

**New species of Alleculini (Coleoptera: Tenebrionidae: Alleculinae)
from the Palaearctic Region III - genus *Anthracula* Fairmaire, 1897**

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Abstract. New species of the genus *Anthracula* Fairmaire, 1897 from China are described as follows: *Anthracula adolfi* sp. nov. and *Anthracula becvari* sp. nov., both from Yunnan Province, *Anthracula emeiica* sp. nov. from Sichuan Province and *Anthracula yanziica* sp. nov. from Hubei Province. All new species are described, illustrated (including male genitalia) and compared together. A list of so far known species of the genus *Anthracula* Fairmaire, 1897 is added.

INTRODUCTION

The genus *Anthracula* was introduced by Fairmaire (1897) for *Anthracula latifrons* Fairmaire, 1897 as a type species, known from North India (Arunachal Pradesh and Uttaranchal State) and Bhutan (Novák 2017, 2020). Novák (2017) described five new species from Nepal and Pakistan. Species of the genus *Anthracula* have relatively large and wide body, usually longer than 10 mm, elytra are widened apically (widest near two thirds from base to apex), short antenna reaching approximately half body length and protarsal claws have more than 10 teeth in males. No species is known from territory of China yet. Males of species from Nepal and Pakistan have space between eyes wider than diameter of one eye; while males of new Chinese species have space between eyes narrower than diameter of one eye (excepting *Anthracula adolfi* sp. nov.).

New species from China are described as *Anthracula adolfi* sp. nov. and *Anthracula becvari* sp. nov. (Yunnan Province), *Anthracula emeiica* sp. nov. (Sichuan Province) and *Anthracula yanziica* sp. nov. (Hubei Province). All new species are illustrated (including male genitalia) and compared together. List of all so far known *Anthracula* species 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 $(100 \times \text{length of pronotum along midline}) / (\text{width across basal angles of pronotum})$.

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:

AMPC collection of Adolf Mikyška, Poděbrady, Czech Republic;

BMNH British Museum Natural History, London, England;

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).

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 *Anthracula* Fairmaire, 1897

Type species: *Anthracula latifrons* Fairmaire, 1897: 236.

Anthracula adolfi sp. nov.

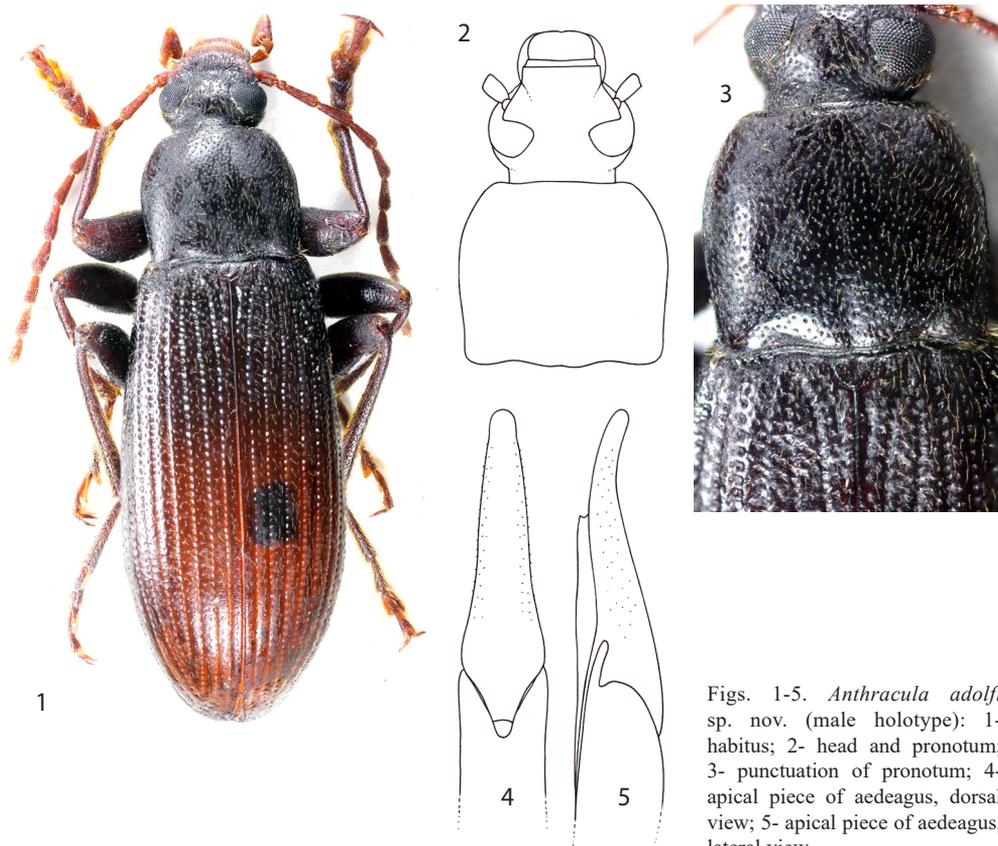
(Figs. 1-5)

Type locality. China, Yunnan Province, Haba, 27°22'N 100°06'E, 3000 m.

