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**NOTES ON THAI SPECIES OF THE SUBFAMILY SAPRININAE  
(COLEOPTERA: HISTERIDAE), WITH REDESCRIPTION OF SAPRINUS  
SUBUSTUS MARSEUL, 1855**

By SZAWOMIR MAZUR, MASAHIRO ÔHARA AND PIET KANAAR

*Abstract*

MAZUR, S., ÔHARA, M. AND KANAAR, P. 2005. Notes on Thai species of the subfamily Sapriniinae (Coleoptera: Histeridae), with redescription of *Saprinus subustus* Marseul, 1855. *Ins. matsum. n. s.* 61: 1–9, 4 figs.

A total of six species of the subfamily Sapriniinae are recorded from Thailand. *Saprinus splendens* (Paykull, 1811) and *S. subustus* are new to Thailand. *Saprinus subustus* is redescribed and illustrated.

Key words. Coleoptera, Histeridae, Sapriniinae, *Saprinus*, Thailand, new record.

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## INTRODUCTION

After our revision of the subfamily Saprinae from Thailand was finished (Mazur and Ôhara, 2003), we have had opportunities to examine 18 additional Thai specimens collected by Mr. Masaaki Nishikawa, over 50 specimens by Mr. T. Keukelaar and 4 specimens in the collection of Mr. Olda Kapler. We found two species not recorded from Thailand, *Saprinus splendens* Paykull, 1811 and *S. subustus* Marseul, 1855 and also some rare species in the additional material. As a result, a total of 9 species of Saprinae are recorded from Thailand (see a list at page 9).

In this paper, we record 6 species of the subfamily Saprinae from Thailand; of them, *S. subustus* is redescribed with figures of male and female genitalia and SEM photos of external structures. Dahlgren (1968) illustrated the only parts of the male genitalia (apices of aedeagus and 8th sternum) of the species.

We are grateful to Mr. M. Nishikawa (Kanagawa, Japan), Mr. T. Keukelaar (Wilhelminadorp, The Netherlands) and Mr. O. Kapler (Prague, Czech) for having enabled us the studies upon their materials collected in Thailand. The study is partly supported by a 21st Century COE grant from the Japanese Ministry of Education, Culture, Sports, Science and Technology for the “Neo-Science of Natural History” (leader: Dr. H. Okada, Hokkaido University, Japan).

## ENUMERATION AND REDESCRIPTION

### *Saprinus splendens* (Paykull, 1811)

*Hister splendens* Paykull, 1811: 53 [Capland].

*Saprinus splendens*: Ôhara, 1994: 236 [Japan]; Ôhara, 2003: 39 [Taiwan].

Specimens examined. Thailand. 1 male, 2 females, Krabi Island, Ko-lahtha, VII-2000, Vondracek leg.

Distribution. Tropical Africa, Arabia, Kashmir, Afghanistan, Pakistan, Oriental Region, Australia, Japan, Thailand. New to Thailand.

### *Saprinus optabilis* Marseul, 1855

*Saprinus optabilis* Marseul, 1855: 438 [India]; Ôhara, 2003: 32 [Taiwan]; Mazur and Ôhara, 2003: 8 [Thailand].

Specimens examined. Thailand. 2 exs., Doi Suthep, alt. 1100 m, Chiang Mai, 6-IV-1989, M. Nishikawa, Carrion trap.

Distribution. Thailand, India, Vietnam, southern continental China, Taiwan, New Guinea.

*Saprinus frontistrius* Marseul, 1855

*Saprinus frontistrius* Marseul, 1855: 450 [Chili (error!)]]; Mazur and Ôhara, 2003: 13 [Thailand].

Specimens examined. Thailand. 2 exs., Doi Inthanon, alt. 1700 – 1750 m, Chiang Mai, 31-III-1989, M. Nishikawa, Carrion trap.

Distribution. Thailand, continental China, Vietnam.

*Saprinus diversegenitalis* Olexa, 1992

*Saprinus diversegenitalis* Olexa, 1992: 18 [Thailand, Nepal]; Mazur and Ôhara, 2003: 18 [Thailand].

