

Taxonomy of the genera *Afroagathidium* Angelini & Peck, *Agathidium* Panzer, *Decuria* Miller & Wheeler, *Gelae* Miller & Wheeler, *Liodopria* Reitter and *Stetholiodes* Fall, with the descriptions of a new genus *Leioceble* gen. nov., and eighteen new species of Anisotomini (Leiodidae, Leiodinae)

Zdeněk ŠVEC

Kamenická 4, 170 00 Praha 7, Czech Republic
e-mail: zd.svec@volny.cz

Taxonomy, new species, keys, faunistics, Leiodidae, Leiodinae, Anisotomini, *Afroagathidium*, *Agathidium*, *Decuria*, *Gelae*, *Leioceble*, *Liodopria*, *Stetholiodes*, China, Laos, Panama

Abstract. All the known species of the genera *Decuria* Miller & Wheeler, 2004; *Liodopria* Reitter, 1909; *Stetholiodes* Fall, 1910 and all the known Asian species of the genus *Afroagathidium* Angelini & Peck, 1984 are reviewed and keyed. A key to the identification of all the currently known genera of the tribe Anisotomini is provided. A new genus *Leioceble* gen. nov. is described together with the type species *Leioceble alia* sp. nov. from Laos and *L. pseudoparila* spp. nov. from China (Sichuan and Zhejiang). *Afroagathidium minimum* sp. nov. from Laos, *Agathidium (Agathidium) clypeale*, *A. (A.) duplicatum*, *A. (A.) havai*, spp. nov. all from China (Yunnan), *A. (A.) micropunctatum* and *A. (A.) radeki* spp. nov. all from China (Sichuan), *A. (Macroceble) concavum*, *A. (Ma.) emimens* spp. nov. all from China (Yunnan), *A. (Neoceble) rakovici* sp. nov. from China (Guandong) and *A. (N.) singulare* spp. nov. from China (Yunnan), *Liodopria laevis*, *L. clypeata* and *L. truncata* spp. nov. all from Laos, *Stetholiodes alesii* sp. nov. from China (Yunnan), *S. schuelkei* sp. nov. from China (Quinghai) and finally *Gelae lepus* sp. nov. from Panama are described. The new genus and all the new species are distinguished from similar taxa. *Agathidium aglyptoides* Reitter, 1884 and *A. kyotoense* Angelini & De Marzo, 1990 are transferred from the genus *Agathidium* Panzer, 1797 to *Leioceble* gen. nov. *Stetholiodes agathidioides* Angelini & Cooter, 1998 and *S. smetanai* Angelini, 2000 are transferred to the genus *Agathidium* Panzer, 1797. With the new generic combination, *A. smetanai* Angelini, 2000 becomes a junior homonym of *A. smetanai* Angelini & De Marzo, 1985 and this results in the proposal of a new name *A. fernan* nom. nov. for *Stetholiodes smetanai* Angelini, 2000. *Liodoria wallacei* Angelini & Cooter, 1993 is transferred to the genus *Decuria*. The spermatheca of *Agathidium (N.) gibbum* Švec, 2017 is figured for the first time.

INTRODUCTION

The tribe Anisotomini is the most numerous within the subfamily Leiodinae. It comprises eleven genera with 1.020 described species (Švec personal database). One genus new to science and 18 new species are described in the present paper. A key to the identification of the Anisotomini genera is provided.

The genus *Afroagathidium* was established by Angelini & Peck in 1984 based on the discovery of morphological characters separating the new genus from the closely standing genus *Liodopria* Reitter, 1909 and also others. It can be distinguished from similar genera of the tribe Anisotomini by the presence of a longitudinal central carina on the first visible abdominal ventrite and by the typically shaped aedeagus that is bifid apically. Altogether seven species have been known up to now, among them three species distributed in the

Palaeartic and in the Oriental realm and four species in the tropical Africa. One species from Laos new to science is added in the present paper.

The genus *Agathidium* Panzer, 1797 currently comprises 866 species (Švec personal database) distributed predominantly in the Palaeartic and Oriental Asia, Europe, north of Africa, and in the Nearctic and Neotropical regions with one species known from the Australian region (Papua New Guinea). No species have been discovered in Afrotropical region, Madagascar and the Pacific region. Nine species new to science belonging to the subgenera *Agathidium* s.str., *Macroceble* Angelini, 1993 and *Neoceble* Des Gozis, 1886 are described in the present paper. Beside them two species are transferred to *Agathidium* from the genus *Stetholiodes* Fall, 1910. For one of them is stated new name. Additionally, two species are transferred from the genus *Agathidium* Panzer, 1797 to *Leioceble* gen. nov.

Decuria Miller & Wheeler, 2004 was established as a monotypic genus discovered in Costa Rica. A second species was described from China later (Švec & Zhang 2020). One more species occurring in Taiwan, Korea and Japan was transferred to the genus from *Anisotoma* Panzer, 1797 (Švec 2025). The fourth known species of the genus occurring in Indonesia is transferred to the genus from *Liodopria* in the present paper.

Gelae Miller & Wheeler, 2004, another genus morphologically similar to *Liodopria* and *Anisotoma* has been known from nine species occurring in America (Newton 2022). One more species new to science, discovered in Laos, is described in the present paper.

The genus *Leioceble* gen. nov. described in this paper is morphologically close to *Agathidium*. Two species new to science, found in China and Laos, are described in this paper and another two species known from Europe and Japan are transferred from *Agathidium* to the new genus.

Altogether nine *Liodopria* Reitter, 1909 species have been known up to now. Eight of them are known to occur in the Oriental and the Asian Palaeartic regions, the remaining species is widely distributed throughout Europe. The genus in the current perception seems to be a polyphyletic taxon necessitating further studies. It is obvious that four species possessing a symmetric antennal club probably do not belong to the genus *Liodopria* but to a different genus. Their status is discussed below. One other species with 10-segmented antenna is proposed to be transferred to the genus *Decuria* Miller & Wheeler, 2004. On the other hand *Anisotoma eos* Perkovsky, 1987 is proposed below to be transferred to the genus *Liodopria*. Beside these taxonomical changes, three *Liodopria* species new to science are described below. Therefore the current number of valid *Liodopria* species is twelve with the proviso that the status of four species is doubtful.

The genus *Stetholiodes* Fall, 1910 comprises 14 known species (Newton 2022) and seems to be morphologically very close to *Agathidium*. Both genera differ mainly by the shape of a body that is very oblong oval with subparallel elytra and distinctly developed posterior pronotal angles in lateral view, while the anterior and posterior pronotal angles in *Agathidium* are suppressed, and therefore the lateral outline of the pronotum is evenly rounded in lateral view. *Agathidium* species are predominantly oval or broadly oval. The most conspicuous morphological character differentiating *Stetholiodes* from *Agathidium* is the elytral structure consisting of distinct, strong, linear longitudinal punctures arranged in nine striae. This character can be a little confusing in those *Agathidium* species which

possess some punctures tending to be longitudinally arranged. Two species are transferred from *Stetholiodes* to *Agathidium* in this paper. Another species looking like *Agathidium* remains in *Stetholiodes* with reservation. Two species new to science are added to the genus in this paper.

MATERIAL AND METHODS

This paper is based mainly on the Laotian and Chinese material. The material collected by Vít Kubáň (Brno) in the year 2007 was donated to the author of the present paper by the late Volker Assing, specialist in Staphylinidae. The other material collected by Kubáň later than 2007 and some material collected by Czech entomologists in China was borrowed for study from the collection of the National Museum, Prague, Czech Republic. Beside this, Chinese material collected by the late specialist in Staphylinidae, Aleš Smetana was provided to the author. A part of the studied Chinese material was collected by Vasily Grebennikov (Ottawa), by Michael Schülke (Berlin) and Miroslav Janata (Sázava n. Sázavou). Some of the studied material was also from the Natural History Museum in Dresden.

Abbreviations of the collections:

- CNCO Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada;
IZAS Institute of Zoology, Chinese Academy of Science, Beijing, China;
JHAC collection Jiří Háva, Praha, Czech Republic;
MSBC collection M. Schülke, Museum für Naturkunde Berlin, Germany;
NKMD collection of the Natural History Museum in Dresden, Germany;
NMPC National Museum, Praha, Czech Republic;
ZSPC collection Zdeněk Švec, Praha, Czech Republic.

The types have been deposited in the collections mentioned above. Indication of the place of the deposition CNCO added to the locality data at the type material should be considered as temporary; it means that the holotypes and a part of the paratypes temporary deposited in CNCO will be eventually deposited in IZAS.

Abbreviations of body parts and measurements:

- AII-AXI antennomeres II-XI;
TI-TV tarsomeres I-V.;
L length;
W width;
L/W or W/L ratio between measurements;
MTLM length of metaventricle measured at midline from the top of anterior process and top of posterior process of metaventricle;
MTLC length of metaventricle measured at the shortest distance (between mid- and hind-coxae);
MTW width of metaventricle measured between outermost postero-lateral points;
MTW/MTLM or MTLC ratio between relevant measurements.

The official names of the states are simplified for the usually used trivial names of the countries: e.g. China for The People's Republic of China, Laos for Lao People's Democratic

Republic etc. The abbreviations of country names used in the keys and faunistic records presented below was taken from Löbl & Löbl (2015). The abbreviations for Indonesia - IA, Laos - LO, Malaysia - ML, Vietnam - VM are added.

The examined material has been compared with the type and other leiodid material deposited in ZSPC and in NMPC.

Collecting data cited in quotation marks are taken from the locality labels accompanying the specimens of the type series; the individual lines of the original locality labels are separated by a slash; the individual labels are separated by double slash in this work. Each holotype or paratype is indicated by a red label bearing the status of the specimen (holotypus or paratypus respectively) name of the species, the name of the author and the year of the designation of the types (2025). The red label is attached to the same pin as the relevant specimen. The holotype labels are initialled by the author.

The specimens had been relaxed in 4% acetic acid first, then rinsed in water and dissected in a drop of water. The both male and female genitalia were mounted in polyvinylpyrrolidin (Lompe 1986) on a transparent label added to the same pin as the dissected specimen or directly on the label near the relevant specimen.

The descriptions are based on the holotypes. Variability is mentioned in the paragraph "Variation" if necessary and includes features exhibited by the paratypes. Important characters of the sexual dimorphism are included in the paragraph "Females."

The measurements of the total body length were taken from all specimens examined. Specific measurements of the individual body parts were taken from the holotypes except data regarding variation. The measurements of morphologic body parts were measured to the first decimal place of millimetre, the measurements of the genitalia were measured to the second decimal place of millimetre.

The types have been deposited in CNCO, JHAC, NMPC, ZSPC, MSBC, NKMD.

Terminology:

endophallus =	sclerite or sclerites or other structures inside tegmen detectable in transmitted light; if present and recognizable, the endophallus is indicated by dotted lines in the figures in the present paper;
operculum =	if recognizable, a lid covered apical orifice of the tegmen; operculum is indicated by dotted-line;
punctate stria or striae =	longitudinally seriate rows of punctures on elytra or deepened or not deepened elytral stria regularly equipped by punctures;
sutural stria=	predominantly deepened stria closest to elytral suture lacking punctures in its caudal part, usually first becoming deepened, equipped with punctures or even becoming a row or rows of punctures anteriorly.
supraocular carina =	term supraocular carina is commonly usually used (e.g. Angelini 1995) even if it doesn't fully capture the essence of the matter. In fact, it is a clypeo-temporal carina accompanied on the medial side by a groove; the carina lining the dorsal surface of the head between the anterolateral margin of the clypeus and the anterior

	margin of the eye, then runs along the medial margin of the eye and finally forms the inner margin of the temples;
anterolateral carina =	anterior part of supraocular carina, i.e. the carina lining the dorsal surface of the head between the anterolateral margin of the clypeus and the anterior margin of the eye
tarsal formula=	the number of tarsomeres on anterior- mid- and posterior tarsi; e.g. in <i>Liodopria laevis</i> sp. nov. male tarsal formula is 5-5-4, female tarsal formula is 4-4-4
tegmen or median lobe =	median lobe of aedeagus.

TAXONOMY AND FAUNISTIC RECORDS

Anisotomini Horaninow, 1834

A key to the identification of the Anisotomini genera

- 1 Elytra without distinct regularly developed punctured striae.2
- Each elytron with nine well developed regular longitudinal punctured striae. Eastern Palaearctic, Oriental and Nearctic. *Stetholiodes* Fall, 1910
- 2(1) Antenna with 11 antennomeres.....3
- Antenna with 10 antennomeres (Fig. 23). *Decuria* Miller & Wheeler, 2004
- 3(2) Anterior margin of clypeus straight, prominent or emarginate, approximately as wide as gena length.4
- Anterior margin of clypeus very narrow, deeply emarginate; emargination approximately 0.3 times as wide as gena length. Parameres of aedeagus conspicuously formed, unusually wide throughout length. Eastern Palaearctic and Oriental. *Besuchetionella* Angelini & Peck, 2000
- 4(3) Antenna with 3-4-segmented club or feebly expressed 5-segmented club with AVII distinctly narrower than AIX.5
- Antennal club 5-segmented with AVIII of similar width as AIX. Clypeus prominent anteriorly; supraocular line absent; metaventrite without oblique femoral lines. Palaearctic, Oriental, Neotropical and Nearctic. *Anisotoma* Panzer, 1797
- 5(4) First visible abdominal ventrite without longitudinal median carina.6
- First visible abdominal ventrite with longitudinal median carina. Ethiopian and Oriental. *Afroagathidium* Angelini and Peck, 1984
- 6(5) Head with extremely small tempora or without them, always abruptly constricted behind eyes, with acute angle behind eyes.....7
- Lateral outline of head never abruptly constricted behind eyes.8
- 7(6) Antennal club 3-segmented, tempora very short, extended laterally or antero-laterally behind eyes. Palaearctic, Oriental. *Cyrtoplastus* Reitter, 1885
- Antennal club 4 segmented, postocular tempora not developed, head constricted just behind eyes. Western Palaearctic. *Amphicyllis* Erichson, 1845
- 8(6) Supraocular carina absent, or if present then not extending behind the eye.9
- Supraocular carina present, extending far behind eye. 11
- 9(8) Antennal club, distinctly 3-4 segmented with antennomeres symmetrical.10
- Antennal club 5-segmented. At least antennomeres IX and X strongly asymmetrical. Palaearctic and Oriental. *Liodopria* Reitter, 1909
- 10(9) Male tarsi 5-5-4, female tarsi 5-4-4. Posterior pronotal angles distinct, broadly rounded, approximately vertically positioned relative to pronotal base in lateral view. Nearctic, Neotropical. *Gelae* Miller & Wheeler, 2004
- Male and female tarsi 4-4-4. Posterior pronotal angles not detectable, therefore lateral outline of pronotum evenly broadly rounded as in *Agathidium*. Palaearctic, Oriental. *Leioceble* gen. nov.

- 11(8) Aedeagus without paramera, spermatheca of specific, short cylindrical shape with a beak process. Oriental and Ethiopian. *Pseudoagathidium* Angelini, 1983
 - Aedeagus with paramera, spermatheca different. Palaearctic, Oriental, Australian and Nearctic.
 *Agathidium* Panzer, 1797

***Afroagathidium* Angelini & Peck, 1984**

***Afroagathidium minimum* sp. nov.**

(Figs. 1-2)

Type material. Holotype (♂): "LAOS-Houa Phan prov./ Phu Phan Mt. 20°12'N, / 104°01'E, ca 1750 m, / 17.V.-3.VI. 2007, / leg Vít Kubáň", (ZSPC). Paratypes: (3 ♀♀, 2 spec. sex indet.): same data as holotype, (ZSPC).

Description. Length 1.2 mm.; head 0.2 mm, pronotum 0.5 mm, elytra 0.5 mm, antenna 0.4 mm, aedeagus 0.30 mm. Maximum width of head 0.4 mm, pronotum 0.6 mm at base, elytra 0.8 mm at basal third. Dorsum without micro-sculpture. Short oval, head dark brown with chestnut coloured frons and clypeus, pronotum brown with widely lighter basal and lateral margins, elytra brown with lighter strip along elytral base and elytral suture. Legs and antennomeres AI-AVII reddish-yellow, AVIII-AXI brown. Venter chestnut coloured.

Head. Dorsal surface with extremely fine and sparse, irregularly distributed punctures. Antennomeres AVIII and AIX distinctly, AX slightly, asymmetrical. L ratio of antennomeres AII-AXI (AII=1.0): 1.0-0.6-0.3-0.3-0.3-0.3-0.9-1.1-1.1-1.9. W ratio of antennomeres AII-AXI (AII=1.0): 1.0-0.5-0.5-0.5-0.8-1.3-2.3-2.8-3.0-2.3. W/L ratio of AII-AXI: 0.6-0.5-1.0-1.0-1.0-2.5-1.5-1.4-1.5-0.7.

Pronotum. Sides almost conically tapered toward anterior angles in dorsal view; faintly rounded in lateral view. Posterior angles blunt, rounded, in dorsal view; not detectable in lateral view. Base bowed backward. Punctuation similar as on head.

Elytra. Strongly convex with obtuse but very distinct lateral angle similar to that in *Agathidium* Panzer, 1797, subgenus *Neocele* Gozis, 1886. With extremely fine and sparse disarranged punctuation, punctures similar to those on pronotum. Lateral elytral channels narrow, not simultaneously visible in dorsal view along their entire length. Faint sutural striae adjacent close to suture confined on posterior half of elytral length.

Legs. Femora and tibiae slim, lacking specific morphological characters. Anterior tarsomeres TI-TIV of similar width as mid- and hind tarsi.

Mesoventrite. Anteriorly with central longitudinal, low carina, posterior part of mesoventrite deepened.

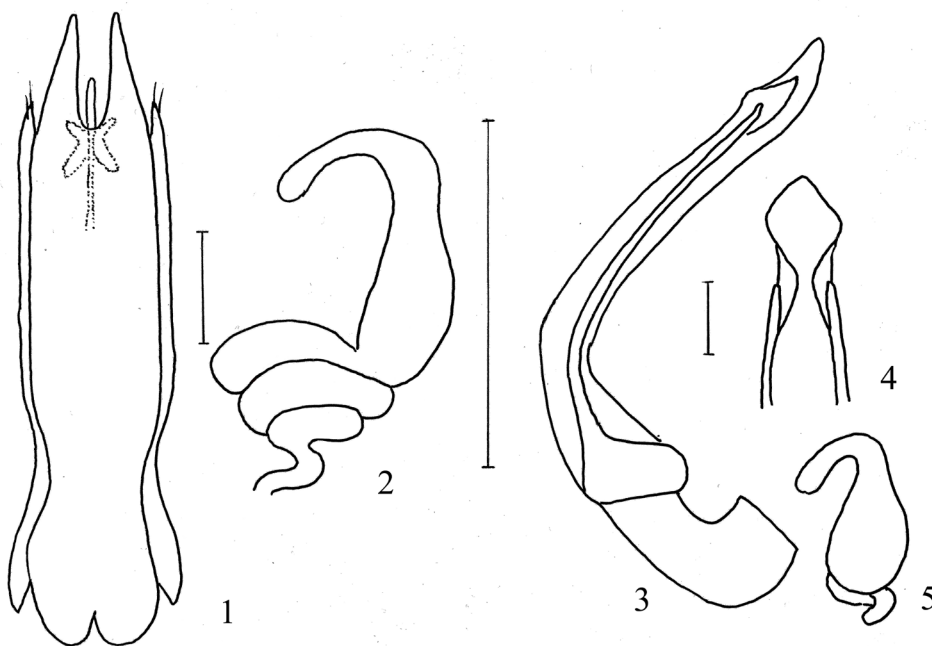
Membranous wings developed.