Type material. Holotype (♂): CHINA: Yunnan, 13.7.2006 / Haba, N: 27°22', E: 100°06' / 3000m, lgt. A. Mikyška, (VNPC). Paratype: (1 ♀): same data as holotype, (AMPC); (2 ♂♂): China, N. W. Yunnan, 3200m / Haba Shan – Haba / N 27°22'.54,3'', E 100°06'03,2'' / 2.7.2005, lgt. Janata M., (BMNH, VNPC). The types are provided with a printed red label: '*Anthracula / adolfi* sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2022'.

Description of holotype. Habitus as in Fig. 1, body large, robust, slightly convex, elongate, shiny, from brown to blackish brown, dorsal surface with pale setation, punctuation and fine microgranulation, BL 13.74 mm. Widest near two thirds elytra length; BL/EW 3.24.

Head (Fig. 2) blackish brown, approximately as long as wide, through the eyes approximately as wide as anterior margin, narrower than base of pronotum. Dorsal surface semi-matte with sparse, long, pale setae. Posterior half blackish brown with sparser and coarser punctures than those in brown anterior part. Clypeus wide, transverse, half heart shaped, brown, with apex excised in middle. Dorsal surface with shallow punctures, long, pale setae, microrugosities and microgranulation, semi-matte. Mandibles glabrous, shiny, almost blackish brown with pale setae in sides. HW 2.00 mm; HW/PW 0.72; HL (visible



Figs. 1-5. *Anthracula adolfi* sp. nov. (male holotype): 1- habitus; 2- head and pronotum; 3- punctuation of pronotum; 4- apical piece of aedeagus, dorsal view; 5- apical piece of aedeagus, lateral view.

part) 2.00 mm. Eyes large, transverse, excised, space between eyes distinctly wider than diameter of one eye, OI equal to 39.56.

Antenna. Relatively short, brown, rather matte (AL 6.81, reaching half body length - AL/BL 0.50). Surface of antennomeres with pale setation, microgranulation and small, shallow punctures. Antennomeres 4-11 finely darker than antennomeres 1-3. Antennomere 2 shortest, antennomere 4 longest, antennomeres 9-11 shorter than antennomere 3.

RLA(1-11): 0.63 : 0.33 : 1.00 : 1.18 : 0.98 : 0.97 : 1.01 : 1.05 : 0.94 : 0.93 : 0.93.

RL/WA(1-11): 1.66 : 1.29 : 3.27 : 3.26 : 3.03 : 2.92 : 2.80 : 2.97 : 2.83 : 3.23 : 3.70.

Maxillary palpus brown, 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 (Figs. 2, 3) blackish brown, shiny, convex, widest near middle, slightly narrower than elytra in humera. Base with small, shallow almost indistinct oblique impressions between middle and posterior angles from both sides and longitudinal shallow impression against scutellum. Dorsal surface with sparse, pale setae, very fine microgranulation and punctuation, intervals between punctures wider than diameter of punctures. PL 2.54 mm;

PW 2.79 mm; PI equal to 90.87. Border lines narrow, margins conspicuous from dorsal view, only in the middle of anterior margin not clearly distinct. Base finely bisinuate, anterior margin straight or slightly excised, anterior and posterior angles distinct, obtuse, posterior angles rounded.

Elytra. Dark brown, relatively wide, elongate, convex, shiny, widest near two thirds from base to apex. Dorsal surface with short and sparse, pale setae. EL 9.20 mm; EW 4.24 mm; EL/EW 2.17. Elytral striae with rows of coarse punctures, intervals between punctures in rows narrower than diameter of punctures. Elytral intervals slightly convex, with fine microgranulation and relatively dense punctures slightly smaller than those in striae.

Scutellum. Blackish brown, semi-elliptical, semi-matte, with a few small, shallow punctures and fine microgranulation.

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

Legs. Long and strong, dark brown, dorsal surface with dense, recumbent, pale setation, small, shallow punctures and fine microgranulation. Protibiae with very fine but distinct angle in basal third of inner side. Pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.92 : 1.01 : 1.08 : 1.31 (protarsus), 1.00 : 0.59 : 0.61 : 0.71 : 1.15 (mesotarsus), 1.00 : 0.40 : 0.34 : 0.56 (metatarsus).

Both protarsal claws with more than 20 visible teeth.

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

Aedeagus (Figs. 4, 5) pale brown, slightly shiny. Basal piece slightly rounded laterally and narrowing in dorsal view. Apical piece elongate triangular from dorsal view, beak shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 4.24.

Female. Body shorter and wider, space between eyes wider than in male. Protibiae without angle in basal third of inner side. Both protarsal claws with 10 visible teeth.

Measurements of female body. BL 13.54 mm; HL 1.96 mm; HW 2.10 mm; OI 44.51; PL 2.64 mm; PW 2.91 mm; PI 90.75; EL 8.94 mm; EW 4.49 mm; AL 6.30 mm; AL/BL 0.47; HW/PW 0.72; BL/EW 3.02; EL/EW 1.99.

RLA(1-11): 0.72 : 0.31 : 1.00 : 1.16 : 1.01 : 1.10 : 1.02 : 1.08 : 1.02 : 0.92 : 0.80.

RL/WA(1-11): 1.94 : 1.20 : 3.03 : 3.29 : 2.09 : 2.38 : 2.42 : 2.84 : 2.42 : 2.97 : 3.12.