Specimens examined. Thailand. 3 exs., Doi Suthep, alt. 1100 m, Chiang Mai, 6-IV-1989, M. Nishikawa, Carrion trap; 4 exs., Doi Inthanon, alt. 1700 – 1750 m, Chiang Mai, 31-III-1989, M. Nishikawa, Carrion trap.

Distribution. Thailand, Nepal, Pakistan.

*Saprinus subustus* Marseul, 1855

*Saprinus subustus* Marseul, 1855: 389 [India]; Mazur, 1999: 230 [catalogued].

Redescription. Body (Fig. 1A) broadly oval, convex. Body length\* (M: male, n=3; F: female, n=2): PPL, M (n=2) 3.68 – 4.07, F 3.48 – 4.56, PEL, M 2.99 – 3.53, F 3.04 – 4.02, APW, M 1.13, F 1.13 – 1.37, PPW, M 2.45 – 2.74, F 2.45 – 3.09, PL, M 1.18 – 1.42, F 1.23 – 1.57, EL, M 1.76 – 2.01, F 1.67 – 2.30, EW, M 2.70 – 2.99, F 2.70 – 3.38, ProW, M 1.62 – 1.81, F 1.57 – 2.21, ProL, M 0.49 – 0.54, F 0.44 – 0.59, PyL, M 1.32 – 1.52, F 1.08 – 1.67, PTL, M 0.93 – 1.13, F 0.94 – 1.08, MSTL, M 0.98 – 1.13, F 0.98 – 1.13, MTTL, M 1.18 – 1.32, F 1.13 – 1.32. Cuticle strongly shiny with purplish-brown luster; elytron sometimes tinged with greenish-blue, its apex with yellowish-orange maculae, more or less strongly marked and weakly limited, occupying about apical 1/4 – 1/5 of elytra. Scapus and funicle of antennae and tarsi dark rufopiceous.

Frontal stria (Fig. 1C) slightly marked but complete, united laterally with supraorbital stria. Disc of front rather sparsely punctuate, the punctures separated by 1 – 4 times their diameter. Occiput with a small fovea at middle. Epistoma convex, more densely punctured. Labrum deeply depressed medially. Mandibles sparsely and finely punctulate.

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\* Measurements. Measurements of some body parts are given in text in the order of range (all in mm). Abbreviations used in the measurements are as follows: PPL: length between anterior angles of pronotum and apex of pygidium, PEL: length between anterior angles of pronotum and apices of elytra, APW: width between anterior angles of pronotum, PPW: width between posterior angles of pronotum, PL: length of pronotum along mid line, EL: length of elytron along sutural line, EW: maximal width between outer margins of elytra, ProW: maximal width of propygidium, ProL: length of propygidium, PyL: length of pygidium, PTL: length of protibia, MSTL: length of mesotibia, MTTL: length of metatibia. See also Ôhara (1994: 8, fig. 2).

