Studies and Reports Taxonomical Series 19 (1): 97-118, 2023

# New Oracula Novák, 2019 (Coleoptera: Tenebrionidae: Alleculinae: Alleculini) species from Thailand

# Vladimír NOVÁK

#### Nepasické náměstí 796, CZ-190 14 Prague 9 - Klánovice, Czech Republic e-mail: alleculinae.vn@centrum.cz

# Taxonomy, new species, descriptions, Coleoptera, Tenebrionidae, Alleculinae, Alleculini, Oracula, Duocula, Thailand, Oriental Region

Abstract. A new species of the Alleculine genus Oracula Novák, 2019 are described as follows: Oracula (Duocula) arcana sp. nov., Oracula (Duocula) callida sp. nov., Oracula (Duocula) flebila sp. nov., Oracula (Duocula) modesta sp. nov., Oracula (Duocula) nuntius sp. nov., Oracula (Duocula) soppongica sp. nov. and Oracula (Oracula) rejseki sp. nov. The species Oracula (Duocula) clara Novák, 2019 known from Laos, is newly recorded from Thailand. All new species are illustrated (including male genitalia) and keyed together. List of species from the territory of Thailand is added.

#### 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 seventeen species are known from the Oriental Region (Novák 2019, 2022a, b). 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 protarsal 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.).

Seven new species from Thailand are described as follows: *Oracula (Duocula) arcana* sp. nov., *Oracula (Duocula) callida* sp. nov., *Oracula (Duocula) flebila* sp. nov. *Oracula (Duocula) modesta* sp. nov., *Oracula (Duocula) nuntius* sp. nov., *Oracula (Duocula) soppongica* sp. nov. and *Oracula (Oracula) rejseki* sp. nov. The species *Oracula (Duocula) clara* Novák, 2019 known from Laos, is newly recorded from Thailand. All new species are illustrated (including male genitalia) and keyed together. List of species from the territory of Thailand is added.

### 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  $(100 \times \text{length of pronotum along midline}) / (width across basal angles of pronotum})$ .

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:

KMTJ private collection of Kimio Masumoto, Tokio, Japan;

IRSNB collection of Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium;

NMPC collection of National Museum, Praha, Czech Republic;

NMTJ collection of National Museum, Tokio, Japan;

SMNS collection of Staatliches Museum für Naturkunde, Stuttgart, Germany;

VNPC private collection of Vladimír Novák, Praha, Czech Republic.

Other abbreviations used in the text: yl: yellow label.

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).

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 (Oracula) bicolor Novák, 2019.

# Subgenus Duocula Novák, 2019

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

# Oracula (Duocula) arcana sp. nov.

(Figs. 1-4)

Type locality. Northern Thailand, Chiang Rai Province, environ of Wiang Pa Pao.

**Type material.** Holotype ( $\mathcal{J}$ ): N THAILAND / Chiang Rai prov. / Wiang Pa Pao env. / 7. - 22.V.2010 / P. Viktora lgt., (VNPC). Paratypes: ( $4 \mathcal{J} \mathcal{J}$ ,  $4 \mathcal{Q} \mathcal{Q}$ ): same data as holotype, (VNPC); ( $1 \mathcal{J}$ ): N THAILAND - Chiang / Rai prov.; Wiang Pa / Pao env. 21.5.-10.6. / 2011; P. Viktora lgt., (VNPC); ( $1 \mathcal{J}$ ): Thailand, Chiang Rai, / Wiang Pa Pao, / 17-21. V. 2015 / K. Takahashi leg., (NMTJ); ( $1 \mathcal{Q}$ ): same data as penultimate, but 27.V.-1.VI.2014, (KMTJ);

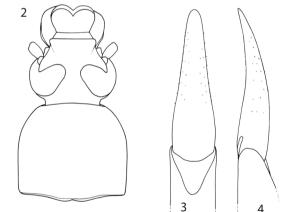
 $(1 \ \circle)$ : Wiang Pa Pao / Chiang Rai, Thailand, / 5-10. VI. 2016 (LFIT) / K. Takahashi leg., (VNPC). The types are provided with a printed red label: 'Oracula / (Duocula) arcana sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 1, body large, elongate, *Leptura* shaped, shiny, from ochre yellow to blackish brown, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 11.31 mm. Widest near middle elytra length; BL/EW 3.37.

Head (Fig. 2) a little longer than wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface shiny with long, pale setae and dense punctuation. Posterior part blackish brown with long dark setae behind eyes, anterior part dark reddish brown with reddish brown apex and genae and very fine microgranulation. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with punctures, long, pale setae and microgranulation, shiny. Mandibles pale reddish brown with sides and apex darker, glabrous, shiny, with pale setae in sides. HW 1.68 mm; HW/PW 0.77; HL (visible part) 1.74 mm. Eyes large, transverse, excised, space between eyes very narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; narrower than length of antennomere 1, OI equal to 16.88.

Antenna. Long and narrow, pale reddish brown (AL 9.44, distinctly exceeding three quarters body length - AL/BL 0.84). Surface with short, recumbent, pale setation, microgranulation and very small, shallow punctures. Antennomeres 1-4 slightly shiny, antennomere 5-11 rather matte. Antennomeres 3-10 slightly widened apically. Antennomere 2 shortest, antennomeres 4-11 approximately as long as or shorter than antennomere 3.





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

RLA(1-11): 0.38 : 0.17 : 1.00 : 1.02 : 0.96 : 1.00 : 0.98 : 0.96 : 0.98 : 0.83 : 0.92. RL/WA(1-11): 1.77 : 1.17 : 8.63 : 8.84 : 6.83 : 6.81 : 7.00 : 7.14 : 7.67 : 7.56 : 9.44.

Maxillary palpus pale reddish brown, semi-matte, with long, pale setae, fine microgranulation and shallow punctures. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Fig. 2) dark blackish brown, shiny, convex, widest near middle, distinctly narrower than elytra in humeri. Base with short, shallow, oblique impressions between middle and posterior angles from both sides. Dorsal surface with pale setation and a few long, dark setae near sides, very fine microgranulation not clearly distinct everywhere and dense punctuation, punctures smaller. PL 1.99 mm; PW 2.19 mm; PI equal to 90.87. Border lines very narrow, margins conspicuous from dorsal view. Base finely bisinuate, anterior margin almost straight, anterior angles indistinct, posterior angles almost rectangular.

Elytra. Blackish brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with long and dense, pale setation. EL 7.58 mm; EW 3.39 mm; EL/EW 2.24. Elytral striae with rows of coarse punctures, distinctly larger than those in pronotum, intervals between punctures in rows almost narrower than diameter of punctures. Elytral intervals slightly convex, with very fine microgranulation and sparse, small punctures.

Scutellum. Blackish brown, semi-elliptical, shiny, with small punctures, microgranulation and a few long, pale setae.

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

Legs. Long and narrow, dorsal surface pale reddish brown with long and dense, erect, pale setation, fine microgranulation and small, shallow punctures. Apex of protibiae finely bent. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. Ultimate tarsomeres widened apically. RLT: 1.00 : 0.73 : 0.68 : 0.70 : 1.25 (protarsus), 1.00 : 0.46 : 0.48 : 0.58 : 0.82 (mesotarsus), 1.00 : 0.50 : 0.44 : 0.71 (metatarsus).

Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

Ventral side of body. Prothorax and mesoventrite blackish brown with sparser, short, pale setae and denser punctures than those in reddish brown metaventrite. Abdomen blackish brown, shiny, with long, pale setae, fine microgranulation and dense, small and shallow punctures.

Aedeagus (Figs. 3, 4) large, ochre yellow, shiny. Basal piece 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: 3.41.

**Female.** Body and space between eyes slightly wider, antenna slightly shorter than in male. Protarsal claws smaller with 16 visible teeth.

Measurements of female body. BL 11.79 mm; HL 1.81 mm; HW 1.83 mm; OI 22.22; PL 1.85 mm; PW 2.35 mm; PI 78.72; EL 8.13 mm; EW 3.86 mm; AL(1-11) 8.64 mm; AL(1-11)/BL 0.73; HW/PW 0.78; BL/EW 3.06; EL/EW 2.11.

RLA(1-11): 0.41 : 0.14 : 1.00 : 1.06: 1.02 : 1.04 : 1.13 : 1.11 : 0.98 : 1.08 : 0.91. RL/WA(1-11): 1.86 : 1.00 : 5.48 : 6.65 : 6.43 : 7.78 : 6.55 : 8.35 : 8.20 : 7.16 : 5.70. RLT: 1.00 : 0.53 : 0.70 : 0.79 : 1.23 (protarsus); 1.00 : 0.48 : 0.39 : 0.50 : 0.87 (mesotarsus); 1.00 : 0.42 : 0.31 : 0.67 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 7). BL 11.21 mm (10.53-11.88 mm); HL 1.69 mm (1.58-1.82 mm); HW 1.66 mm (1.58-1.80 mm); OI 14.48 (11.84-16.88); PL 1.95 mm (1.75-2.23 mm); PW 2.15 mm (1.97-2.39 mm); PI 90.87 (88.21-93.31); EL 7.57 mm (7.20-7.83 mm); EW 3.46 mm (3.05-3.60 mm). Females (n= 6). BL 11.76 mm (11.63-11.80 mm); HL 1.76 mm (1.72-1.81 mm); HW 1.78 mm (1.75-1.83 mm); OI 26.21 (25.20-27.24); PL 1.92 mm (1.83-2.01 mm); PW 2.39 mm (2.31-2.46 mm); PI 80.13 (78.72-81.82); EL 8.04 mm (7.90-8.14 mm); EW 3.87 mm (3.76-3.96 mm).

**Differential diagnosis.** (For details see the key below). Similar *Duocula* Novák, 2019 species with blackish brown dorsal surface (including head) and apex of femora pale from Thailand is *Oracula (Duocula) modesta* sp. nov.

*Oracula (Duocula) arcana* sp. nov. clearly differs from similar species *O. (D.) modesta* mainly by ultimate protarsomere 1.25 times longer than protarsomere 1, by anterior angles of pronotum indistinct, by lateral margins in anterior part of pronotum rounded and by shape of apical piece of aedeagus as in Figs. 3 and 4; while *O. (D.) modesta* has ultimate protarsomere 1.5 times longer than protarsomere 1, anterior angles of pronotum are distinct, obtuse, lateral margins in anterior part of pronotum are distinct, obtuse, lateral margins in anterior part of pronotum are straight and shape of apical piece of aedeagus is as in Figs. 15 and 16.

Etymology. From Latin arcana (meaning 'secret').

Distribution. Thailand (Chiang Rai Province).

# Oracula (Duocula) callida sp. nov. (Figs. 5-8)

Type locality. Northwestern Thailand, Chiang Mai Province, Doi Suthep mount.

**Type material.** Holotype ( $\mathcal{J}$ ): Doi Suthep / Thailand, 16. V. 2011 / K.MASUMOTO & / K.TAKAHASHI leg., (NMTJ). Paratypes:  $(2 \mathcal{J} \mathcal{J}, 1 \mathcal{Q})$ : same data as holotype, (NMTJ, KMTJ, VNPC);  $(1 \mathcal{Q})$ : same data as holotype, but 20. V. 2011, (VNPC);  $(4 \mathcal{Q} \mathcal{Q})$ : N, THAILAND; / Chiang Mai Prov. / Doi Suthep / 13-16. V. 2012 / K. MASUMOTO leg., (KMTJ, VNPC);  $(2 \mathcal{J} \mathcal{J})$ : Thailand, Chiang Mai / Doi Suthep, LFIT, / 25.IV-6. V. 2013, K. Masumoto leg., (VNPC);  $(1 \mathcal{J})$ : Thailand, Chiang / Mai, Mae Rim Dist., / 22-23. V. 2017, / K. Masumoto leg., (VNPC);  $(1 \mathcal{Q})$ : Thailand, Chiang Mai Prov., / Mae Rim Dist., Ban Nong / Hoi Kao, 24-26. V. 2014, / K. Masumoto leg., (VNPC). The types are provided with a printed red label: 'Oracula / (Duocula) callida 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 blackish brown, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 11.67 mm. Widest near middle elytra length; BL/EW 3.37.

Head (Fig. 6) blackish brown, almost as long as wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface slightly shiny with long, pale setae, very fine microgranulation and coarse punctuation. Posterior part behind eyes with a few long, dark setae. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with small, shallow punctures, long and pale setae, microgranulation and microrugosities, semimatte. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.75 mm; HW/PW 0.81; HL (visible part) 1.74 mm. Eyes large, transverse, excised, space between eyes very narrow, distinctly narrower than diameter of one eye; slightly wider than length of antennomere 2; OI equal to 14.27.

Antenna. Long, narrow (AL 9.55 mm, distinctly exceeding three quarters body length - AL/BL 0.82). Antennomeres 1-3 yellow, slightly shiny with pale setation longer than in ochre yellow antennomeres 4-11 with short, recumbent, pale setation. Surface with microgranulation and very small punctures. Antennomere 2 shortest, antennomeres 7-11 shorter than antennomere 3.

RLA(1-11): 0.44 : 0.16 : 1.00 : 1.05 : 1.00 : 0.99 : 0.92 : 0.92 : 0.92 : 0.91 : 0.82.

RL/WA(1-11): 1.91 : 1.44 : 8.71 : 9.18 : 8.71 : 8.59 : 9.07 : 9.07 : 9.07 : 8.93 : 9.67.