RLT: 1.00 : 0.62 : 0.74 : 0.78 : 1.42 (protarsus), 1.00 : 0.45 : 0.51 : 0.54 : 0.96 (mesotarsus), 1.00 : 0.34 : 0.24 : 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= 3). BL 13.11 mm (12.06-14.02 mm); HL 1.93 mm (1.76-2.04 mm); HW 1.95 mm (1.78-2.06 mm); OI 38.89 (38.21-39.56); PL 2.45 mm (2.22-2.60 mm); PW 2.72 mm (2.45-2.92 mm); PI 90.17 (89.04-90.87); EL 8.87 mm (8.08-9.38 mm); EW 4.02 mm (3.59-4.24 mm).

Differential diagnosis. Male of *Anthracula adolfi* sp. nov. clearly differs from all males of known Chinese *Anthracula* species mainly by space between eyes wider than diameter of one eye (OI approximately 39) and by protibiae with very fine but distinct angle in basal third of inner side; while males of other known Chinese species have space between eyes narrower than diameter of one eye (OI 29-33) and protibiae are straight.

Etymology. Patronymic, named after the collector of the type specimens - Adolf Mikyška (Poděbrady, Czech Republic), after his first name.

Distribution. China (Yunnan Province).

Anthracula becvari sp. nov.

(Figs. 6-10)

Type locality. China, Yunnan Province, Lijiang, 26°53'N 100°18'E, 1800 m.

Type material. Holotype (♂): China, Yunnan, 1800m / LIJIANG 23.6.-21.7. / 26.53N 100.18E / lgt. S. Bečvar 1992, (VNPC). Paratypes: (1 ♂, 1 ♀): same data as holotype, (VNPC). The types are provided with a printed red label: '*Anthracula / becvari* sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2022'.

Description of holotype. Habitus as in Fig. 6, body large, elongate, slightly convex, shiny, from pale reddish brown to blackish brown, dorsal surface with pale setae, punctuation and very fine microgranulation, BL 12.20 mm. Widest near two thirds elytra length; BL/EW 3.22.

Head (Fig. 7) slightly wider than long, through the eyes distinctly wider than anterior margin, narrower than base of pronotum, dorsal surface shiny. Posterior half blackish brown with indistinct microgranulation, sparser setation and sparser punctuation than in brown or pale brown anterior part with long pale setae, dense punctures and very fine microgranulation. Clypeus wide, transverse, reddish brown. Dorsal surface with punctures, long, pale setae and microgranulation, shiny. Mandibles reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.82 mm; HW/PW 0.72; HL (visible part) 1.71 mm. Eyes large, transverse, excised, space between eyes distinctly narrower than diameter of one eye, OI equal to 29.57.

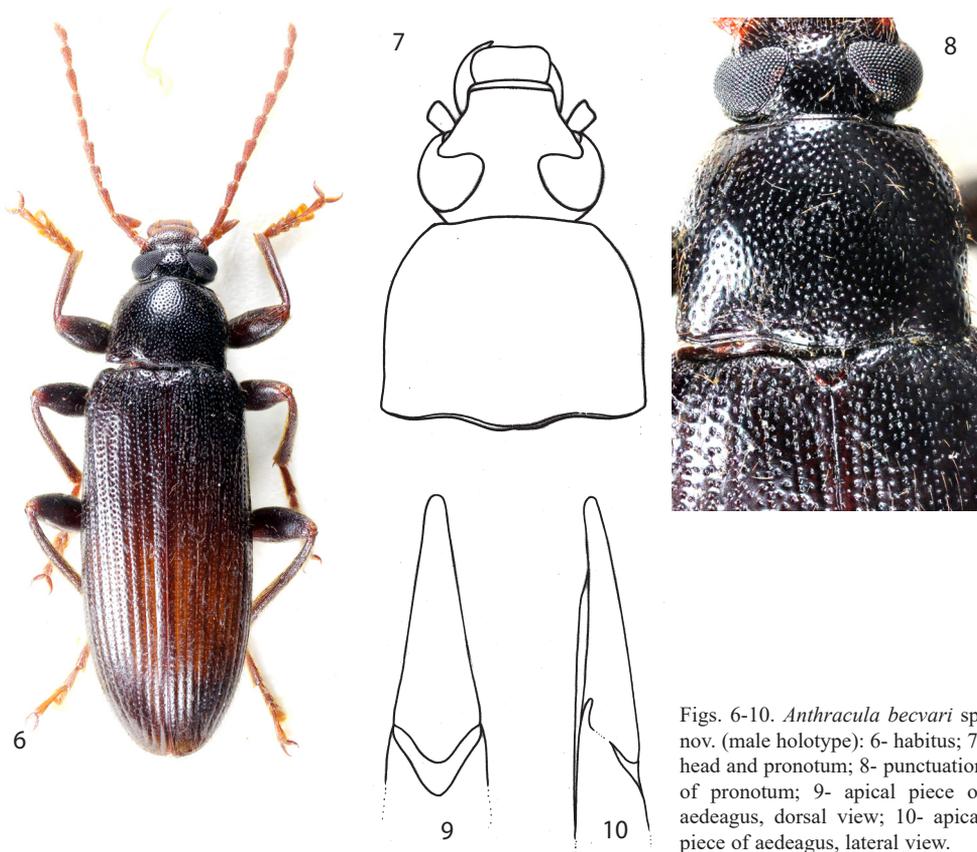
Antenna. Relatively short, reddish brown (AL 5.36, not reaching half body length - AL/BL 0.44). Surface with pale setation, microgranulation and small, shallow punctures. Antennomere 2 shortest, antennomere 4 longest, antennomeres 1-4 slightly shiny, antennomeres 5-11 rather matte, antennomeres 4-11 as long or longer than antennomere 3, antennomeres 4-10 widened apically. Ultimate antennomere widest near middle.