Metaventrte. Long, smooth, micro-sculptured, centrally with small shallow fovea equipped with several erect setae.

Abdomen. First visible ventrite with longitudinal central carina detectable on anterior part only.

Genitalia. Aedeagus as in Fig. 1. Parameres distinctly shorter than bifid tegmen, each paramera with two setae.

Females. Female tarsomeres slim similar as in males. Metaventral fovea present also in females. Spermatheca 0.11 mm (Fig. 2).



Figs. 1-5. 1, 2 *Afroagathidium minimum* sp. nov.; 3-5- *Agathidium (Agathidium) clypeale* sp. nov. 1, 4- aedeagus dorsally; 2, 5- spermatheca; 3- aedeagus laterally. Scale bars = 0.2 mm in Figs. 1, 3, 4; 0.1 mm in Figs. 2, 5.

Variation. Length of body 1.1-1.3 mm. The ratio of length of AIII/AII = 0.5-0.6. Dark areas on dorsum varies from brown to brown-black.

Differential diagnosis. *Afroagathidium minimum* sp. nov. is similar to the Malaysian *A. sarawakense* Angelini & De Marzo, 1984 in the shape of the antenna having antennomeres AVIII and AIX distinctly asymmetrical. The male of *A. sarawakense* is not known up to now, the best way to differ *A. minimum* sp. nov. and *A. sarawakense* is comparison of the spermathecal shape. The spermatheca is oblong oval with well sclerotized multiply twisted spermathecal duct and with slim bent apical part (Fig. 2) in *A. minimum* while the same *A. sarawakense* lacks the convoluted spermathecal duct and possesses a stout bent apical part. Additionally, the mesoventrite of *A. minimum* possesses a slight but distinct longitudinal carina while the same is not developed in *A. sarawakense*.

Etymology. The name *A. minimum* reminds the very small size of body of the new species (Latin adjective minimum means smallest in English).

Key to the identification of the Asian *Afroagathidium* Angelini & Peck, 1984

- 1 At least antennomeres VIII and IX distinctly asymmetric.....2
- Club antennomeres symmetric or only unobtrusively asymmetric. Dorsum dark red-brown, antennal club dark. Length ratio of AIII/AII=0.8. Head and elytra punctate. Elytral punctures separated by 5-7 times their diameter. Tarsal formula ♂ 4-4-4, female unknown. Tegmen deeply bifurcate. 1.5 mm. Distribution: A - TAI.
..... *A. orientale* Angelini & DE Marzo, 1984
- 2(1) Dorsum with sparse micro-punctures.....3
- Dorsum lacking puncturation. Head dark red-brown, pronotum and elytra lighter. AIII/AII=0.7. Spermatheca J- shaped. Tarsal formula ♀ 4-4-4. Male unknown. 1.8 mm. Distribution: A - ML (Sarawak).
..... *A. sarawakense* Angelini & Cooter, 1985
- 3(2) Smallest species of the genus, body 1.1-1.3 mm. AIII/AII=0.9. AVIII and AIX distinctly, AX slightly, asymmetrical. Tegmen bifurcate apically (Fig. 1). Spermatheca oblong oval with well sclerotized multiply twisted spermathecal duct and with bent apical part (Fig. 2). Distribution: A - LO..... *A. minimum* sp. nov.
- Larger, 2.1-2-3 mm. AIII/AII=0.9. AVIII-AXI asymmetrical. Tegmen skittle-shaped with very shortly rounded small apical process. Spermatheca oblong oval with short slightly bent apical part. 2.1-2.3 mm. Distribution: A - VM.
..... *A. pecki* Angelini, 2000.

Agathidium Panzer, 1797

Agathidium (Agathidium) clypeale sp. nov.

(Figs. 3-5, 17)

Type material. Holotype (♂): "China, NW Yunnan, 8.-10.6.2018 / Haba Xueshan, N slopes., 3190 m / N 27°52'57'', E 100°05.'57'' / lgt. M. Janata, R. Sehnal", (ZSPC). Paratypes: (2 ♀♀): same data, (ZSPC).

Description. Length of body 4.1 mm, head 0.5 mm, pronotum 1.6 mm, elytra 2.0 mm, antenna 1.1 mm, aedeagus 1.64 mm; maximum width of head 1.2 mm, pronotum 2.2 mm, elytra 2.2 mm.

Dorsum brown-black, margins of pronotum and elytra lighter. Legs and antenna light chestnut. Ventral surface chestnut. Dorsum without any micro-sculpture, elytra without sutural striae, antero-lateral carina on head low (species group *dentatum*).

Head. Broadest at parabola-slice shaped eyes. Supra-ocular carina present, sub-ocular carina absent. Antero-lateral carina low, of the equal height. Clypeal line distinctly developed. Clypeal anterior margin concave. Shape of head as on Fig. 17. Antennal club 3-segmented. L ratio of antennomeres II-XI (AII=1.0) =1.0-2.5-0.8-1.2-1.0-1.0-0.7-1.3-1.3-2.3. W ratio of AII-AXI (AII=1.0) =1.0-1.3-1.1-1.0-1.1-1.3-1.3-1.6-1.8-1.7. W/L ratio of AII-AXI =1.0-0.5-1.3-0.8-1.1-1.3-1.8-1.3-1.4-0.8. Puncturation distinct, punctures separated predominantly by 4-5 times, on clypeus 2-3 times their diameter.

Pronotum. Puncturation similar to that on head, punctures a little more distinct. Lateral margin broadly rounded in lateral view. Anterior margin distinctly convex.

Elytra. Dorsum except of median part near suture with small sparse punctures; Punctures near suture well developed, dense tending to longitudinally seriate, separated by one time their diameter, Punctures become smaller and sparser laterally and caudally, separated by 2-4 or more diameters.

Sutural striae not developed. Lateral angle almost not detectable, extremely widely rounded, elytral margin nearly evenly curved laterally.

Mesoventrite. Longitudinal carina indistinct, indicated only by two parallel longitudinal very fine striae. Lateral lines missing.

Membranous wings missing.

Metaventrite. Femoral lines complete with obtuse angle located at most posterior margin of metaventrite. Central part of metaventrite more densely punctured than laterally. Punctures bear adjacent seta. Metaventrite moderately developed. $MTW/MTLM = 6$; $MTW/MTLC = 9$.

Legs. Tarsal formula ♂: 5-5-4. Tarsomeres I of anterior and mid- tarsi feebly widened. Tibiae of usual width. Posterior margin of femora first concave then distinctly widened toward broadly rounded apex.

Genitalia. Aedeagus of type B, paramera without any seta, lateral margins of tegmen very strongly concave before rhombic-shaped apex of tegmen dorsally. Aedeagus in Figs. 3, 4.

Females. Spermatheca pear-shaped basally with slim, bent apical part (Fig. 5). Length of spermatheca 0.26 mm. Tarsal formula 5-4-4. Tarsi slim. Metafemora gradually strongly widened distally, at least twice as wide as mid-femora; posterior margin concave at basal half.

Variation. Length of body: 3.2-4.1 mm. $AIII/AII = 1.7-2.5$.

Differential diagnosis. *Agathidium (Agathidium) clypeale* sp. nov. is similar to the Chinese *A. hani* Angelini, 1999 by the large size of body, missing sutural striae, lack of dorsal micro-sculpturation and by the B type of the aedeagus, rhombic shape of the apex of the tegmen and by the very similar shape of the spermatheca. *A. clypeale* differs from *A. hani* by the shape of head having anterior margin of clypeus feebly convex and by the presence of the clypeal line while clypeus is feebly emarginate and clypeal line is absent in *A. hani*. The tegmen possess a small bump before apex detectable in lateral view in *A. clypeale* while the dorsal plane of the tegmen is straight in lateral view in *A. hani*. While parameral apex is widened in *A. clypeale*, the same is slim in *A. hani*.

Etymology. The name of the new species *clypeale* refers to the presence of the clypeal line that is quite an exceptional character in the Chinese species of the subgenus *Agathidium*.

***Agathidium (Agathidium) duplicatum* sp. nov.**

(Figs. 6-8, 18)

Type material. Holotype (♂): "CHINA: N-Yunnan [C03-07] / Zhongdian Co., 55 km N Zhong- / dian, 28°19.8' N, 99°45.7' E / 3800 m, primary mixed forest / Rhodod., dead wood, mushrooms / moss, 18.VIII. 2003, M. Schülke", (MSBC). Paratypes: (1 ♂, 1 ♀): same data, (ZSPC); (♀): "CHINA: N-Yunnan [C03-13B] / Zhongdian Co., 36 km ESE Zhongdian / overgrown rock hillside with old mixed / forest, bamboo, dead wood, mushrooms / 27°40.9' N, 100°01.5' E, / 3500-3550 m, primary mixed forest 24.VIII. 2003, leg. M. Schülke", (MSBC).

Description. Length of body 2.9 mm, head 0.6 mm, pronotum 0.9 mm, elytra 1.4 mm, antenna 1.1 mm, aedeagus 1.04 mm; maximum width of head 1.2 mm, pronotum 1.5 mm,

elytra 1.5 mm. Pronotum chestnut, head and elytra a little darker, clypeus light chestnut. Legs chestnut, antenna unicolorous light reddish-brown. Ventral surface chestnut. Dorsum without any micro-sculpture, elytra with sutural striae, antero-lateral carina on head low (species group *atrum*).

Head. Broadest just before posterior margin of eyes. Eyes flat, drop-shaped. Supra-ocular carina present, low of the equal height, subocular carina absent. Clypeal line missing. Clypeus straight, distinctly emarginate. Shape of head as in Fig. 18. Antennal club 3-segmented. L ratio of antennomeres II-XI (AII=1.0) = 1.0-2.2-1.0-1.0-0.7-0.8-0.7-1.2-1.2-2.2. W ratio of AII-AXI (AII=1.0) = 1.0-0.8-0.5-1.0-1.0-1.3-1.1-1.6-2.0-2.0. W/L ratio of AII-AXI = 0.8-0.3-0.4-0.8-1.1-1.3-1.3-1.1-1.3-0.7. Punctuation sparse but distinct, very fine punctures of one size separated by about 6-10 or more times their diameter.

Pronotum. Punctuation similar to that on head. Lateral margins very broadly rounded in lateral view.

Elytra. With very fine furrows of various directions creating irregular small cells. Punctures of two sizes. Larger punctures separated by 2-4 times their diameter some micro-punctures dispersed between them. Sutural striae long, overreaching elytral mid-length. Lateral angle very obtuse located in basal fourth of elytral length in lateral view.

Mesoventrite. Longitudinal carina feeble, detectable in caudal half only. Lateral lines incomplete not reaching middle of anterior part of mesoventrite.

Membranous wings missing.

Metaventrite. Femoral lines complete. Centrally placed fovea equipped with bush of erect setae. Metaventrite shortened. MTW/MTLM = 7; MTW/MTLC = 19.

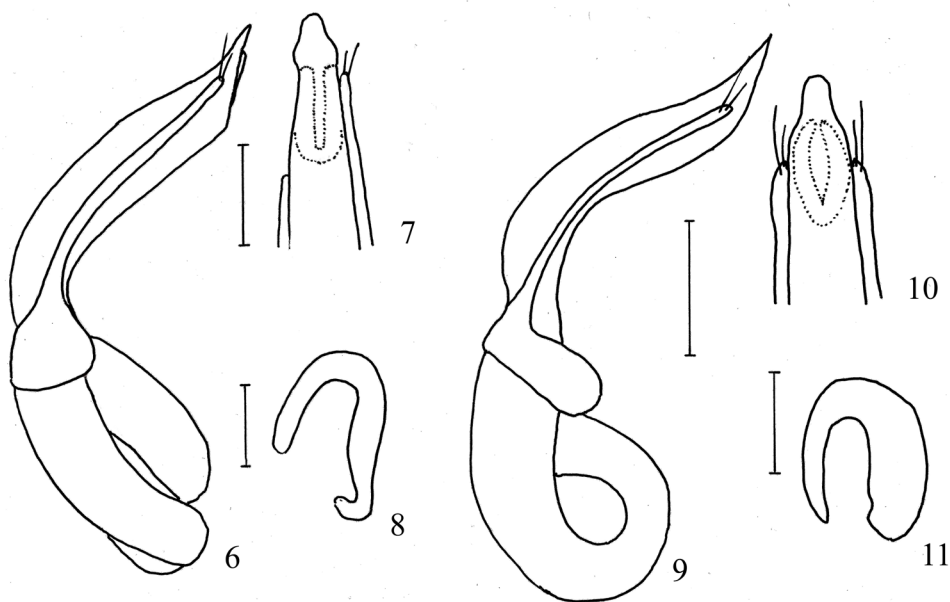
Legs. Tarsal formula 5-5-4. Tarsomeres I and TII of anterior tarsi distinctly widened but narrower than apex of tibia. TI of mid-tarsi distinctly widened. Meso- and metatibiae strikingly widened, 3.5 as wide apically as long. Lateral margin of hind tibiae straight. Posterior margin of metafemora emarginate before triangularly widened apex.

Genitalia. Aedeagus of type E, bisetose paramera a little shortened, apical part of tegmen first a little convergent, nearly subparallel, then widened in dorsal view, later again narrowed to long and wide apical nipple (Figs. 6, 7).

Females. Spermatheca slim, J-shaped with rectangular curved short basal part (Fig. 8). Length of spermatheca 0.21 mm. Metaventrite without any fovea. Tarsal formula 4-4-4. Meso- and metatibiae similarly widened as in male.

Variation. Length of body: 2.9-3.0 mm. The ratio of AIII/AII varies between 2.2-2.3. The female paratypes from the type locality possess denser elytral punctuation than on the holotype.

Differential diagnosis. *Agathidium (Agathidium) duplicatum* sp. nov. is similar to the Chinese *A. (A.) cephalotum* Švec, 2017 in the lack of dorsal-micro-sculpture, maximum width of the head in the eyes?, by the distinctively emarginate anterior margin of clypeus and widened mid- and hind tibiae. The large size of the body, double punctured majority of the dorsum and mainly by the shape of the aedeagus of the E type having the parameres



Figs. 6-11. 6-8- *Agathidium (Agathidium) duplicatum* sp. nov.; 9-11- *A. (A.) havai* sp. nov. 6, 9- aedeagus laterally; 7, 10- apical part of aedeagus dorsally; 8, 11- spermatheca. Scale bars = 0.2 mm in Figs. 6, 7, 9, 10; 0.1 mm in Figs 8, 11.

shortened and by the wide apical bump of the tegmen differentiate *A. duplicatum* from *A. cephalotum* which lacks the sutural striae, possesses D type of the aedeagus, parameres of usual length and the tegmen with small apical nipple. Aedeagus of *A. duplicatum* is very similar also to the aedeagus of *A. (Macroceble) eminens* sp. nov. by its type E, shortened paramera, protracted apical part of tegmen and the shape of the apex of the tegmen. Both species differ morphologically because they belong to different subgenera and therefore have different morphological characters typical for the relevant subgenus.

Etymology. The species name *duplicatum* has been chosen due to the double puncturation of the elytra possessing punctures of at least two sizes (Latin adjective *duplicatum* means duplicated in English).

***Agathidium (Agathidium) havai* sp. nov.**

(Figs. 9-11, 19)

Type material. Holotype (♂): "CHINA: Yunnan, Dali Bai Aut. Pref. / Diancang Shan, pass 43 km NW Dali / 25°59'33.5"N, 99°52'12.5"E / 3104 m, pasture & shrubs, litter, / moss and mushrooms sifted, 23.VIII. / 2009, leg. M. Schülke [CH09-01]", (MSBC). Paratypes: (7 ♂♂, 4 ♀♀, 7 spec. sex indet.): the same data, (MSBC, ZSPC, JHAC); (1 ♂): "CHINA: Yunnan, SE Pingbian, / 22°54'31"N, 103°41'44"E, 2100 m, / primary subtropical broad-leaved / forest, litter sifted, 28.VIII.2014, / leg. M. Schülke [CH14-22a]", (MSBC); (2 ♂♂): "CHINA: Yunnan [CH09-08], / Dali Bai Aut. Pref., Diancang / Shan, pass 43 km NW Dali, 3078 m / 25°59'35"N, 99°52'06"E, W /

pass, Rhodod., oaks, bamboo, / sifted, 29.viii. 2009 pasture & shrubs, litter, / moss and mushrooms sifted, 23.V. / 2007, leg A. Pütz // Ankauf A. Pütz 2008 / Eisenhüttenstadt / Tierkundemuseum / DRESDEN", (NKMD, ZSPC).

Description. Length of body 2.2 mm, head 0.4 mm, pronotum 0.8 mm, elytra 1.0 mm, antenna 0.8 mm, aedeagus 0.88 mm; maximum width of head 1.0 mm, pronotum 1.4 mm, elytra 1.4 mm.

Dorsum dark brown with a little lighter pronotum, clypeus, lateral margins of pronotum and narrow strip along elytral suture reddish-brown. Legs brown with lighter coloured tarsi, antennae unicolorous light chestnut. Ventral surface chestnut. Dorsum without micro-sculpture, elytra without sutural striae, antero-lateral carina on head low (species group *dentatum*).

Head. Broadest before posterior margin of eyes. Supra-ocular carina present, sub-ocular carina absent. Antero-lateral carina low, uniform. Clypeal line missing. Clypeus feebly emarginate. Eyes antero-laterally oriented, flat, drop-shaped. Shape of head as in Fig. 19. Antennal club 3-segmented. L ratio of antennomeres II-XI ($A_{II}=1.0$) = 1.0-1.4-0.7-0.7-0.7-0.6-1.1-1.1-1.9. W ratio of A_{II} - A_{XI} ($A_{II}=1.0$) = 1.0-0.8-0.8-0.9-0.9-1.0-1.0-1.5-1.8-1.8. W/L ratio of A_{II} - A_{XI} = 0.8-0.4-0.9-1.0-1.0-1.1-1.3-1.1-1.3-0.7. Punctuation quite inconspicuous, micro-punctures fine, sparse, separated by 6-8 or even more times their diameter.

Pronotum. Punctuation similar to that on head, micro-punctures sparser, separated by about 10 times or more their diameter. Lateral margin very broadly rounded in lateral view, flatly convergent in dorsal view.

Elytra. Punctures of two sizes; larger punctures sparse, separated by 4-10 or more times their diameter. Smaller ones - micro-punctures more sparsely disseminated. Surface with fine furrows oriented in various directions forming small irregular cells. Sutural striae missing. Lateral angle broadly obtuse, located at anterior third of elytral length in lateral view.

Mesoventrite. Longitudinal carina not developed, lateral lines incomplete, not reaching middle of mesoventrite.

Membranous wings missing.

Metaventrte. Femoral lines incomplete, fine. Inconspicuous bush of erect setae located at posterior third of metaventrte. Metaventrte shortened. $MTW/MTLM = 8$; $MTW/MTLC = 15$.

Legs. Tarsal formula: 5-5-4. Tarsomeres I and TII of anterior and mid- tarsi widened. Mid- and hind-tibiae slim of usual size. Metafemora without any specific characters.