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

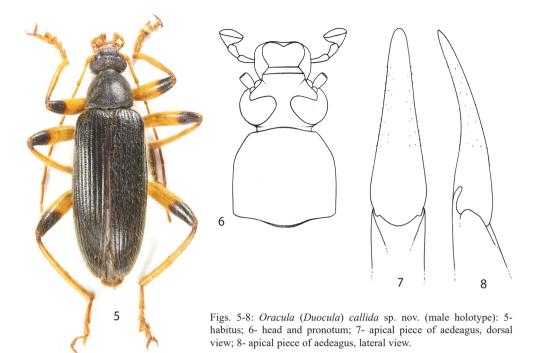
Pronotum (Fig. 6) blackish brown, shiny, convex, widest near base, distinctly narrower than elytra in humeri. Dorsal surface with sparse, long and short, pale and dark setae and very fine microgranulation between dense punctures, intervals between punctures almost narrower than diameter of punctures. PL 2.00 mm; PW 2.16 mm; PI equal to 92.59. Border lines very narrow, margins conspicuous from dorsal view only in the middle of anterior margin not clearly conspicuous. Lateral margins almost straight in basal part, narrowing in apical half. Base finely bisinuate, anterior margin finely arcuate, anterior angles indistinct, posterior angles obtuse.

Elytra. Dark brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with dense and long, pale setation. EL 7.93 mm; EW 3.46 mm; EL/EW 2.29. Elytral striae with rows of coarse punctures, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals finely convex, with fine microgranulation and small punctures.

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

Elytral epipleura well-developed, dark reddish brown, with punctures and long, 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. Femora with darker setation, apex of femora blackish brown. Tibiae normally shaped, slightly widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.57 : 0.56 : 0.81 : 2.12 (protarsus), 1.00 : 0.42 : 0.36 : 0.42 : 0.93 (mesotarsus), 1.00 : 0.46 : 0.49 : 0.77 (metatarsus).



Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

Ventral side of body dark reddish brown with small punctures and pale setae denser in metaventrite than in prothorax and mesoventrite. Abdomen blackish brown with recumbent, pale setae, fine microgranulation and small, shallow punctures.

Aedeagus (Figs. 7, 8) ochre yellow, shiny. Basal piece 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: 3.03.

**Female** has body slightly wider and more oval than in male. Protarsal claws short with 15 visible teeth.

Measurements of female body. BL 11.74 mm; HL 1.70 mm; HW 1.77 mm; OI 23.66; PL 1.85 mm; PW 2.35 mm; PI 78.72 EL 8.19 mm; EW 3.86 mm; AL(1-11) 9.23 mm; AL(1-11)/BL 0.79; HW/PW 0.75; BL/EW 3.04; EL/EW 2.12.

RLA(1-11): 0.42 : 0.20 : 1.00 : 1.01: 0.97 : 1.03 : 1.01 : 0.97 : 1.00 : 0.90 : 0.96.

RL/WA(1-11): 1.94 : 1.36 : 5.50 : 6.50 : 6.25 : 5.64 : 5.57 : 5.56 : 5.70 : 5.75 : 7.40.

RLT: 1.00 : 0.62 : 0.53 : 0.71 : 1.44 (protarsus); 1.00 : 0.48 : 0.39 : 0.54 : 1.00 (mesotarsus); 1.00 : 0.42 : 0.37 : 0.69 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 6). BL 11.31 mm (11.14-11.49 mm); HL

1.73 mm (1.66-1.70 mm); HW 1.70 mm (1.65-1.77 mm); OI 19.53 (16.88-22.22); PL 1.94 mm (1.83-2.08 mm); PW 2.17 mm (2.14-2.28 mm); PI 89.34 (85.98-91.22); EL 7.46 mm (7.00-7.67 mm); EW 3.34 mm (3.22-3.46 mm). Females (n= 7). BL 11.74 mm (11.03-12.16 mm); HL 1.72 mm (1.62-1.85 mm); HW 1.80 mm (1.71-1.94 mm); OI 22.61 (22.08-23.66); PL 1.90 mm (1.74-2.03 mm); PW 2.41 mm (2.25-2.52 mm); PI 78.80 (77.33-80.56); EL 8.12 mm (7.69-8.43 mm); EW 3.79 mm (3.56-3.98 mm).

**Differential diagnosis.** (For details see the key below). Similar species with dark dorsal surface and pale legs with blackish brown apex of femora is *Oracula (Duocula) soppongica* sp. nov. *Oracula (Duocula) callida* sp. nov. clearly differs from similar species *O. (D.) soppongica* mainly by space between eyes of male narrower than length of antennomere 1, by lateral margins of pronotum straight and parallel before roundly obtuse posterior angles and by shape of apical piece of aedeagus as in Figs. 7 and 8; while *O. (D.) soppongica* has space between eyes of male wider than length of antennomere 1, lateral margins of pronotum are distinctly excised before almost rectangular posterior angles and shape of apical piece of aedeagus is as in Figs. 23 and 24.

Etymology. From Latin callida (meaning 'clever').

Distribution. Thailand (Chiang Mai Province).

#### Oracula (Duocula) clara Novák, 2019

**Type locality.** Laos northeast, Houa Phanh province, Ban Saleuy→Phou Pane Mt., 20°12-13.5'N 103°59.5'-104°01'E, 1340-1870 m.

**Type material examined.** (male paratype): LAOS-NE, Houa Phan prov., / 20°12-13.5'N 103°59.5'-104°01'E, / Ban Saleuy→Phou Pane Mt., / 1340-1870 m, 2.-22.vi.2011, Vít. Kubáň & Lao coll. leg. // Primary mountain forest, / *at light+ individual collecting.* / Laos 2011 Expedition / National Museum Prague, / Czech Republic., (VNPC).

Material examined. (1 ♂): THAILAND Chiang Mai prov. / DOI SUTHEP - Chiang Mai / 21-22.6.2002, alt. 1350+-50m / WGS 84: 12°05'N, 102°21'E / leg. Fouqué R. + H., (VNPC).

**Remarks.** Examined male species in all characters is the same as type material studied. Figures see in Novák (2019: 62: fig. 5 - habitus of holotype; fig. 6 - head and pronotum of holotype; figs. 7 and 8 - aedeagus, apical piece).

Distribution. Laos, new for Thailand.

Oracula (Duocula) flebila sp. nov. (Figs. 9-12)

Type locality. Thailand, Fang Doi Ang Khang.

**Type material.** Holotype ( $\mathcal{C}$ ): Thailand, Fang, / Doi Ang Khang / 2-4.VI.2014, / K. Takahashi leg., (NMTJ). Paratype: (1  $\mathcal{C}$ ): same data as holotype, (VNPC). The types are provided with a printed red label: 'Oracula / (Duocula) flebila sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

104

**Description of holotype.** Habitus as in Fig. 9, body large, elongate, *Leptura* shaped, matte, from reddish brown to black, dorsal surface with dark setation, punctuation and very fine microgranulation, BL 10.32 mm. Widest near middle elytra length; BL/EW 3.35.

Head (Fig. 10) approximately as long as wide, through the eyes distinctly wider than anterior margin, finely narrower than base of pronotum. Dorsal surface matte with dark setae, very small punctures and microgranulation. Posterior part behind eyes with long, black setae. Clypeus wide, transverse, half heart shaped, matte, black with ochre yellow apex excised in middle. Dorsal surface with long, dark and pale setae and microgranulation. Mandibles brown with darker sides and apex, glabrous, shiny. HW 1.55 mm; HW/PW 0.84; HL (visible part) 1.58 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; approximately as wide as length of antennomere 1; OI equal to 22.46.