RLA(1-11): 0.50 : 0.35 : 1.00 : 1.22 : 1.00 : 1.03 : 1.04 : 1.03 : 1.06 : 0.99 : 1.06.

RL/WA(1-11): 1.64 : 1.21 : 3.27 : 3.04 : 2.57 : 2.47 : 3.00 : 2.96 : 2.62 : 2.53 : 2.93.

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

Pronotum (Figs. 7, 8) blackish brown, shiny, convex, widest in base, distinctly narrower than elytra in humera. Base with small, shallow, oblique impressions between middle and



Figs. 6-10. *Anthracula becvari* sp. nov. (male holotype): 6- habitus; 7- head and pronotum; 8- punctuation of pronotum; 9- apical piece of aedeagus, dorsal view; 10- apical piece of aedeagus, lateral view.

posterior angles from both sides. Dorsal surface with sparse and long, semi-erect or erect, pale setae and dense punctuation, microgranulation indistinct. PL 2.04 mm; PW 2.52 mm; PI equal to 80.95. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins slightly arcuate, finely excised before posterior angles. Base bisinuate, anterior margin finely arcuate, anterior and posterior angles distinct, obtuse.

Elytra. Blackish brown, elongate, slightly convex, shiny, widest near two thirds from base to apex. Dorsal surface with long, pale setae. EL 8.45 mm; EW 3.79 mm; EL/EW 2.23. Elytral striae with rows of coarse punctures as large as those in pronotum, interspaces between punctures in rows narrower than diameter of punctures. Elytral intervals slightly convex, with very fine microgranulation and coarse punctures a little smaller than those in striae.

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

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

Legs. Long and narrow reddish brown, femora blackish brown, strong. Dorsal surface

with pale setation, fine microgranulation and very small, shallow punctures. Tarsi distinctly paler, pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.52 : 0.83 : 1.02 : 1.85 (protarsus), 1.00 : 0.39 : 0.37 : 0.63 (metatarsus).

Both protarsal with 27 visible teeth.

Ventral side of body blackish brown with sparse, short, pale setae and dense, small punctures. Abdomen blackish brown, shiny, surface with fine microgranulation, dense, very small and shallow punctures and recumbent pale setation. Apex of penultimate and rather matte ultimate ventrites distinctly paler.

Aedeagus (Figs. 9, 10) ochre yellow. Basal piece slightly rounded laterally and narrowing in dorsal view. Apical piece elongate triangular from dorsal view, beak shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 2.72.

Female. Space between eyes slightly wider than in male. Both protarsal claws with 12 visible teeth.

Measurements of female body. BL 13.49 mm; HL 1.81 mm; HW 1.93 mm; OI 33.33; PL 2.41 mm; PW 3.14 mm; PI 76.75; EL 9.27 mm; EW 4.02 mm; AL 5.54 mm; AL/BL 0.41; HW/PW 0.62; BL/EW 3.36; EL/EW 2.31.

RLA(1-11): 0.55 : 0.31 : 1.00 : 1.13 : 0.96 : 0.95 : 1.01 : 0.96 : 0.96 : 0.93 : 0.91.

RL/WA(1-11): 1.29 : 1.04 : 3.33 : 3.00 : 2.66 : 2.30 : 2.89 : 2.57 : 2.85 : 3.36 : 3.48.

RLT: 1.00 : 0.75 : 0.77 : 1.09 : 2.06 (protarsus), 1.00 : 0.43 : 0.48 : 0.58 : 1.02 (mesotarsus), 1.00 : 0.42 : 0.36 : 0.59 (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 12.51 mm (12.20-12.81 mm); HL 1.72 mm (1.71-1.72 mm); HW 1.83 mm (1.82-1.83 mm); OI 31.19 (29.57-32.81); PL 2.10 mm (2.04-2.16 mm); PW 2.59 mm (2.52-2.66 mm); PI 81.08 (80.95-81.20); EL 8.69 mm (8.45-8.93 mm); EW 3.74 mm (3.69-3.79 mm).

Differential diagnosis. Similar species from China are *Anthracula adolfi* sp. nov. from Yunnan Province, *Anthracula emeiica* sp. nov. from Sichuan Province and *Anthracula yanziica* sp. nov. from Hubei Province.

Male of *Anthracula becvari* sp. nov. clearly differs from male of the similar species *A. adolfi* mainly by narrower space between eyes, which is narrower than diameter of one eye (OI approximately 31) and by straight protibiae; while male of *A. adolfi* has space between eyes distinctly wider than diameter of one eye (OI approximately 39) and protibiae have very fine but distinct angle in basal third of inner side.

Male of *A. becvari* is clearly different from male of similar species *A. emeiica* mainly by wider and shorter pronotum (PI approximately 81) and by wider antennomeres 4-11 (RL/WA 2.5-3); while male of *A. emeiica* has pronotum narrower and longer (PI approximately 90) and antennomeres 4-11 are longer and narrower (RL/WA 3-4.4).