Genitalia. . Aedeagus of type D, bisetose paramera a little shortened, apex of tegmen with long wide nipple longer than wide (Figs. 9, 10).

Females. Spermatheca slim, U-shaped with widened basal part (Fig. 11). Length of spermatheca 0.17 mm. metaventrte without bush of erect seta. Tarsal formula 4-4-4. Tibia of usual width and shape. Metafemora without any specific characters.

Variation. Length of body: 2.2-2.5 mm. Length ratio of antennomeres III/ A_{II} varies between 1.4-1.6.

Differential diagnosis. *Agathidium (Agathidium) havai* is similar to *A. cephalotum* Švec, 2017 in the size and shape of the body, shape of the eyes which are flat, somewhat drop-shaped, extremely fine dorsal puncturation, missing dorsal micro-sculpture and sutural striae, and in the type D of the aedeagus. *A. havai* differs by the shape of the tegmen that terminates in a parallel-sided projection while the tegmen possesses a nipple at the apex in *A. cephalotum*.

Etymology. The new species is dedicated to my entomological friend and colleague Jiří Háva (Prague), well known specialist in Dermestidae.

***Agathidium (Agathidium) micropunctatum* sp. nov.**
(Figs. 12-14, 20)

Type material. Holotype (♂): “CHINA P.R. CHINA, Sichuan, / E slope Gongga Shan, / N29°34'31" E102°00' / 31", 23.vi.2011, 2832m, / sift 26, Grebennikov", (CNCO). Paratypes: (1 ♂, 2 ♀♀): same data as holotype (CNCO, ZSPC); (2 ♂♂): “P.R. CHINA, Sichuan, / NE slope Gongga Shan, / N29°50'05" E102°02' / 53", 11.vi.2011, 3019m, / sift15, V. Grebennikov", (CNCO, ZSPC); (1 ♀): “CHINA, Sichuan Emeishan / Leidongping, 2500 m, 18.vii.1996 / 29°32' N, 103°21' E / A. Smetana, J. Farkač, P. Kabátek", (ZSPC).

Description. Length of body in holotype 2.7 mm, head 0.6 mm, pronotum 1.0 mm, elytra 1.1 mm, antenna 1.0 mm, aedeagus 0.89 mm; maximum width of head 1.2 mm, pronotum 1.5 mm, elytra 1.5 mm.

Dorsum chestnut, legs brown, antennae unicolorous reddish-yellow. Ventral surface yellow-brown. Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low (species group *atrum*).

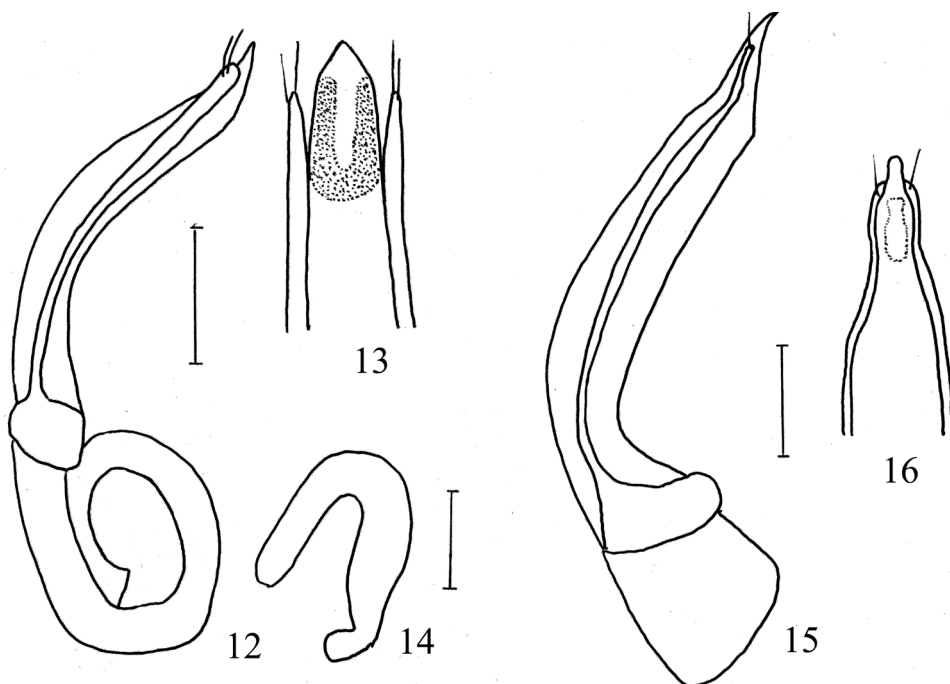
Head. Broadest before posterior margin of eyes. Supra-ocular carina present, sub-ocular carina absent. Antero-lateral carina low, uniform. Clypeal line missing. Clypeus distinctly emarginate. Eyes antero-laterally oriented, flatly drop-shaped. Shape of head as on Fig. 20. Antennal club 3-segmented. L ratio of antennomeres II-XI (AII=1.0) = 1.0-2.0-0.9-1.0-0.9-0.9-0.8-1.2-1.2-2.4. W ratio of AII-AXI (AII=1.0) = 1.0-0.8-0.9-0.9-1.1-1.3-1.3-1.9-2.0-1.8. W/L ratio of AII-AXI = 0.8-0.3-0.8-0.7-1.0-1.1-1.3-1.3-1.3-0.6. Puncturation distinctive - punctures of two sizes. Micro-punctures predominantly paired, separated by about 2-3 times their diameter, individual pairs separated by about 5-6 times of puncture diameter. Some larger punctures sparsely dispersed between pairs.

Pronotum. Puncturation similar to that on head, micro-punctures frequently paired, separated by 1-2 times their diameter, pairs separated by about 5-6 times puncture diameter, and some sparse large punctures. Lateral margin broadly rounded in lateral view, flatly convergent in dorsal view. .

Elytra. Dorsum similarly punctured as on pronotum by strong punctures of two sizes; smaller predominantly paired. Surface with fine furrows oriented in various directions forming small irregular cells. Sutural striae weak and short, confined to posterior fifth of elytral length.. Lateral angle very broadly obtuse, located at anterior fifth in lateral view.

Mesoventrite. Longitudinal carina very feebly developed, lateral lines missing.

Membranous wings missing.



Figs. 12-16. 12-14- *Agathidium (Agathidium) micropunctatum* sp. nov.; 15, 16- *A. (A.) radeki* sp. nov. 12, 15- aedeagus laterally; 13, 16- apical part of aedeagus dorsally; 14- spermatheca. Scale bars = 0.2 mm in Figs. 12-15; 0.1 mm in Fig. 16.

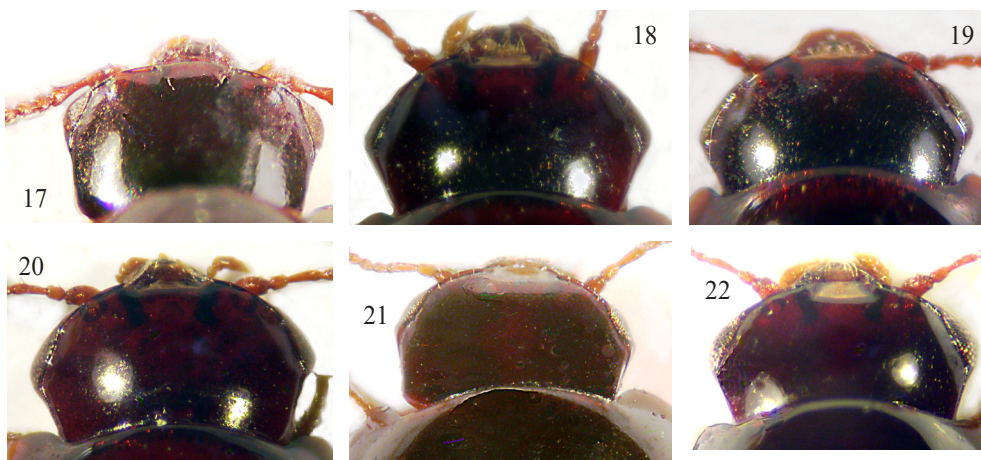
Metaventricle. Femoral lines incomplete very fine, hardly detectable, approached to mid-coxae. Central, transversely oval fovea with bush of erect setae confined posterior part of metaventricle. . Metaventricle shortened, similarly like in the subgenus *Macroceble* Angelini, 1993. MTW/MTLM = 6; MTW/MTLC = 27.

Legs. Tarsal formula: 5-5-4. Tarsomeres I of anterior and mid- tarsi distinctly widened nevertheless narrower than apex of tibia. Mid- and hind-tibiae very widened, 3.3 times as long as apically wide. Metafemora without any specific characters.

Genitalia. Aedeagus of type E, bisetose paramera a little shortened, apical part of tegmen first a little convergent, nearly subparallel, apex widely rounded with nipple approximately as wide as long in dorsal view. (Figs. 12, 13).

Females. Spermatheca slim, U-shaped with rectangular, inwardly curved, base (Fig. 14). Length of spermatheca 0.21 mm. Metaventricle without any fovea. Tarsal formula 4-4-4. Meso- and metatibiae very dilated, similar to males. Metafemora without any specific characters.

Variation. Variable species. Length of body: 2.7-2.9 mm. Punctuation sparser on pronotum in one of the male paratypes from the type locality with micro-punctures less frequently paired than solo isolate. Length ratio of antennomeres III/AII varies from 1.7-2.0.



Figs. 17-22 head dorsally. 17- *Agathidium (Agathidium) clypeale* sp. nov.; 18- *A. (A.) duplicatum* sp. nov.; 19- *A. (A.) havai* sp. nov.; 20- *A. (A.) micropunctatum* sp. nov.; 21- *A. (Agathidium) radeki* sp. nov.; 22- *A. (Macroceble) concavum* sp. nov.

Differential diagnosis. *Agathidium (Agathidium) micropunctatum* sp. nov. is similar to the Nepalese *A. chamaeleon* Švec, 2021 mainly by the presence of sutural striae, chestnut colour of dorsum, lightly coloured antenna, sparse puncturation on the head and pronotum, the similar ratio of length AIII/AII and flat parabola slice-shaped eyes. The new species differs by distinctly emarginate anterior margin of the clypeus that is hardly emarginate in *A. chamaeleon*, by the absence of the dorsal micro-sculpture, which is partly developed in *A. chamaeleon*. The shape of the aedeagus in *A. micropunctatum* is similar to that in *A. chamaeleon* but differs by straight paramera while the same are twisted apically in the compared species. The aedeagus of *A. micropunctatum* is very similar in the dorsal view to the same of *A. (A.) cephalotum* Švec, 2017. Both species differ in more morphological characters, among them presence of the elytral sutural striae in *A. micropunctatum*, while the same striae are missing in *A. cephalotum*.

Etymology. The species name *micropunctatum* has been created from the Greek word micros (microscopic in English) and Latin punctatus (punctate in English) as a reminder of the type of the elytral sculpture.

***Agathidium (Agathidium) radeki* sp. nov.**
(Figs. 15, 16, 21)

Type material. Holotype (♂): “CHINA Sichuan prov. / KANGDING distr. 21.-24.vii./ HAILOUGOU [sic] GLACIER PARK / R. Dunda lgt. 1992 // Moxi / Gongga Shan.”, (ZSPC).

Description. Length of body in holotype 3.5 mm, head 0.6 mm, pronotum 1.2 mm, elytra 1.7 mm, antenna 1.1 mm, aedeagus 1.30 mm; maximum width of head 1.1 mm, pronotum 1.6 mm, elytra 1.7 mm at anterior third.

Dorsum black, head with clypeus, median longitudinal patch on frons and vertex reddish, pronotum with lighter anterior, lateral and basal ill-defined reddish strips along margins, elytra with reddish strip along suture and lateral margins. Antenna and tarsi yellow-red, femora and tibia reddish-brown. Ventral surface light chestnut. Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low (species group *atrum*).

Head. Broadest just behind the eyes. Eyes flattened, parabola slice-shaped. Shape of head as on Fig. 21. Supra-ocular carina low, uniform, sub-ocular carina absent. Clypeal line missing. Clypeus straight, feebly emarginate. Antennal club 3-segmented. L ratio of AII-AXI (AII=1.0) = 1.0-1.5-0.8-0.8-0.7-0.7-0.6-0.8-1.1-1.7. W ratio of AII-AXI (AII=1.0): 1.0-0.9-0.9-1.0-0.9-1.3-1.1-2.0-2.1-2.0. W/L ratio of AII-AXI = 0.7-0.4-0.8-0.9-0.9-1.3-1.3-1.6-1.3-0.7. Punctuation sparse but distinct, punctures small, fine, separated by about 4-6 times their diameter.

Pronotum. Punctuation similar to that on head, punctures a little denser, separated by about 3-5 times their diameter. Lateral margin broadly rounded in dorsal and lateral view.

Elytra. Punctures strong, deep, regularly distributed, separated by 2 times their diameter. Sutural striae distinct, exceeds mid-length of elytra. Lateral angle not detectable, elytral margin evenly curved in lateral view.

Mesoventrite. Longitudinal median carina present, lateral lines developed laterally not reaching longitudinal carina.

Membranous wings developed.

Metaventrite. Femoral lines complete. Raised anterior part of metaventrite smooth with sparse short very fine setae limited caudally by widely opened hyperbolic femoral line. A bush of erect, stiff setae located in middle of anterior metaventrite. Caudal part of metaventral surface covered by chagrin lacking punctures. Metaventrite well developed. MTW/MTLM = 5; MTW/MTLC = 6.

Legs. Tarsal formula ♂: 5-5-4. Tarsomere I of anterior tarsi strongly, tarsomere I of mesotarsi feebly, widened. Tibiae and femora of usual width without specific morphological characters.

Genitalia. Aedeagus of type D, slim in dorsal view, apex of tegmen narrow, rounded paramera sinuate before apex (Figs 15, 16).

Females. Not known.

Differential diagnosis. *Agathidium (Agathidium) radeki* sp. nov. is very similar to *A. chinense* Hlisnikovský, 1964 by the shape of head and generally by the shape of body, by colouring of dorsum and by the presence of the sutural line and by the absence of the micro-sculpture on dorsum. Also the shape of the aedeagi in both species are of a similar shape.

Body of *A. radeki* is distinctly larger (3.5 mm) compared to *A. chinense* (2.5 mm), *A. radeki* which possess pronotum with fine small sparser punctures separated by about 3-5 times their diameter; punctuation of elytra is denser and distinctly stronger and regular with punctures separated by about 2 times their diameter while punctuation of pronotum is only a little more sparse (distance of punctures 3 times diameter) than elytral punctuation (distance 2-3 times diameter) in *A. chinense*. The tegmen in dorsal view is abruptly narrowed just

before apex forming a small terminal nipple in *A. radeki* (Fig. 4) while the same is evenly rounded and narrowed toward shortly rounded apex in *A. chinense*.

Etymology. The new species is dedicated to my late Czech entomological colleague, Radek Dunda.

Agathidium (Macroceble) concavum sp. nov.

(Figs. 22-25)

Type material. Holotype (♂): "CHINA, Yunnan prov. / 16.vi. 1993 / S. Bečvář lgt.", (ZSPC). Paratype: (1 ♀): same data, (ZSPC).

Description. Length of body in holotype 2.3 mm, head 0.5 mm, pronotum 0.9 mm, elytra 0.9 mm, antenna 0.8 mm, aedeagus 0.85 mm; maximum width of head 1.1 mm, pronotum 1.4 mm, elytra 1.4 mm at anterior fifth.

Dorsum brown, clypeus, lateral margins of pronotum and elytra reddish. Antenna and tarsi yellow-brown, femora and tibia brown, tarsi reddish-brown. Ventral surface yellow-brown. Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low, femoral lines missing.

Head. Broadest at eyes. Eyes drop-shaped. Shape of head as in Fig. 22. Supra-ocular carina low, uniform, normally long, sub-ocular carina absent. Clypeal line missing. Weak short furrow present antero-laterally at each side of deeply emarginate clypeus. Antennal club 3-segmented. L ratio of length of antennomeres AII-AXI (AII=1.0) = 1.0-1.8-0.8-0.8-0.6-0.7-0.6-1.0-1.1-1.9. W ratio of AII-AXI (AII=1.0): 1.0-0.8-0.8-0.8-0.9-1.1-1.0-1.5-1.8-1.8. W/L ratio of AII-AXI= 0.8-0.3-0.8-0.8-1.2-1.3-1.3-1.2-1.3-0.7. Punctuation inconspicuous, micro-punctures very fine, separated by more than 10 times their diameter.

Pronotum. Punctuation similar to that on head, several larger punctures irregularly distributed. Lateral margins broadly rounded in lateral view, almost subparallel, anteriorly convergent in dorsal view.

Elytra. Dorsum with traces of punctuation, punctures fine, very shallow, ill-bordered, almost regularly distributed, separated by 2-4 times their diameter on disc. Punctuation sparser toward lateral and apical parts of elytra. Sutural striae distinct, confined to apical two fifths of elytral length. Lateral angle very obtuse and hardly detectable, elytral lateral margin evenly curved in lateral view.

Mesoventrite. Longitudinal median carina not developed, lateral lines missing.

Membranous wings developed.

Metaventrite. Femoral lines missing. Central circular fovea bearing bush of erect long setae confine approximately half of metaventral length MTLM. Metaventrite very shortened as is usual in *Macroceble*. MTW/MTLM = 9; MTW/MTLC = 52.

Legs. Tarsal formula ♂: 5-5-4. Tarsomere I of anterior and mesotarsi widened. Anterior tibiae and all femora of usual width, mid- and hind-tibiae noticeably widened. Lateral outline of hind tibiae broadly convex therefore their maximum width is in mid-length. Lateral outline of mesotibiae straight, widened on their apex. Ratio of length:width of hind tibia = 3.5, same in mid-tibia 3.8.

Genitalia. Aedeagus of type D, slim, apex of tegmen very small nipple-shaped in dorsal view; paramera straight (Figs. 23, 24). Distal part of one paramera missing.

Females. Metaventricle without fovea and setal bush. Tarsal formula 4-4-4. Length of spermatheca 0.17 mm (Fig. 25).

Variation. Length of body 2.3-2.4 mm. L ratio of AIII/AII = 1.8-2.0.

Differential diagnosis. *Agathidium (Macroceble) concavum* sp. nov. is very similar to *A. (Macroceble) eminens* sp. nov. by the shape of head and generally by the shape of body, by colouring of dorsum and antenna, widened mid- and hind tibiae by the presence of the sutural lines and by the absence of the micro-sculpture on dorsum. Also the D type of the aedeagi in the both species are identical. *A. concavum* differs from *A. eminens* by longer paramera and different shape of tegmen lacking distinct terminal nipple.

A. concavum shares the D-type of the aedeagus and its shape with *A. (A.) cephalotum*. Both species differ morphologically because they belong to different subgenera and therefore have different morphological characters typical for the relevant subgenus.

Etymology. The name *concavum* is based on the shape of the anterior margin of clypeus that is distinctly concave (Latin adjective *concavus* means concave in English).