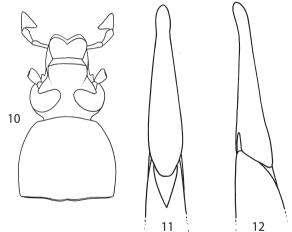
Antenna. Long, narrow, rather matte (AL 8.87 mm, AL/BL 0.86 - distinctly exceeding three quarters body length). Surface with short and dense, recumbent, almost dark setation, microgranulation and small punctures. Antennomeres 1-5 black with narrowly reddish brown apex, antennomeres 6-11 brown. Antennomere 2 shortest, antennomeres 4-11 longer than antennomere 3.

RLA(1-11): 0.37 : 0.21 : 1.00 : 1.19 : 1.01 : 1.13 : 1.03 : 1.08 : 1.12 : 1.05 : 1.06.

RL/WA(1-11): 1.71 : 1.60 : 6.00 : 4.43 : 5.27 : 5.50 : 5.71 : 6.00 : 6.21 : 6.83 : 8.30.

Maxillary palpus blackish brown, matte, with dark setation and microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest in apex, ultimate palpomere widely triangular.





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

Pronotum (Fig. 10) black, matte, convex, widest near middle, distinctly narrower than elytra in humeri, slightly wider than long. Dorsal surface with dark setae and microgranulation, punctuation indistinct. PL 1.67 mm; PW 1.84 mm; PI equal to 90.36. Border lines very narrow, margins conspicuous from dorsal view, in the middle of anterior and posterior margin not clearly conspicuous. Lateral margins finely arcuate. Base finely bisinuate, anterior margin arcuate, anterior and posterior angles obtuse.

Elytra. Black, narrow, elongate, slightly convex, semimatte, widest near middle. Dorsal surface with dark setation. EL 7.07 mm; EW 3.08 mm; EL/EW 2.30. Elytral striae with rows of small, coarse punctures, intervals between punctures in rows as large as or wider than diameter of punctures. Elytral intervals finely convex, with very fine microgranulation and very small punctures.

Scutellum. Black, roundly triangular, matte, with microgranulation and dark setae.

Elytral epipleura well-developed, black, with small punctures, distinctly narrowing to ventrite 1 in basal part, then narrow and parallel in apical part.

Legs. Long and narrow, black, tarsi and metatibiae reddish brown. Dorsal surface with dark setation, fine microgranulation and very small, shallow punctures. Tibiae normally shaped, widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.69 : 0.69 : 0.92 : 1.58 (protarsus), 1.00 : 0.45 : 0.45 : 0.55 : 1.04 (mesotarsus), 1.00 : 0.44 : 0.38 : 0.69 (metatarsus).

Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

Ventral side of body black with small punctures. Abdomen black, shiny, with pale setae, microgranulation and small, shallow punctures.

Aedeagus (Figs. 11, 12) partly pale brown, partly blackish brown. Basal piece finely 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: 2.80.

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= 2). BL 10.18 mm (10.04-10.32 mm); HL 1.56 mm (1.54-1.58 mm); HW 1.53 mm (1.51-1.55 mm); OI 20.72 (18.97-22.46); PL 1.69 mm (1.67-1.71 mm); PW 1.87 mm (1.84-1.90 mm); PI 90.21 (90.06-90.36); EL 6.93 mm (6.79-7.07 mm); EW 2.99 mm (2.89-3.08 mm).

**Differential diagnosis.** (For details see the key below). *Oracula (Duocula) flebila* sp. nov. is a unique species. It differs from other similar species of the subgenus *Duocula* Novák, 2019 mainly by dorsal surface, body and legs almost completely black.

Etymology. From Latin *flebila* (meaning 'tearfull').

Distribution. Thailand.

# Oracula (Duocula) modesta sp. nov. (Figs. 13-16)

Type locality. Thailand, Chiang Mai Province, Doi Suthep.

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand, Chiang Mai / Doi Suthep, LFIT, / 25.IV-6. V. 2013, K. Masumoto leg., (NMTJ). Paratypes: (1  $\mathcal{J}$ , 2  $\mathcal{Q}$  $\mathcal{Q}$ ): same data as holotype, (KMTJ, VNPC); (3  $\mathcal{J}$ , 3  $\mathcal{Q}$  $\mathcal{Q}$ ): N, THAILAND; / Chiang Mai Prov. / Doi Suthep / 13-16. V. 2012 / K. MASUMOTO leg., (KMTJ, VNPC); (2  $\mathcal{J}$ , 1  $\mathcal{Q}$ ): Doi Suthep / Thailand, 16. V. 2011 / K.MASUMOTO & / K.TAKAHASHI leg., (VNPC); (3  $\mathcal{J}$ , 2): same data as penultimate, but 20. V. 2011, (KMTJ, VNPC); (1  $\mathcal{J}$ ): Thailand, Chiang Mai / Doi Suthep, / 26.IV. 2013 / K. Masumoto leg., (VNPC); (1  $\mathcal{J}$ ): Thailand, Chiang Mai / Doi Suthep, / 26.IV. 2013 / K. Masumoto leg., (VNPC); (1  $\mathcal{J}$ ): Thailand, Chiang Mai / Doi Suthep, 8.V.2012 / K. Masumoto & / K.Takahashi leg., (VNPC); (1  $\mathcal{J}$ , 2  $\mathcal{Q}$  $\mathcal{Q}$ ): Thailand, Chiang Mai / Doi Suthep, 8.V.2017 / K. Masumoto leg., (KMTJ, VNPC); (1  $\mathcal{J}$ ): Thailand, Chiang Mai / Chiang Mai / 22-23. V. 2017, / K. Masumoto leg., (KMTJ, VNPC); (1  $\mathcal{J}$ ): Thailand, Chiang Mai / Chiang Mai prov. / 30. V. - 2. VI. 2017 / LFIT. K.Takahashi leg., (VNPC); (1  $\mathcal{J}$ ): NW Thailand / Chiang Mai prov. / Doi Suthep mt. / Sv. Bílý leg. 1.v.1996, (NMPC). The types are provided with a printed red label: 'Oracula / (Duocula) modesta 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 blackish brown, dorsal surface with pale setation, punctuation and fine microgranulation, BL 11.47 mm. Widest near middle elytra length; BL/EW 3.23.

Head (Fig. 14) dark brown, slightly wider than long, through the eyes distinctly wider than anterior margin, finely narrower than base of pronotum. Dorsal surface shiny with long, pale setae. Posterior part with indistinct microgranulation, long, dark setae behind eyes, larger and coarser punctures than those in anterior half with fine microgranulation. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with dense punctures, long, pale setae, microgranulation and microrugosities, shiny. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny. HW 1.77 mm; HW/PW 0.80; HL (visible part) 1.65 mm. Eyes large, transverse, excised, space between eyes very narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; OI equal to 15.90.

Antenna. Long, narrow, ochre yellow, rather matte (AL 9.30 mm, AL/BL 0.81 - distinctly exceeding three quarters body length). Surface with short and dense, recumbent, pale setation, microgranulation and small punctures. Antennomere 2 shortest, antennomeres 5-11 shorter than antennomere 3.