Male of *A. becvari* clearly differs from male of the similar species *A. yanziica* mainly by narrower and longer pronotum (PI approximately 81), by disc of pronotum with dense

punctuation (as in Fig. 8), by coarse punctures in elytral intervals and by wider antennomeres 4-11 (RL/WA 2.5-3); while male of *A. yanziica* has wider and shorter pronotum (PI approximately 77), disc of pronotum has sparser punctuation (as in Fig. 18), elytral intervals have shallower punctures and antennomeres 4-11 are narrower and longer (RL/WA 3.2-3.9).

Etymology. Patronymic, named after the collector of the type specimen, my friend and specialist in family Tenebrionidae (Coleoptera) - Stanislav Bečvář (České Budějovice, Czech Republic), after his surname.

Distribution. China (Yunnan Province).

Anthracula emeiica sp. nov.

(Figs. 11-15)

Type locality. China, Sichuan Province, Mount Emei, 1930 m.

Type material. Holotype (♂): CHINA, pr. Sichuan / EMEI Mt. 2500 m, / 4.-20.5.1989 // Vít Kubáň leg., (VNPC). The type is provided with a printed red label: 'Anthracula / emeiica sp. nov. / HOLOTYPUS / V. Novák det. 2022'.

Description of holotype. Habitus as in Fig. 11, body large, elongate, semi-matte, slightly convex, from pale brown to blackish brown, dorsal surface with pale setae, punctuation and fine microgranulation, BL 13.40 mm. Widest near two thirds elytra length; BL/EW 3.15.

Head (Fig. 12). approximately as long as wide, through the eyes distinctly wider than anterior margin, narrower than base of pronotum. Surface semi-matte, with fine microgranulation. Posterior part blackish brown with a few pale setae, sparser and larger punctures than those in reddish brown anterior half with longer pale setae. Clypeus wide, transverse, apex rounded, pale reddish brown. Dorsal surface with shallow punctures, long and dense, pale setae and microgranulation, rather matte. Mandibles pale reddish brown with darker sides and apex, glabrous, shiny, with pale setae in sides. HW 1.97 mm; HW/PW 0.79; HL (visible part) 1.95 mm. Eyes large, transverse, excised, space between eyes slightly narrower than diameter of one eye, OI equal to 31.53.

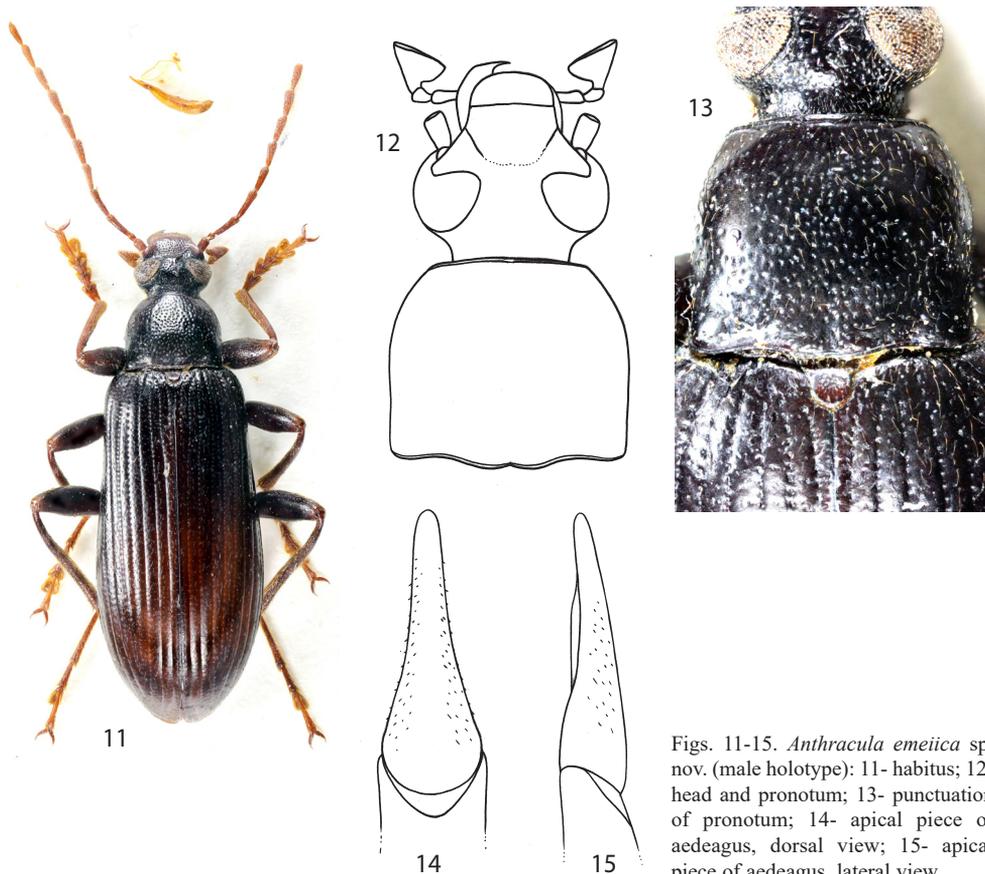
Antenna. Relatively short, brown, rather matte (AL 6.93, finely exceeding half body length - AL/BL 0.52). Surface with pale setation, microgranulation and small, shallow punctures. Antennomere 2 shortest, antennomere 4 longest, antennomeres 5-11 as long or little longer than antennomere 3. Antennomeres 4-10 finely widened apically, ultimate antennomere widest before apex.

