 11.3 mm in males and 11.9 mm in females), elytral epipleura has dense and long, pale setae and shape of apical piece of aedeagus is as in Figs. 11 and 12.

**Etymology.** From Latin *timida* (it means 'nervous').

**Distribution.** North Vietnam (Cao Bang, Ninh Binh and Vinh phuc Provinces).

#### KEY TO THE NORTH VIETNAM ORACULA SPECIES

- 1 (2) Antennomere 4 shorter than antennomere 3, protarsal claws of male with teeth on both sides of hollow claw. Habitus as in Fig. 1, head and pronotum (Fig. 2), aedeagus as in Figs. 3, 4. Vinh Phuc Province. .... *Oracula (Duocula) incauta* sp. nov.
- 2 (1) Antennomere 4 more than 1.15 longer than antennomere 3, protarsal claws of male with teeth only on one side of hollow claw. .... 3
- 3 (4) Lateral margins of pronotum slightly but distinctly excised near posterior angles. Anterior margin of pronotum not clearly distinct. Habitus as in Fig. 5, head and pronotum (Fig. 6), aedeagus as in Figs. 7, 8. Bac Kan Province. .... *Oracula (Oracula) backanica* sp. nov.
- 4 (3) Lateral margins of pronotum straight or finely arcuate (not excised near posterior angles). Anterior margin of pronotum narrow, but distinct. .... 5
- 5 (6) Body larger (BL approximately 13.3 mm in males and 14.3 mm in females), elytral epipleura with sparse dark and pale setae. Habitus as in Fig. 13, head and pronotum (Fig. 14), aedeagus as in Figs. 15, 16. Vinh Phuc and Cao Bang Provinces. .... *Oracula (Oracula) timida* sp. nov.
- 6 (5) Body smaller (BL approximately 11.3 mm in males and 11.9 mm in females), elytral epipleura with dense and long, pale setae. Habitus as in Fig. 9, head and pronotum (Fig. 10), aedeagus as in Figs. 11, 12. Cao Bang, Ninh Binh, Vinh Phuc Provinces. .... *Oracula (Oracula) pervulgata* sp. nov.

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