

Two new species of *Cistelopsis* Fairmaire, 1896 (Coleoptera: Tenebrionidae: Alleculinae: Alleculini) from the Palaearctic Region

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Abstract. Two new species of Alleculini Laporte, 1840 are described as *Cistelopsis kejvali* sp. nov. and *Cistelopsis tryznai* sp. nov. from India (Uttaranchal Pradesh). The new species are illustrated and compared with only one known species (*Cistelopsis aborensis* Borchmann, 1915) from Northern India (Arunachal Pradesh).

INTRODUCTION

Fairmaire (1896) established the new genus *Cistelopsis* Fairmaire, 1896 with type species *Cistelopsis rufina* Fairmaire, 1896. Species of this genus live in the south-eastern Palaearctic Region and mainly in the Oriental Region. Borchmann (1910) in *Coleopterorum Catalogus* listed 2 species, Novák & Pettersson (2008) presented four species from Palaearctic Region (Borchmann 1915, Mařan 1944 and Pic 1930a, 1955). Majority of more than 60 species of this genus live in the Oriental Region (Borchmann 1915, 1925, 1928, 1929, 1932, 1935 and 1937, Fairmaire 1896 and Pic 1914, 1916, 1922, 1923, 1928, 1930b, 1932, 1934, 1939 and 1956).

Two new species of *Cistelopsis* Fairmaire, 1896 are described from the Palaearctic Region (India - Uttaranchal Pradesh) as follows: *Cistelopsis kejvali* sp. nov. and *Cistelopsis tryznai* sp. nov. The new species are illustrated and compared with the nearest known *Cistelopsis* species from Arunachal Pradesh in northern India (*Cistelopsis aborensis* Borchmann, 1915).

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 or examined material, a slash (/) separates data in separate rows.

The following collection code is used:

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 text are as follows: pb= printed black, wl= white 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 5.2.

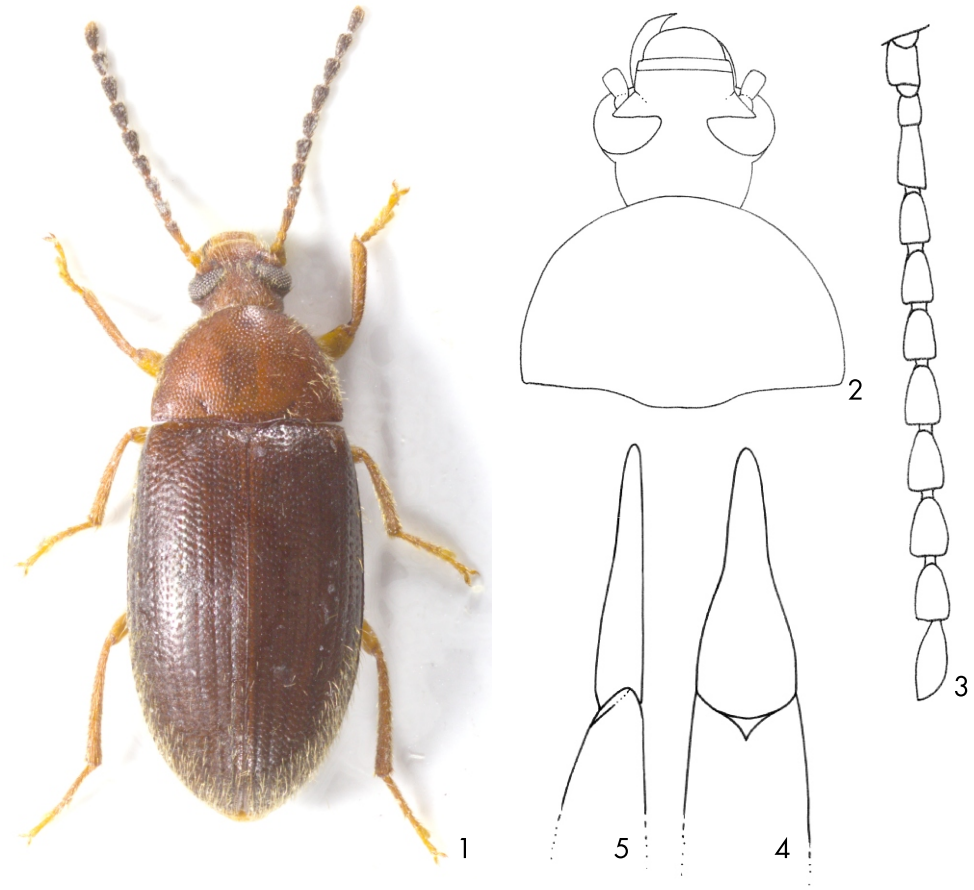
TAXONOMY

Cistelopsis kejvali sp. nov.