***Agathidium (Macroceble) eminens* sp. nov.**

(Figs. 26-28, 35)

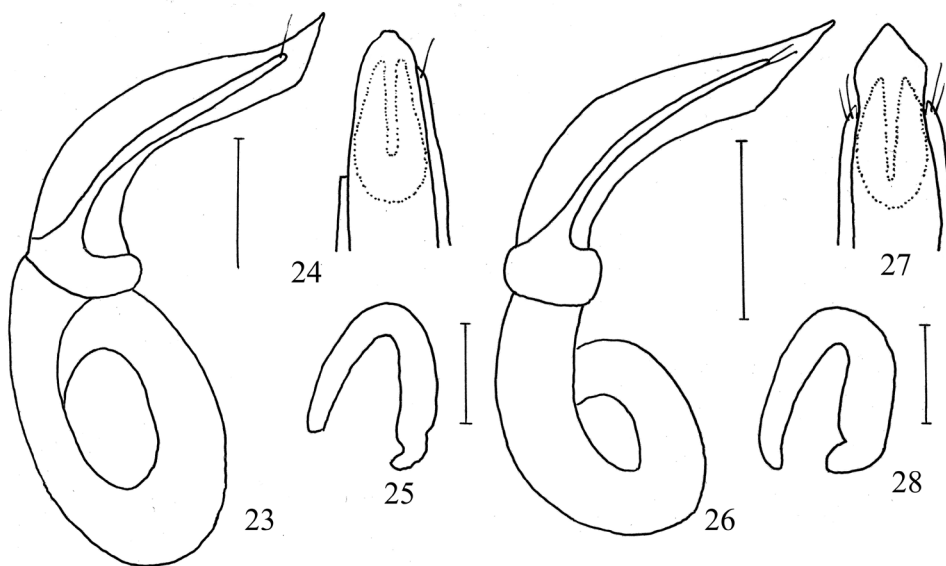
Type material. Holotype (♂): "CHINA, Yunnan, 14km / SE Deqin, road G214, / N28°22'50" E98°59'44", / 12.vi.2012, 4360m, / sift20, V. Grebennikov", (CNCO). Paratypes: (2 ♂♂, 2 ♀♀): same data, (CNCO, ZSPC); (1 ♂): CHINA, Yunnan, 23km / SE Deqin, road G214, / N28°19'54" E99°04'50", / 12.vi.2012, 4381m, / sift19, V. Grebennikov", (CNCO).

Description. Length of body 2.5 mm, head 0.5 mm, pronotum 0.8 mm, elytra 1.2 mm, antenna 0.8 mm, aedeagus 0.67 mm; maximum width of head 1.1 mm, pronotum 1.4 mm, elytra 1.4 mm at anterior fifth. Dorsum brown, antenna and tarsi red-brown, femora and tibia brown. Ventral surface yellow-brown.

Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low, femoral lines missing.

Head. Broadest at eyes. Eyes flat, drop-shaped. Shape of head as in Fig. 35. Supra-ocular carina low, of the equal height, normally long, sub-ocular carina absent. Clypeal line missing. Clypeus distinctly emarginate. Antennal club 5-segmented. L ratio of antennomeres II-XI (AII=1.0) = 1.0-1.7-0.8-0.8-0.8-0.7-0.6-1.1-1.1-2.1. W ratio of AII-AXI (AII=1.0): 1.0-0.8-0.8-0.8-0.9-1.3-1.1-1.6-1.8-1.6. W/L ratio of AII-AXI= 0.9-0.4-0.9-0.9-1.0-1.7-1.8-1.3-1.4-0.7. Punctuation fine, punctures small, separated by 5-6 times their diameter.

Pronotum. Punctuation sparse on disk, punctures separated by 6-10 or more their diameter, punctures large and dense, separated by 3-4 times their diameter, toward lateral sides and base. Lateral margins broadly rounded in dorsal and lateral view.



Figs. 23-28. 23-25- *Agathidium (Macroceble) concavum* sp. nov.; 26-28- *A. (Ma.) eminens* sp. nov. 23, 26- aedeagus laterally; 24, 27- apical part of aedeagus dorsally; 25, 28- spermatheca. Scale bars = 0.2 mm in Figs. 23, 24, 26, 27; 0.1 mm in Figs. 25, 28.

Elytra. Dorsum with punctures larger than those on head and pronotum, separated by 4-7 times their diameter. Sutural striae distinct, long, confined apical three fourths of elytral length. Lateral angle not detectable, elytral lateral margin evenly curved in lateral view.

Mesoventrite. Longitudinal median carina very slight anteriorly, better developed posteriorly. Lateral lines missing.

Membranous wings not developed.

Metaventrite. Femoral lines missing. Central circular fovea bearing bush of erect long setae confined to approximately half of metaventral MTLM. Metaventrite very shortened as is usual in *Macroceble*. MTW/MTLM = 9; MTW/MTLC = 78.

Legs. Tarsal formula ♂: 5-5-4. Tarsomeres TI and TII of anterior and mesotarsi widened. Anterior tibiae and all femora of usual width, mid-and hind-tibiae noticeably widened. Lateral outline of hind tibiae broadly angled therefore their maximum width is approximately in mid-length. Lateral outline of mesotibiae straight, widest on their apex. Ratio of length:width of hind tibia = 3.5, in mid-tibia 3.8.

Genitalia. Aedeagus of type D, slim in dorsal view, apex of tegmen rounded, paramera straight (Figs 26, 27).

Females. Metaventrite without fovea and setal bush. Tarsal formula 4-4-4. Length of spermatheca 0.17 mm (Fig. 28).

Variation. Length of body 2.3-2.5 mm. L ratio of AIII/AII = 1.4-1.9. Dorsal colouring a little

variable - head and pronotum brown-black, elytra brown with reddish lateral margins and a strip along suture in a female paratype from the type locality.

Differential diagnosis. *Agathidium* (*Macroceble*) *eminens* sp. nov. is very similar to *A.* (*Macroceble*) *concavum* sp. nov. in the shape of the head and generally in the shape of body, in colouring of dorsum and antenna, in the noticeably widened mid- and hind-tibiae, in the presence of the sutural line, in the absence of the lateral lines and the absence of the micro-sculpture on dorsum. Also the D type of the aedeagi is shared in the both species. *A. eminens* differs mainly by usual elytral puncturation, by shorter paramera and by the different shape of tegmen having shortly rounded apex while elytral puncturation is shallow, paramera are longer and tegmen broadly rounded in *A. concavum*. The aedeagus of *Agathidium* (*Macroceble*) *eminens* sp. nov. is very similar to that in *A. (A.). latitarse* Švec, 2021 due to prominent apical part of the tegmen. Both species are quite different regarding to the morphological characters of body, especially by the absence/presence of the femoral lines, because they belong to the different subgenera.

Etymology. The name of the new species is the Latin adjective *eminens* (the English meaning is notable or also protuberant) being chosen due to the protuberant apex of the tegmen that is notably longer than paramera.

***Agathidium* (*Neoceble*) *agathidioides* (Angelini & Cooter, 1998) comb. nov.**

Stetholiodes agathidioides Angelini & Cooter, 1998.

The result of the current examination of the holotype and the paratype of *Stetholiodes agathidioides* Angelini & Cooter, 1998 brought me to the conclusion that the species should be transferred to the genus *Agathidium* Panzer, 1797 subgenus *Neoceble* Gozis, 1886. The species exhibits morphological characters typical for *Agathidium* - lack of posterior pronotal angles, absence of punctured striae, evenly rounded lateral outline in lateral view, presence of long, distinct supraocular groove and lack of elytral striae. The well-developed metaventrite lacking femoral lines indicates the belonging of the taxon to the subgenus *Neoceble* species group *varians* sensu Angelini 1993.

***Agathidium* (*Neoceble*) *fernán* Švec, nom. nov.**

Stetholiodes smetanai Angelini, 2000

Agathidium smetanai (Angelini, 2000) nec *Agathidium smetanai* Angelini & De Marzo, 1985.

The result of the current examination of the holotype and the paratype of *Stetholiodes smetanai* Angelini, 2000 brought me to the conclusion that the species should be transferred to the genus *Agathidium* Panzer, 1797 subgenus *Neoceble* Gozis, 1886. The species exhibits morphological characters typical for *Agathidium* - lack of posterior pronotal angles, evenly rounded lateral outline in lateral view, presence of long, distinct supraocular groove and lack of elytral striae. The well-developed metaventrite lacking femoral lines indicates the

belonging of the taxon to the subgenus *Neoceble*, species group *varians* sensu Angelini 1993.

The new species is dedicated to my late friend Fernando Angelini and it is created from abbreviations of his first name and his surname.

***Agathidium (Neoceble) rakovici* sp. nov.**

(Figs. 29-31, 36)

Type material. Holotype (♂): "CHINA, GUANGDONG prov. / Nanling National Nature reserve / DADONSHAN 18.-21.iv 2013/ (border of mixed forest) / 24°58.0'N, 112°42.9'E, 800 m / J. Hájek & J. Růžicka leg." (NMPC). Paratypes: (1 ♂, 2 ♀♀): same data (NMPC, ZSPC); (1 ♂, 1 ♀): "CHINA, GUANGDONG prov. / Nanling National Nature reserve / DADONSHAN 21.iv 2013 / 24°54.62'N, 112°43.11'E, 70 m / J. Hájek & J. Růžicka leg. // sift # 19 bamboo forest on right side / slope of valley above small dam // close to former field station sifting / of leaves in deeper, wet depressions / and close to large stones", (NMPC, ZSPC).

Description. Length of body in holotype 2.6 mm, head 0.7 mm, pronotum 0.8 mm, elytra 1.1 mm, antenna 0.7 mm, aedeagus 0.65 mm; maximum width of head 0.9 mm, pronotum 1.3 mm, elytra 1.4 mm at anterior third.

Dorsum very light chestnut. Legs light chestnut, antenna light chestnut with AI, AIX and AX darker, AXI brown with light apex. Ventral surface yellow-brown. Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low (species group *atrum*).

Head. Extraordinary large, almost as wide as long. Broadest at eyes. Eyes laterally oriented parabola slice-shaped. Mandible almost as long as the remaining part of head. Shape of head as on Fig. 36 Supra-ocular carina low, uniform, normally long, sub-ocular carina absent. Clypeal line missing. Clypeus straight, hardly emarginate. Antennal club 3-segmented. Ratio of length of antennomeres II-XI (AII=1.0) = 1.0-0.7-0.5-0.5-0.5-0.5-0.5-0.8-0.9-1.5. Ratio of width of AII-AXI (AII=1.0): 1.0-0.7-0.7-0.9-1.0-1.3-1.4-2.0-2.0-2.0. Ratio of width:length of AII-AXI= 0.6-0.6-0.8-1.0-1.4-1.8-2.0-1.6-1.4-0.8. Punctuation very sparse, very fine, punctures extremely small, fine, separated more than 10 times their diameter. Micro-sculpture lacking.

Pronotum. Punctuation similar to that on head.

Elytra. Punctures a little stronger and denser than that on pronotum, separated by 6-10 times their diameter. Sutural striae distinct, exceeds mid-length of elytra. Lateral angle obtuse in lateral view, rounded, but well detectable at basal fourth of elytral length.

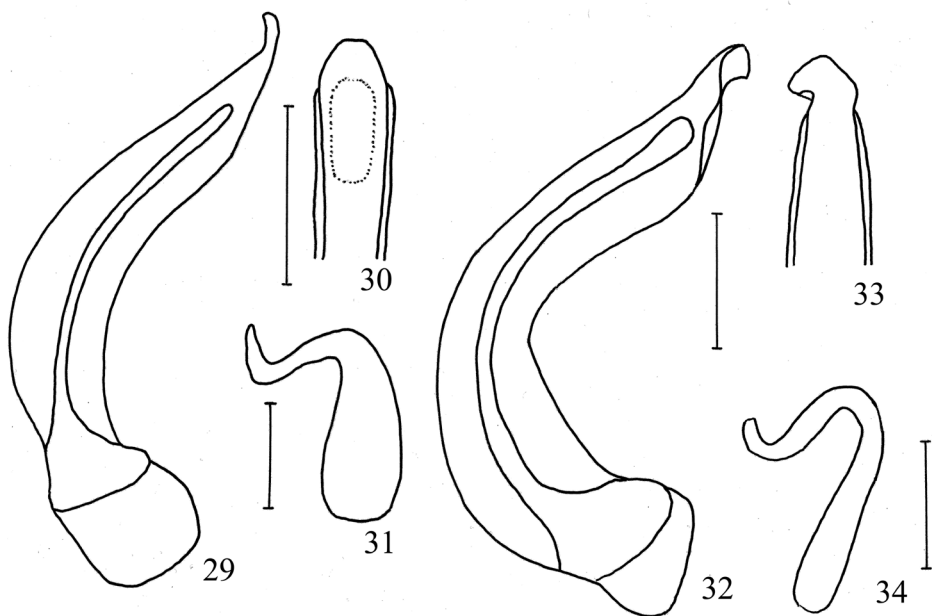
Mesoventrite. Longitudinal median carina absent, lateral lines developed, complete,

Membranous wings developed.

Metaventrte. Femoral lines not developed. A bush of erected stiff setae extending up from shallow fovea located in middle of anterior metaventrte part. Central part of metaventral surface with sparse punctures equipped with adjacent setae; lateral parts micro-sculptured lacking punctures.

Legs. Tarsal formula ♂: 5-5-4. Tarsomere I of anterior and mid- tarsi a little widened. Slim tibiae and femora of usual width without specific morphological characters.

Genitalia. Aedeagus of type A, slim, apex of tegmen broadly rounded in dorsal view; paramera without any setae (Figs. 29, 30).

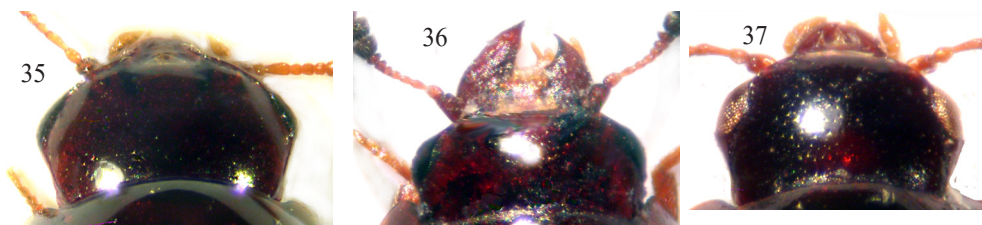


Figs. 29-34. 29-31- *Agathidium (Neoceble) rakovici* sp. nov.; 32, 33- *Agathidium (Neoceble) singulare* sp. nov.; 34- *Agathidium (Neoceble) gibbum* Švec, 2017. 29, 32- aedeagus laterally; 30, 33- apical part of aedeagus dorsally; 31, 34- spermatheca. Scale bars = 0.2 mm in Figs. 29, 30, 32, 33; 0.1 mm in Figs. 31, 34.

Females. Both mandibles stout of same size. Spermatheca 0.19 mm (Fig. 31). Tarsi slim, tarsal formula: 4-4-4.

Variation. Length of body 2.3-2.6 mm. Ratio of W/L of AXI=0.7-1.0.

Differential diagnosis. *Agathidium (Neoceble) rakovici* sp. nov. belongs to the species group *nigripenne* sensu Angelini 1993. It shares distinct lateral angle of the elytra, lack of the femoral lines, presence of sutural striae and the absence of the dorsal micro-sculpture with the similar species *A. (N.) pseudoconfusum* Angelini & De Marzo, 1986. Both species are similar also in the shape of head having the outmost widest points at eyes, in the shape of the aedeagus in dorsal and in the lateral view and also in the shape of the spermatheca. *A. rakovici* differs distinctly from *A. pseudoconfusum* by very broad head compared to pronotum - width head/pronotum 1.4 in *A. rakovici* agrees more to the ratio typical more to the subgenus *Macroceble* Angelini, 1993 then to *Neoceble* Gozis, 1886. *A. rakovici* differs from *A. pseudoconfusum* also by the absence of the clypeal line and also by the feebly emarginate anterior outline of the clypeus while the same is conspicuously deeply emarginate in *A. pseudoconfusum*. Beside that the dorsum of *A. rakovici* is light chestnut coloured while *A. pseudoconfusum* is black.



Figs. 35-37 head dorsally. 35- *Agathidium (Macroceble) eminens* sp. nov.; 36- *Agathidium (Neoceble) rakovici* sp. nov.; 37- *Agathidium (Neoceble) singulare* sp. nov.

Etymology. The new species is dedicated to Miloslav Rakovič, well-known specialist in Scarabaeidae.

***Agathidium (Neoceble) singulare* sp. nov.**
(Figs 32, 33, 37)

Type material. Holotype (♂): “China: N-Yunnan / Nujiang Lisu Aut. Pr. / Gongshan Co. / Gaoligong Shan // valley at 3000-3050 m / 27°47.90’ N, 98°30.19’ E / 21.vi.2005, A. Smetana [C169]”, (ZSPC).

Description. Length of body in holotype 2.8 mm, head 0.5 mm, pronotum 0.8 mm, elytra 1.5 mm, antenna 0.8 mm, aedeagus 0.85 mm; maximum width of head 0.8 mm, pronotum 1.3 mm, elytra 1.4 mm at anterior fourth.

Dorsum black, lateral margins of pronotum and elytra narrowly yellowish-red, head with reddish-brown spot on vertex. Legs and antennomeres AI-AVIII yellow-red, AIX-AXI black. Ventral surface yellow-red, metaventricle and abdomen brown. Dorsum without micro-sculpture, elytra with sutural striae, antero-lateral carina on head low (species group *nigripenne*). Body oblong oval, almost subparallel.

Head. Broadest just behind eyes. Eyes antero-laterally oriented, parabola slice-shaped. Shape of head as in Fig. 37. Supra-ocular carina low, uniform, normally long, sub-ocular carina absent. Clypeal line missing. Clypeus feebly convex. Antennal club 3-segmented. L ratio of antennomeres II-XI (AII=1.0) = 1.0-1.8-0.9-0.8-0.8-0.9-0.6-1.1-1.1-2.1. W ratio of AII-AXI (AII=1.0): 1.0-0.6-0.8-0.9-0.9-1.1-1.0-1.6-1.6-1.6. W/L ratio of AII-AXI= 0.9-0.3-0.8-1.0-1.0-1.1-1.6-1.3-1.3-0.7. Punctuation distinct, separated by about 2-4 times their diameter.

Pronotum. Punctuation a little finer than that on head, punctures a little denser on disc, separated by about 3-4 times their diameter. Punctuation becoming sparser toward base. Sparse micro-punctures disseminated. Lateral margin broadly rounded in lateral view.

Elytra. Dorsum without any micro-sculpture, punctures strong, deep, longitudinally seriate near suture, separated by 2-3 times their diameter. Sutural striae distinct, reaching basal third of elytral length. Lateral angle obtuse, detectable laterally seen at basal fourth of elytral length.

Mesoventrite. Longitudinal median carina fine, lateral lines complete.

Membranous wings developed.

Metaventrite. Femoral lines not developed. Central part of metaventral surface finely and sparsely punctured with setose punctures. Lateral parts with parallelograms.

Legs. Tarsal formula 5-5-4. Tarsomeres I+II of anterior tarsi and tarsomeres I+II of mid-tarsi widened. Tibiae and femora of usual width without specific morphological characters.

Genitalia. Aedeagus of type A, moderately stout in dorsal view, apex of tegmen asymmetrical (Figs. 33).

Females. Not known.

