

## Preliminary revision of the genus *Sparedrus* (Coleoptera: Oedemeridae) from eastern and southeastern Asia

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**Abstract.** Species of the genus *Sparedrus* Megerle, 1821 in DEJEAN (1821) from eastern and southeastern Asia are revised, illustrated and keyed. Three new species are described and illustrated: *Sparedrus karenorum* sp. nov. (N Thailand), *S. malickyi* sp. nov. (N Thailand) and *S. chiangmaiensis* sp. nov. (N Thailand). The following new combinations are proposed: *Sparedrus atricolor* (Pic, 1935) comb. nov., *S. subserratus* (Gressitt, 1939) comb. nov., *S. latipennis* (Pic, 1923) comb. nov., *S. angustatus* (Pic, 1923) comb. nov., all transferred from *Sparedropsis* Heyden, 1886, in HEYDEN & KRAATZ (1886). Genus *Polacus* Sasaji, 1985, syn. nov. is synonymised with *Sparedrus*. New name, *S. sasajii* nom. nov., is established for *S. longicornis* (Sasaji, 1985), secondary homonym of *S. longicornis* (Iablokoff-Khnzorian, 1970).

**Key words.** Coleoptera, Oedemeridae, *Sparedrus*, taxonomy, new species, new name, new synonyms, new combinations, redescriptions, key, Oriental and Palaearctic regions

### Introduction

Species of the genus *Sparedrus* Megerle, 1821 in DEJEAN (1821) are distributed in arboreal areas of the northern hemisphere, approximately between 5° and 50° of northern latitude. One species is known from the Nearctic region (Texas, California) and four species from the Neotropical region (Mexico, Guatemala, Costa Rica). The distribution in the Palaearctic and Oriental regions is, according to present knowledge, discontinuous. Four species occur in southern Europe but no species is hitherto known from Transcaucasia and the Near East. Further east, the distribution area resumes more or less continuously from southwestern Iran through southern part of the Palaearctic region and through the Oriental region as far eastwards as Taiwan, Hainan and Vietnam.

Thirty two species are currently recognized as valid. Their taxonomy was revised by ŠVIHLA (1986). The only Nearctic species was redescribed by ARNETT (1951). European species

were reviewed by VÁZQUEZ (2002), with one additional species described by ŠVIHLA (2006a). Species from the central part of the Palaearctic region and western part of the Oriental region (i.e. Indian subcontinent including Sri Lanka) were treated by ŠVIHLA (2006b). The aim of the present paper is to revise species occurring in the eastern and southeastern Asia, namely in China (including its northern part) and Indo-China. Eight species were hitherto known from this area.

The work on the subject has been hampered by lack of specimens. Of the 11 species treated here, five are only available in female sex and five only in male sex. One of them was not allowed to be dissected. However, when more specimens will become available, some species could be found synonymous. Therefore, this revision represents the first step towards a full knowledge of the *Sparedrus* of southeastern Asia.

## Material and methods

The studied specimens are deposited in the following collections:

|      |  |
|------|--|
| CASC | California Academy of Sciences, San Francisco, USA;  |
| MNHN | Muséum National d'Histoire Naturelle, Paris, France; |
| NMEG | Naturkundesmuseum, Erfurt, Germany;                  |
| NMPC | Národní muzeum, Praha, Czech Republic;               |
| NSMT | National Science Museum, Tokyo, Japan.               |

Shades of colours used in the descriptions are classified according to PAULT (1958) and the names of integument structures follow HARRIS (1979). Morphological characters were observed under a 90× magnification. The handwritings of previous authors were interpreted according to HORN et al. (1990). Parts of male terminalia drawn in lateral view have their ventral side facing to the left. Locality labels of type specimens are cited verbatim with standardized dates. Names of localities of additional specimens are also standardized. Separate labels are divided in the text by a double slash (/).

## Taxonomy

### *Sparedrus* Megerle, 1821

*Sparedrus* Megerle, 1821, in DEJEAN (1821): 72. Type species: *Calopus testaceus* Andersch, 1797, by monotypy.

*Sparedropsis* Heyden, 1886, in HEYDEN & KRAATZ (1886): 191, synonymised by ŠVIHLA (1986). Type species:

*Sparedropsis fuscus* Heyden, 1886 in HEYDEN & KRAATZ (1886), by monotypy.

*Saloninus* Fairmaire, 1891: cxxxii, synonymised by ŠVIHLA (1986). Type species: *Saloninus nebulosus* Fairmaire, 1891, by original designation.

*Ocularium* Pic, 1922: 18, synonymised by ŠVIHLA (1986). Type species: *Ocularium rufum* Pic, 1922, by monotypy.

*Polacus* Sasaji, 1985: 10, **syn. nov.** Type species: *Polacus longicornis* Sasaji, 1985, by original designation.

**Diagnosis.** Body subdepressed to moderately vaulted, coloration yellow to dark brown, light recumbent pubescence on elytra often forming markings.

Male. Both mandibles simple at apex, last maxillary palpomere slender to securiform. Eyes large and often strongly protruding, head across eyes mostly wider than pronotum. Antenna

reaching elytral midlength to strongly exceeding elytral apex; antennae almost filiform to strongly serrate, terminal antennomeres mostly more or less flattened. Pronotum longer than wide, subcylindrical. Claws simple. Elytra parallel-sided to slightly dilated posteriorly, nervation absent or very feeble. Pygidium not exceeding last sternite, both rounded or shallowly emarginate apically, urite VIII invisible. Tegmen slightly sclerotized, more or less shorter than aedeagus, sometimes pubescent apically, aedeagus slightly to strongly dorsoventrally flattened, sometimes with lateral longitudinal folds, with or without subapical teeth.

Female. Eyes smaller and less protruding than in male, antenna mostly shorter and less serrate.

**Remarks.** All characters used to distinguish the species in this paper are more or less variable and it is necessary to combine several of them for exact identification. They are : coloration of elytra and pubescence, width of frons between eyes, length of antenna and length of first three antennomeres and the form of the preapical portion of aedeagus, including the presence or absence of lateral folds. It is possible that some of the characters used in this paper will prove to be too variable in the future, and the status of some species will have to be changed.

SASAJI (1985) considered his new genus *Polacus* Sasaji, 1985, to be related to *Calopus* Fabricius, 1775, on the basis of apically bifid mandibles. I had the possibility to examine the holotype of the type species, *Polacus longicornis* Sasaji, 1985, and found that the apices of mandibles are entire, so that *P. longicornis* does not differ in any essential character from the species of the genus *Sparedrus*, and *Polacus* is hereby synonymised with *Sparedrus*.

### *Sparedrus karenorum* sp. nov.

(Figs. 1, 14, 16, 25)

**Type locality.** Northern Thailand, Chiang Mai province, Doi Pha Hom Pok, 20°05'N 99°15'E.

**Type material.** HOLOTYPE: ♂, 'THAILAND, N; Chiang Mai, N; Doi Pha Hom Pok, 20 05N 99 15E, 23.-29.i.2004, leg. T. Ihle' (NMEG). PARATYPES: 2 ♀♀, same data as holotype (NMEG, NMPC).