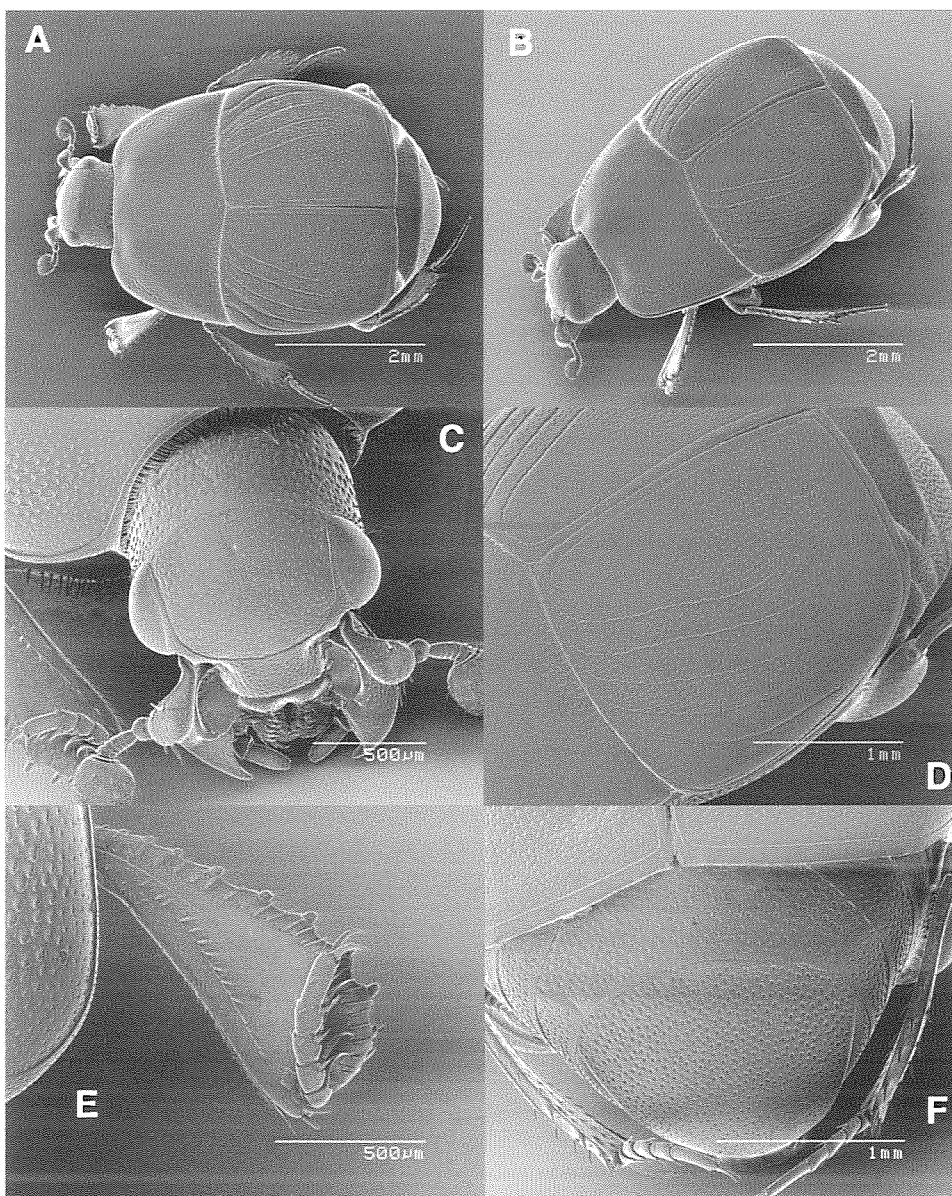


Fig. 1. *Saprinus subustus*. A: Habitus, dorsal view; B: ditto, oblique view; C: head, frontal view; D: left elytron, oblique view; E: protibia, dorsal view; F: propygidium and pygidium, caudal view. [Male, MO-04021 (Chonburi, Pattaya)].

Pronotal sides evenly arcuate and convergent forward on basal 3/4, thence strongly convergent apically. Apical angles obtuse. Marginal stria thin, a little carinate at sides and abbreviated in basal 1/8 – 1/6. Disc nearly smooth, very finely and sparsely punctulate, the punctures becoming denser, larger and deeper laterally, especially at antero-lateral part where the punctures are separated by 0.1 – 2.0 times their diameter. There are also some