Differential diagnosis. *Agathidium* (*Neoceble*) *singulare* sp. nov. belongs to the same species group *nigripenne* sensu Angelini 1993 as the similar species *A.(N.) aleseki* Švec, 2011 due to distinct lateral angle of the elytra, lack of the femoral lines, presence of sutural striae and the absence of the dorsal micro-sculpture. Both species are similar also in the shape of head having the outmost widest points just behind the eyes and in the type of the dorsal puncturation with elytral punctures strong, dense and much more conspicuous than those on the head and the pronotum. Both species differ by the shape of the body which is almost subparallel in *A. singulare*, while *A. aleseki* is oblong oval. Also the shape of the aedeagi in the dorsal and in the lateral view differs significantly from each other as the tegmen is strikingly asymmetrical apically in *A. singulare* while tegmen in *A. aleseki* is *Tilia* leaf-shaped apically. Conspicuous shape of the tegmen also differs *A. singulare* from all known species of the genus *Agathidium*.

Etymology. The name *singulare* of the new species expresses the fact that the shape of its tegmen is quite unique in the subgenus (Latin *singularis* means unique in English).

***Agathidium* (*Neoceble*) *gibbum* Švec, 2017**
(Fig. 34)

Material examined: 1 ♂, 2 ♀♀: "CHINA: N. Yunnan Dali Bai / Nat. Aut. Pref. Diancang / Shan 3 km W Dali 25°41.1' N/ 100°06.8' E 2750 m / 1.ix.03 A. Smetana [C144]", (ZSPC).

The examined male agrees well with the holotype. The species was originally described according to the single male. The female was not known at the time of the description. Therefore the shape of the spermatheca is presented in the Fig. 34 according to the newly found specimens.

***Decuria* Miller & Wheeler, 2004**

***Decuria wallacei* (Angelini & Cooter, 1993) comb. nov.**

Liodopria wallacei Angelini & Cooter, 1993.

The species was attributed in the original description to the genus *Liodopria* Reitter, 1909. Later Miller & Wheeler (2004) erected for those Agathidiini possessing antennae with

10 antennomeres, a new genus *Decuria*. *Liadopria wallacei* agrees well with the main characters of the genus *Decuria*. Therefore the species is proposed to be transferred to the genus *Decuria*.

A key to the determination of the *Decuria* Miller & Wheeler, 2004 species

- 1 Species from Asia. Head strongly and densely punctured. Tegmen tapered toward top from level of the apex of parameres.2
- Species from America. Head finely and sparsely punctured. Tegmen up to broadly rounded top parallel-sided. Parameres with one short inconspicuous seta. 2.0-2.4 mm. Costa Rica, Bolivia, Mexico.
..... *D. newtoni* Miller & Wheeler, 2004
- 2(1) Dorsum unicoloured chestnut, or chestnut with head possessing large red spot. Tegmen broadly rounded apically.....3
- Head black, elytra brown. Lateral margin of pronotum rounded, anterior angle very broadly rounded, posterior angle indistinct in lateral view. Tegmen shortly rounded at apex. Parameres with two short inconspicuous setae. Operculum slightly emarginate apically. Basal part of spermatheca irregularly cylindrical, distal part narrowed, perpendicularly oriented to basal part. 1.7-2.0 mm, Taiwan, Korea, Japan.
..... *D. smetanai* (Angelini & De Marzo, 1995)
- 3(2) Antennomeres AVI-AX dark. Parameres lack of seta. Operculum rounded apically. Spermatheca J-shaped. 1.9 mm. China (Sichuan), Far East of Russia. *D. pepeon* Švec & Zhang, 2020
- Antennomeres AVII-AX dark. Spermatheca U-shaped with apex reversely bowed. Antennal club 5-segmented. AV slightly asymmetrical, AVI-AX very strongly asymmetrical. 1.9-2.4 mm. Indonesia (Sulawesi, Java).....
..... *D. wallacei* (Angelini & Cooter, 1993)

Gelae Miller & Wheeler, 2004

Gelae lepus sp. nov.

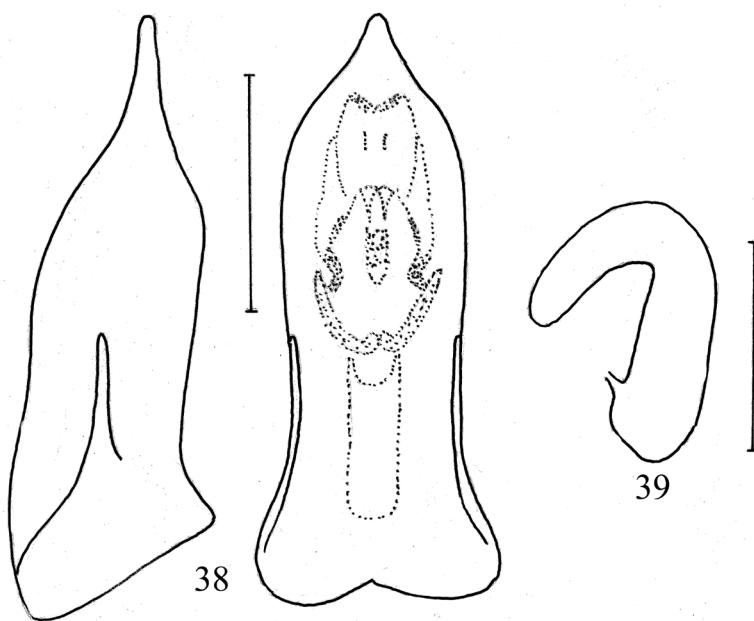
(Figs. 38, 39)

Type material. Holotype (♂): “PANAMA: Panama Prov., P.N. / Altos de Campana, Cerro / Campana / 08°41.1’N, 79°56.0’W / 800-900 m; 1.-13.ix.2017 / Fikáček, Seidl & Sekerka leg. // Flight intercept trap on ridge / in a lower tropical / mountain forest”, (NMPC). Paratypes (2 ♂♂, 2 ♀♀, 2 spec. sex. indet), same data, (NMPC, ZSPC).

Description. Length of body 2.1 mm, head 0.3 mm, pronotum 0.6 mm, elytra 1.2 mm, antenna 0.7 mm, aedeagus 0.55 mm. Maximum width of head 0.7 mm, pronotum 1.2 mm, elytra 1.4 mm.

Broadly oval. Dorsum without micro-reticulation, dark chestnut with lighter coloured clypeus, frons, margins of pronotum and strip along suture. Legs reddish-brown, antennomeres AI-AVI yellowish, remaining antennomeres brown. Venter chestnut, abdomen lighter.

Head. Maximum width of head at basal third of eyes. Eyes well developed, bulging, semi-globular, antero-laterally oriented. Head distinctly narrowed behind eyes. Supraocular carina and subocular carina not developed. Head with larger punctures medially near each eye. Anterior margin of clypeus very slightly convex, clypeal line missing indicated by dark line only. Antennal club 3-segmented, antennomeres VI, VII distinctly asymmetrical, AVIII-AX feebly asymmetrical. Ratio of length of AII-AXI (AII=1.0): 1.0-1.1-0.6-0.6-0.6-0.7-0.7-1.0-1.0-1.7. Ratio of width of AII-AXI (AII=1.0): 1.0-1.0-1.0-1.0-1.2-1.8-2.0-3.4-3.8-3-0. Ratio of W/L of AII-AXI: 0.6-0.5-1.0-1-0-1.2-2.3-2.5-1.4-1.5-0.8. Surface of head



Figs. 38, 39. *Gelae lepus* sp. nov. 38- aedeagus laterally (left) and dorsally (right); 39- spermatheca.

smooth, lacking micro-sculpture with hardly detectable puncturation. Very small punctures irregularly distributed, separated by more than 10 times their diameters.

Pronotum. Puncturation similar to that on head.

Elytra. Puncturation faint almost not detectable, similar to those on pronotum. Punctures separated by more than 10 times their diameter. Sutural striae distinct, confined to apical half of elytral length.

Legs. Anterior tarsi in TI-TIII very feebly widened, tibiae and femora slim. Tarsal formula: 5-5-4.

Mesoventrite. Deeply depressed. Anterior part flat, neither longitudinal carina nor lateral lines developed.

Metaventrte. Moderately long, almost as long as first five visible ventrites measured in mid-line. Smooth, sparsely finely punctured and setose laterally.

Membranous wings developed.

Metascutum large, semicircular, laterally emarginate.

Genitalia. Aedeagus as in Fig. 38. Lateral outline of the median lobe first evenly rounded, then feebly concave before shortly rounded tip distally, in dorsal view. Operculum oval with central emargination apically

Females. Tarsi and tibiae slim, tarsal formula 4-4-4. Spermatheca feebly sclerotized, U-shaped 0.13 mm (Fig. 39).

Variation. Length of body 1.9-2.2 mm. The clypeal line in some of the paratypes is feebly developed. Length ratio of AIII/AII varies between 1.0-1.4.

Differential diagnosis. *Gelae lepus* sp. nov. is similar to *G. cognatum* (Matthews, 1887) in the larger metaventrite, finely inconspicuously punctured elytra and the straight apex of tegmen in lateral aspect (Fig. 30). The new species differs by the shape of the lateral outline of the tegmen which is concave before apex while lateral outline is evenly roundly narrowed to apex in *G. cognatum*. The endophallic structures resembling a hare head.

Name derivation. The name of the new species is noun in apposition lepus (hare in English) was chosen because the shape of the endophallus resembles the hare head.

***Leioceble* gen. nov.**
(Figs. 40-50)

Type species: *Leioceble alia* sp. nov.

Description. Small beetles, size of body less than 2 mm. colour of dorsum dark to reddish-brown, unicoloured. Body convex, lateral outline oblong oval, beetles possess the ability of the partial conglobation. Dorsum with or without micro-sculpture, punctured, some punctures equipped with very short and fine micro-setae.

Head. Rather large comparing to pronotum, dorso-ventrally depressed. Maximum width at eyes. Eyes parabola-slice shaped (Fig. 40). Terminology of eyes shapes follows Švec (2021). Clypeal anterior margin almost straight - very feebly emarginate. Postoculum tempora not bordered against vertex and neck, head narrowed caudally behind eyes. Supraocular carina absent. Very narrow, shallow, unobtrusive and short furrow adjacent to median margin of eyes (Fig. 40) not exceeding the posterior level of the eye. Mandibles and maxilla in Figs. 41-43. Antennal club well developed (Fig. 44).

Pronotum. Convex, transversal, basal margin feebly bowed caudally, lateral outline rounded, posterior angles not detectable, anterior angles broadly rounded in dorsal view. Lateral outline in lateral view broadly rounded, anterior and posterior angles not detectable. Pronotal margins not bordered.

Elytra. Very convex. Almost circular in dorsal view, lateral outline broadly rounded. Lateral angle obtuse but well detectable in lateral view, its shape corresponds with that in *Agathidium*, the subgenus *Neoceble* Gozis, 1886. Lateral margin without specific shape or structures.

Mesoventrite. Steeply obliquely falling anteriorly to sub-triangular, slightly raised, anterior part.

Metaventrite. Well developed, long. Femoral lines not present. Size and shape correspond with that in *Neoceble* species.

Legs. Femora and tibiae slim without specific characters. Tarsal formula of the known species 4-4-4 in both sexes.

Differential diagnosis. The four currently known species belonging to the new genus correspond in their general appearance with those that are attributed to the *Agathidium*

subgenus *Neoceble* Gozis, 1886. They are similar in the ability of the partial conglobation, in the shape of lateral outline of the elytra possessing obtuse angle in lateral view and also in well developed long metaventrite lacking femoral lines. The new genus differs from *Agathidium* by lack of the supraocular carina. Supraocular carina extends far beyond posterior level of eyes separating temples from the remaining part of the dorsal surface of the head in *Agathidium*.

The lack of the supraocular carina is a morphological character shared by *Leioceble* also with some other genera of the tribe Anisotomini. The most similar of them is the genus *Gelae* Miller & Wheeler, 2004 which significantly differs by distinctive posterior pronotal angles and therefore by limited ability of conglobation. Currently known species of *Leioceble* differ from *Gelae* also by reduced number of tarsomeres, having tarsal formula 4-4-4 in both sexes.

The new genus is also similar to the genus *Liiodopria* Reitter, 1909 known from Europe and Asia due to the lack of supraocular carina. The new genus can be distinguished from *Liiodopria* and from all the remaining genera of Anisotomini by the characters given in the key to the identification provided above.

Distribution and diversity. Altogether four Old World species can be attributed to the new genus *Leioceble*. They are European *L. aglyptoides* (Reitter, 1884), Japanese *L. kyotoense* (Angelini & De Marzo, 1988) both transferred from *Agathidium* to *Leioceble* below and two species new to science - one from Laos, the second one from China (Yunnan and Zhejiang).

All currently known *Leioceble* species possess the tarsal formula 4-4-4 in males and females and the specific shape of the tegmen having long acute process apically. It can be expected, that assumed future findings will clarify whether mentioned characters have taxonomic significance at a genus level. Therefore the tarsal formula and specific shape of tegmen are not included in the differential diagnosis.

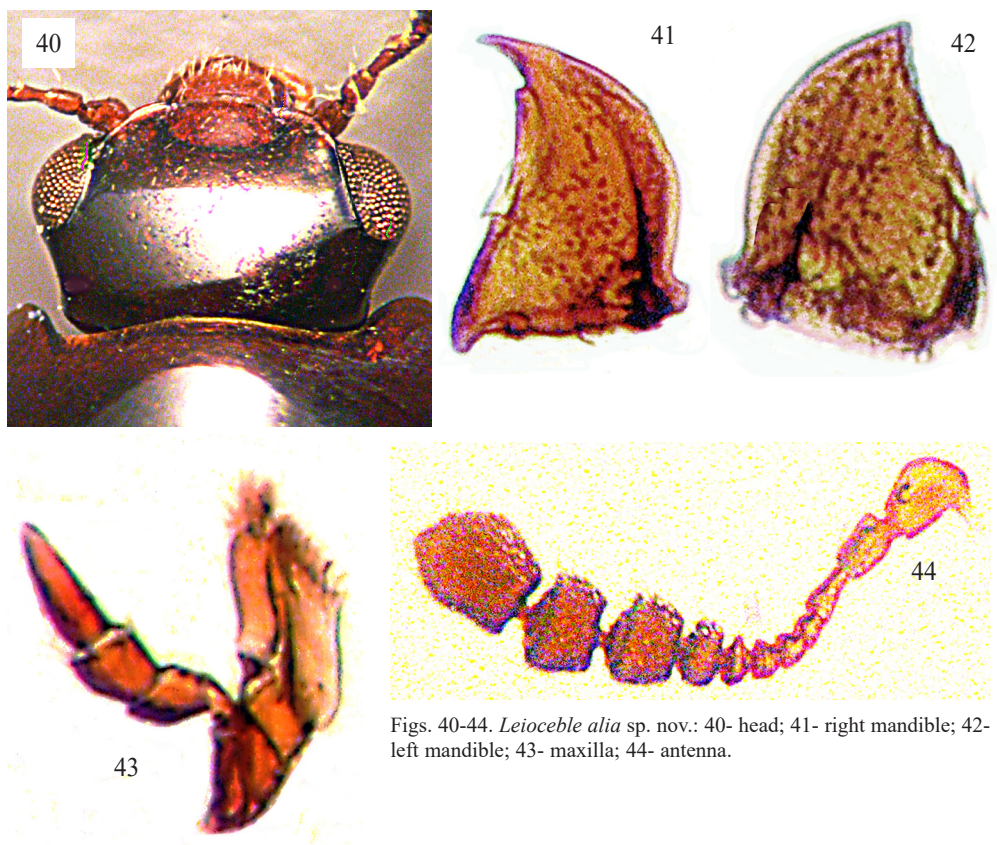
Etymology. As the new taxon is morphologically most similar to *Agathidium* subgenus *Neoceble*, the basal part of the new name “ceble” was chosen. The expression ceble is according to Schenkling (1917) derived from Greek word κέβλη, feminism, which means Kopf in German = head in English. The expression “leio” in the name *Leioceble* comes from Greek λείος which means smooth in English. The word smooth should remind the fact that supraocular carina missing on head or that is developed only as a shallow very short inconspicuous difficult-to-detect groove.

***Leioceble alia* sp. nov.**

(Figs. 40-47)

Type material. Holotype (♂): “LAOS-Houa Phan prov./ Phu Phan Mt. 20°12'N, 104°01'E, ca 1750 m, 17.V.-3.VI. 2007, leg Vit Kubán” (ZSPC). Paratypes: (7 ♂♂, 11 ♀♀): same data as holotype, (ZSPC).

Description. Length of body 1.7 mm, head 0.2 mm, pronotum 0.5 mm, elytra 1.0 mm, antenna 0.6 mm, aedeagus 0.69 mm; maximum width of head 0.6 mm, pronotum 1.0 mm, elytra 1.1 mm at anterior third. Head yellow-red on clypeus and central part, remaining



Figs. 40-44. *Leioceble alia* sp. nov.: 40- head; 41- right mandible; 42- left mandible; 43- maxilla; 44- antenna.

surface darker, pronotum yellow-red with darker disc, elytra light chestnut with lighter longitudinal strip along suture and lateral margins. Antennomeres AI-AVIII yellowish, AIX-AXI brown. Legs yellow-red. Ventral surface yellow-brown.

Head. Broadest at eyes. Eyes bulging, antero-lateral oriented, parabola-slice shaped. Shape of head as on Fig. 40. Supra-ocular carina absent, substituted by very narrow, shallow, unobtrusive and short furrow (Fig. 40) not exceeding the posterior level of the eyes. Antero-lateral carina low, uniform. Clypeal line distinct, parallel to anterior margin. Clypeus straight, very feebly emarginate. Mouthparts in Figs. 41-43. Antennal club 4-segmented (Fig. 44). L ratio of antennomeres II-XI ($A_{II}=1.0$) = 1.0-0.8-0.4-0.4-0.3-0.4-0.6-1.0-1.0-1.9. W ratio of AII-AXI ($A_{II}=1.0$): 1.0-0.8-0.8-0.8-1.2-1.6-2.0-2.8-3.0-3.2. W/L ratio of AII-AXI = 0.5-0.5-1.0-1.0-2.0-2.0-1.7-1.4-1.5-0.8. Punctuation inconspicuous, punctures very small, very fine, separated by about 4-6 times their diameter. Micro-sculpture lacking.

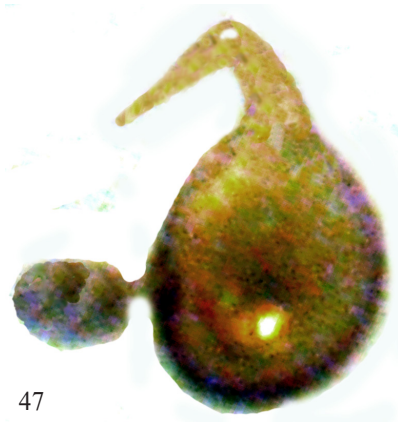
Pronotum. Micro-sculpture lacking, punctuation much sparser than that on head, punctures very small and fine, separated by more than 10 times their diameter. Lateral outline of pronotum flatly rounded in dorsal view, broadly rounded without detectable anterior and posterior angles.