**Description.** Coloration entirely sienna (Fig. 1).

Male. Eyes large, protruding, head across eyes moderately wider than pronotum, nearly parallel-sided behind eyes. Frons between eyes moderately wider than length of antennomere 2. Last palpomere of maxillary palpus securiform as in Fig. 14. Antenna reaching elytral apex (Fig. 1), antennomere 3 almost four times as long as antennomere 2 (Fig. 16), antennomeres 3-10 more or less serrate with arcuate inner margin and with protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved. Surface of frons and vertex punctate, covered by sparse, long, yellowish white semierect pubescence, semilustrous. Pronotum one fifth longer than wide, very slightly cordiform, moderately ovably depressed in its posterior half, its anterior margin widely rounded, anterior corners rounded, lateral margins moderately sinuate, posterior corners obtuse, posterior margin rounded. Surface of pronotum punctate and pubescent like that of head, semilustrous. Elytra parallel-sided, their surface punctate and pubescent like that of vertex and pronotum, semilustrous, elytral nervation absent. Last tergite exceeding last sternite by ca. one third, apex with triangular emargination, apex of last sternite widely triangularly emarginate. Tegmen only moderately shorter than aedeagus, aedeagus as in Fig. 25.

Female. Frons between eyes wider than in male, almost twice as long as antennomere 2, antenna shorter, reaching ca. three fourth of elytral length, emarginations of both last tergite and last sternite shallower.

Length (♂♀). 10.6-12.0 mm.

**Differential diagnosis.** *Sparedrus karenorum* sp. nov. belongs to the *S. unicolor* species group as defined by ŠVIHLA (2006b). It is related to *S. alesivani* Švihla, 2006 (Nepal), from which it differs by the absence of small, seriate, impunctate and glabrous areas on elytra and by the slightly wider and more parallel-sided aedeagus in ventral view (cf. ŠVIHLA 2006b).

**Etymology.** Named after the Karens, one of the tribes inhabiting northern Thailand.

**Distribution.** Northern Thailand.

### *Sparedrus malickyi* sp. nov.

(Figs. 2, 24, 26)

**Type locality.** Northern Thailand, Chiang Mai province, Doi Suthep.

**Type material.** HOLOTYPE: ♂, 'Thailand, Doi Suthep, 19.i.1990, Malicky lgt.' (NMPC).

**Description.** Coloration. Body entirely terra-cotta (Fig. 2).

Male. Eyes large and protruding, head across eyes ca. one fourth wider than pronotum, very slightly narrowing posteriorly behind eyes. Frons between eyes very narrow, ca. twice as narrow as maximum width of antennomere 2. Last maxillary palpomere very narrowly securiform. Antenna very long, exceeding body by ca. length of elytra; antennomeres 3-10 more or less serrate with arcuate inner margin and with protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved. Surface of vertex verrucose, matt, covered by sparse, long, semierect white pubescence forming a corner between eyes and paired asterisk in central part of vertex. Pronotum subcylindrical, with small flat area closely before posterior margin, its anterior margin very slightly rounded with very shallow emargination in its middle, lateral margins slightly converging posteriorly, straight, posterior corners obtuse, posterior margin rounded. Surface of pronotum verrucose, matt, with long, sparse, semierect white hairs forming two almost parallel and continuous mediolongitudinal lines and two posterolateral lines. Elytra almost parallel-sided, lateral margins very slightly sinuate in its middle portion, surface very densely and rather deeply punctate (Fig. 24), matt, covered by sparse, long, semierect white pubescence, elytral nervation slight but visible in subhumeral portion, slightly emphasized by pubescence. Last tergite by ca. one third exceeding last sternite, with slightly emarginate apex, apex of last sternite arcuately emarginate. Tegmen reaching ca. three fourth of length of aedeagus, aedagus as in Fig. 26.

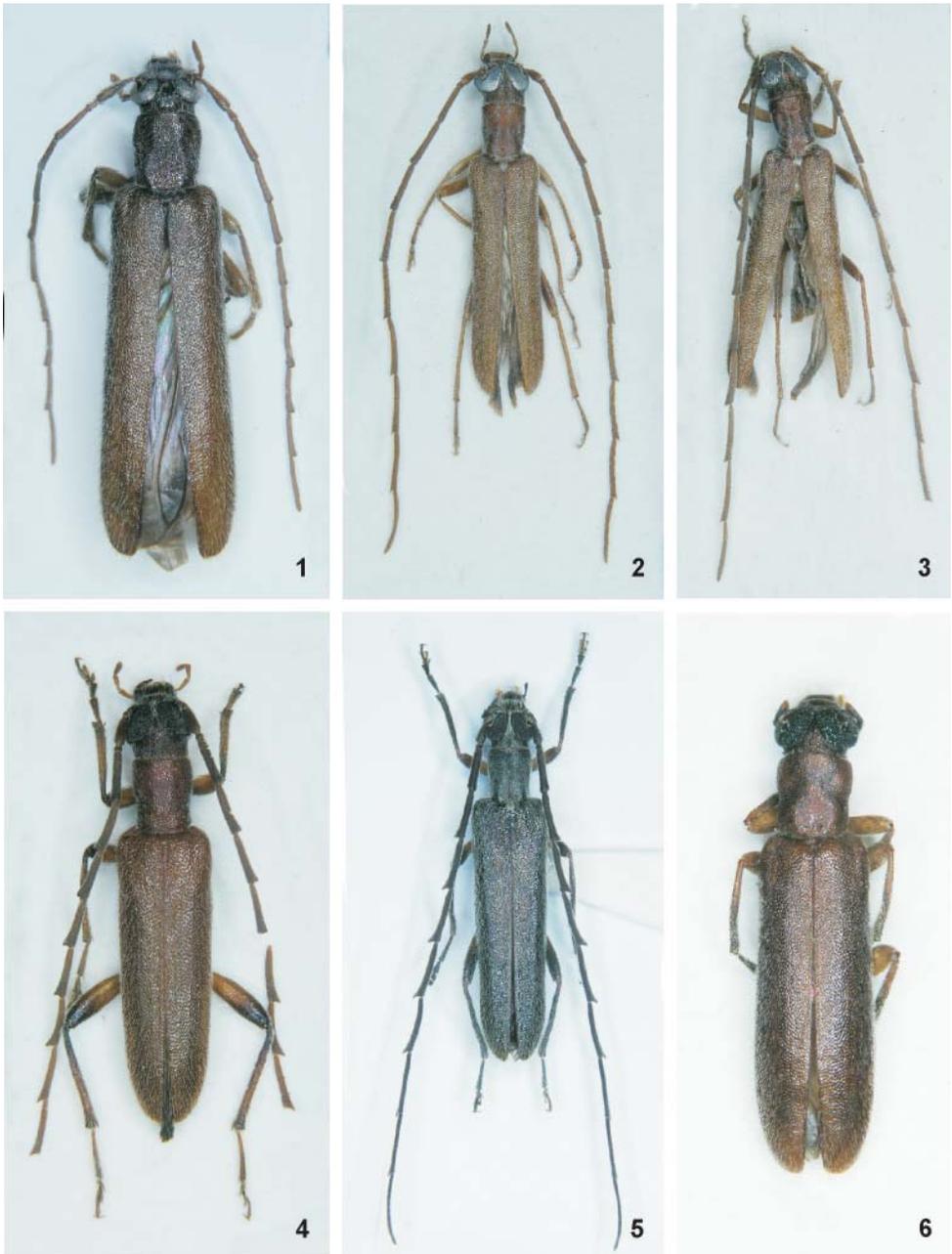
Female unknown.

