

***Pseudocistela ornata* sp. nov. from Laos and new nomenclatory acts in Gonoderini
(Coleoptera: Tenebrionidae: Alleculinae)**

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Abstract. *Pseudocistela ornata* sp. nov. from Laos is described and illustrated. *Pseudocistela haagi* Harold, 1878 is transferred to the genus *Microcistela* Pic, 1904 as *Microcistela haagi* (Harold, 1878). *Pseudocistela muhldorfi* Borchmann, 1930 is treated as a new synonym for *Microcistela rosinae* Pic, 1904.

INTRODUCTION

The genus *Pseudocistela* was introduced by Crotch (1873), the species of this genus living in all zoogeographical Regions except Australian and Neotropical Regions with more than 120 known species (Novák 2014). Novák & Pettersson (2008) listed 10 species in Palaearctic Region, newly was described species *Pseudocistela hajeki* Novák, 2013 from Iran. New species from Laos (Houa Phan) is described as *Pseudocistela ornata* sp. nov. New species is illustrated and compared with the species *Pseudocistela ceramboides* (Linnaeus, 1758) and other Indochina species *Pseudocistela angustior* Pic, 1926, *Pseudocistela atritarsis* Pic, 1927 and *Pseudocistela limbatipennis* Pic, 1909. *Pseudocistela rufithorax* Pic, 1913 and *Pseudocistela luteopubens* Pic, 1913 were earlier transferred to the genus *Paracistela* Borchmann, 1941 by Novák (2011).

Genus *Microcistela* was introduced by Pic (1904) for one species *Microcistela rosinae* Pic, 1904 from East Siberia, Far East and China (Shaanxi). *Pseudocistela muhldorfi* Borchmann, 1930 is treated as new synonym of *Microcistela rosinae* Pic, 1904 and *Pseudocistela haagi* Harold, 1878 from Far East and Japan is transferred to the genus *Microcistela* as *Microcistela haagi* (Harold, 1878).

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 material, a slash (/) separates data in separate rows, a double slash (//) separates different labels.

The following collection code is used:

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

ZMUH collection of Zoologisches Museum und Universität, Hamburg, Germany.

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: bf = black frame; hb = handwritten black; pb = printed black; pl = pink label; wl = white label.

Measurements were made with Olympus SZ 40 stereoscopic microscope with continuous magnification and with Soft Imaging System AnalySIS.

TAXONOMY

Genus *Pseudocistela* Crotch, 1873

Pseudocistela ornata sp. nov.

(Figs. 1-5)

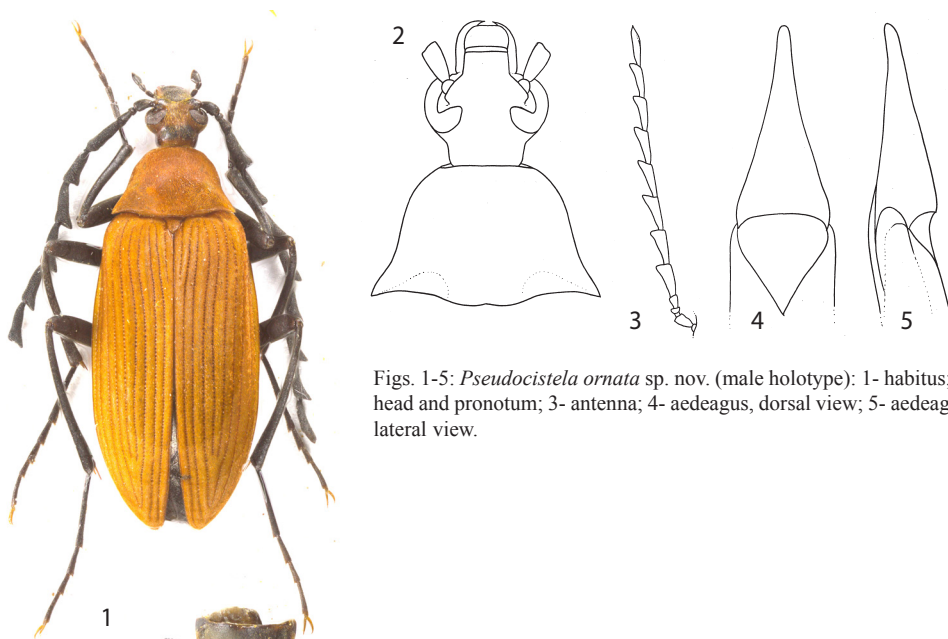
Type locality. Northeastern Laos, Hua Phan province, Mount Phu Pane, environs of Ban Saluei, 1200-1600 m.

Type material. Holotype (♂): wl: NE LAOS: Hua Phan prov. / Ban Saluei env. / MT. PHU PANE / 1200-1600m, 6.-20.5.2014 / P. Viktora et local coll. lgt., (VNPC). The type is provided with a printed red label: '*Pseudocistela ornata* sp. nov. / HOLOTYPUS / V. Novák det. 2017'.