RLA(1-11): 0.56 : 0.32 : 1.00 : 1.12 : 1.00 : 0.99 : 1.01 : 1.04 : 0.98 : 1.01 : 0.98.

RL/WA(1-11): 2.09 : 1.86 : 4.10 : 4.18 : 3.57 : 3.00 : 3.46 : 3.54 : 3.81 : 3.95 : 4.44.

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

Pronotum (Figs. 12, 13) blackish brown, semi-matte, convex, widest near middle, finely transverse, distinctly narrower than elytra in humeri. Base with small, shallow almost indistinct oblique impressions between middle and posterior angles from both sides and one



Figs. 11-15. *Anthracula emeiica* sp. nov. (male holotype): 11- habitus; 12- head and pronotum; 13- punctuation of pronotum; 14- apical piece of aedeagus, dorsal view; 15- apical piece of aedeagus, lateral view.

shallow impression against scutellum. Dorsal surface with sparse, short, recumbent, pale setae, very fine microgranulation and medium sized punctures, intervals between punctures often wider than diameter of punctures. PL 2.22 mm; PW 2.48 mm; PI equal to 89.52. Border lines very narrow, margins conspicuous from dorsal view. Base bisinuate, anterior margin almost straight, anterior angles distinct, posterior angles obtuse, rounded.

Elytra. Blackish brown, elongate, slightly convex, semi-matte, widest near two thirds from base to apex. Dorsal surface with short and sparse, pale setae. EL 9.22 mm; EW 4.26 mm; EL/EW 2.16. Elytral striae with rows of small punctures, distinctly smaller than those in pronotum. Elytral intervals slightly convex, with fine microgranulation and small punctures.

Scutellum. Brown, semi-elliptical, slightly shiny, with a few shallow punctures and microgranulation.

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

Legs. Long and narrow, dark brown, femora stronger, dorsal surface with pale setae, fine microgranulation and small punctures. Tarsi paler, pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.48 : 0.36 : 0.48 : 0.99 (protarsus), 1.00 : 0.35 : 0.35 : 0.31 : 0.71 (mesotarsus), 1.00 : 0.32 : 0.20 : 0.33 (metatarsus).

Protarsal claws with 17 and 18 visible teeth.

Ventral side of body blackish brown with sparse, short, pale setae and very small punctures. Abdomen blackish brown with fine microgranulation, very small punctures and sparse, short, pale setae. Apex of ultimate ventrite paler with shallow impression.

Aedeagus (Figs. 14, 15) ochre yellow. Basal piece rounded laterally and narrowing in dorsal view. Apical piece elongate triangular 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. Unknown.

Differential diagnosis. Similar species from China are *Anthracula adolfi* sp. nov. and *Anthracula becvari* sp. nov. both from Yunnan Province, and *Anthracula yanziica* sp. nov. from Hubei Province.

Male of *Anthracula emeiica* sp. nov. clearly differs from male of the similar species *A. adolfi* mainly by narrower space between eyes, which is narrower than diameter of one eye (OI approximately 32) and by straight protibiae; while male of *A. adolfi* has space between eyes distinctly wider than diameter of one eye (OI approximately 39) and protibiae have very fine but distinct angle in basal third of inner side.

Male of *A. emeiica* is clearly different from male of similar species *A. becvari* mainly by pronotum narrower and longer (PI approximately 90) and by antennomeres 4-11 longer and narrower (RL/WA 3-4.4); while male of *A. becvari* has wider and shorter pronotum (PI approximately 81) and antennomeres 4-11 are wider (RL/WA 2.5-3).

Male of *A. emeiica* clearly differs from male of the similar species *A. yanziica* mainly by narrower and longer pronotum (PI approximately 90), by shape of apical piece of aedeagus (as in Figs. 14 and 15); while male of *A. yanziica* has wider and shorter pronotum (PI approximately 77), and shape of apical piece of aedeagus is as in Figs. 19 and 20.

Etymology. Toponymic, named after the type locality Mount Emei in Sichuan Province (China).

Distribution. China (Sichuan Province).

***Anthracula yanziica* sp. nov.**
(Figs. 16-20)

Type locality. China, West of Hubei province, Shennongjia Co., Yanzi Pass, 31°43'N, 110°28'E, 2200 m.

Type material. Holotype (♂): CHINA, W. HUBEI, / SHENNONGJIA Co., YANZI / PASS, 31°43'/110°28', / 2200 m, 23.-26.6.95 / L.+R. BUSINSKÝ lgt., (VNPC). Paratype: (1 ♂): same data as holotype, (VNPC). The types are provided with a printed red label: '*Anthracula / yanziica* sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2022'.

Description of holotype. Habitus as in Fig. 16, body large, elongate, semi-matte, from pale reddish brown to dark reddish brown, dorsal surface with pale setation, punctuation and very fine microgranulation, BL 12.31 mm. Widest near two thirds elytra length; BL/EW 3.20.