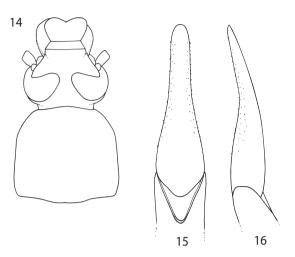
RLA(1-11): 0.44 : 0.17 : 1.00 : 1.04 : 0.88 : 0.91 : 0.91 : 0.86 : 0.88 : 0.82 : 0.80.

RL/WA(1-11): 2.72: 1.30: 6.22: 6.00: 5.71: 6.46: 7.42: 7.06: 7.61: 7.44: 7.88.

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

Pronotum (Fig. 14) blackish brown, shiny, convex, widest in basal part, distinctly narrower than elytra in humeri, slightly wider than long. Disk with two small and shallow oblique impressions from both sides from middle to posterior angles. Dorsal surface with pale setae, fine microgranulation and dense, coarse punctuation, punctures medium sized. PL 2.04 mm; PW 2.21 mm; PI equal to 92.31. Border lines very narrow, margins conspicuous from dorsal view, only in the middle of anterior margin not clearly conspicuous. Lateral margins straight in basal half, narrowing in apical part. Base finely bisinuate, anterior margin arcuate, anterior angles obtuse.





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

Elytra. Blackish brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with pale setation. EL 7.78 mm; EW 3.55 mm; EL/EW 2.19. Elytral striae with rows of coarse punctures, approximately as large as those in pronotum, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals finely convex, with very fine microgranulation and dense, small punctures.

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

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

Legs. Long and narrow, ochre yellow, apex of femora reddish. Dorsal surface with pale setation, fine microgranulation and very small punctures. Tibiae normally shaped, widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00: 0.55: 0.72: 1.03: 1.52 (protarsus), 1.00: 0.43: 0.49: 0.71: 1.00 (mesotarsus), 1.00: 0.45: 0.49: 0.88 (metatarsus).

Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

Ventral side of body blackish brown with very small punctures and pale setae. Abdomen blackish brown, slightly shiny with recumbent, pale setae, fine microgranulation and small, shallow punctures.

Aedeagus (Figs. 15, 16) ochre yellow, shiny. Basal piece 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: 3.25.

**Female** has space between eyes and body wider than in male. Protarsal claws short with 17 visible teeth.

Measurements of female body. BL 12.31 mm; HL 1.82 mm; HW 1.88 mm; OI 27.52; PL 1.96 mm; PW 2.59 mm; PI 75.68; EL 8.53 mm; EW 4.18 mm; AL(1-11) 9.90 mm; AL(1-11)/ BL 0.81; HW/PW 0.73; BL/EW 2.95; EL/EW 2.14. RLA(1-11): 0.47 : 0.22 : 1.00 : 1.06: 1.00 : 0.95 : 0.98 : 0.98 : 0.84 : 0.81 : 0.94. RL/WA(1-11): 2.11 : 1.46 : 5.31 : 6.00 : 6.54 : 6.56 : 6.92 : 6.92 : 5.92 : 5.52 : 5.58. RLT: 1.00 : 0.54 : 0.46 : 0.60 : 1.28 (protarsus); 1.00 : 0.43 : 0.30 : 0.72 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 14). BL 11.57 mm (11.07-11.79 mm); HL 1.69 mm (1.65-1.74 mm); HW 1.78 mm (1.74-1.84 mm); OI 15.51 (14.60-16.67); PL 2.00 mm (1.81-2.17 mm); PW 2.23 mm (1.97-2.39 mm); PI 89.30 (86.34-91.88); EL 7.87 mm (7.58-8.06 mm); EW 3.52 mm (3.30-3.63 mm). Females (n= 9). BL 12.00 mm (11.84-12.31 mm); HL 1.75 mm (1.68-1.82 mm); HW 1.81 mm (1.73-1.88 mm); OI 25.51 (22.91-27.52); PL 1.87 mm (1.84-1.96 mm); PW 2.71 mm (2.31-2.59 mm); PI 77.16 (75.58-78.81); EL 8.38 mm (8.20-8.53 mm); EW 3.91 mm (3.73-4.18 mm).

**Differential diagnosis.** (For details see the key below). Similar *Duocula* Novák, 2019 species with blackish brown dorsal surface (including head) and apex of femora pale from Thailand is *Oracula (Duocula) arcana* sp. nov.

*Oracula (Duocula) modesta* sp. nov. clearly differs from similar species *O*. (*D*.) arcana mainly by ultimate protarsomere 1.5 times longer than protarsomere 1, by anterior angles of pronotum distinct, obtuse, by lateral margins in anterior part of pronotum straight and by shape of apical piece of aedeagus as in Figs. 15 and 16; while *O*. (*D*.) arcana has ultimate protarsomere 1.25 times longer than protarsomere 1, anterior angles of pronotum are indistinct, lateral margins are in anterior part of pronotum rounded and shape of apical piece of aedeagus is as in Figs. 3 and 4.

Etymology. From Latin modesta (meaning 'modest').

Distribution. Thailand (Chiang Mai Province).

## Oracula (Duocula) nuntius sp. nov. (Figs. 17-20)

Type locality. Thailand, Fang Doi Ang Khang.

**Type material.** Holotype ( $\mathcal{J}$ ): Thailand, Fang / Doi Ang Khang, / 8.-10.XI.2012 / K. Takahashi leg., (NMTJ). The type is provided with a printed red label: 'Oracula / (Duocula) nuntius sp. nov. / HOLOTYPUS / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 17, body large, elongate, *Leptura* shaped, shiny, from ochre yellow to blackish brown, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 13.25 mm. Widest near middle elytra length; BL/EW 3.49.

Head (Fig. 18) pale reddish brown, approximately 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, coarse punctures and fine microgranulation. Posterior part with a few long, dark setae behind eyes. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with large punctures, long, pale setae and microgranulation, shiny. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny. HW 1.84 mm; HW/PW 0.72; HL (visible part) 1.90 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 17.95.

Antenna. Long, narrow, ochre yellow, rather matte (AL 11.02 mm, AL/BL(1-11) 0.83 - distinctly exceeding three quarters body length). Surface with short and dense, recumbent, pale setation, microgranulation and very small punctures. Antennomere 2 shortest, antennomeres 5-11 shorter than antennomere 3.

RLA(1-11): 0.40 : 0.20 : 1.00 : 1.05 : 0.94 : 0.98 : 0.99 : 0.96 : 0.94 : 0.89 : 0.90.

RL/WA(1-11): 2.31 : 2.00 : 7.24 : 7.95 : 7.53 : 9.31 : 8.33 : 8.11 : 8.41 : 8.47 : 9.13.