Length (♂). 8.0 mm.

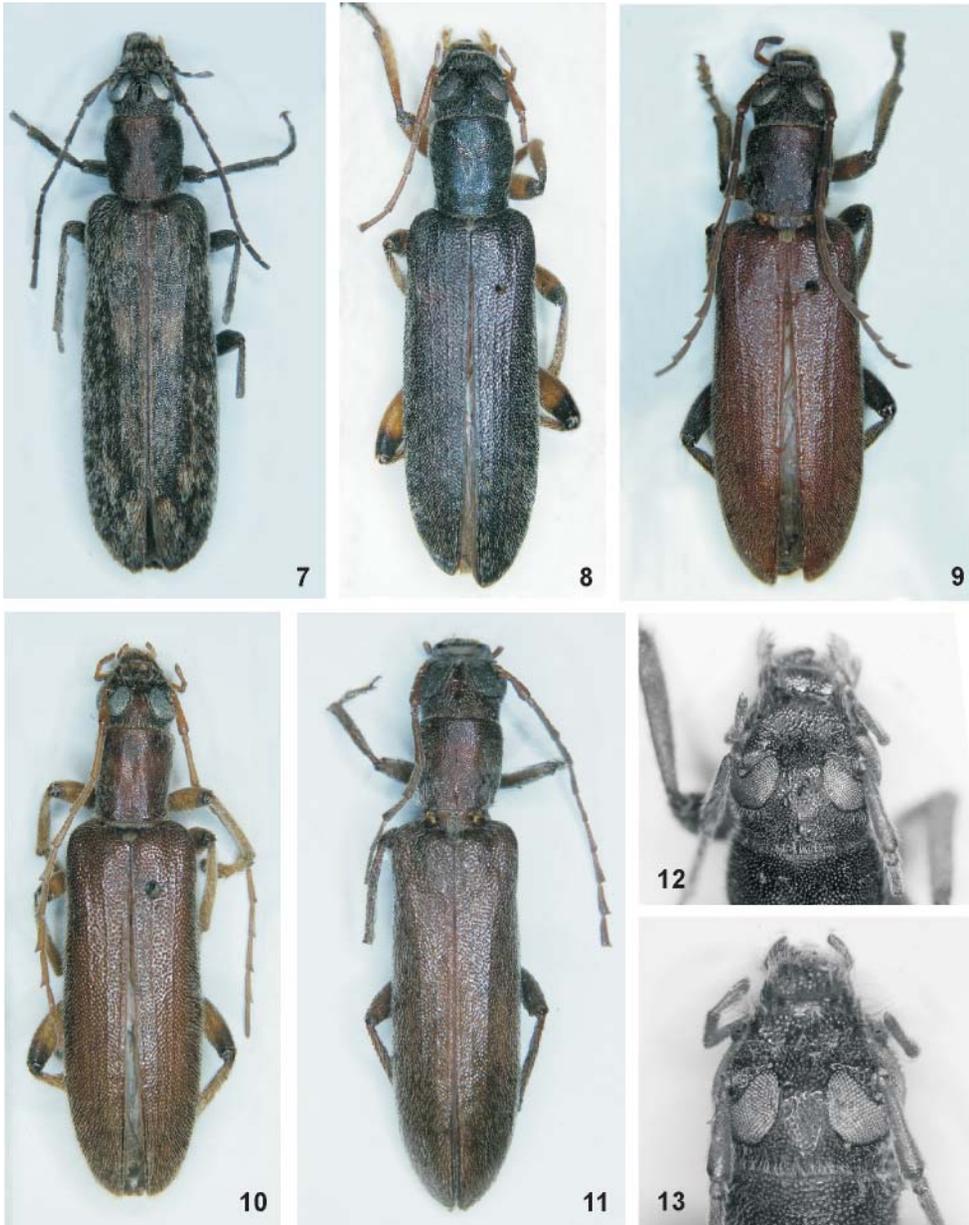
**Differential diagnosis.** *Sparedrus malickyi* sp. nov. belongs to *S. longicollis* species group as defined by ŠVIHLA (2006b). It is related to *S. tryznai taunnguensis* Švihla, 2006 and *S. chiangmaiensis* sp. nov., differing from both by the well-developed elytral nervation, denser and deeper elytral punctation, and aedeagal teeth not protruding laterad (cf. Figs. 2-4, 23-24, 26-28).

**Etymology.** This species is dedicated to its collector, Hans Malicky (Lunz am See, Austria), well-known specialist in Trichoptera.

**Distribution.** Northern Thailand.



Figs. 1-6. Habitus. 1 – *Sparedrus karenorum* sp. nov., holotype. 2 – *S. malickyi* sp. nov., holotype. 3 – *S. chiangmaiensis* sp. nov., holotype. 4 – *S. tryznai taunnguensis* Švihla, 2006, paratype. 5 – *S. sasajii* nom. nov., holotype. 6 – *S. rufus* (Pic, 1922), syntype. (Photo J. Macek).



Figs. 7-11. Habitus. 7 – *Sparedrus davidis* Fairmaire, 1888. 8 – *S. atricolor* (Pic, 1935), syntype. 9 – *S. subserratus* (Gressitt, 1939), paratype. 10 – *S. latipennis* (Pic, 1923), syntype. 11 – *S. angustatus* (Pic, 1923), syntype. 12-13. Head. 12 – *Sparedrus atricolor* (Pic, 1935); 13 – *S. latipennis* (Pic, 1923). (Photo J. Macek).

***Sparedrus chiangmaiensis* sp. nov.**

(Figs. 3, 23, 27)

**Type locality.** Northern Thailand, Chiang Mai province, Chiang Mai.**Type material.** HOLOTYPE: ♂, 'Thailand, Chiangmai, 400 m, 22.-29.i.1990, light trap, Malicky lgt.' (NMPC).**Description.** Coloration. Basic coloration of body rusty, only lateral sides of vertex and pronotum slightly darker, sienna brown (Fig. 3).