(Figs. 1-5)

Type locality. Northern India, Uttaranchal state, Haldwani, Kathgodam, sand stony riverbed, 800 m.

Type material. Holotype (♂): wl: N-INDIA Uttaranchal state, / Haldwani-KATHGODAM / sand-stony riverbed ca 800 / m, 21.-22.vii.2003; lgt. / Z. Kejval & M. Trýzna [pb], (VNPC). Paratypes: (11 spec.): same data as holotype, (VNPC). The types are provided with a printed red label: **Cistelopsis / kejvali* sp. nov. / HOLOTYPUS [or PARATYPUS] / V. Novák det. 2019*.



Figs. 1-5. *Cistelopsis kejvali* sp. nov.; Figs. 1-3: male holotype: 1- Habitus; 2- head and pronotum; 3- antenna; 4- aedeagus, dorsal view; 5- aedeagus, lateral view.

Description of holotype. Habitus as in Fig. 1, small, oval, egg-shaped, slightly convex, dorsal surface from pale brown to blackish brown, with punctuation, microgranulation and ochre yellow setation, BL 5.12 mm. Widest near half elytra length; BL/EW 2.55.

Head (Fig. 2) small, wider than long, with microgranulation, long, ochre yellow setation and sparse, shallow punctuation, matte. Posterior part reddish brown, anterior part and clypeus pale reddish brown. Clypeus rounded apically. Mandibles strong, pale reddish brown with sides and apex dark, surface matte with microrugosities, lateral margins with long pale setae. HW 0.87 mm; HW/PW 0.54. HL (visible part) 0.72 mm. Eyes large, transverse, excised, space between eyes slightly narrower than diameter of one eye, approximately as wide as length of antennomere 3; OI equal to 28.86.

Antenna (Fig. 3). Short, matte (AL 2.34 mm, not reaching half body length, AL/BL 0.46), with relatively dense, pale setation, fine microgranulation and shallow punctures. Antennomeres 1, 2, basal half of antennomere 3 and apex of antennomere 11 pale reddish brown, apical half of antennomere 3 and antennomeres 4-11 black. Antennomeres 3-10 distinctly widened apically, antennomere 2 shortest, antennomere 11 longest, each of antennomeres 4-6 distinctly shorter than antennomere 3. Ultimate antennomere arcuate, slightly drop-shaped, widest near middle.

RLA(1-11): 0.55 : 0.46 : 1.00 : 0.81 : 0.91 : 0.92 : 1.08 : 1.15 : 1.03 : 0.94 : 1.22.

RL/WA(1-11): 1.33 : 1.25 : 2.50 : 1.61 : 1.84 : 1.82 : 1.89 : 1.97 : 1.86 : 1.79 : 2.47.

Maxillary palpus pale reddish brown, rather matte, with ochre yellow setation and fine microgranulation. Ultimate palpomere widely triangular, palpomeres 2 and 3 distinctly dilated anteriorly.

Pronotum (Fig. 2). Reddish brown, wide, transverse, almost semicircular, with sparse, long, ochre yellow setation, denser near lateral margins than on disc. Dorsal surface slightly convex with dense punctuation, punctures small, interspaces between punctures narrow, with microgranulation, matte. Border lines narrow, but distinct and complete, only in the middle of anterior margin not clearly conspicuous. Lateral margins and anterior margin arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles very slightly obtuse. PL 0.99 mm; PW 1.61 mm; PI equal to 61.49.

Ventral side of body reddish brown with punctuation and short pale setation. Prosternal process between anterior coxae extended against mesosternum. Abdomen blackish brown with long pale setation and shallow punctuation, slightly shiny.