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

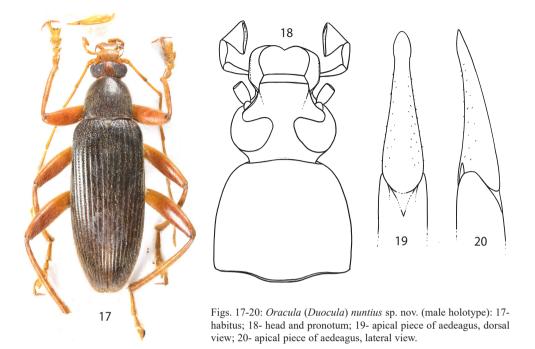
Pronotum (Fig. 18) dark brown, shiny, convex, widest near middle, distinctly narrower than elytra in humeri, slightly wider than long. Two small and shallow oblique impressions before posterior angles not clearly distinct. Dorsal surface with pale setation, very fine microgranulation and dense punctuation, punctures smaller, intervals between punctures almost as wide as diameter of punctures. PL 2.30 mm; PW 2.57 mm; PI equal to 89.49. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins finely arcuate. Base bisinuate, anterior margin slightly arcuate in middle, anterior angles indistinct, posterior angles obtuse.

Elytra. Blackish brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with pale setation. EL 9.05 mm; EW 3.80 mm; EL/EW 2.38. Elytral striae with rows of coarse punctures, larger than those in pronotum, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals finely convex, with very fine microgranulation and very small punctures.

Scutellum. Reddish brown with black margins, semielliptical, matte, with fine microgranulation and a few long, pale setae.

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

Legs. Long and narrow, reddish brown, tarsi ochre yellow. Dorsal surface with pale setation, fine microgranulation and small punctures. Pro- and mesotibiae slightly bent. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.59 : 0.85 : 1.22 : 1.77 (protarsus), 1.00 : 0.43 : 0.57 : 0.77 : 0.95 (mesotarsus), 1.00 : --- : --- : --- (metatarsus).



Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

Ventral side of body reddish brown with dense, small punctures and pale setae. Abdomen pale brown, shiny, ultimate and penultimate ventrites reddish, surface with recumbent, pale setae, fine microgranulation and small, shallow punctures.

Aedeagus (Figs. 19, 20) ochre yellow, rather matte. Basal piece finely 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: 2.94.

Female. Unknown.

**Differential diagnosis.** (For details see the key below). *Oracula (Duocula) nuntius* sp. nov. is a unique species differs from similar *Duocula* Novák, 2019 species with dark dorsal surface and partly pale legs from Thailand mainly by pale reddish brown head; while all other species have head dark.

Etymology. From Latin nuntius (meaning 'the messenger').

Distribution. Thailand.

# Oracula (Duocula) soppongica sp. nov. (Figs. 21-24)

Type locality. Thailand, Mae Hong Son Province, Kiwlom pass near Soppong, 19°26'N, 098°19'E, 1400+-50 m.

**Type material.** Holotype ( $\eth$ ): THAILAND / Mae Hong Son prov. / KIWLOM-pass near Soppong / 23.6-2.7.2002,alt. 1400+-50m / WGS 84: 19°26'N , 098°19'E / lgt. Fouqué R. + H., (VNPC). Paratypes: (1  $\circlearrowright$ , 4  $\bigcirc$  $\bigcirc$ ): same data as holotype, (VNPC). The types are provided with a printed red label: 'Oracula / (Duocula) soppongica sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 21, body large, elongate, *Leptura* shaped, shiny, from yellow to blackish brown, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 13.75 mm. Widest near middle elytra length; BL/EW 3.46.

Head (Fig. 22) as long as wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface shiny with pale setae, microgranulation and punctuation. Posterior part blackish brown with larger and coarser punctures than those in dark brown anterior half with pale reddish brown apex and reddish brown genae. Clypeus wide, transverse, half heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with shallow punctures, long, pale setae and microgranulation, shiny. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny. HW 2.01 mm; HW/PW 0.76; HL (visible part) 2.00 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; narrower than length of antennomere 1; OI equal to 23.37.

Antenna. Long, narrow (AL(1-10) 9.71 mm, AL/BL(1-10) 0.71 - distinctly exceeding two thirds body length). Surface with short, recumbent, pale setation, microgranulation and small punctures. Antennomeres 1-4 ochre yellow, slightly shiny, antennomeres 5-11 slightly darker, rather matte. Antennomere 2 shortest, antennomeres 6-10 shorter than antennomere 3.

RLA(1-10): 0.42 : 0.19 : 1.00 : 1.06 : 1.02 : 0.99 : 0.97 : 0.96 : 0.94 : 0.92.

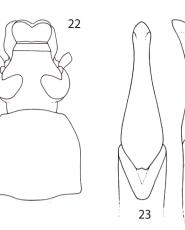
RL/WA(1-10): 2.16 : 1.41 : 6.60 : 7.25 : 6.72 : 6.79 : 7.27 : 7.95 : 8.16 : 8.44.

Maxillary palpus ochre yellow, rather matte, with pale setation, small, shallow punctures and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest in apex, ultimate palpomere slightly darker, widely triangular.

Pronotum (Fig. 22) blackish brown, shiny, convex, widest in base, distinctly narrower than elytra in humeri, almost as long as wide. Disk with two small and shallow oblique impressions from both sides from middle to posterior angles. Dorsal surface with fine microgranulation, pale setae denser near lateral margins than in the middle, with dense punctuation, punctures small and coarse. PL 2.50 mm; PW 2.65 mm; PI equal to 94.34. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins slightly excised before posterior angles, narrowing in apical part. Base finely bisinuate, anterior margin slightly arcuate, anterior angles distinct, obtuse, posterior angles almost rectangular.

Elytra. Blackish brown, narrow, elongate, slightly convex, shiny, widest near middle. Dorsal surface with pale setation. EL 9.25 mm; EW 3.98 mm; EL/EW 2.32. Elytral striae with rows of coarse punctures, distinctly larger than those in disc of pronotum, intervals





Figs. 21-24: *Oracula (Duocula) soppongica* sp. nov. (male holotype): 21- habitus; 22- head and pronotum; 23- apical piece of aedeagus, dorsal view; 24- apical piece of aedeagus, lateral view.

24

between punctures in rows narrower than diameter of punctures. Elytral intervals finely convex, with fine microgranulation and very small, dense punctures.

Scutellum. Reddish brown with black margins, roundly triangular, shiny, with small punctures and fine microgranulation.

Elytral epipleura well-developed, blackish brown in basal part, distinctly narrowing to ventrite 1, then reddish brown, relatively narrow and parallel in apical part.

Legs. Long and narrow, femora yellow with black apex, tibiae and tarsi pale brown. Dorsal surface with longer, pale setation, fine microgranulation and small punctures. Proand mesotibiae straight, very finely bent, widened apically. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.68 : 0.76 : 0.95 : 1.60 (protarsus), 1.00 : 0.43 : 0.40 : 0.66 : 1.04 (mesotarsus), 1.00 : 0.47 : 0.54 : 0.83 (metatarsus).

Tarsal claws large with teeth from both sides of hollow claw, both upper protarsal claws with more than 40 visible teeth.

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

Aedeagus (Figs. 23, 24) ochre yellow, shiny. Basal piece finely rounded laterally and narrowing in dorsal view. Apical piece beak shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 3.88.

Female. Body distinctly wider than in male, both protarsal claws short with 12 teeth.