Male. Eyes large and protruding, head across eyes ca. three fourths wider than pronotum, very slightly narrowing posteriorly behind eyes. Frons between eyes slightly narrower than length of antennomere 2. Last maxillary palpomere narrowly securiform. Antenna long, exceeding apex of body by slightly less than length of elytra, antennomere 3 slightly more than ten times as long as antennomere 2, antennomeres 3-10 more or less serrate with arcuate inner margin and protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved. Surface of vertex verrucose, matt, covered by long, sparse, semierect white pubescence forming a corner between eyes and paired asterisk in central part of vertex. Pronotum ca. one sixth longer than wide, slightly cordiform, anterior margin very slightly sinuate in middle, nearly straight, anterior corners rounded, lateral margins moderately narrowing posteriorly, moderately sinuate in posterior half, posterior corners obtuse, posterior margin rounded. Surface of pronotum verrucose, matt, covered by long, sparse, semierect white pubescence forming four longitudinal lines in posterior portion. Pronotum with pair of shallow depressions in anterior half, mediolongitudinal groove in middle part, and flat area before posterior margin. Elytra nearly parallel-sided, lateral margin very slightly sinuate in its middle portion, surface densely rugulose-lacunose (Fig. 23), matt, covered by long, sparse, semierect white pubescence, elytral nervation absent. Last tergite exceeding last sternite by ca. one third, apex slightly emarginate, apex of last sternite arcuately emarginate. Tegmen ca. one third shorter than aedeagus, aedeagus as in Fig. 27.

Female unknown.

Length (♂). 8.1 mm.

**Differential diagnosis.** *Sparedrus chiangmaiensis* sp. nov. belongs to *S. longicollis* species group as defined by ŠVIHLA (2006b). It differs from *S. malickyi* sp. nov. by the absence of elytral nervation, different structure of elytral surface, protruding lateral teeth of the aedeagus and slightly wider frons between the eyes, and from *S. tryznai taungguensis* Švihla, 2006, by longer antennae and the aedeagal teeth situated farther from the apex (cf. Figs 2-4, 23-24, 26-28).**Etymology.** Named after the type locality.**Distribution.** Northern Thailand.***Sparedrus tryznai taungguensis* Švihla, 2006**

(Figs. 4, 28)

*Sparedrus tryznai taungguensis* Švihla, 2006b: 8.**Comments.** Recently described together with the nominotypical subspecies, which occurs in southern India (ŠVIHLA 2006b).**Distribution.** Central Myanmar, northwestern Thailand.

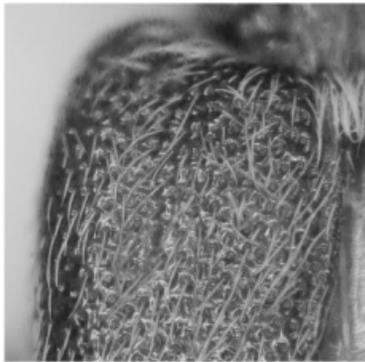
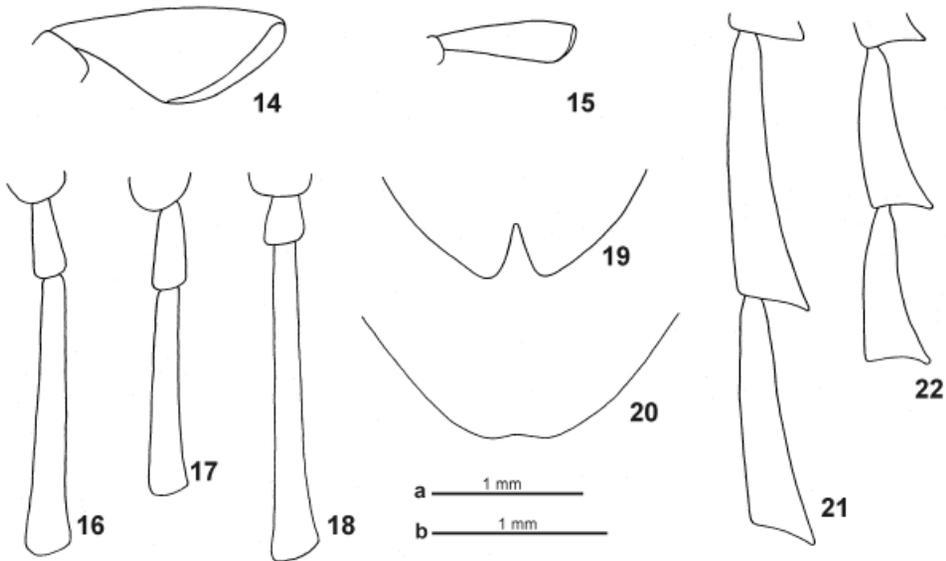
*Sparedrus sasajii* nom. nov.

(Fig. 5)

*Polacus longicornis* Sasaji, 1985: 1; secondary homonym, preoccupied by *Sparedrus longicornis* (Iablokoff-Khnzorian, 1970): 62.

**Type locality.** Taiwan, Kaohsiung prov., Mt. Fengang near Liu-kui.

**Type material examined.** HOLOTYPE: ♂, 'Mt. Fengang near Liukuei, Kaohsing, Formosa [handwritten in Japanese letters, type locality cited according to original description], 3.iv.1980 [handwritten], H. Fujita [probable meaning; handwritten in Japanese letters] // H. Fujita Collection [printed] // HOLOTYPE, male, *Polacus longicornis* Sasaji, 1985, gen. et sp. nov. [red label, handwritten]' (NSMT).



23



24

Figs. 14-22. 14-15. Last maxillary palpomere of male. 14 – *Sparedrus karenorum* sp. nov.; 15 – *S. rufus* (Pic, 1922). 16-18. Antennomeres 2-3. 16 – *S. karenorum* sp. nov., ♂; 17 – ditto, ♀; 18 – *S. atricolor* (Pic, 1935), ♀. 19-20. Apex of pygidium of female. 19 – *S. atricolor*; 20 – *S. subserratus* (Gressitt, 1939). 21-22. Antennomeres 9-10 of female. 21 – *S. latipennis* (Pic, 1923); 22 – *S. angustatus* (Pic, 1923). 23-24. Structure of elytra. 23 – *S. chiangmaiensis* sp. nov. 24 – *S. malickyi* sp. nov. Scale a – Figs. 16-22; b – Figs. 14-15.

**Redescription.** Coloration. Head including antennae sooty, mouthparts partly sienna, prothorax sooty, anterior margin narrowly sienna. Legs sooty, basal two thirds of femora and bases of tibiae narrowly rusty, ventral part of body sooty. Elytra sooty; wide, oval, mediolongitudinal sooty stripe reaching ca. two thirds of elytral length and corresponding with flattened portion of elytra (Fig. 5).