45



46



47

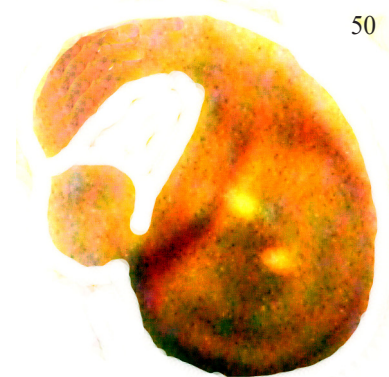
Figs. 45-50. 45-47 *Leioceble alia* sp. nov.: 48-50- *L. pseudoparila* sp. nov.; 45, 48- aedeagus dorsally; 46, 49- aedeagus laterall; 47, 50- spermatheca.



48



49



50

Elytra. Dorsum without micro-sculpture, punctures a little stronger than those on pronotum, rare, separated much more than 10 times their diameter. Sutural striae distinct, reaching mid-length of elytra. Lateral margin angle obtuse but distinct similar to that in the majority of *Neoceble*.

Mesoventrite. Longitudinal median carina and lateral lines not developed.

Membranous wings developed.

Metaventrite. Femoral lines missing. Central part of metaventral surface possess small fine setal punctures, lateral parts covered by parallelograms without any puncturation. Metaventrite well developed, long. Meso- and metacoxae very distant.

Legs. Tarsal formula ♂: 4-4-4. Tarsomeres I and II of anterior tarsi very feebly widened. Tibiae and femora slim without specific morphological characters.

Genitalia. Aedeagus of type A, stout in dorsal and lateral view, apex of tegmen protracted in a long, slim, sub-conical process, operculum emarginate apically, paramera bi-setose apically, much shorter than tegmen (Figs. 45, 46).

Females. Tarsal formula 4-4-4. All tarsi slim. Spermathecal globose basal part with supplementary gland; distal part reversely bent in acute angle (Fig. 47). Length of spermatheca 0.11 mm.

Variation. Length of body 1.7-1.9 mm Ratio of length AIII/AII=0.8-0.9. Dorsal dark parts of body brown in some of the paratypes, one male paratype with antennomeres brown starting from AVIII.

Differential diagnosis. *Leioceble alia* sp. nov. is very similar to all the remaining species of the subgenus - to *L. pseudoparila* sp. nov. from China, to the European *L. aglyptoides* (Reitter, 1884) and also Japanese *L. kyotoense* (Angelini & De Marzo, 1988). All the mentioned species share, beside the generic morphological characters the same tarsal formula 4-4-4 in both sexes, and the same morphological scheme of the male and the male genitalia. *L. alia* differs from *L. aglyptoides* and *L. kyotoense* by the four-segmented antennal club and also by the shape of the operculum that is deeply emarginate apically (Fig. 45), while the compared species possess 3- segmented antennal club and the oblong oval operculum lacking any emargination. The new species possesses distinctly shortened paramera (Fig. 45) which are only a little shorter than tegmen (Fig. 48) in *L. pseudoparila* sp. nov.

Etymology. For the name of the new species the Latin word “alia” (the meaning is: another in English) because *A. (L.) alia* sp. nov. possess the same morphological characters as *A. (L.) pseudoparila* sp. nov, but it is another species as its male genitalia differ.

***Leioceble pseudoparila* sp. nov.**

(Figs. 48-50)

Type material. Holotype (♂): “CHINA: Yunnan [CH 07-13], / Baoshan Pref. , Gaoligongshan E / pass, 36km SE Tengchong, 2200 /m, 24°49’32”N, / 98°46’06”E, / decid. forest, litter, wood, fungi / sifted, 31.V. 2007, leg. A. Pütz// Ankauf A. Pütz, 2008 Eisenhüttenstadt, / Tierkundemuseum / DRESDEN”, (NKMD). Paratype: (1 ♀): “CHINA: ZHEJIANG prov. /, Lin’an County West Tianmu / Shan Nat. Res., 100 m SE below / top of Immortal Peak. / J. Hájek & J. Růžicka leg.// (WT13), 28.vii.2017, / 1470 m, sift #07, dwarf/ forest under bamboo another /shrubs near water source”, (NMPC).

Description. Length of body in holotype 1.7 mm, head 0.3 mm, pronotum 0.6 mm, elytra 0.8 mm, antenna 0.6 mm, aedeagus 0.63 mm; maximum width of head 0.6 mm, pronotum

0.9 mm, elytra 1.0 mm at anterior fourth. Head yellow-red on clypeus and genae, remaining surface darker, pronotum chestnut coloured, widely reddish along basal and lateral margins, with narrow anterior margin, elytra light chestnut. Antennomeres AI-AIII yellowish, AIV-AV infusate, remaining antennomeres brown. Legs yellow-red. Ventral surface yellow-brown.

Head. Broadest at eyes. Eyes bulging, antero-lateral oriented, parabola-slice shaped. Supra-ocular carina absent, substituted by very narrow, shallow, unobtrusive and short furrow not exceeding the posterior level of the eyes. Antero-lateral carina low, of the equal height. Clypeal line distinct, parallel to anterior margin. Clypeus straight, very feebly emarginate. Antennal club 4-segmented. L ratio of antennomeres II-XI (AII=1.0) = 1.0-1.0-0.4-0.4-0.4-0.4-0.7-1.3-1.3-1.9. W ratio of AII-AXI (AII=1.0): 1.0-0.6-0.6-0.8-1.0-1.2-2.0-2.8-3.0-3.4. W/L ratio of AII-AXI = 0.6-0.4-1.0-1.3-1.7-2.0-1.7-1.4-1.5-1.1. Punctuation inconspicuous, punctures very small, very fine, separated by about 4-6 times their diameter. Micro-sculpture lacking.

Pronotum. Micro-sculpture lacking, punctuation much sparser than that on head, punctures very small and fine, separated by more than 10 times their diameter. Lateral outline of pronotum flatly rounded in dorsal view, broadly rounded without detectable anterior and posterior angles.

Elytra. Dorsum without micro-sculpture, punctures a little stronger than those on pronotum, separated by much more than 10 times their diameter. Sutural striae distinct, reaching mid-length of elytra. Lateral margin angle obtuse but distinctly similar to that in the majority of *Neoceble* species.

Mesoventrite. Longitudinal median carina and lateral lines not developed.

Membranous wings developed.

Metaventrite. Femoral lines missing. Central part of metaventral surface possess small fine setal punctures, lateral parts covered by parallelograms without any punctuation. Metaventrite well developed, long. Meso- and metacoxae very distant.

Legs. Tarsal formula ♂: 4-4-4. Tarsomeres I and II of anterior tarsi very feebly widened. Tibiae and femora slim without specific morphological characters.

Genitalia. Aedeagus of type A, stout in dorsal and lateral view, apex of tegmen protracted in a long, slim, sub-conical process, operculum emarginate apically, paramera bi-setose apically a little shorter than tegmen (Figs. 48, 49).

Females. Tarsal formula 4-4-4. All tarsi slim. Spermathecal globose basal part with supplementary gland; distal part reversely bent in acute angle (Fig. 50). Length of spermatheca 0.11 mm.

Variation. Length of body 1.5-1.7 mm. The dorsum of the paratype brown. Ratio of W/L of AXI=1.0-1.1. Antennomeres AI-AVI yellowish, AVII-AXI brown in the paratype.

Differential diagnosis. *Agathidium (Leioceble) pseudoparila* sp. nov. is very similar to all the remaining known species of the genus - to *L. alia* sp. nov. from China, to the European *L. aglyptoides* Reitter, 1884 and also to the Japanese *L. kyotoense* Angelini & De Marzo, 1888. *L. pseudoparila* differs from *L. aglyptoides* and *L. kyotoense* by the four-segmented antennal club and also by the shape of the operculum that is straight apically, while the compared

species possess 3- segmented antennal club and the oblong oval operculum broadly rounded at apex. The new species possess paramera only a little shorter than tegmen (Fig. 48) while the same are distinctly shortened (Fig. 45) in *L. alia* sp. nov.

Etymology. For the name of the new species the Latin word “parile” was modified (the meaning is: the same in English) because *L. parile* sp. nov. possess the same morphological characters as *L. alia* sp. nov, but its male genitalia are of a different shape. The prefix “pseudo” is used due to avoid an incidental nomenclatural conflict with the name *Agathidium parile* Fall, 1934 which is currently a synonym of *Gelae parile* (Fall, 1934).

Liodopria Reitter, 1909

A key to the *Liodopria* Reitter, 1909 species

- 1 At least AIX and AX dark or black.....2
- Antenna entirely testaceous. Clypeus with micro-sculpture. Traces of micro-sculpture on pronotum. Tarsal formula ♂: 5-5-4. Tegmen with pointed process apically in dorsal view, apex bent upwards in lateral view, paramera reach up to mid-length of tegmen. 2.2 mm. Distribution: A - NE. *Liodopria minuta* Angelini, 2002
- 2(1) At least AIX-AX symmetrical. (Species probably not belonging to *Liodopria*).3
- At least AIX, AX strongly asymmetrical.6
- 3(2) Dorsum reddish-brown or pronotum with darker disc. Antennal club darkened or black.4
- Dorsum black. Antennal club black. AV-AVIII very feebly asymmetrical. Tegmen thickened step-like on dorsal side just before tip in lateral view. Flagellum protruded. 2.9-3.2 mm. Distribution: A - IA (Java). (Liodopria) *javaensis* Angelini, 1998
- 4(3) Antennal club 3-segmented or antenna evenly widened apically with 3-segmented club. Elytra irregularly punctate. Tegmen with very small pointed nipple apically. Tarsal formula ♂ 5-5-4, ♀ 4-4-4 or ♀ unknown.5
- Antennal club 5-segmented. Elytra with traces of punctate rows near base. Tegmen thickened on ventral side just before tip in lateral view. AVI very feebly, AVII-VIII feebly asymmetrical. Spermatheca J-shaped. Distribution: A - Cambodia, Thailand. (Liodopria) *cambogensis* Angelini & DeMarzo, 1984
- 5(4) Pronotum sparsely punctate, punctures separated by about 4-8 times their diameter, elytra more distinct punctate, punctures separated by 4-5 times their diameter. Antennal club darkened. AVI-AVIII very feebly asymmetrical. Apex of tegmen thickened ventrally in lateral view. Spermatheca stout, L-shaped. 2.7-3.0 mm. Distribution: A - TAI. (Liodopria) *taiwanensis* Ang. & DMNzo, 1984
- Pronotum irregularly, feebly punctate, punctures separated by 2-20 times their own diameter, elytra distinctly punctate, punctures separated by about 2-5 times their diameter. Antennae gradually thickened with unobtrusive 3-segmented club. Tegmen with parallel sides terminating in acute tip. 2.8-3.0 mm. Distribution: A - ML (Sabah, Sarawak). (Liodopria) *hlavaci* Angelini 8 Cooter, 2002
- 6(2) Tarsal formula ♂ 5-5-4, ♀ 4-4-4. 7
- Tarsal formula ♂, ♀ 4-4-4. Head with punctures hardly visible, punctures separated by 2-10 times their diameter. Mandibles ♂ with 2-3 longitudinal grooves. Pronotum more sparsely punctate than head - punctures separated by 3-15 times their diameter, elytral punctures separated by 2-6 times their diameter. Tegmen with small granules on lateral margin in dorsal view. 2.4-3.4 mm. Distribution: A - IA (Java, Sulawesi), LO (?). *Liodopria sulawesis* Angelini & Cooter, 1993
- 7(6) Tegmen with apex straight or raised in lateral view. Dorsum reddish to reddish-brown, pronotum with darker central spot, elytra reddish to reddish-brown or with darker stains or with basal transversal strip.8
- Apex of tegmen declined ventrally in lateral view. Dorsum brown, vertex darker, pronotum with darker central spot, elytra with lighter spot. Traces of punctate rows on elytra. AIX, AX darker. AIV-AX asymmetric. 2.5-3.5 mm. Distribution: A - JA (Honshu Island), SC, FE. *Liodopria maculicollis* Nakane, 1963

- 8(7) At least AVII-AX darker.....9
- Only AIX-AXI black. Dorsum shiny. Aedeagus slim, long, regularly roundly tapered to shortly rounded apex. Paramera long overreaching half of aedeagal length. 2.2-2.5 mm. Distribution: A - FE (Kunashir Island).....(*Anisotoma*) *eos* Perkovsky, 1987
- 9(8) Dorsum of male mat, micro-sculptured or at least elytra with some traces of micro-sculpture. Aedeagal apex straight in lateral view, with nipple apically in dorsal view.10
- Dorsum of male smooth, without any micro-sculpture. Aedeagus with apical process or nipple dorsally viewed, feebly raised or hook-like shaped in lateral view (Figs.53, 54, 61, 62).12
- 10(9) Dorsum of male with uniform very fine micro-sculpture, therefore mat.11
- Only traces of micro-sculpture on elytra in both sexes. Clypeus with pit at each side. AIII shorter than AIV+AV together. AXI dark. Elytra with punctures distinct, tending to be seriate. 3.1 mm. Distribution: A - NE. *Liiodopria nepalensis* Angelini & DeMarzo, 1994
- 11(10) AXI obliquely truncate on apex. Elytra distinctly coarsely punctured medially along suture and on basal part, remainder elytral surface without puncturation in male, with small sparse unobtrusive punctures in female. AXI light. Aedeagus as in Figs 61, 62. Length 2.6-2.9 mm. Distribution: A - LO. *Liiodopria truncata* sp. nov.
- AXI oval. Tegmen similar as *L. sulawesis* in dorsal view, straight in lateral view. Spermatheca U-shaped with thickened apex. 2.0-2.5 mm. Distribution: E - AU, BE, CR, CT, CZ, EN, FI, FR, GE IT, LA, LT, NR, NL, PL, RO, SK, ST, SV, SZ, YU. *Liiodopria serricornis* (Gyllenhal, 1813)
- 12(9) Clypeal line straight, centrally parallel to anterior margin of clypeus. Apical process of aedeagus feebly raised in lateral view. Aedeagus in Figs. 53, 54. Elytral puncturation tend to seriate near suture. 2.1-2.5 mm. Distribution: A - LO. *Liiodopria laevis* sp. nov.
- Clypeal line V-shaped with rounded spike. Apex of aedeagus with nipple in dorsal view, hook-shaped in lateral view (Figs. 57, 58). 2.4-2.9 mm. Distribution: A - LO. *Liiodopria clypeata* sp. nov.

Remarks. Four species described originally and currently attributed under the genus *Liiodopria* Reitter, 1909 - *L. javaensis* Angelini, 1998, *L. cambogensis* Angelini & DeMarzo, 1984, *L. taiwanensis* Ang. & DMNzo, 1984, *L. hlavaci* Angelini & Cooter, 2002 probably do not belong to the genus. Any confirmation about the status and affiliation of the species to a different genus, probably *Anisotoma* Panzer, 1797 requests further studies.

Further species described originally under the genus *Liiodopria* are newly combined with the genus *Decuria* Miller & Wheeler, 2004 (see below).

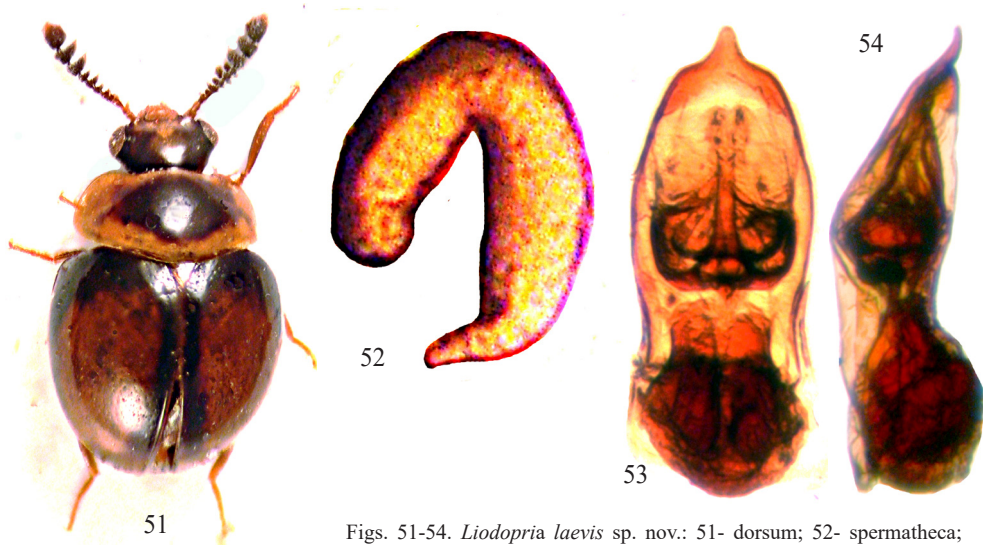
Perkovsky (1987) described *Anisotoma eos* from Far East of Russia. This species is newly transferred to the genus *Liiodopria* in this paper.

***Liiodopria laevis* sp. nov.**

(Figs. 51-54)

Type material. Holotype (♂): "LAOS-Houa Phan prov./ Phu Phan Mt. 20°12'N./ 104°01'E, ca 1750 m./ 17.V.-3. VI. 2007./ leg Vit Kubán", (ZSPC). Paratype: (1 ♀): same data, (ZSPC).

Description. Length 2.5 mm. Length of body parts: head 0.4 mm, pronotum 0.6 mm, elytra 1.5 mm, antenna 0.8 mm, aedeagus 0.61 mm. Maximum width of body parts: head 0.7 mm, pronotum 1.1 mm at base, elytra 1.5 mm approximately at anterior third. Dorsum brown, head with large yellowish triangular spot covering clypeus, front and lateral parts of vertex, pronotum with central brown spot, widely yellowish margined, elytra with large longitudinal reddish spot leaving only wide brown strips on base, along suture and lateral sides; scutellum predominantly yellowish. Antennomeres I and II yellowish, antennomeres



Figs. 51-54. *Liodopria laevis* sp. nov.: 51- dorsum; 52- spermatheca; 53- aedeagus dorsally; 54- aedeagus laterally.

starting AIII darker, gradually becoming brown at club. Venter yellowish-brown with darker genae. Entire dorsum punctate, without micro-sculpture but with traces of micro-sculpture on clypeus. Dorsum in Fig. 51.

Head. Dorsal surface simply punctate with irregularly distributed punctures separated predominantly by 2-4 or more times their diameter. AIV-AX strongly asymmetrical. AXI oblong oval. L ratio of AII:AXI (AII=1.0): 1.0-1.6-0.7-1.1-1.0-1.1-0.9-1.6-1.7-3.1; W ratio of AII-AXI (AII=1.0) = 1.0-1.0-1.2-1.8-1.8-2.5-2.2-3.5-3.5-3.0; W/L ratio of AII-AXI=0.9-0.5-1.4-1.4-1.6-1.9-2.2-1.9-1.8-0.8. Head widest at eyes. Clypeal line straight, laterally abruptly turned toward anterior clypeal margin.

Pronotum. Widest at posterior angles. Base very feebly bowed posteriorly. Lateral outline roundly tapered anteriorly in dorsal view, almost straight in lateral view. Posterior angles acute, broadly rounded in dorsal view, obtuse, broadly rounded in lateral view. Punctuation similar to that on head, sparser and double. Basic punctures separated by about 4-6 times their diameters. Sparse micro-punctures interposed. Lateral and anterior margins with very fine narrow border and with sparse erect setae placed near margin.

Elytra. With punctures tending to become seriate near suture forming two incomplete irregular striae vanishing anteriorly and posteriorly. Punctures near suture separated by about 2-4 times or even more their diameter, toward base and apex of elytra punctures become sparse and smaller. Remaining part of elytra irregularly punctured. Sutural striae shallow, approaching suture, impressed from apex to anterior third of elytral length.