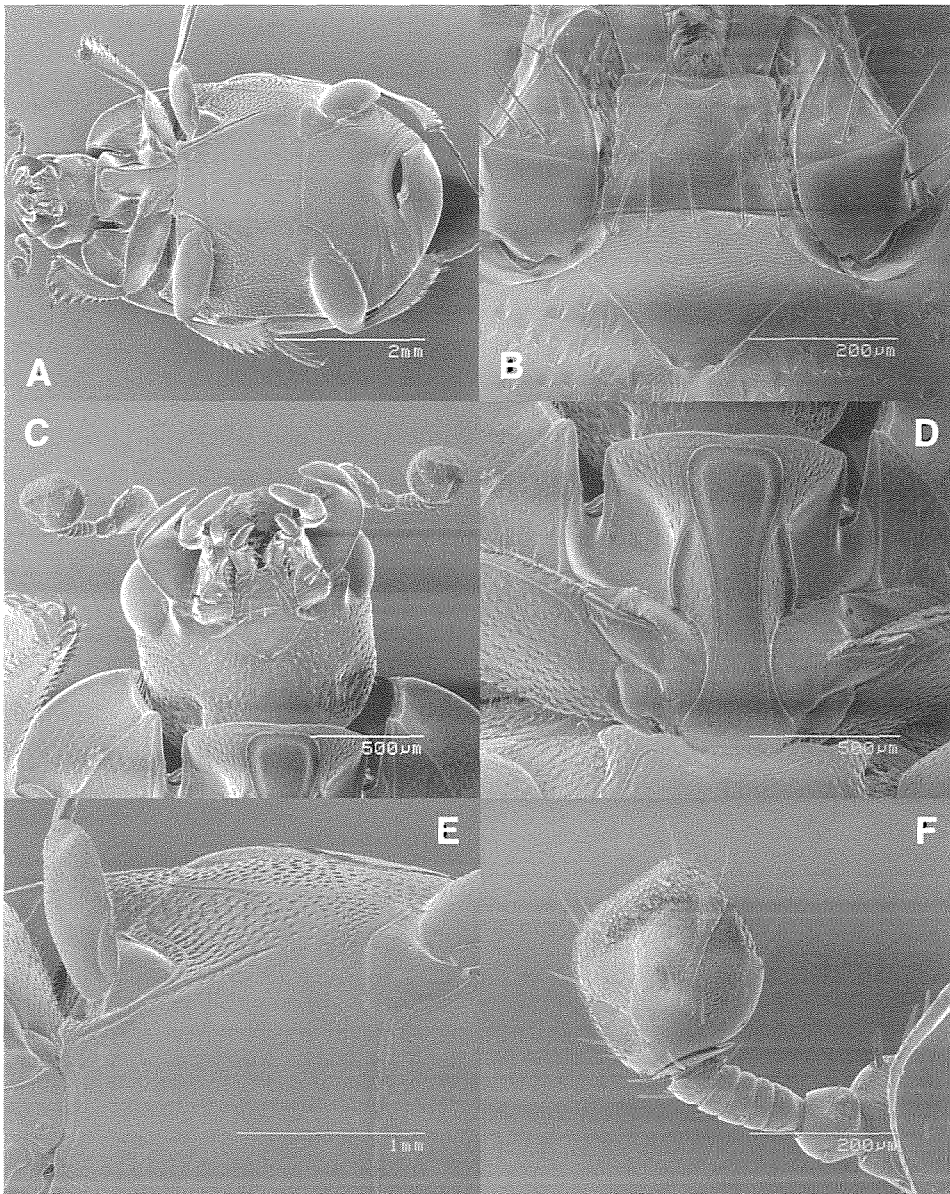


Fig. 2. *Saprinus subustus*. A: Habitus, ventral view; B: mentum and submentum, ventral view; C: head, ventral view; D: prosternum, ventral view; E: meso- and metasterna, ventral view; F: right antenna, ventral view. [Male, MO-04021 (Chonburi, Pattaya)].

irregular rows of coarse punctures along the pronotal base, nearly interrupted in front of scutellum; also a small foveiform elongate puncture being present here. Area behind eyes distinctly depressed. Pronotal epipleura slightly concave, sparsely covered with fine punctures.

Epipleura of elytra even, sparsely covered with fine, elongate punctures. Marginal

epipleural stria distinct, deeply impressed on basal half, reaching to the elytral apex but not united with marginal elytral stria. Marginal elytral stria complete, prolonged on the elytral apex as an apical stria and united with sutural stria. External subhumeral stria (Fig. 1D) wanting; internal one sometimes present as a short line on medial 1/6 – 1/8. Oblique humeral stria well impressed and present on basal 1/3. First to 4th striae crenate, impressed and present on about basal 2/3, the fourth one inwardly hamate basally and united here with sutural stria. Sutural stria complete, finely crenate and hamate outwardly at base. Surface of elytra, excepting its scutellar area, densely covered with oval punctures, separated by