Male. Eyes large and protruding, head across eyes ca. one fifth wider than pronotum, nearly parallel-sided behind eyes. Frons between eyes ca. three times narrower than maximum width of antennomere 2. Last palpomere of maxillary palpus narrowly securiform. Antenna very long, exceeding body by almost length of elytra, antennomere 3 slightly more than ten times as long as antennomere 2, antennomeres 3-10 more or less serrate with arcuate inner margin and with protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved. Surface of head imbricate-punctate, matt, covered by long, semierect white pubescence forming a crest between eyes. Pronotum almost one fifth longer than wide, nearly parallel-sided, anterior margin nearly straight, anterior corners very slightly rounded, lateral margins very slightly sinuate, posterior corners obtuse, posterior margin rounded. Surface of pronotum densely verrucose, matt; disc moderately flattened before posterior margin; long, semierect white pubescence forming a central asterisk before middle and a pair of moderately sinuate lines around flattened part before base. Elytra slightly narrowing posteriorly, lateral margins very slightly sinuate, surface rather sparsely punctate, semilustrous, covered by long, recumbent white pubescence, elytral nervation absent, disc of elytra flattened in basal two thirds of their length. Last tergite by one third exceeding last sternite, apex moderately emarginate; apex of last sternite widely, arcuately emarginate. Dissection of aedeagus was not allowed.

Female unknown.

Length (♂): 10.8 mm.

**Distribution.** Taiwan.

**Comments.** *Sparedrus sasajii* nom. nov. very probably belongs to *S. longicollis* species group as defined by ŠVIHLA (2006b). Its position must be verified by examination of the aedeagus.

### *Sparedrus rufus* (Pic, 1922)

(Figs. 6, 15, 29)

*Ocularium rufum* Pic, 1922: 18.

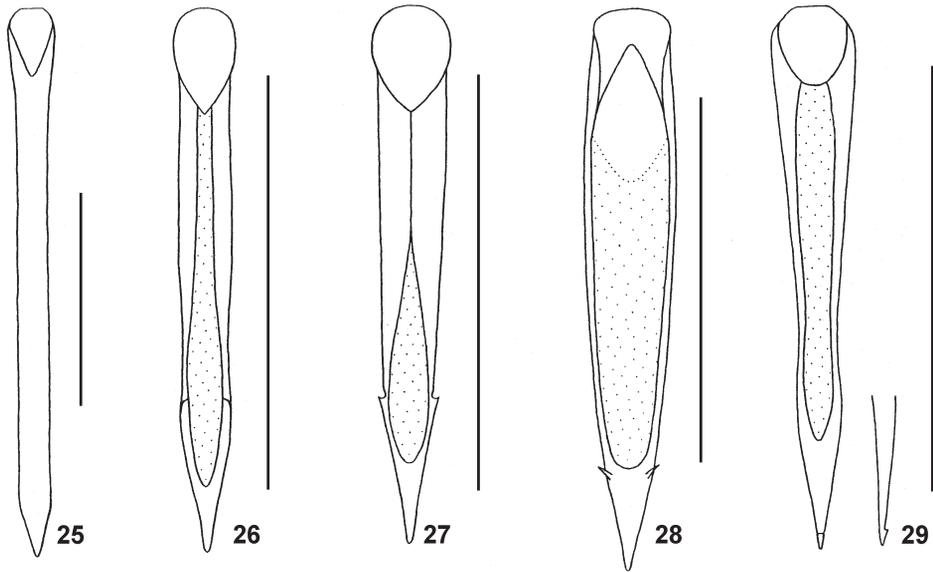
*Sparedrus rufus*: ŠVIHLA (1986): 177.

**Type locality.** Northern Vietnam.

**Type material examined.** SYNTYPE (?HOLOTYPE): ♂, 'Tonkin [= northern Vietnam], Hoc [? – unreadable word; Pic's handwriting] // type [yellow label, Pic's handwriting] // type [red label, printed] // *Ocularium* n. gen. *rufum* Pic [yellow label, Pic's handwriting] // Museum Paris, coll. M. Pic [printed]' (MNHN).

**Redescription.** Coloration. Body entirely rusty excluding chestnut brown maxillary palpi (except rusty tips of last palpomeres) and apical halves of tibiae (Fig. 6).

Male. Eyes large and protruding, head across eyes moderately wider than pronotum, nearly parallel-sided behind eyes. Frons between eyes very narrow, eyes almost holoptic. Last maxillary palpomere long securiform (Fig. 15). Antennae of the examined specimen completely missing. Surface of head densely verrucose, very sparsely and finely yellow pubescent (pubescence maybe secondarily darkened), matt. Pronotum slightly longer than wide, slightly cordiform, anterior margin moderately arcuate, anterior corners rounded, lateral margins sinuate, moderately converging posteriorly, posterior corners obtusely rounded,



Figs. 25-29. Aedeagus, ventral view. 25 – *Sparedrus karenorum* sp. nov.; 26 – *S. malickyi* sp. nov.; 27 – *S. chiang-maiensis* sp. nov.; 28 – *S. tryznai taunnguensis* Švihla, 2006; 29 – *S. rufus* (Pic, 1922), with apex of aedeagus in lateral view. Scale = 1 mm.

posterior margin widely rounded. Surface of pronotum sculptured and pubescent like that of head, matt, with a pair of shallow depressions before middle. Elytra very slightly dilated posteriorly, nearly parallel-sided, surface finely punctate, semilustrous, with fine, sparse yellow pubescence, elytral nervation absent. Last tergite barely exceeding last sternite, both shallowly and widely emarginate apically. Tegmen about two thirds as long as aedeagus; aedeagus as in Fig. 29.

Female unknown.

Length (♂). 8.2 mm.

**Distribution.** Northern Vietnam.

**Comments.** *Sparedrus rufus* belongs to *S. longicornis* species group owing to the shape of the aedeagus (see ŠVIHLA 2006b). The missing antennae could probably be as long as in the preceding species, because their length and form seems to be related to the very narrow frons between eyes in most of species of this group.

### *Sparedrus davidis* Fairmaire, 1888

(Fig. 7)

*Sparedrus davidis* Fairmaire, 1888: 131.

*Saloninus davidis*: FAIRMAIRE (1891): 134.

*Sparedropsis davidis*: SCHENKLING (1915): 7.

**Type locality.** China, Hebei province, Chengde.

**Type material examined.** SYNTYPE (?HOLOTYPE): ♀, 'Jehol [= Chengde; printed] // MUSEUM PARIS, Nord PEKIN, A. David [lgt.] 1865 [printed] // [yellow circle] // type [red label, printed] // *Sparedrus Davidis* Fairm. [Fairmaire's handwriting] // MUSEUM PARIS, Collection Léon Fairmaire, 1906 [printed] // *Sparedropsis davidis* Fairm., type de Fairmaire [handwritten], C. Girard det. 19 [printed]' (MNHN).