Head (Fig. 17) slightly wider than long, through the eyes distinctly wider than anterior margin, narrower than base of pronotum. Dorsal surface shiny with pale setae and very fine microgranulation, posterior half dark reddish brown with a little sparser punctuation approximately as large as in pale reddish brown anterior part. Clypeus wide, transverse, rounded, pale reddish brown with apex very finely excised in middle. Dorsal surface with shallow punctures, long, pale setae and microgranulation, rather matte. Mandibles pale reddish brown, partly darker, glabrous, semi-matte, with pale setae in sides. HW 1.68 mm; HW/PW 0.70; HL (visible part) 1.82 mm. Eyes large, transverse, excised, space between eyes narrow, distinctly narrower than diameter of one eye, OI equal to 28.45.

Antenna. Relatively short, pale reddish brown, rather matte (AL 6.13, reaching half body length - AL/BL 0.50). Surface with long, recumbent, pale setation, microgranulation and small, shallow punctures. Antennomere 2 shortest, antennomeres 4-11 almost longer than antennomere 3, antennomeres 4-10 widened apically, ultimate antennomere half drop shaped - widest near middle.

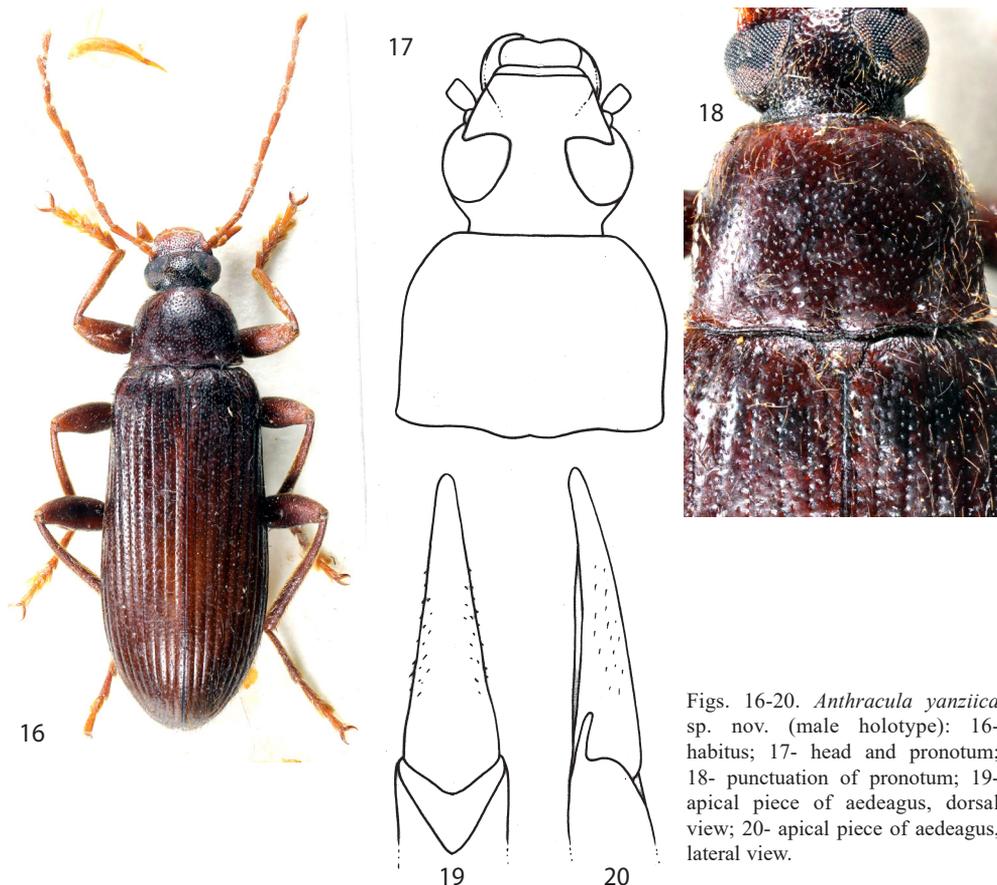
RLA(1-11): 0.64 : 0.35 : 1.00 : 1.12 : 1.03 : 1.09 : 1.09 : 1.12 : 1.06 : 0.97 : 1.02.

RL/WA(1-11): 2.02 : 1.36 : 3.50 : 3.91 : 3.19 : 3.39 : 3.83 : 3.60 : 3.70 : 3.55 : 3.73.

Maxillary palpus pale reddish brown, slightly shiny, with pale setae and fine microgranulation. Palpomeres 2 and 3 distinctly narrowest at base and widest at apex, ultimate palpomere widely triangular.

Pronotum (Figs. 17, 18) brown or reddish brown, shiny, convex, transverse, widest in base, distinctly narrower than elytra in humeri. Base with shallow oblique impressions between middle and posterior angles from both sides and one longitudinal impression against scutellum. Dorsal surface with long, semi-erect, pale setae, very fine microgranulation and sparser punctures. PL 1.95 mm; PW 2.57 mm; PI equal to 75.88. Border lines very narrow, margins conspicuous from dorsal view. Lateral margins almost straight in basal part, arcuate in apical half. Base bisinuate, anterior margin straight, anterior angles not clearly distinct, posterior angles roundly obtuse.

Elytra. Brown or reddish brown, wide, elongate, slightly convex, semi-matte, widest near two thirds from base to apex. Dorsal surface with pale setation. EL 8.53 mm; EW 3.85 mm; EL/EW 2.22. Elytral striae with rows of coarse, small punctures approximately as large as those in pronotum, interspaces between punctures in rows narrower or as wide as diameter of punctures. Elytral intervals slightly convex, with sparse, small and shallow punctures and very fine microgranulation.