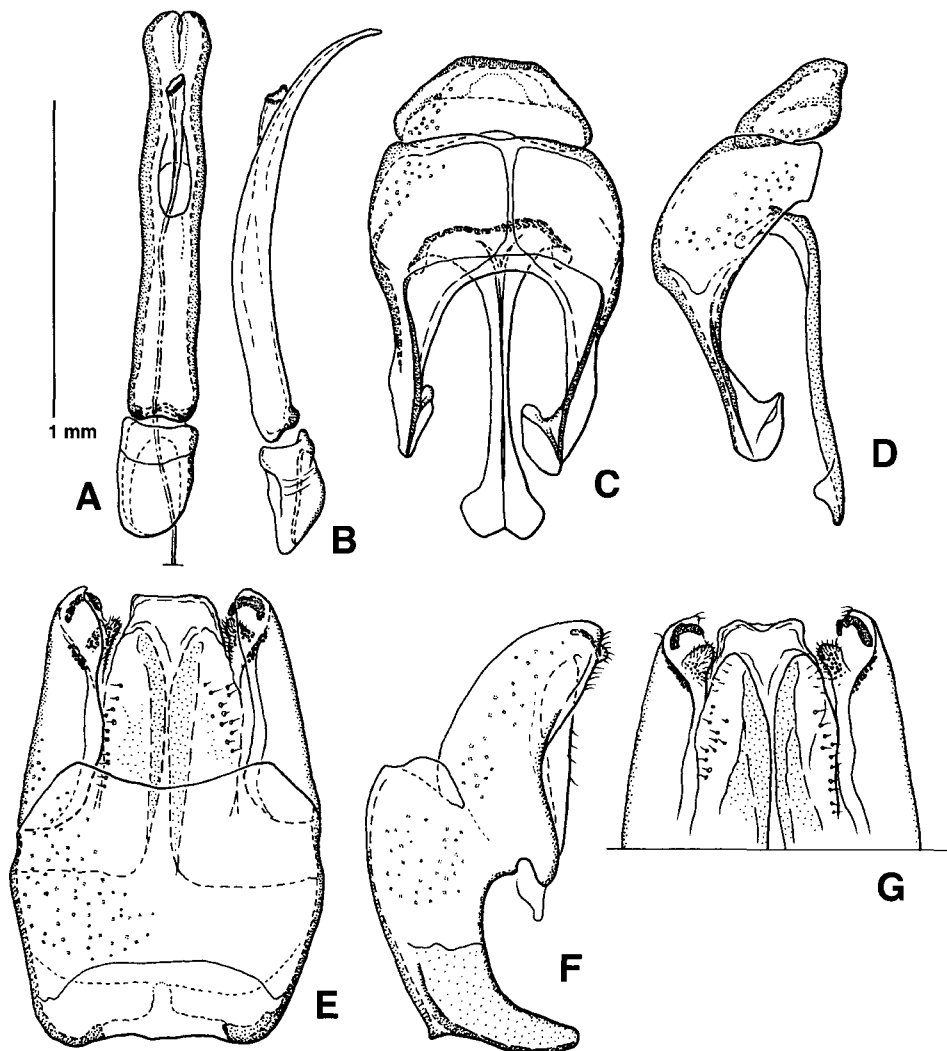


Fig. 3. *Saprinus subustus*. Male genitalia. A: Aedeagus, dorsal view; B: ditto, lateral view; C: 9th and 10th tergites and 9th sternum (spicules), dorsal view; D: ditto, lateral view; E: 8th tergite and sternum, dorsal view; F: ditto, lateral view; G: apical part of 8th sternum, ventral view. [Male, MO-04020 (Chonburi, Pattaya)].