**Additional material examined.** CHINA: HEBEI, Xingtai, Taihang Mts., Neiqiu, Xinjiayu, 1,300 m a.s.l., from pheromone trap baited for bark beetles *Dendroctonus valens* LeConte, 1860, 17.-20.v.2002, 2♀♀, M. Knižek lgt. (NMPC).

**Redescription.** Coloration. Head rusty, between and behind eyes slightly darker, mouthparts and antennae rusty. Prothorax sepia, middle part of disc with mediolongitudinal rusty stripe, dilated both anteriorly and posteriorly, legs and ventral part of body sepia, elytra sepia, narrow basal two third of suture and irregular markings rusty (Fig. 7). Coloration of syntype generally paler, most probably caused by the killing agent or by exposure to light.

Male unknown.

Female. Eyes large, slightly protruding, head across eyes slightly narrower than pronotum, behind eyes arcuately narrowing posteriorly. Frons between eyes slightly wider than length of antennomere 2. Last maxillary palpomere long securiform. Antenna reaching ca. elytral midlength (antennomeres 10-11 missing in all examined specimens), nearly filiform, with antennomeres only slightly dilated posteriorly and not flattened. Surface of head densely punctate, matt, between eyes semilustrous, punctation between eyes sparser, with long, semierect yellow pubescence. Pronotum ca. as long as wide, very slightly cordiform, anterior margin straight to slightly sinuate in middle, anterior corners rounded, lateral margins sinuate, slightly converging posteriorly, posterior corners obtuse, posterior margin widely rounded. Surface of pronotum punctate and pubescent like that of head, matt, pubescence forming an asterisk before middle, pair of anterior depressions very slightly indicated. Elytra very slightly dilated posteriorly, their surface finely punctate, semilustrous, with fine, recumbent, terra-cotta and sepia pubescence, corresponding with colour of integument, elytral nervation absent. Last tergite not exceeding last sternite, both with shallowly emarginate apex.

Length (♀). 9.1-13.6 mm.

**Distribution.** China: Hebei province.

### *Sparedrus atricolor* (Pic, 1935) comb. nov.

(Figs. 8, 12, 18-19)

*Sparedropsis atricolor* Pic, 1935: 100.

**Type locality.** Northern Vietnam, Tuyen Quang province, Chiêm Hóa and Tuyen Quang regions.

**Type material examined.** SYNTYPE (?HOLOTYPE): ♀, 'Museum Paris, Tonkin centr. [northern Vietnam], région de Chim-Hoa [= Chiêm Hóa] et de Tuyen-Quan [= Tuyen Quang], A. Weis 1901 [yellow label, printed] // Printemps [printed] // *Sparedropsis unicolor* [Pic's handwriting], M. Pic det. [printed] // type [red label, printed]' (MNHN).

**Redescription.** Coloration. Head sepia, palpi and antennae terra-cotta, thorax, elytra and ventral side of abdomen sepia, legs terra-cotta with knees narrowly sepia (Fig. 8).

Male unknown.

Female. Eyes large, very slightly protruding, head across eyes about as wide as pronotum, straight behind eyes, very slightly narrowing posteriorly. Frons between eyes ca. four times as wide as length of antennomere 2 (Fig. 12). Last maxillary palpomere narrowly securiform. Antennomeres 2-3 as in Fig. 18, antennomeres 6-11 missing in the examined specimen, antennomeres 4 and 5 moderately serrate, with slightly protruding inner apical corner. Surface of head finely and densely verrucose, matt, between eyes more sparsely structured, semilustrous, with sparse, long, semierect yellowish-white pubescence. Pronotum moderately longer than wide, moderately cordiform, anterior margin very slightly sinuate, nearly straight, anterior corners rounded, lateral margins rather sinuately converging posteriorly, posterior corners

obtuse, posterior margin rounded. Surface of pronotum sculptured and pubescent like that of head, matt, semilustrous both near anterior and posterior margin, with very shallow median depression before midlength. Elytra parallel-sided, their surface finely punctate, semilustrous (left elytron, right one is teratologically sculptured, roughly verrucose, matt), with fine, semierect, yellowish-white pubescence, elytral nervation slightly indicated. Last tergite moderately exceeding last sternite, with triangular apical emargination (Fig. 19), apex of last sternite rounded.

Length (♀). 18.3 mm.

**Distribution.** Northern Vietnam.

**Comments.** Because the male is unknown, this species cannot be included in any species group. Owing to its large body and habitus, it is probably related to *S. subserratus* (Gressitt, 1939) and *S. latipennis* (Pic, 1923).

***Sparedrus subserratus* (Gressitt, 1939) comb. nov.**

(Figs. 9, 20)

*Sparedropsis subserratus* Gressitt, 1939: 218.

**Type locality.** China, Hainan Island, Yacheng district, Sama.

**Type material examined.** PARATYPE: ♀, 'Hainan Is., China, Sam-ah-kong [= Sama], Yai-hsien [= Yacheng] (District), May 22-25, 1932, W. E. Hoffmann & K. Lau [lgt.] [printed] // 4 [typed] // ALLOTYPE, J. L. Gressitt [printed], SPAREDROPSIS SUBSERRATUS [handwritten] [red label] // L. Gressitt collection [printed] // Collection of the CALIFORNIA ACADEMY OF SCIENCES, San Francisco, California [printed]' (CASC).

**Redescription.** Coloration. Entirely rusty, knees and bases of middle and posterior tibiae chestnut brown (Fig. 9).

Male (not examined). Original description (GRESSITT 1939), with my emphasis of probably more important distinguishing characters: 'Head slightly broader than prothorax, closely and distinctly punctured; frons concave, transversely oblong, twice as wide as interocular portion of occiput; eyes large and deeply emarginated. Antennae nearly three-fourth as long as body, moderately slender; scape slightly swollen apically, shorter than third segment and about as long as fourth; fifth to tenth segments briefly produced at ectoapical angles. Prothorax barely broader than long, subparallel, slightly broader at middle, depressed above; surface closely punctured, slightly irregular, compressed near elytral bases. Elytra broad and depressed, closely punctured; disc of each with vestiges of four costae. Ventral surfaces finely punctured, a little more sparsely and deeply so on first two abdominal segments; last abdominal sternite evenly rounded, not quite as long as preceding segment. Length 12 mm; breadth 3.35 mm.'

Female. Eyes large, moderately protruding, head across eyes ca. as wide as pronotum, straight behind eyes, moderately narrowing posteriorly. Frons between eyes slightly more than three times as wide as length of antennomere 2. Last maxillary palpomere narrowly securiform. Antenna reaching almost two thirds of elytral length, antennomeres 3-10 more or less serrate with arcuate inner margin and with protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved. Surface of head rugulose-lacunose, matt, with sparse, long, semierect yellow pubescence. Pronotum ca. as long as wide, very slightly cordiform, its anterior margin slightly sinuate, anterior corners rounded, lateral mar-

gins slightly and sinuately narrowing posteriorly, posterior corners obtuse, posterior margin rounded. Surface of pronotum sculptured and pubescent like that of head, matt except for a pair of small, oblique, longitudinal impunctate and glabrous areas, situated ca. in middle of posterior half. Elytra parallel-sided, surface finely punctate, semilustrous, with fine, semierect yellowish-white pubescence, elytral nervation slightly indicated. Last tergite slightly exceeding last sternite, apically truncate, apex of last sternite shallowly emarginate (Fig. 20).