Description of holotype. Habitus as in Fig. 1, body large, elongate oval, matte, black, dorsal surface reddish orange, setose, with microgranulation. BL 10.66 mm. Widest near half of elytra length, BL/EW 2.75.

Head (Fig. 2) relatively small and narrow, elongate, distinctly wider than anterior margin of pronotum, dorsal surface with yellow setation and microgranulation. Base, anterior part and clypeus black, space between eyes and mandibles reddish orange. HL 1.27 (visible part); HW 1.54 mm; HW/PW 0.52. Eyes large, transverse, strongly excised, space between eyes narrow; distinctly wider than length of antennomere 1 or 3. OI equal to 36.91.

Antenna (Fig. 3). Long, unicolored black, matte, with short and dark setation, microgranulation and small punctures, AL(1-11) 9.34 mm; AL(1-11)/BL 0.88. Antennomeres 1-3 short, slightly widened in apex. Antennomeres 4-10 longer, strongly serrate apically. Antennomere 2 shortest, antennomere 1 distinctly longer than antennomere 3, antennomeres



Figs. 1-5: *Pseudocistela ornata* sp. nov. (male holotype): 1- habitus; 2- head and pronotum; 3- antenna; 4- aedeagus, dorsal view; 5- aedeagus, lateral view.

4-11 each distinctly longer than antennomere 3. Antennomeres 4-10 less than 2.7 times longer than wide in apex.

RLA (1-11): 1.46 : 0.62 : 1.00 : 2.83 : 2.96 : 3.00 : 3.15 : 3.21 : 2.77 : 3.00 : 3.23.

RL/WA (1-11): 2.00 : 1.14 : 1.30 : 2.13 : 2.53 : 2.48 : 2.65 : 2.61 : 2.22 : 2.48 : 5.25.

Maxillary palpus black, with pale setation and fine microgranulation. Palpomeres 2, 3 distinctly narrowest in base and widest in apex with dark and long setae. Ultimate palpomere widest, axe-shaped.

Pronotum (Fig. 2). Bell-shaped, reddish orange, matte, slightly convex, with short, pale setation and microgranulation. PL 1.65; PW 2.99; PI equal to 55.18. Border lines very narrow in base and anterior margin, in lateral margins indistinct. Anterior margin short and straight, base bisinuate. Side margins slightly arcuate in anterior half, distinctly excised before posterior angles. Posterior angles strongly sharp, oblique extended. Anterior angles almost indistinct.

Ventral side of body black, with short, pale setae, prothorax partly reddish orange. Abdomen black, with short, pale setation and microgranulation. Apex of ultimate ventrite pale brown.

Elytron. Reddish orange, elongate oval, dorsal surface matte, with short, orange setation. Elytral striae with distinct rows of small-sized punctures, elytral intervals slightly convex, with fine microgranulation. EL 7.74 mm; EW 3.88 mm. EL/EW 2.00.

Scutellum reddish orange, relatively large, long, triangular, with orange setation and microgranulation.

Elytral epipleura. Well developed, reddish orange, parallel in basal half, slightly narrowing from ventrite 1 to apex.

Legs black, narrow, long, with short, pale setation, microgranulatin and punctuation, punctures small and shallow. Tibiae distinctly widened anteriorly. Protarsomere 1 very long, slightly longer than protarsomeres 2-4 together, more than three times longer than each of protarsomeres 2-4, RLT: 1.00 : 0.32 : 0.31 : 0.24 : 0.74 (protarsus); 1.00 : 0.40 : 0.33 : 0.27 : 0.63 (mesotarsus); 1.00 : 0.37 : 0.27 : 0.52 (metatarsus).

Anterior tarsal claws with 10 and 11 visible teeth.

Aedeagus (Figs. 4, 5). Relatively short, pale brown, slightly shiny. Basal piece slightly rounded laterally and narrowing dorsally. Apical piece beak-shaped laterally, triangular and beak-shaped dorsally. Ratio of length of apical piece to length of basal piece 1: 3.58.

Female. Unknown.

Differential diagnosis. *Pseudocistela ornata* sp. nov. distinctly differs from similar species *Pseudocistela ceramboides* (Linnaeus, 1758) mainly by shape of pronotum with posterior angles strongly sharp with oblique extension, by space between eyes distinctly wider than diameter of one eye (OI 37), by eyes more strongly excised, by protarsomere 1 distinctly longer than length of protarsomeres 2-4 together; while *P. ceramboides* has sides of pronotum slightly, but distinctly arcuate, posterior angles not extended and posterior angles only slightly arcuate; space between eyes is distinctly narrower than diameter of one eye (OI 25-28) and eyes not so strongly excised, protarsomere 1 is not longer than protarsomeres 2-4 together.