Legs. Tarsal formula 5-5-4. Anterior tarsi slim. Tibiae slim, femora lack specific morphological characters.

Membranous wings developed.

Metaventricle. Central part and strips above metacoxae smooth, remaining parts of metaventricle sparsely punctured and setose with short recumbent setae.

Genitalia. Paramera shortened without any setae. Tegmen with up-raised apex in lateral view. Aedeagus as in Figs. 53, 54.

Females. Anterior tarsi slim. Female tarsal formula 4-4-4. Spermatheca 0.15 mm (Fig. 52).

Variation. Length of body 2.1-2.5 mm, AIII/AII = 1.5-1.6. Pronotum with lateral small dark spot close to each side of central brown spot.

Differential diagnosis. *Liiodopria laevis* sp. nov. can be compared to *L. serricornis* (Gyllenhal, 1813) distributed in Europe. Both species are similar in the shape and size of body and mainly in the shape of aedeagus. The dorsal surface in *L. laevis* is smooth in both sexes, while the same is covered by very fine and dense micro-sculpture in males of *L. serricornis*. The apex of the tegmen possesses in the both compared species a process that is distinctly incised in *L. laevis* (Fig. 53) while the same smoothly transitions to the lateral outline of the tegmen in *L. serricornis*. *L. laevis* is also similar to *Liiodopria clypeata* sp. nov. in the smooth surface of body and colouring of the dorsum. *L. laevis* differs by the shape of the clypeal line that is parallel to clypeal margin while the clypeal line is V-shaped in *L. clypeata*. The shape of the aedeagus is quite different from both compared species (Figs. 53, 57).

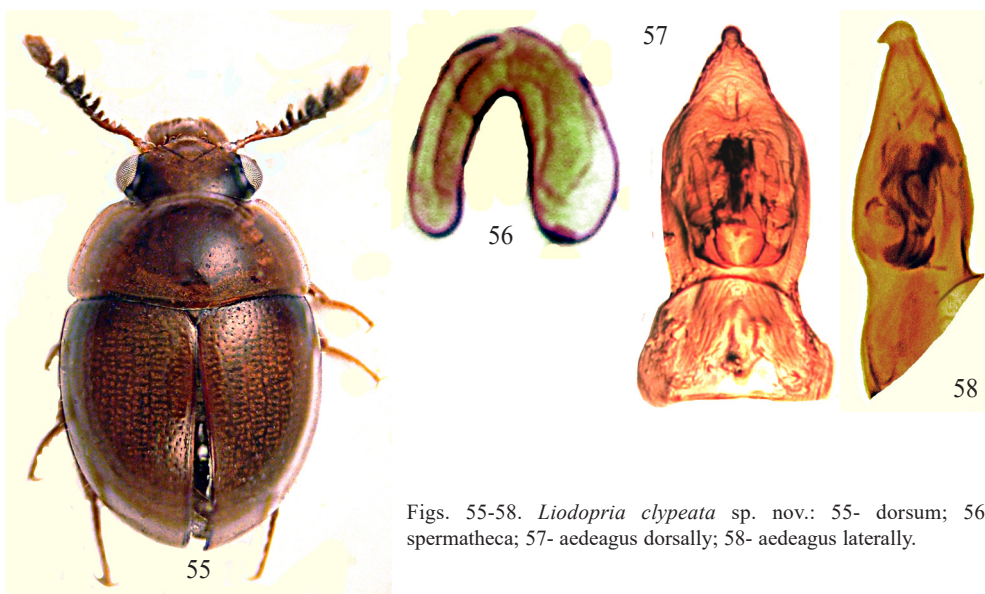
Etymology. The dorsal surface of *Liiodopria laevis* sp. nov. lacks any micro-sculpture, therefore the species name is the Latin word *laevis* which means smooth in English.

***Liiodopria clypeata* sp. nov.**
(Figs. 55-58)

Type material. Holotype (♂): “LAOS - Houa Phan prov., / Phu Phan Mt. [sic] 20°12'N, / 104°01'E, ca 1750 m, / 17.V.-3.VI. 2007, / leg Vít Kubáň”, (ZSPC). Paratypes: (3 ♀♀): same data, (ZSPC); (1 ♂, 1 ♀): “LAOS - Bokeo prov., 5 / km W Ban Toup, Bokeo / Nature Reserve, 20°27' - 28'N, / 100°45'E, 500- / 700 m 4.-18.V. 2011, / leg Brancucci et al.”, (ZSPC); (4 ♂♂, 2 ♀♀, 4 spec. sex indet): “LAOS - NE Houa Phan prov., / 20°13'09-19"N 103°59'54"- / 104°00'03"E, 1480-1510 m / Phou Pane Mt. [sic] 2.-22-vi., / 2011 Vít Kubáň leg. // Primary mountain forest / flight intercept trap / LAOS 2011 Expedition / National Museum Prague, / Czech Republic”, (NMPC, ZSPC); (4 ♀♀): “LAOS - NE Xien Khouan Houa Phan prov., / 19°38.20'N 103°20.20'E / Phonsavan (30 km NE) / Phou Sane Mt. [sic], 10.-30.v.2009 1429 m / Vít Kubáň leg. // Secondary mountain forest / flight intercept trap / LAOS 2011 Expedition, / NHMB Basel, / NMPC Prague”, (NMPC, ZSPC); (2 ♀♀): “LAOS - NE Houa Phan prov., / 20°13'09-19"N 103°59'54"- / 104°00'03"E, 1480-1510 m / PHOU PANE Mt. [sic] 22.iv.-14.v., / 2008 Vít Kubáň leg.”, (NMPC).

Description. Short oval. Length 2.7 mm. Length of body parts: head 0.6 mm, pronotum 0.7 mm, elytra 1.4 mm, antenna 1.0 mm, aedeagus 0.58 mm. Maximum width of body parts: head 0.9 mm, pronotum 1.5 mm at base, elytra 1.6 mm approximately at basal fifth. Head brown with yellow-red clypeus and central longitudinal patch on front and vertex, pronotum and elytra yellow-red, pronotum with large central light brown spot, elytral base and lateral margins light brown. Antennomeres I-V yellow-red, AVI-AX brown, AXI yellow-red. Entire dorsum punctate, without micro-sculpture. Dorsum in Fig. 55.

Head. Dorsal surface double punctured; larger punctures separated by about 3-6 or even more times their diameter, small micro-punctures sparse. Antennomeres VIII- X distinctly



Figs. 55-58. *Liodopria clypeata* sp. nov.: 55- dorsum; 56- spermatheca; 57- aedeagus dorsally; 58- aedeagus laterally.

asymmetrical, AXI oblong oval. L ratio of AII:AXI (AII=1.0): 1.0-2.3-0.9-1.0-1.0-1.0-1.0-1.8-2.3-3.9; W ratio of AII-AXI (AII=1.0) = 1.0-1.1-1.0-1.3-1.6-2.3-1.6-2.8-2.9-2.5; W/L ratio of AII-AXI=1.0-0.5-1.1-1.3-1.6-2.3-1.6-1.3-0.6. Head widest at eyes. Clypeal line V-shaped with round angle oriented caudally.

Pronotum. Widest at posterior angles. Base very feebly bowed posteriorly. Lateral outline roundly tapered anteriorly in dorsal view, flatly rounded in lateral view. Posterior angles acute, rounded in dorsal view, obtuse, abruptly rounded in lateral view. Punctuation finer and sparser than that on head, simple. Punctures separated by about 6-10 or more times their diameters. Lateral and anterior margins with very fine narrow border and with sparse erect setae near margin.

Elytra. With punctures tending to become seriate near suture forming traces of several incomplete irregular striae. Punctures near suture separated by about 3-4 times their diameter, punctures become sparser toward disc and also anteriorly and caudally are separated by about 4-5 or more times their diameter. Punctures present in ill defined intervals between traces of striae very similar in size and strength but sparser than striae punctures.

Sutural striae fine, approaching suture, impressed from apex to anterior third of elytral length.

Legs. Tarsal formula 5-5-4. Anterior tarsi slim. Tibiae slim, femora lack specific morphological characters.

Membranous wings developed.

Metaventricle. Lateral parts and strips above metacoxae lacking punctures with micro-sculptured surface, sparsely punctured and setose with short recumbent setae centrally.

Genitalia. Paramera vestigial without any setae. Tegmen with hook-shaped apex in lateral view. Aedeagus as in Figs. 57, 58.

Females. Anterior tarsi slim. Female tarsal formula 4-4-4. Spermatheca 0.10 mm (Fig. 56).

Variation. Length of body 2.4-2.9 mm, AIII/AII = 1.9-2.4. Intensity of brown parts of dorsum varies in the individual paratypes, some of them are almost unicolorous, yellow-red.

Differential diagnosis. *Liodopria clypeata* sp. nov. is similar to *L. laevis* in the size of body, smooth surface of body and colouring of the dorsum. *L. clypeata* differs distinctly by the V-shaped clypeal line while the clypeal line is parallel to anterior clypeal margin in *L. laevis*. Also the shape of the aedeagus is quite differ in the both species (Figs. 53, 57).

Etymology. The species name of *Liodopria clypeata* sp. nov. refers to the specific shape of the clypeal line.

***Liodopria truncata* sp. nov.**

(Figs. 59-62)

Type material. Holotype (♂): “LAOS - Houa Phan prov., / Phu Phan Mt. [sic] 20°12’N, / 104°01’E, ca 1750 m, / 17.V.-3.VI. 2007, / leg Vít Kubán”, (ZSPC). Paratypes: (4 ♂♂, 1 ♀): same data, (ZSPC).

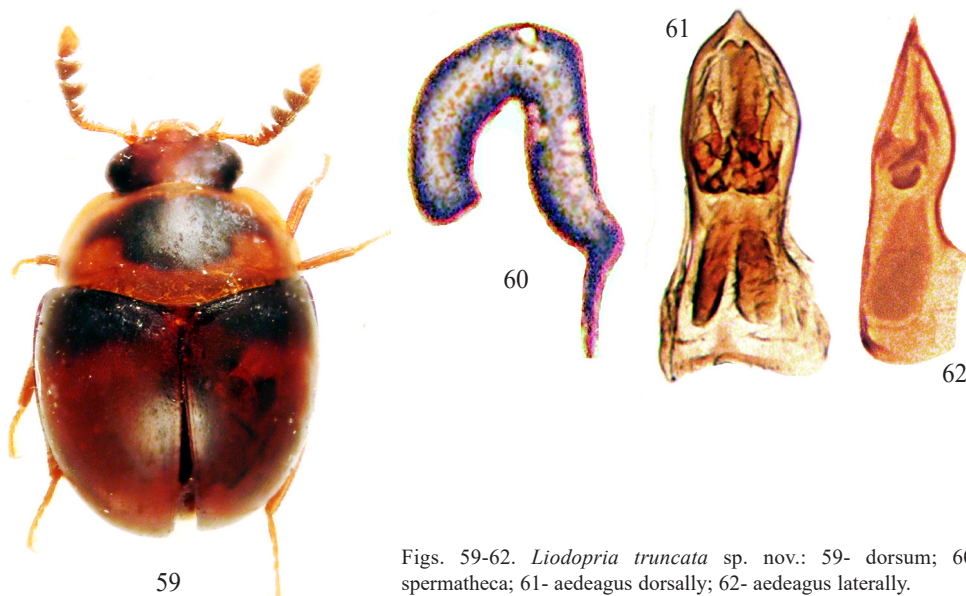
Description. Short oval. Length 2.9 mm. Length of body parts: head 0.3 mm, pronotum 0.8 mm, elytra 1.8 mm, antenna 1.0 mm, aedeagus 0.53 mm. Maximum width of body parts: head 1.0 mm, pronotum 1.7 mm at base, elytra 2.0 mm approximately at basal fifth. Head predominantly black, clypeus and central longitudinal patch on front and vertex yellow-red, pronotum yellow-red with large oblong oval central, transversally oriented patch, elytra yellow red with basal transversal black strip (Fig. 59). Antenna yellow-red with antennomeres VIII-AX a little darker. Entire dorsum punctate, with micro-sculpture.

Head. Dorsal surface distinctly, extremely densely, micro-sculptured, therefore opaque, lacking puncturation with exception of a large puncture (or large punctures) at median margin of each eye. Antennomeres I-X distinctly asymmetrical, AXI oblong oval with obliquely truncate apex. L ratio of AII:AXI (AII=1.0): 1.0-2.1-0.8-0.9-0.9-0.9-0.9-1.8-1.9-3.4; W ratio of AII-AXI (AII=1.0) = 1.0-1.1-1.4-1.4-1.4-2.3-1.5-3.5-3.6-2.5; W/L ratio of AII-AXI=0.9-0.5-1.6-1.4-1.4-2.3-1.5-1.8-1.7-0.6. Head widest at eyes. Clypeal line arcuate.

Pronotum. Matte, micro-sculpture as that on head. Widest at posterior angles. Puncturation lacking with exception of several very small setose punctures distributed along lateral margins. Base feebly bowed posteriorly. Lateral outline roundly tapered anteriorly in dorsal view, flatly rounded in lateral view. Posterior angles acute, broadly rounded in dorsal view; obtuse, abruptly rounded in lateral view. Lateral and anterior margins with very fine narrow border.

Elytra. Opaque, micro-sculpture as that on head. With punctures tending to become seriate near suture forming traces of several incomplete irregular striae. Punctures near suture separated by about 3-4, punctures become sparser toward disc and also anteriorly and caudally.

Sutural striae fine, approaching to suture, impressed from apex to anterior fourth of elytral length.



Figs. 59-62. *Liodopria truncata* sp. nov.: 59- dorsum; 60- spermatheca; 61- aedeagus dorsally; 62- aedeagus laterally.

Legs. Tarsal formula 5-5-4. Anterior tarsi slim. Tibiae slim, femora lack specific morphological characters.

Membranous wings developed.

Metaventricle. Lateral parts punctured very finely, punctures, bearing short recumbent setae, separated by about 3 times their diameter, central part of metaventricle more strongly punctured; strips above metacoxae lacking punctures.

Genitalia. Paramera shortened without any setae. Tegmen with nipple at apex, endophallus with basal sclerite resembling the letter W with two lateral more distally placed sclerites resembling a treble clef.

Tegmen with straight apex in lateral view. Aedeagus as in Figs. 61, 62.

Females. Anterior tarsi slim. Female tarsal formula 4-4-4. Spermatheca 0.12 mm (Fig. 60).

Variation. Length of body 2.6-2.9 mm, AIII/AII = 2.1-2.4 in the males of the type series, 1.8 in females. Intensity extent of brown parts of dorsum varies in the individual paratypes, some of them are predominantly reddish with darker base of elytra, central spot on pronotum and brown lateral parts of the head (Fig. 59). Other specimens are predominantly brown with lightly coloured central longitudinal patch on head, light pronotal margins and longitudinal patches on each elytron. Dorsal surface of females lacking micro-sculpture, but is punctured. Head distinctly strongly punctured with punctures separated by 2-4 times their diameter, pronotum finely sparsely punctured, punctures separated by 10 or more times their diameter; elytra with strong punctures separated by 2-4 times their diameter near suture and base - punctures become smaller and sparser laterally and caudally.

Differential diagnosis. *Liodopria truncata* sp. nov. is similar to *L. serricornis* (Gyllenhal, 1813) in the size of body, micro-sculptured surface of body in male and colouring of the dorsum. The shape of the aedeagus is quite similar in both species but the longitudinal lateral sclerites resembling treble clef distinguish *L. truncata* from *L. serricornis*.

Etymology. The species name of *Liodopria truncata* sp. nov. refers to the specific shape of the antennomere XI which is obliquely truncate at the apex.

Stetholiodes Fall, 1910

A key to the determination of the *Stetholiodes* Fall, 1910 species

- 1 Elytra with distinct punctured striae. 2
- Elytra with traces of rows of punctures. Dorsum black. AIX-XI infuscated. Clypeus with striae, remainder of dorsum without micro-sculpture. Elytra with slight lateral angle. Tarsal formula in ♂: 5-5-4, ♀: 5-4-4. Aedeagus of type A, parameres swollen distally, apex narrowly rounded. Spermatheca similar to *A. laevigatum*. 3.2-4.0 mm. Distribution: A - FE (Primorsky krai). (*S. puetzi* (Angelini & Švec, 1998))
- 2(1) Species from Asia. 3
- Species from USA. Temples straight forming angle with eyes. AIII/AII=2.5. Tegmen terminates by broad process rounded apically. Parameres distinctly S-curved before apex. 2.7 mm. Distribution: NAR - U.S.A. (Indiana). *S. laticollis* Fall, 1910
- 3(2) Elytra unicolorous. Body smaller up to 3.5 mm. 4
- Black, elytron with C-shaped brown spot. Microreticulation on head, more superficial on pronotum, absent on elytra. AVII-X and base AXI dark. AIII/AII=1.7. Head widest just behind eyes. Interval punctures distinct, dense, 0.5-2.0 times their diameter. Temples very short. Tegmen very broadly rounded apically parameres a little shorter than tegmen. Tarsal formula in ♂: 5-5-4. Length 4.1 mm. Distribution: A - TAI. *S. magnifica* Angelini & Cooter, 1998
- 4(3) At least pronotum or even also head micro-sculptured. 5
- Dorsum lacking micro-sculpture. 10
- 5(4) Head widest at posterior margins of eyes. 6
- Head widest at temples just behind posterior margins of eyes. 7
- 6(5) Micro-reticulation only on pronotum, superficial. Head with double puncturation. Punctures in elytral intervals sparse, very small and superficial, separated by about 6-10 times their diameter. Male unknown. Spermatheca pyriform, distal part two-times curved. 2.8 mm. Distribution: A - NE. ... *S. schawalleri* Angelini & DeMarzo, 1994
- Micro-reticulate on head and pronotum. . Micro-sculpture strong on head, fine but distinct on pronotum. Head simply punctured. Elytral intervals finely but distinctly punctured, punctures separated by about 3-5 times their diameter. Tegmen evenly slightly narrowed toward apex; parameres thickened apically (Figs. 66, 67). 2.9-3.7 mm. Distribution: China (Qinghai). *S. schuelkei* sp. nov.
- 7(5) Head and pronotum with punctures of similar size and strength. Dorsum unicoloured, reddish-brown or black. 8
- Punctuation of head differs from that on pronotum in strength and/or density. Head strongly deeply punctate, pronotum with sparser and distinctly finer puncturation. Dorsum variable coloured - uniformly reddish-brown or with elytra black. Antennae with dark club. AIII/AII=1.3-1.5. Micro-sculpture on head and pronotum superficial or even in traces. Tegmen constricted before semicircular apex. Parameres slim, spermatheca pyriform with distal part oriented rectangular to base. 2.3-2.7 mm. Distribution: A - NE..... *S. reticulata* Angelini & De Marzo, 1987
- 8(6) Head and pronotum punctured strongly, densely, punctures separated by about 0.5-2 times their diameter. Species from China and Nepal. 9
- Head and pronotum punctured sparsely, punctures separated by 3-6 times their diameter. Species from Japan. Dorsum uniformly reddish-brown. Tarsal formula in male 5-5-4. Female not known. Tegmen terminating by semicircular apex, parameres a little shorter than tegmen. 2.5 mm. Distribution: A - JA. *S. nipponica* Angelini & DeMarzo, 1987