Elytron blackish brown, oval, widest near middle. Dorsal surface with semierect, ochre yellow, relatively long setation, distinctly denser near lateral margins and in apex than in middle. Elytral striae with not clearly distinct rows of punctures almost as large as dense punctures in elytral interspaces. Elytral interspaces with microgranulation, slightly shiny. EL 3.41 mm; EW 2.01 mm. EL/EW 1.70.

Scutellum. Partly reddish brown, partly dark brown, broadly triangular with microgranulation and a few shallow punctures.

Elytral epipleura well developed, reddish brown, with dense and long pale setation, leading relatively wide and parallel from mesosternum.

Legs relatively short with dense, ochre yellow setation, small punctures and microgranulation, pale brown, tibiae pale reddish brown with short, strong setae on outer side. Penultimate tarsomeres and protarsomeres 3 widened and lobed. RL: 1.00 : 0.60 : 0.76 : 1.22 : 1.65 (protarsus); 1.00 : 0.44 : 0.50 : 0.66 : 1.16 (mesotarsus); 1.00 : 0.31 : 0.32 : 0.76 (metatarsus).

Both anterior tarsal claws with 6 visible teeth.

Aedeagus (Figs. 4 and 5). Ochre yellow, slightly shiny. Basal piece arcuate laterally and very

slightly narrowing dorsally. Apical piece beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 3.33.

Female without distinct differences, only both anterior tarsal claws with 5 visible teeth.

Variability. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Specimens (n=12). BL 5.18 mm (4.74-5.75 mm); HL 0.76 mm (0.71-0.84 mm); HW 0.92 mm (0.85-0.99 mm); OI 31.12 (28.86-33.68); PL 1.00 mm (0.88-1.10 mm); PW 1.70 mm (1.53-1.89 mm); PI 58.30 (55.38-61.49); EL 3.42 mm (3.13-3.85 mm); EW 2.07 mm (1.84-2.25 mm).

Differential diagnosis. The closest species are *Cistelopsis tryznai* sp. nov. from India (Uttaranchal state) and *Cistelopsis aborensis* Borchmann, 1915 from India (Arunachal state).

Cistelopsis kejvali sp. nov. distinctly differs from similar species *C. tryznai* mainly by narrower space between eyes (OI 28-34), by dorsal surface of pronotum reddish brown and by wider antennomeres - RL/WA(4-10) 1.6-2; while *C. tryznai* has space between eyes broader (OI 39-45), dorsal surface of pronotum is blackish brown and antennomeres are narrower - RL/WA(4-10) 2.3-3.

C. kejvali is clearly different from the species *C. aborensis* mainly by antennomere 4 slightly shorter than antennomere 3 and ultimate antennomere is distinctly longer than penultimate; while *C. aborensis* has antennomere 4 twice longer than antennomere 3 and ultimate antennomere is shorter than the penultimate one (Borchmann 1915: 187).

Etymology. The new species is dedicated to one of the collectors - Zbyněk Kejval (Domažlice, Czech Republic), my friend and specialist in beetle family Anthicidae.

Distribution. India (Uttaranchal state).

***Cistelopsis tryznai* sp. nov.**
(Figs. 6-10)

Type locality. Northern India, Uttaranchal state, 30 km N of Rishikesh, Northwest of Chamba, environ of Arako village, 1500 m.