P. ornata is relatively large species (10.66 mm); while *Pseudocistela angustior* Pic, 1926 from Tonkin is distinctly smaller (only 6 mm). *P. ornata* has scutellum reddish orange; while *Pseudocistela atritarsis* Pic, 1926 from Tonkin has scutellum black. *P. ornata* has head partly black; while *Pseudocistela limbatipennis* Pic, 1909 from Tonkin has head completely black.

Etymology. From Latin „ornata“ - in English elegant.

Distribution. Laos.

Genus *Microcistela* Pic, 1904

Microcistela haagi (Harold, 1878) comb. nov.

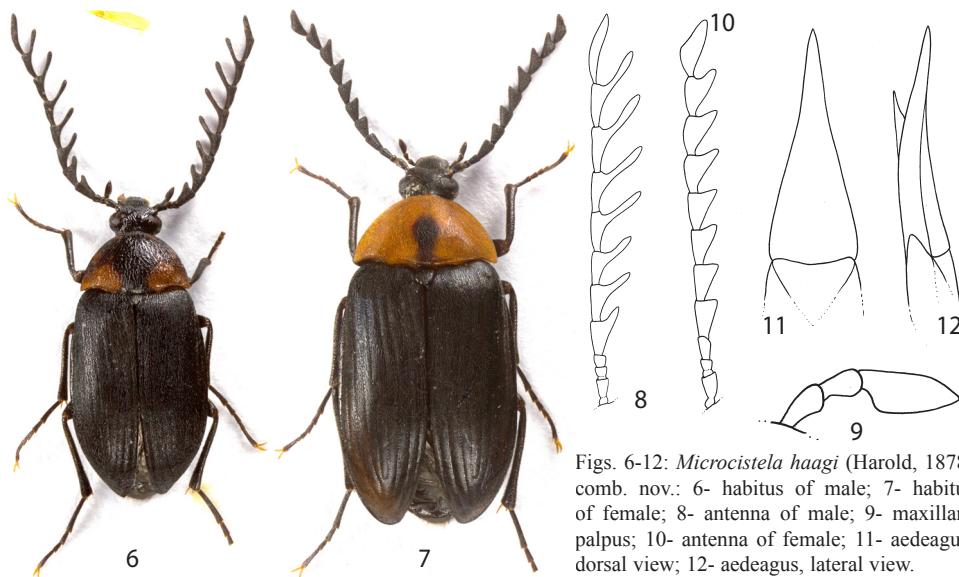
(Figs. 6-12)

Pseudocistela haagi Harold, 1878: 80.

Material examined. (1 ♂): wl: JAPAN : Mie-ken / Ise-shi, Tsumura-chô / 80m, [pb] 6.V. [hb] 199 [pb] 8 [hb] / Katsumi Akita leg., (VNPC); (1 ♀): wl: JAPAN; Mie-ken / Ise-shi / Tsumura-chô / 28.V.2006 / Katsumi Akita leg. [pb], (VNPC).

Remark. Pic (1904) established new genus *Microcistela* Pic, 1904: 26 with the species *Microcistela rosinae* Pic, 1904. Males of this new genus have „flabellierte“ antennae, Reitter (1909: 102) showed figure of the male of *M. rosinae*. Similar species *Pseudocistela haagi* Harold, 1878 (as you can compare Figs. 6 and 7 with Figs. 13-15, Figs. 8 and 10 with Figs. 16 and 18) distinctly belongs to the genus *Microcistela* Pic, 1904.

Distribution. Russia (Far East), Japan.



Figs. 6-12: *Microcistela haagi* (Harold, 1878) comb. nov.: 6- habitus of male; 7- habitus of female; 8- antenna of male; 9- maxillary palpus; 10- antenna of female; 11- aedeagus, dorsal view; 12- aedeagus, lateral view.

***Microcistela rosinae* Pic, 1904**
(Figs. 13-22)

Microcistela rosinae Pic, 1904: 26.