- 9(8) Body smaller, 2.6 mm. Dorsum reddish-brown, antennae unicolorous, testaceous. Anterior tarsomeres I-III distinctly widened in male. Head and pronotum densely, in some places irregularly punctured, punctures separated by approximately 2 times their diameter. Head and sides of pronotum with distinct, disc of pronotum, with faint micro-sculpture. Tegmen first flatly narrowed terminating in broadly rounded tip, parameres wavy before apex. Spermatheca semicircular with simply bent long apical part. ♂: 5-5-4, ♀: 4-4-4. Distribution: A - CH (Gansu). *S. chinensis* Angelini & Švec, 1994
- Body larger (3.0 -3.2 mm), dorsum black, antennal club black. Male anterior tarsi slim. Head and pronotum strongly micro-sculptured with punctures separated by 0.5-1 times their diameter. Tegmen narrowed apically, feebly constricted before broadly rounded semi-circular apex. Spermatheca globiform with apex in mid-length of basal part, simply bent shorter apical part. ♂: 5-5-4, ♀: 5-4-4. Distribution: A - CH (Sichuan). *S. turnai* Angelini & Švec, 1994
- 10(4) Larger (2.4 - 3.3 mm), elytral intervals distinctly punctured. 11
- Smaller (1.8-1.9 mm), elytral intervals without distinct puncturation, at most some micro-punctures present, antenna unicolorous. Head punctures small, superficial, sparse (separated by 3-5 times their diameter), pronotum even more sparsely punctured. Strial punctures on elytra impressed within basal 1/3 elytra. ♂: 5-5-4, ♀: 4-4-4. Tegmen simply rounded apically, spermatheca globiform, apical part rectangularly bent. Distribution: A - IN (Darjeeling). *S. loebli* Angelini & DeMarzo, 1987
- 11(10) Head widest just behind eyes. 12
- Head widest at eyes before their posterior margin. 13
- 12(11) Head and pronotal puncturation double. AIII/II=1.5. Head reddish-brown, pronotum darker, elytra black with reddish-brown apex. Tegmen with conspicuous long narrow preapical part before broadly rounded apex. Female unknown. Parameres straight. 2.8-3.3 mm. India (Kashmir). *S. striatipennis* (Portevin, 1926)
- Head and pronotum puncturation simple. Dorsum black, pronotal and elytral margins lighter. Apex of tegmen declined in lateral view, parameres curved in dorsal view (Figs. 63, 64). 2.4-2.8 mm. China (Yunnan). *S. alesi* sp. nov.
- 13(11) Antenna light, unicolorous. AIII/II=1.6. Head punctures large, impressed (separated by about 0.5-1.0 their diameter), pronotal punctures smaller and more superficial, dense (separated by about 0.5-1.0 their diameter). Strial punctures well impressed, intervals moderately punctured by fine sparse punctures (separated by 3-5 times their diameter). Tarsal formula in ♂: 5-5-4. Tegmen terminating in wide flat semiglobe. 2.8 mm. Distribution: A - NE. *S. besucheti* Angelini & DeMarzo, 1987
- Antennomeres IX, X reddish-brown, remainder of antennae lighter. AIII/II=1.3. Head punctures fine, superficial, dense (1.5-3.0 times), pronotal punctures similar, more sparse and irregularly distributed. Punctures of elytral intervals fine, small moderately sparse (separated by 2-4 times their diameter) Tarsal formula in ♀: 5-4-4. Spermatheca ovoid with double curved distal part. 2.7 mm. Distribution: A - VM. *S. kabakovi* Perkovsky, 1990

Remarks. *Stethliodes puetzi* Angelini & Švec, 1998 probably does not belong to the genus *Stethliodes* but to *Agathidium* as it lacks distinct elytral striae and also the lateral outline of pronotum is broadly rounded lacking hind angles.

Stethliodes alesi sp. nov.

(Figs. 63-65)

Type material. Holotype (♂): "China: N. Yunnan, Diqing Tibet / Aut. Pr. Dequin Co., Meili Xue Shan E-side, 14 km W Dequin 28°27.47'N 98°46.35'E, 2580 m, 11.vi. 2005, A. Smetana [C158]", (ZSPC). Paratypes: (2 ♀♀): "China: N-Yunnan / Nujiang Lisu Aut. Pr. / Gongshan Co. / Gaoligong Shan // valley at 3000-3050 m / 27°47.90' N, 98°30.19' E / 21.vi.2005, A. Smetana / [C169]", (ZSPC).

Description. Length of body in holotype 2.8 mm, head 0.5 mm, pronotum 0.8 mm, elytra 1.5 mm, antenna 0.8 mm, aedeagus 0.89 mm; maximum width of head 0.8 mm, pronotum 1.4 mm at basal third, elytra 1.5mm at anterior fourth. Body very long oval, elytra predominantly

parallel-sided. Dorsum black with lateral margins of elytra and narrow strip along elytral suture lighter. Antennomeres brown with AIX and AXI brown-black. Legs brown, tarsi reddish-brown. Ventral surface brown.

Head. Surface smooth without any micro-sculpture, punctured. Punctuation strong, deep, dense, punctures separated by about 0.5-2 times their diameter. Front with two larger punctures. Broadest just behind eyes at temples, developed in dorsal view as small triangular protuberance. Eyes bulging, antero-laterally oriented, parabola-slice shaped. Supraocular carina present, of equal height all along its length, terminating far behind posterior margin of eyes; its anterior part - anterolateral carina not developed. Head margin between clypeus and eye flat. Clypeal line not developed, anterior outline of clypeus feebly convex. Antennal club 5-segmented. L ratio of antennomeres II-XI ($AII=1.0$) = 1.0-1.4-0.7-0.6-0.6-0.8-0.5-1.0-1.1-1.8. W ratio of AII-AXI ($AII=1.0$): 1.0-0.9-0.9-0.7-1.0-1.4-1.3-1.9-2.0-2.0. W/L ratio of AII-AXI = 0.7-0.4-0.9-0.8-1.2-1.3-1.8-1.3-1.3-0.8.

Pronotum. Micro-sculpture lacking, punctuation much sparser and finer than on head, punctures very small and fine, separated by 4-6 times their diameter. Pronotum broadest at its basal third. Lateral outline of pronotum very feebly rounded, almost straight, in dorsal view, broadly rounded in lateral view. Posterior angles very blunt and broadly rounded in dorsal and lateral view. Lateral margin with sparse light erect setae.

Elytra. Dorsum without any micro-sculpture. Each elytra possess nine punctured longitudinal striae. Strial punctures strong, deep, dense separated by 0.5-1 times their diameter, a little stronger than those on pronotum, Striae VI and VII merge and similar to stria IX, terminate at apical third of elytral length. Interval punctures finer and smaller than those on pronotum separated approximately by 2-3 times their diameter. Sutural striae distinct, confined apical two thirds of elytra, continuing anteriorly as row of punctures. Lateral margins with sparse erect setae.

Membranous wings developed.

Metaventrite. Femoral lines missing. Central part of metaventral surface with small fine setal punctures, lateral parts lacking punctuation. Metaventrite well developed, long.

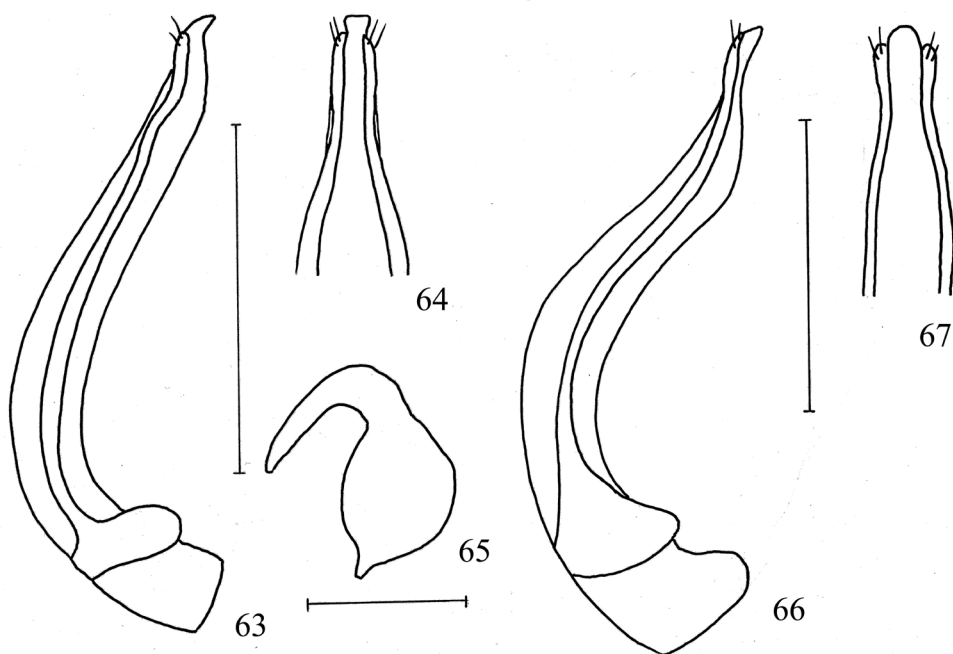
Legs. Tarsal formula ♂: 5-5-4. Tarsomeres I and II of anterior tarsi very feebly widened. Tibiae and femora slim without specific morphological characters.

Genitalia. Aedeagus of type A, slim in dorsal and lateral view, apex of tegmen terminates in a flattened knob in dorsal view, paramera bisetose, wavy, turned on dorsal surface of tegmen apically (Fig. 63, 64). Operculum oblong oval.

Females. Tarsal formula 4-4-4. All tarsi slim. Spermatheca globose basal part with nipple in the connection to spermoduct; distal part reversely bent as acute angle (Fig. 65). Length of spermatheca 0.13 mm.

Variation. Length of body 2.4-2.8 mm Ratio of length $AIII/AII=1.4-1.6$. The dorsum of the body varies from light chestnut in one of the paratypes to predominantly black in the holotype. The punctuation of the dorsum is finer and sparser in the paratypes.

Differential diagnosis. *S. alesi* sp. nov. is similar to *S. striatipennis* (Portevin, 1926) in the absence of the dorsal micro-sculpture and the shape of the head which is broadest just behind



Figs. 63-67. 63-65 *Stetholiodes alesi* sp. nov.: 66-67- *Stetholiodes schuelkei* sp. nov.; 63, 66- aedeagus dorsally; 64, 67- aedeagus laterally; 65- spermatheca. Scale bars = 0.5 mm in Figs. 63-67; 0.1 mm in Fig. 65.

the eyes. Both species differ by the type of head and pronotal puncturation which is simple in *S. alesi* while the same is double in *S. striatipennis*. The apex of the tegmen is declined in the lateral view in *S. alesi* while the same is straight in *S. striatipennis*.

Etymology. The new species is dedicated to its collector, my late friend Aleš Smetana, an outstanding specialist in Staphylinidae.

***Stetholiodes schuelkei* sp. nov.**
(Figs. 66-67)

Type material. Holotype (♂): "CHINA: Qinghai Prov. [CH11-20], road 301, km 140, 63 km ESE Men / Yuan 37°07'41.0"N, 102°16'04.7"E, / 2558 m, creek valley with pasture and / forest remnants litter sifted / 5.VII.2011, leg. M. Schülke", (MSBC). Paratypes: (1 ♂), same data, (ZSPC); (1 ♂), "CHINA: Qinghai Prov. [CH11-08] / Daban Shan, 60 km NW Honggu / 36°49'10.7"N, 102°31'22.8"E, 2366- / 2400 m, mixed forest (Betula, Populus, / Picea) dead wood, litter sifted / 25.VI.2011, leg. M. Schülke", (MSPC); (1 ♂), CHINA: Qinghai Prov. [CH11-09] / Daban Shan, 62 km NNW Honggu / creek valley *Picea*, *Populus*, *Betula* / forest, 36°51'15-28"N, 102°36'34"- / 37°07"E, 2236-2350 m, creek valley, litter, dead wood / & moss sifted 26.VI.2011, leg. M. Schülke", (MSBC); (1 ♂), CHINA: Qinghai Prov. [CH11-09e] / Daban Shan, 62 km NNW Honggu, / creek valley *Picea*, *Populus*, *Betula* / forest, 36°51'15-28"N, 102°36'34"- / 37°07"E 2236-2350 m, creek valley, litter, dead wood / & moss sifted / 10.VII.2011, leg. M. Schülke", (ZSPC).

Description. Length of body in holotype 3.7 mm, head 0.6 mm, pronotum 1.1 mm, elytra 2.0 mm just behind humeri, antenna 1.1, aedeagus 1.09; maximum width of head 1.1 mm, pronotum just before base 1.8 mm, elytra 1.8 mm at anterior fourth. Body almost cylindrical, elytra predominantly parallel-sided. Dorsum chestnut with elytra a little darker, antenna and legs unicolorous, very light chestnut. Ventral surface chestnut.

Head. Surface with distinct micro-sculpture, strongly punctured. Punctuation deep, dense, punctures separated by about 1-2 times their diameter. Head broadest at posterior margin of eyes with temples tapered toward neck. Eyes a little flattened, antero-lateral oriented. Supraocular carina present, low, of equal height all along its length, terminating far behind posterior margin of eyes. Clypeal line not developed, anterior outline of clypeus feebly convex. Antennal club 5-segmented. L ratio of antennomeres II-XI ($A_{II}=1.0$) = 1.0-1.4-0.7-0.6-0.6-0.9-0.4-1.0-1.1-1.7. W ratio of A_{II} - A_{XI} ($A_{II}=1.0$): 1.0-0.8-0.9-0.9-1.0-1.4-1.3-1.8-2.0-2.0. W/L ratio of A_{II} - A_{XI} = 0.6-0.4-0.8-1.0-1.0-1.0-2.0-1.1-1.2-0.8.

Pronotum. Micro-sculpture distinct but finer than on head, punctuation sparser and finer than on head, punctures small and fine, separated by 2-4 times their diameter. Pronotum broadest at its basal fourth. Lateral outline of pronotum feebly rounded, almost straight in dorsal view, broadly rounded in lateral view. Posterior angles very blunt and broadly rounded in dorsal and lateral view. Lateral margin with sparse light erect setae.

Elytra. Dorsum without any micro-sculpture. Each elytra possesses nine punctured longitudinal striae. Strial punctures strong, deep, dense, separated by 1-2 times their diameter. Striae VI and VII merge and terminate at apical third of elytral length similarly as stria IX. Stria IX well distant from lateral margin of elytra anteriorly, then obliquely running toward lateral margin of elytra. Interval punctures finer, smaller and sparser than those on pronotum separated by approximately 3-6 times their diameter. Sutural striae distinct, confined to apical half of elytra, continuing anteriorly as rows of punctures. Lateral margins with sparse erect setae.

Membranous wings developed.

Metaventrite. Femoral lines missing. Central part of metaventral surface with small fine setal punctures, lateral parts micro-sculptured, punctures lacking. Metaventrite well developed, long.

Legs. Tarsal formula ♂: 5-5-4. Tarsomeres I and II of anterior tarsi feebly but distinctly widened. Tibiae and femora slim without specific morphological characters.

Genitalia. Aedeagus of type A, slim in dorsal and lateral view, apex of tegmen broadly rounded in dorsal view (Fig. 66), declined apically in lateral view (Fig. 67), paramera bisetose. Operculum oblong oval with central longitudinal striae confined apical two thirds.

Females. Not known.

Variation. Length of body 2.9-3.7 mm. Ratio of length $A_{III}/A_{II}=1.4-1.7$. The dorsum of the body varies from light chestnut in one of the paratypes to chestnut with a little darker elytra in the holotype.

Etymology. The new species is dedicated to its collector, my entomological friend Michael Schülke, well known specialist in Staphylinidae.

Differential diagnosis. *Stetholiodes schuelkei* sp. nov. is similar to the Nepalese *S. schawalleri* Angelini & De Marzo, 1994 by the shape of head which is widest at the posterior margin of eyes and by the presence of the micro-reticulation on pronotum. *S. schuelkei* differs from *S. schawalleri* by simply punctured and micro-sculptured head that is double punctured lacking any micro-sculpture other than micro-punctures in *S. schawalleri*.

ACKNOWLEDGEMENTS. My thanks and gratitude belong to my late friend, world-renowned entomologist Aleš Smetana, to my late entomological colleagues Volker Assing and Radek Dunda, to my entomological colleague Stanislav Bečvář (České Budějovice), my entomological friend Miroslav Janata (Sázava nad Sázavou) who gifted me with many types and/or other leiodid material they collected predominantly in Asia. My sincere thanks belong also to my entomological friend Michael Schülke from Berlin, to Olaf Jäger, the curator of the collection in the Natural History Museum in Dresden, Germany, to Jiří Hájek, the curator of the collection in the National Museum in Prague, Czech Republic, who enabled me to study the museum leiodid material.

REFERENCES

- ANGELINI F. 1993: Studi sugli *Agathidium*. Designazione di un nuovo genere, un nuovo sottogenere e gruppi di specie. *Bollettino della Società Entomologica Italiana* 125: 29-44.
- ANGELINI F. 1995: *Revisione tassonomica delle specie paleartiche del genere Agathidium Panzer (Coleoptera, Leiodidae, Agathidiini)*. Monografie XVIII Museo Regionale di Scienze Naturale - Torino. 1-484.
- HOSHINA H. 1996: A taxonomic study of the genus *Cyrtoplastus* (Coleoptera, Leiodidae) of Japan. *Japanese Journal of Systematic Zoology* 2(2): 201-206.
- LÖBL I. & LÖBL D. 2015: *Catalogue of Palaearctic Coleoptera. Vol. 2/1. Hydrophiloidea - Staphylinoidea. Revised and Updated Edition*. Leiden: Koninklijke Brill, XXV + 900 pp.
- MILLER K. B. & Q. D. WHEELER 2004: Two new genera of Agathidiini from the Nearctic and Neotropical regions (Coleoptera: Leiodidae). *The Coleopterists Bulletin* 58(4): 466-487.
- NEWTON A. 2022: *StaphBase* (Aug 2022). <https://doi.org/10.48580/dfqf-3gk>
- SCHENKLING S. 1917: *Erklärung der wissenschaftlichen Käfernahmen aus Reitter's Fauna Germanica*. K. G. Luts Verlag. Stuttgart, 80 pp.
- ŠVEC Z. & ZHANG T. 2020: New Chinese species of six Leiodinae genera (Coleoptera: Leiodidae) with keys to the identification the Leiodinae tribes, relevant genera and species. *Studies and Reports. Taxonomical Series* 16(2): 543-567.
- ŠVEC Z. 2021: Himalayan Leiodinae Fleming, 1821 (Insecta: Coleoptera: Leiodidae) - part III. with morphological notes on the genus *Agathidium* Panzer, 1797: 321-331. In: HARTMANN M., BARCLAY M. & WEIPERT J.: *Biodiversität und Naturlausstattung im Himalaya VII*. Erfurt: Naturkundemuseum Erfurt 594 pp.
- ŠVEC Z. 2025: A review of Old World *Anisotoma* Panzer, 1797 and *Cyrtoplastus* Reitter, 1885 (Coleoptera: Leiodidae) with the description of ten new species and a new faunistic record. *Studies and Reports, Taxonomical Series* 21(1): 153-178.

Received: 14.6.2025

Accepted: 10.7.2025

Printed: 5.10.2025