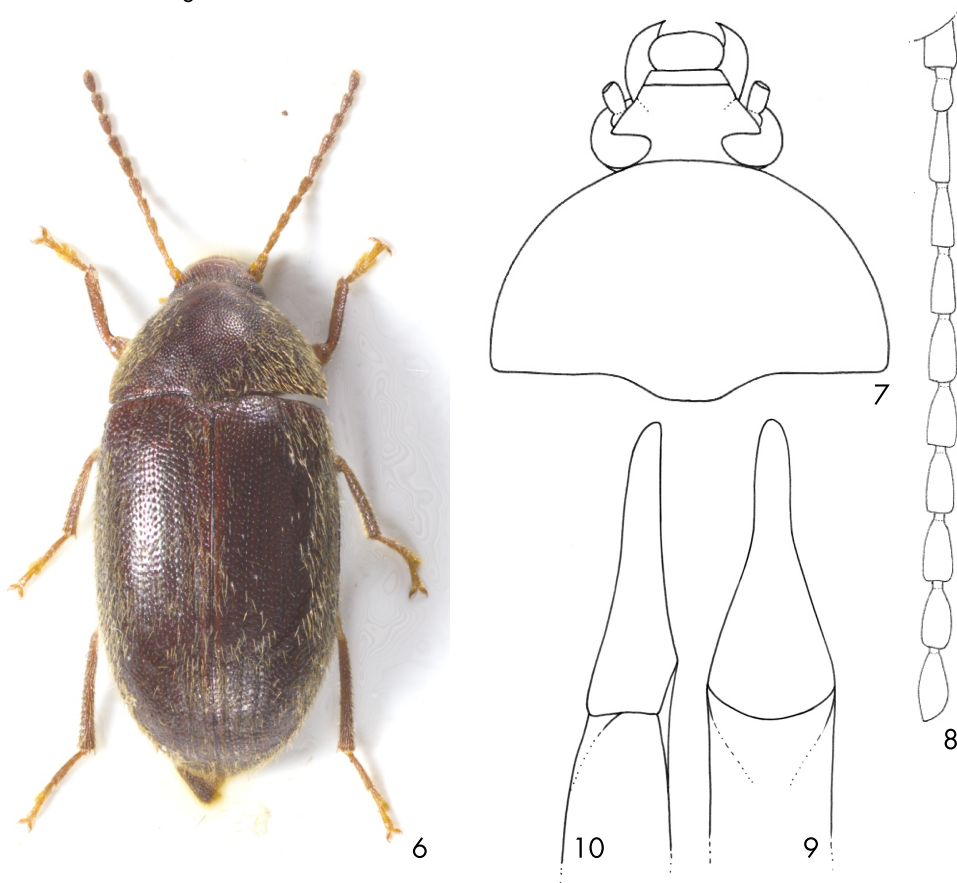
Type material. Holotype (♂): wl: N-INDIA Uttaranchal state / 30 km N of Rishikesh, NW / of Chamba, Arako vill / env., 1500m, 29.-31.vii. 2003 / Z.Kejval &M. Trýzna lgt. [pb], (VNPC). Paratypes: (51 spec.): same data as holotype, (VNPC). The types are provided with a printed red label: '*Cistelopsis* / *tryznai* sp. nov. / HOLOTYPUS or PARATYPUS / V. Novák det. 2019'.

Description of holotype. Habitus as in Fig. 6, body small, oval, egg-shaped, convex, dorsal surface from pale brown to blackish brown, with punctuation, fine microgranulation and ochre yellow setation, BL 5.85 mm. Widest near half elytra length; BL/EW 2.35.

Head (Fig. 7) small, transverse, distinctly wider than long, reddish brown, with long, sparse, ochre yellow, erected setation, fine microgranulation and punctuation, punctures larger and coarser in posterior part than in reddish brown anterior part. Clypeus pale reddish brown, distinctly paler than head, with microgranulation and long ochre yellow setation distinctly denser than those in head, rounded apically. Widest through the eyes, HW 0.98 mm; HW/PW 0.45. HL (visible part) 0.66 mm. Eyes large, transverse, excised, space between eyes wide, distinctly wider

than length of one eye, distinctly wider than length of antennomere 3; OI equal to 39.02.

Antennae (Fig. 8). Short (AL 2.24 mm, not reaching half body length, AL/BL 0.38), antennomeres 1-6 pale brown, distinctly paler than brown antennomeres 7-11. Surface with fine microgranulation, long ochre yellow setation, and sparse, shallow punctures. Antennomeres 3-10 slightly widened apically, antennomeres 1 and 2 slightly shiny, antennomeres 3-11 rather matte, ultimate antennomere arcuate, drop-shaped, widest near apex. Antennomere 2 shortest, antennomere 3 longest.



Figs. 6-10. *Cistelopsis tryznai* sp. nov.: Figs. 6-8: male holotype: 6- Habitus; 7- head and pronotum; 8- antenna; 9- aedeagus, dorsal view; 10- aedeagus, lateral view.

RLA (1-11) equal to: 0.64 : 0.61 : 1.00 : 0.86 : 0.93 : 0.93 : 0.86 : 0.86 : 0.86 : 0.89 : 0.96.

RL/WA (1-11) equal to: 1.50 : 2.43 : 3.78 : 2.86 : 2.96 : 2.50 : 2.40 : 2.40 : 2.31 : 2.32 : 2.50.