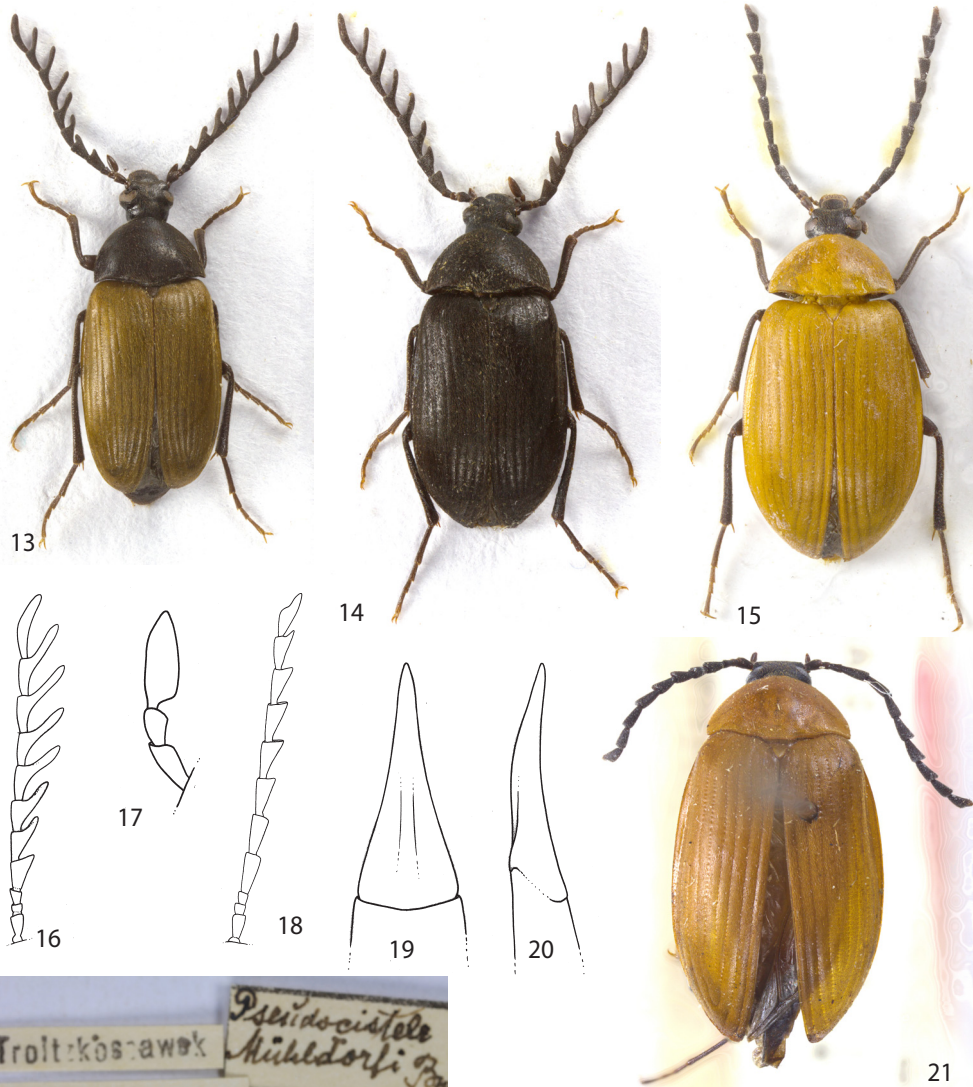
Pseudocistela muhldorfi Borchmann, 1930: 244 **syn. nov.**

Type material. (♀): wl: Troitzkossawsk // Transbaikalien / Mandl // pl: Type // wl with bf: *Pseudocistela* / *Muhldorfi* Bm [hb] // wl: Sammlung / F. Borchmann / Eing. Nr. 5, 1943, (ZMUH).

Material examined. (1 ♂ 1 ♀): wl: SU USSURI reg. / KAMENYUSCHKA / 24-27.7.89 / lgt. S. Bečvār, (VNPC); (1 ♂ 1 ♀): wl: RUSSIA - Far East / Primorsk. Region / 16.-19.vi.1993 // wl: Darktayga / 20 km of Lazo / Zd. Jindra et M. Trýzna lgt., (VNPC).

Remark. *Pseudocistela muhldorfi* Borchmann, 1930 (as you can see and compare Figs. 15 and 21) is treated as a new synonym of *Microcistela rosinae* Pic, 1904.

Distribution. Russia (East Siberia and Far East), China (Shaanxi).



Figs. 13-22: *Microcistela rosinae* Pic, 1904: 13, 14- habitus of male; 15- habitus of female; 16- antenna of male; 17- maxillary palpus of male; 18- antenna of female; 19- aedeagus, dorsal view; 20- aedeagus, lateral view; 21- habitus of female holotype of *Pseudocistela muhldorfi* Borchmann, 1930 syn. nov.; 22- locality labels of *P. muhldorfi* Borchmann.

KEY TO THE SPECIES OF THE GENUS *MICROCISTELA* PIC

- 1 Ultimate palpomere shorter and wider, anterior tarsal claws with 6-8 teeth. Habitus as in Figs. 6, 7, antenna (Figs. 8 and 10), maxillary palpus (Fig. 9), aedeagus (Figs. 11 and 12). *Microcistela haagi* (Harold, 1878) comb. nov.
- Ultimate palpomere longer and narrower, anterior tarsal claws with 3-5 teeth. Habitus as in Figs. 13-15, antenna (Figs. 16 and 18), maxillary palpus (Fig. 17), aedeagus (Figs. 19 and 20). *Microcistela rosinae* Pic, 1904

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