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 2). BL 13.56 mm (13.35-13.75 mm); HL 1.91 mm (1.82-2.00 mm); HW 1.93 mm (1.85-2.01 mm); OI 21.98 (20.58-23.37); PL 2.43 mm (2.35-2.50 mm); PW 2.62 mm (2.58-2.65 mm); PI 92.72 (91.09-94.34); EL 9.22 mm (9.19-9.25 mm); EW 3.93 mm (3.87-3.98 mm).

**Differential diagnosis.** (For details see the key below). Similar species with dark dorsal surface and pale legs with blackish brown apex of femora is *Oracula* (*Duocula*) *callida* sp. nov.

*Oracula (Duocula) soppongica* sp. nov. clearly differs from similar species *O*. (*D*.) *callida* mainly by space between eyes of male wider than length of antennomere 1, by lateral margins of pronotum distinctly excised before almost rectangular posterior angles and by shape of apical piece of aedeagus as in Figs. 23 and 24; while *O*. (*D*.) *callida* has space between eyes of male narrower than length of antennomere 1, lateral margins of pronotum are straight and parallel before roundly obtuse posterior angles and shape of apical piece of aedeagus is as in Figs. 7 and 8.

**Etymology.** Toponymic, named after the type locality Soppong in Mae Hong Son Province (Thailand).

Distribution. Thailand (Mae Hong Son Province).

# Subgenus Oracula Novák, 2019

Type species: Oracula (Oracula) bicolor Novák, 2019.

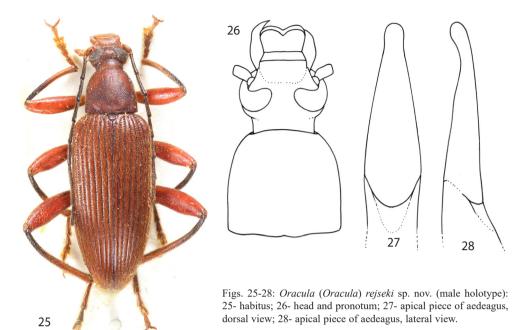
# Oracula (Oracula) rejseki sp. nov. (Figs. 25-28)

Type locality. Western Thailand, Klong Lan National Preserve, 50 km southwestern from Kamphaeng Phet.

**Type material.** Holotype (3): yl: W-THAILAND, Klong / Lan NP, 50 km SW / Kamphaeng Phet, 2.-5. / VII.1997,leg. J. REJSEK, (SMNS). Paratypes (1 3): yl: same data as holotype, (VNPC); (1 2): yl: <u>Col. IR.Sc.N.B.</u> / Thailand, Kanchanaburi / prov., Sai Yok N.P. / 4-5.VI.2003 / Leg. J. Constant and K. / Smets, (IRSNB). The types are provided with a printed red label: 'Oracula / (Oracula) rejseki sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2022'.

**Description of holotype.** Habitus as in Fig. 25, body large, elongate, *Leptura* shaped, semimatte, from yellow to black, dorsal surface reddish with pale setation, punctuation and fine microgranulation, BL 12.67 mm. Widest near middle elytra length; BL/EW 3.27.

Head (Fig. 26) a little longer than wide, through the eyes distinctly wider than anterior margin, slightly narrower than base of pronotum. Dorsal surface pale reddish brown, slightly shiny with pale setae, dense, relatively coarse punctuation, punctures medium sized and microgranulation. Apex of anterior part ochre yellow. Clypeus wide, transverse, half



heart shaped, pale reddish brown with apex excised in middle. Dorsal surface with shallow punctures, pale setae and fine microgranulation, rather matte. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.86 mm; HW/ PW 0.74; HL (visible part) 1.94 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye; wider than length of antennomere 2; approximately as wide as length of antennomere 1, OI equal to 20.52.

Antenna. Long, narrow, slightly shiny (AL(1-10) 8.53 mm, distinctly exceeding two thirds body length - AL(1-10)/BL 0.67). Dorsal surface with short and dense, semierect, pale setation, microgranulation and small punctures. Antennomeres 1 and 2 pale reddish brown, antennomeres 3-5 black, antennomeres 6-10 dark brown. Antennomere 2 shortest, antennomeres 4-8 and 10 slightly longer than antennomere 3.

RLA(1-10): 0.43 : 0.20 : 1.00 : 1.12 : 1.01 : 1.02 : 1.03 : 1.03 : 0.92 : 1.04.

RL/WA(1-10): 2.11: 1.18: 6.00: 6.44: 5.28: 5.40: 6.18: 5.44: 4.69: 5.71.

Maxillary palpus pale reddish brown, semimatte, with long, recumbent, pale setation, small, shallow punctures and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Fig. 26) reddish brown, semimatte, convex, widest in base, distinctly narrower than elytra in humeri. Disk with two small and shallow oblique impressions from both sides between middle and posterior angles. Dorsal surface with pale setae, fine microgranulation and dense, medium sized punctures, intervals between them narrower than diameter of punctures. PL 2.33 mm; PW 2.50 mm; PI equal to 93.20. Border lines very narrow, margins conspicuous from dorsal view only in the middle of anterior margin not clearly conspicuous.

Lateral margins straight and parallel in basal part, slightly arcuate in apical part. Base finely bisinuate, anterior margin slightly arcuate, anterior angles indistinct, posterior angles obtuse.

Elytra. Reddish brown, elongate, slightly convex, slightly shiny, widest near middle. Dorsal surface with pale setation. EL 8.40 mm; EW 3.88 mm; EL/EW 2.17. Elytral striae with rows of coarse punctures, slightly larger than those in pronotum. Elytral intervals finely convex, with very fine microgranulation and very small punctures.

Scutellum. Reddish brown with black margins, trapezoidal shape, shiny, with shallow punctures, microgranulation and a few, long, pale setae.

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

Legs. Long and narrow, femora red, basal part of tibiae black, apical part and tarsi pale brown. Dorsal surface with pale setation, fine microgranulation and small, shallow punctures. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00: 0.80: 0.71: 0.88: 1.73 (protarsus), 1.00: 0.44: 0.44: 0.46: 0.97 (mesotarsus), 1.00: 0.48: 0.38: 0.65 (metatarsus).

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

Ventral side of body with short, pale setae and small punctures, meso- and metaventrite little darker than reddish brown prothorax. Abdomen brown, shiny, almost glabrous with dense, small and shallow punctures and fine microgranulation.

Aedeagus (Figs. 27, 28) brown. Basal piece 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: 2.84.

**Female** has space between eyes and body slightly wider than in male. Protarsal claws short with 13 visible teeth.

Measurements of female body. BL 10.14 mm; HL 1.60 mm; HW 1.52 mm; OI 27.46; PL 1.74 mm; PW 1.96 mm; PI 88.78; EL 6.80 mm; EW 3.30 mm; AL(1-11) 7.09 mm; AL(1-11)/ BL 0.70; HW/PW 0.78; BL/EW 3.07; EL/EW 2.06.

RLA(1-11): 0.44 : 0.20 : 1.00 : 1.12: 0.94 : 0.90 : 0.95 : 0.94 : 0.92 : 0.88 : 0.91.