Maxillary palpus ochre yellow, slightly shiny, with pale setation. Ultimate palpomere widely triangular, palpomeres 2 and 3 distinctly dilated anteriorly with a few long setae on apex.

Pronotum (Fig. 7). Blackish brown, wide, transverse, almost semicircular, widest near base, convex, with dense and long, recumbent, ochre yellow setation, dense punctuation, punctures relatively small and slightly coarse, interspaces between punctures narrow, narrower than

diameter of punctures, with microgranulation. Border lines very narrow, but distinct and complete. Lateral and anterior margins arcuate, posterior margin bisinuate, anterior angles indistinct, posterior angles almost rectangular. PL 1.34 mm; PW 2.20 mm; PI equal to 60.91.

Ventral side of body blackish brown, with pale setation and punctuation. Prosternal process between anterior coxae distinctly extended against mesosternum. Abdomen blackish brown, with pale setation, dense punctuation and fine microgranulation, shiny.

Elytron blackish brown, oval, widest near middle, convex, suture reddish brown. Dorsal surface with long and dense, recumbent, ochre yellow setation. Rows of punctures in elytral striae not clearly conspicuous everywhere, elytral interspaces flat, with microgranulation and relatively dense punctures slightly smaller than those in striae. EL 3.85 mm; EW 2.49 mm. EL/EW 1.55.

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

Elytral epipleura well developed, with long and dense, pale setation and punctures, relatively wide, leading parallel from mesosternum.

Legs reddish brown, with long and dense ochre yellow setation, pale brown or pale reddish brown tarsomeres distinctly paler than tibiae. Protibiae shorter than meso- and metatibiae. Tibiae with punctures, very fine microgranulation and short strong setae in outer side. Penultimate tarsomeres and protarsomeres 3 widened and lobed. RLT (1-5 or 1-4) equal to: 1.00 : 0.94 : 1.13 : 1.92 : 3.19 (protarsus), 1.00 : 0.38 : 0.50 : 0.73 : 1.19 (mesotarsus), and 1.00 : 0.32 : 0.33 : 0.58 (metatarsus).

Anterior tarsal claws with 7 visible teeth.

Aedeagus (Figs. 9 and 10). Ochre yellow, rather matte. Basal piece very slightly narrowing dorsally and very slightly rounded laterally. Apical piece beak-shaped dorsally and laterally. Ratio of length of apical piece to length of basal piece from dorsal view 1 : 3.06.

Female without distinct differences.

Variability. The type specimens somewhat vary in size; each character is given as its mean value, with full range in parentheses. Specimens (n=52). BL 5.51 mm (4.99-5.85 mm); HL 0.66 mm (0.59-0.69 mm); HW 0.97 mm (0.88-1.02 mm); OI 42.36 (39.02-45.04); PL 1.28 mm (1.14-1.40 mm); PW 2.15 mm (1.88-2.41 mm); PI 59.52 (57.89-61.96); EL 3.57 mm (3.26-3.85 mm); EW 2.43 mm (2.14-2.65 mm).

Differential diagnosis. The closest species are *Cistelopsis kejvali* sp. nov. from India (Uttaranchal state) and *Cistelopsis aborensis* Borchmann, 1915 from India (Arunachal state).

Cistelopsis tryznai sp. nov. distinctly differs from similar species *C. kejvali* mainly by broader space between eyes (OI 39-45), by dorsal surface of pronotum and elytra blackish brown and by narrower antennomeres - RL/WA(4-10) 2.3-3; while *C. kejvali* has space between eyes narrower (OI 28-34), dorsal surface of pronotum is reddish brown and antennomeres are wider - RL/WA(4-10) 1.6-2.

C. tryznai is clearly different from species *C. aborensis* mainly by antennomere 4 slightly shorter than antennomere 3 and ultimate antennomere is slightly longer than penultimate; while *C. aborensis* has antennomere 4 twice longer than antennomere 3 and ultimate antennomere is shorter than penultimate (Borchmann 1915: 187).

Etymology. The new species is dedicated to second one of the collectors - Miloš Trýzna (Krásná Lipa, Czech Republic), my friend and specialist in beetle family Anthribidae.

Distribution. India (Uttaranchal state).

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