Figs. 16-20. *Anthracula yanziica* sp. nov. (male holotype): 16- habitus; 17- head and pronotum; 18- punctuation of pronotum; 19- apical piece of aedeagus, dorsal view; 20- apical piece of aedeagus, lateral view.

Scutellum. Reddish brown with darker sides, roundly triangular, slightly shiny, with shallow punctures, fine microgranulation and pale setae.

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

Legs. Long and narrow, brown or reddish brown, dorsal surface with fine microgranulation and pale setation. Femora stronger, protibiae and tarsi paler, pro- and mesotarsomeres 3 and 4 and metatarsomere 3 widened and lobed. RLT: 1.00 : 0.86 : 1.09 : 1.09 : 1.69 (protarsus), 1.00 : 0.42 : 0.50 : 0.52 : 0.54 (mesotarsus), 1.00 : 0.39 : 0.33 : 0.58 (metatarsus).

Both protarsal claws with about 25 visible teeth.

Ventral side of body reddish brown with sparse, short, pale setae and small punctures. Abdomen reddish brown, shiny with very fine microgranulation, dense, small punctures and recumbent, pale setation. Ultimate ventrite rather matte, apex with shallow impression distinctly paler than penultimate.

Aedeagus (Figs. 19, 20) ochre yellow, shiny. Basal piece slightly rounded laterally and narrowing in dorsal view. Apical piece elongate triangular from dorsal view, beak shaped

dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1: 2.60.

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 11.93 mm (11.55-12.31 mm); HL 1.75 mm (1.68-1.82 mm); HW 1.73 mm (1.66-1.80 mm); OI 29.29 (28.45-30.13); PL 1.87 mm (1.79-1.95 mm); PW 2.44 mm (2.31-2.57 mm); PI 76.69 (75.88-77.49); EL 8.31 mm (8.08-8.53 mm); EW 3.68 mm (3.50-3.85 mm).

Differential diagnosis. Similar species from China are *Anthracula adolfi* sp. nov. and *Anthracula becvari* sp. nov. both from Yunnan Province, and *Anthracula emeiica* sp. nov. from Sichuan.

Male of *Anthracula yanziica* sp. nov. clearly differs from male of the similar species *A. adolfi* mainly by narrower space between eyes, which is narrower than diameter of one eye (OI approximately 29) and by straight protibiae; while male of *A. adolfi* has space between eyes distinctly wider than diameter of one eye (OI approximately 39) and protibiae have very fine but distinct angle in basal third of inner side.

Male of *A. yanziica* is clearly different from male of similar species *A. becvari* mainly by wider and shorter pronotum (PI approximately 77), by disc of pronotum with sparser punctuation (as in Fig. 18), by elytral intervals with shallow punctures and by antennomeres 4-11 narrower and longer (RL/WA 3.2-3.9); while male of *A. becvari* has narrower and longer pronotum (PI approximately 81), disc of pronotum has denser punctuation (as in Fig. 8), elytral intervals have coarse punctures and antennomeres 4-11 are wider (RL/WA 2.5-3).

Male of *A. yanziica* clearly differs from male of the similar species *A. emeiica* mainly by wider and shorter pronotum (PI approximately 77), and by shape of apical piece of aedeagus as in Figs. 19 and 20; while male of *A. emeiica* has narrower and longer pronotum (PI approximately 90), and shape of apical piece of aedeagus is as in Figs. 14 and 15.

Etymology. Toponymic, named after the type locality Yanzi pass in Hubei Province (China).

Distribution. China (Hubei Province).

LIST OF *ANTHRACULA* FAIRMAIRE SPECEIS FROM THE PALAEARCTIC REGION

genus *Anthracula* Fairmaire, 1897

type species: *Anthracula latifrons* Fairmaire, 1897

adolphi sp. nov.

China (Yunnan Province)

becvari sp. nov.

China (Yunnan Province)

emeiica sp. nov.

China (Sichuan Province)

<i>fouquei</i> Novák, 2017	Nepal
<i>humlaica</i> Novák, 2017	Nepal
<i>latifrons</i> Fairmaire, 1897	Bhutan, India (Arunachal Pradesh Uttaranchal State)
<i>lawaraiica</i> Novák, 2017	Pakistan
<i>renei</i> Novák, 2017	Nepal
<i>sanamica</i> Novák, 2017	Nepal
<i>yanziica</i> sp. nov.	China (Hubei Province)

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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.
- FAIRMAIRE L. 1897: Note XXXI. Coléoptères de l'Inde et de la Malaise. *Notes from the Leyden Museum* 18: 225-240.
- NOVÁK V. 2017: New *Anthracula* Fairmaire (Coleoptera: Tenebrionidae: Alleculinae) species from Palaearctic Region. *Folia Heyrovskyana, Series A* 25(1): 41-55.
- NOVÁK V. 2020: Subfamily Alleculinae Laporte, 1840. In: IWAN D. & LÖBL I. (eds.): *Catalogue of Palaearctic Coleoptera. Revised and Updated Edition. Volume 5. Tenebrionoidea*. Leiden, Boston: Brill, 945 pp.

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