RL/WA(1-11): 1.59 : 1.00 : 4.43 : 4.31 : 3.87 : 4.11 : 4.37 : 4.50 : 5.18 : 6.06 : 6.28.

RLT: 1.00 : 0.60 : 0.68 : 0.71 : 1.30 (protarsus); 1.00 : 0.47 : 0.43 : 0.52 : 0.75 (mesotarsus); 1.00 : 0.45 : 0.34 : 0.72 (metatarsus).

**Variability.** The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Males (n= 2). BL 10.30 mm (9.83-10.76 mm); HL 1.45 mm (1.44-1.46 mm); HW 1.54 mm (1.53-1.54 mm); OI 21.14 (19.77-22.50); PL 2.00 mm (1.95-2.05 mm); PW 2.15 mm (2.10-2.20 mm); PI 93.02 (92.86-93.18); EL 6.77 mm (6.44-7.10 mm); EW 3.22 mm (3.14-3.30 mm).

**Differential diagnosis.** (For details see the key below). *Oracula (Oracula) rejseki* sp. nov. is a unique species. It differs from all other known species of subgenus *Oracula* Novák, 2019 by reddish dorsal surface of elytra and pronotum.

**Etymology.** Patronymic, named after one of the collectors of type material and my friend - Jiří Rejsek (Czech Republic), after his surname.

**Distribution.** Thailand.

# LIST OF ORACULA SPECIES FROM THAILAND

genus Oracula Novák, 2019

subgenus Duocula Novák, 2019 Oracula (Duocula) arcana sp. nov. Oracula (Duocula) callida sp. nov. Oracula (Duocula) clara Novák, 2019 Oracula (Duocula) flebila sp. nov. Oracula (Duocula) modesta sp. nov. Oracula (Duocula) nuntius sp. nov. Oracula (Duocula) soppongica sp. nov.

subgenus Oracula Novák, 2019 Oracula (Oracula) bicolor Novák, 2019 Oracula (Oracula) domina Novák, 2019 Oracula (Oracula) opulenta Novák, 2019 Oracula (Oracula) rejseki sp. nov.

### KEY TO THE ORACULA SPECIES OF THAILAND

| Protarsal claws of male with teeth from both sides of hollow claw. subgenus <i>Duocula</i> Novák, 20197    |
|--|
| Protarsal claws of male with teeth only from one side of hollow claw. subgenus Oracula Novák, 2019         |
|  |
| Dorsal surface and body completely black. See Novák (2019: 79: habitus as in fig. 29, head and pronotum    |
| (fig. 30) and aedeagus as in figs. 31 and 32 Oracula (O.) opulenta Novák, 2019                             |
| Dorsal surface and body not completely black   |
| Elytra and pronotum reddish. Habitus as in Fig. 25, head and pronotum (Fig. 26), aedeagus as in Figs. 27   |
| and 28 Oracula (O.) rejseki sp. nov.   |
| Elytra dark, pronotum reddish. See Novák (2019: 74: habitus as in fig. 21, head and pronotum (fig. 22) and |
| aedeagus as in figs. 23 and 24 Oracula (O.) bicolor Novák, 2019  |
| Elytra and pronotum dark. See Novák (2019: 77: habitus as in fig. 25, head and pronotum (fig. 26) and      |
| aedeagus as in figs. 27 and 28 Oracula (O.) domina Novák, 2019   |
| Dorsal surface, body and legs almost completely black. Habitus as in Fig. 9, head and pronotum (Fig. 10),  |
| aedeagus as in Figs. 11 and 12 Oracula (D.) flebila sp. nov.   |
| Dorsal surface, body and legs not completely black   |
| Dorsal surface, body and legs ochre yellow or pale brown. See Novák (2019: 62: habitus as in fig. 5, head  |
| and pronotum (fig. 6) and aedeagus as in figs. 7 and 8 Oracula (D.) clara Novák, 2019                      |
| Dorsal surface dark, legs at least partly pale   |
| Apex of femora dark blackish brown. 14   |
| Apex of femora pale 16   |
|  |

| 14 (15) | Space between eyes wider than length of antennomere 1, lateral margins of pronotum distinctly excised       |
|---------|---|
|         | before almost rectangular posterior angles. Habitus as in Fig. 21, head and pronotum (Fig. 22), aedeagus    |
|         | as in Figs. 23 and 24 Oracula (D.) soppongica sp. nov.  |
| 15 (14) | Space between eyes narrower than length of antennomere 1, lateral margins of pronotum straight and          |
|         | parallel before roundly obtuse posterior angles. Habitus as in Fig. 5, head and pronotum (Fig. 6), aedeagus |
|         | as in Figs. 7 and 8 Oracula (D.) callida sp. nov.   |
| 16 (17) | Head pale reddish brown. Habitus as in Fig. 17, head and pronotum (Fig. 18), aedeagus as in Figs. 19 and    |
|         | 20 Oracula (D.) nuntius sp. nov.  |
| 17 (16) | Head blackish brown   |

- (10) Hold backhard for the formation of the

ACKNOWLEDGEMENTS. Sincere thanks are due to Jerome Constant (IRSNB), Lukáš Sekerka and Jiří Hájek (NMPC) and Wolfgang Schawaller (SMNS) for loaning me a new material under their care, to Kimio Masumoto (KMTJ) for loaning me a new material. Special thanks are due to Zuzana Čadová (Liberec, Czech Republic) for excellent drawings.

### REFERENCES

- CAMPBELL J. M. 1965: A revision of the genus *Charisius* (Coleoptera: Alleculidae). *The Coleopterist's Bulletin* 19: 43-56.
- CAMPBELL J. M. & MARSHALL J. D. 1964: The ocular index and its applications to the taxonomy of the Alleculidae (Coleoptera). *The Coleopterist's Bulletin* 18: 42.
- Novák V. 2019: New genera of Alleculinae (Coleoptera: Tenebrionidae) from Palaearctic and Oriental Regions XI - Oracula gen. nov. Folia Heyrovskyana, Series A 27(2): 52-86.
- Novák V. 2020: Subfamily Alleculinae Laporte, 1840. In: IWAN D. & LÖBL I. (eds.): Catalogue of Palaearctic Coleoptera. Revised and Updated Edition. Volume 5. Tenebrionoidea. Brill: Leiden/Boston, 945 pp.
- Novák V. 2021: Check-list of Alleculinae (Insecta: Coleoptera: Tenebrionidae) of Nepal, with description of a new species pp. 545-566. In: HARTMANN M., BARCLAY M. & WEIPERT J. (eds.): *Biodiversität und Naturausstattung im Himalaya VII.* Verein der Freunde und Förderer des Naturkundemuseums Erfurt: Erfurt, 616 pp.
- Novák V. 2022a: New Oracula Novák, 2019 species from North Vietnam (Coleoptera: Tenebrionidae: Alleculinae: Aleculini). Folia Hevrovskvana, Series A 30(2): 68-80.
- Nováκ V. 2022b: New Oracula Novák, 2019 species from Laos (Coleoptera: Tenebrionidae: Alleculinae: Alleculini). Vernate 41: 385-405.

Received: 30.11.2022 Accepted: 10.12.2022 Printed: 31.3.2023