Length (♀). 19.0 mm.

**Comments.** Because the male is unknown, the species cannot be included in any species group. Owing to its large body and habitus, it is probably related to *S. atricolor* (Pic, 1935) and *S. latipennis* (Pic, 1923).

**Distribution.** China: Hainan Island.

### *Sparedrus latipennis* (Pic, 1923) comb. nov.

(Figs. 10, 13, 21)

*Sparedropsis latipennis* Pic, 1923: 22.

**Type locality.** Northern Vietnam, Hai Phong province, Hà Lũng, ca 10 km W Haiphong.

**Type material examined.** SYNTYPE (?HOLOTYPE): ♀, 'Hà-Lang [= Hà Lũng, ca 10 km W Haiphong], Tonkin nord [= northern Vietnam] [handwritten] // *Sparedropsis latipennis* n. sp. [Pic's handwriting] // type [yellow label, Pic's handwriting] // type [red label, printed] // Muséum Paris, coll. M. Pic [printed]' (MNHN).

**Redescription.** Coloration. Body entirely terra-cotta to rusty, only apices of femora very narrowly sepia (Fig. 10).

Male unknown.

Female. Eyes large, only slightly protruding, head across eyes ca. as wide as pronotum, behind eyes straight, nearly parallel-sided. Frons between eyes less than three times as wide as length of antennomere 2 (Fig. 13). Last maxillary palpomere narrowly securiform. Antenna slightly exceeding two thirds of elytral length, antennomeres 3-10 more or less serrate with arcuate inner margin and protruding inner lateroapical corner, antennomeres 6-11 more or less flattened dorsoventrally, more or less curved, antennomeres 9-10 as in Fig. 21. Surface of head densely punctate on vertex, more sparsely between eyes, with sparse, long, semierect yellow pubescence, matt to semilustrous. Pronotum ca. one sixth longer than wide, its anterior margin slightly but distinctly sinuate, anterior corners slightly rounded, lateral margins almost straight, moderately converging posteriorly, posterior corners obtuse, posterior margin rounded. Surface of pronotum punctate and pubescent like that of head, matt, semilustrous before base, very shallow mediolongitudinal depression reaching from one third of pronotal length to basal margin. Elytra parallel-sided, their surface finely punctate, semilustrous, with semierect, fine yellow pubescence, elytral nervation very slightly indicated. Last tergite slightly exceeding last sternite, with small triangular apical emargination; apex of last sternite rounded.

Length (♀). 15.5 mm.

**Comments.** Because the male is unknown, the species cannot be included in any species group. Owing to its large body and habitus, it is probably related to *S. subserratus* (Gressitt, 1939) and *S. atricolor* (Pic, 1935).

**Distribution.** Northern Vietnam.

***Sparedrus angustatus* (Pic, 1923) comb. nov.**

(Figs. 11, 22)

*Sparedropsis angustatus* Pic, 1923: 22.**Type locality.** Cambodia, Kâmpóng Kesley (uncertain, hardly readable).**Type material examined.** SYNTYPE (?HOLOTYPE): ♀, 'Cambodge, Kampong [= Kâmpóng] Kesley [uncertain, hardly readable, Pic's handwriting] // pas coll. Frm. [= Fairmaire] [Pic's handwriting] // type [yellow label, Pic's handwriting] // type [red label, printed] // *Sparedropsis angustatus* n.sp. [Pic's handwriting] // Muséum Paris, coll. M. Pic [printed]' (MNHN).**Redescription.** Coloration. Body entirely rusty (Fig. 11).

Male unknown.

Female. Eyes large, slightly protruding, head across eyes ca. as wide as pronotum, behind eyes narrowing posteriorly in an almost straight line. Frons between eyes about 1.5 times as wide as length of antennomere 2. Last maxillary palpomeres missing in examined specimen. Antenna presumably moderately exceeding elytral midlength (both last antennomeres missing in examined specimen), antennomeres 3-10 more or less serrate with inner margin arcuate and inner lateroapical corner protruding, antennomeres 6-10 more or less flattened dorsoventrally, more or less curved, antennomeres 9-10 as in Fig. 22. Surface of head densely verrucose on vertex, matt, sparsely punctate between eyes, semilustrous, with long, semierect yellow pubescence. Pronotum ca. as long as wide, anterior margin straight, very slightly sinuate in middle, anterior corners rounded, lateral margins straight, nearly parallel-sided, slightly sinuate before obtuse posterior corners, posterior margin rounded. Surface of pronotum sculptured and pubescent like that of vertex, matt, with indistinct, impunctate, narrow mediolongitudinal line situated in posterior two thirds of pronotal length. Elytra parallel-sided, their surface finely punctate and yellow pubescent, semilustrous, elytral nervation absent. Last tergite not exceeding last sternite, both rounded apically.

Length (♀). 10.6 mm.

**Differential diagnosis.** Because the male is unknown and the last palpomeres are missing in the examined specimen, it cannot be included in any species group. It might even be a female of *S. rufus*, which is the habitually most similar species.**Distribution.** Cambodia.**Key to the species – males**

Note. Males of the following species are unknown: *S. davidis* Fairmaire, 1888, *S. atricolor* (Pic, 1935), *S. latipennis* (Pic, 1923), *S. subserratus* (Gressitt, 1939), *S. angustatus* (Pic, 1923).

- 1 Last maxillary palpomere securiform (Fig. 14), frons between eyes wider than maximum width of antennomere 1, antennomere 3 almost four times as long as antennomere 2 (Fig. 16). N Thailand. .... ***S. karenorum* sp. nov.**
- Last maxillary palpomere long securiform as in Fig. 15 or more slender, frons between eyes narrower than maximum width of antennomere 2, antennomere 3 ten or more times as long as antennomere 2. .... 2
- 2 Basic colour of body sooty, disc of elytra sienna, basal portions of middle and posterior femora and anterior ones entirely sienna, elytral disc distinctly flattened (Fig. 5). Taiwan. .... ***S. sasajii* nom. nov.**

- Body entirely rusty to sienna, at most parts of femora and tibiae darker. .... 3
- 3 Aedeagus without lateral teeth, apex of aedeagus with dorsal tooth (Fig. 29). N Vietnam. .... *S. rufus* (Pic, 1922)
- Aedeagus with lateral teeth (Figs. 26-28), apex of aedeagus without dorsal tooth. .... 4
- 4 Elytral punctation denser (Fig. 24), humeral portion of elytra with slightly indicated nervation, teeth of aedeagus not protruding laterad (Fig. 26). N Thailand. ....  
..... *S. malickyi* sp. nov.
- Elytral punctation sparser, as in Fig. 23, elytral nervation absent, teeth of aedeagus slightly but distinctly protruding laterad (Figs. 27-28). .... 5
- 5 Pronotum with two mediolongitudinal lines formed by pubescence, pubescence of body white (Fig. 3), lateral teeth of aedeagus situated far from apex (Fig. 27). N Thailand. ....  
..... *S. Chiangmaiensis* sp. nov.
- Pronotum without mediolongitudinal lines, pubescence of body yellow (Fig. 4), lateral teeth of aedeagus situated nearer to apex (Fig. 28). C Myanmar, N Thailand. ....  
..... *S. tryznai taungguensis* Švihla, 2006

### Key to the species – females

Note. Females of the following species are unknown: *S. sasajii* nom. nov., *S. rufus* (Pic, 1922), *S. malickyi* sp. nov., *S. Chiangmaiensis* sp. nov., and *S. tryznai taungguensis* Švihla, 2006.

- 1 Both elytral integument and pubescence bicolorous, sepia and rusty, forming spots and stripes; pronotum bicolorous (Fig. 7). China: Hebei. .... *S. davidis* Fairmaire, 1888
- Integument of both pronotum and elytra unicolorous. .... 2
- 2 Last palpomere of maxillary palpus securiform as in Fig. 14, antennomere 3 ca. three times as long as antennomere 2 (Fig. 17). N Thailand. .... *S. karenorum* sp. nov.
- Last palpomere of maxillary palpus long securiform as in Fig. 15 or more slender, antennomere 3 ca. six times as long as antennomere 2. .... 3
- 3 Frons between eyes more than three times as wide as length of antennomere 2 (e.g. Fig. 12). .... 4
- Frons between eyes three times or less as wide as antennomere 2 (e.g. Fig. 13). .... 5
- 4 Head, pronotum and elytra sepia, legs terra-cotta with knees narrowly sepia, pronotum without impunctate glabrous areas (Fig. 8), apex of last tergite with triangular emargination (Fig. 19). N Vietnam. .... *S. atricolor* (Pic, 1935)
- Head, pronotum and elytra rusty, legs rusty, knees and bases of tibiae slightly darker, pronotum with pair of small, oblique, impunctate and glabrous areas (Fig. 9), apex of last tergite only very shallowly emarginate (Fig. 20). China: Hainan Island. ....  
..... *S. subserratus* (Gressitt, 1939)
- 5 Antenna longer, slightly exceeding two thirds of elytral length (Fig. 10), antennomeres comparatively longer (Fig. 21), apex of last tergite triangularly emarginate as in Fig. 19. N Vietnam. .... *S. latipennis* (Pic, 1923)
- Antenna shorter, moderately exceeding elytral midlength (Fig. 11), antennomeres comparatively shorter (Fig. 22), apex of last tergite rounded. Cambodia. ....  
..... *S. angustatus* (Pic, 1923)

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## References

- ARNETT R. H. 1951: A revision of the Nearctic Oedemeridae (Coleoptera). *American Midland Naturalist* **45**: 257-391.
- DEJEAN P. F. M. A. 1821: *Catalogue de la collection de Coléoptères de M. le Baron Dejean, lieutenant-général des armées du roi, commandeur de l'ordre royal de la légion d'honneur, chevalier de l'ordre royal et militaire de Saint-Louis*. Crevot libraire, Paris, 8 + 136 + 2 pp.
- FAIRMAIRE L. 1888: Notes sur Coléoptères des environs de Pékin 2. *Revue d'Entomologie* **7**: 111-160.
- FAIRMAIRE L. 1891: Descriptions de Coléoptères des montagnes de Kasmir (Suite). *Bulletin ou Comptes-Rendus des Séances de la Société Entomologique de Belgique* **1891**: cxxi-cxxxiv.
- GRESSITT L. J. 1939: Some Oedemeridae from south China, Hainan I., Formosa and the Riukiu Islands (Coleoptera). *Lingnan Science Journal* **18**: 217-231.
- HARRIS R. A. 1979: The glossary of surface sculpturing. *Occasional Papers in Entomology* (Sacramento) **28**: 1-31.
- HEYDEN L. VON & KRAATZ G. 1886: Beiträge zur Coleopteren-Fauna von Turkestan, namentlich des Alai-Gebirge. *Deutsche Entomologische Zeitschrift* **30**: 177-194.
- HORN W., KAHLE I., FRIESE G. & GAEDIKE R. 1990: *Collectiones entomologicae*. Akademie der Landwirtschaftswissenschaften der Deutschen Demokratischen Republik, Berlin, 573 pp.
- IABLOKOFF-KHNZORIAN S. M. 1970: Novye vidy zhestkokrylych iz Armenii i drugikh chastey SSSR (Insecta, Coleoptera). [New species of beetles from Armenia and other lands of USSR (Insecta, Coleoptera)]. *Zoologicheskii Sbornik Akademii Nauk Armyanskoy SSR* **15**: 50-80 (in Russian).
- PACLT J. 1958: *Farbenbestimmung in der Biologie*. VEB Gustav Fischer Verlag, Jena, 76 pp + 5 pls.
- PIC M. 1922: Nouveautés diverses. *Mélanges Exotico-Entomologiques* **36**: 1-32.
- PIC M. 1923: Nouveautés diverses. *Mélanges Exotico-Entomologiques* **39**: 3-32.
- PIC M. 1935: Coléoptères Oedémérides nouveaux. *Revue Française d'Entomologie* **2**: 98-102.
- SASAJI H. 1985: Discovery of the subfamily Calopidinae [sic!] (Coleoptera: Oedemeridae) in Formosa, with description of a new genus and a new species. *Gekkan-Mushi* **177**: 7-12 (in Japanese and English).
- SCHENKLING S. 1915: *Pars 65: Oedemeridae*. In: JUNK W. & SCHENKLING S. (eds.): *Coleopterorum Catalogus*. W. Junk, Berlin, 82 pp.
- ŠVIHLA V. 1986: Revision of the generic classification of the Old World Oedemeridae (Coleoptera). *Sborník Národního Muzea v Praze, Řada B* **41** (1985): 141-238.
- ŠVIHLA V. 2006a: New species of the genus *Sparedrus* (Coleoptera: Oedemeridae) from Bulgaria. *Acta Entomologica Musei Nationalis Pragae* **46**: 123-125.
- ŠVIHLA V. 2006b: A revision of the genus *Sparedrus* (Coleoptera: Oedemeridae) from central part of the Palaearctic Region and from western part of the Oriental Region. *Folia Heyrovskyana, Series A* **14**: 1-35.
- VÁZQUEZ X. A. 2002: *European Fauna of Oedemeridae*. Argania editio, S. C. P., Barcelona, 179 pp.