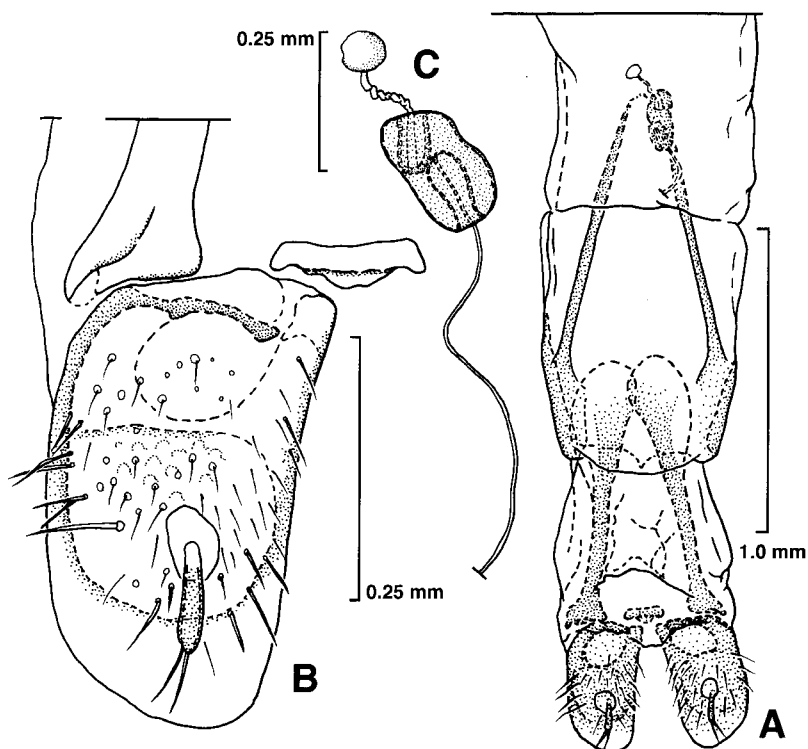


Fig. 4. *Saprinus subustus*. A: Female genitalia, ventral view; B: coxite, ventral view; C: spermatheca and spermathecal gland [A, B: MO-04025, C: MO-04024 (Chonburi, Pattaya)].

0.5 – 2.0 times their diameter. Latero-apical part of elytra with alutaceous microsculpture.

Propygidium (Fig. 1F) short, disc densely covered with ocelloid punctures, separated by 0.1 – 1.0 times their diameter. All the interspaces very finely and transversely chagreened. Pygidium convex, moderately densely covered with oval, ocelloid punctures, separated by 0.5 – 1.5 times their diameter, the punctuation becoming finer apically, the apex finely punctulate. Basal half of pygidium with fine alutaceous microsculpture.

Anterior margin of median portion of prosternum (Fig. 2D) weakly emarginated, nearly straight; its marginal stria short and carinate, present only at median 1/3. Keel moderately convex, sparsely covered with fine punctures. Descending lateral striae strongly carinate, convergent to apex and united with the carinals at apical 1/5. Carinal striae complete and divergent posteriorly and anteriorly, its outer sides carinate.

Anterior margin of mesosternum (Fig. 2D) emarginated medially, its marginal stria distinctly carinate and complete. Disc sparsely clothed with fine punctures. Meso-metasternal suture (Fig. 2E) indicated by a strongly crenate line. Intercostal disc of metasternum flat or with a shallow oval depression along median line at apex. Median area very sparsely clothed with fine punctures, except a transverse apical band of irregular rows of oval punctures, densely distributed, and with some small punctures along the metasternal lateral stria. Lateral metasternal stria carinate, extending obliquely and posteriorly on about basal 2/3. Lateral metasternal disc covered with large and deep punctures separated by 0.2 – 1.0 times their

diameter. Interspaces among the punctures smooth and shiny. Metepisternum moderately densely covered with a little elongate punctures.

Intercostal disc of 1st abdominal sternum striate on each side, the striae a little shortened at apex and bent outwardly; punctures very fine and sparse on middle, and becoming denser and coarser in a transverse band and apical row.

Protibia (Fig. 1E) with 8 (+2) spinules at outer margin and with a row of small spinules at apex. Mid- and hindtibiae with two rows of spinules, rather rarely distributed.

Male genitalia (Figs. 3A – G): apical part of 8th sternum weakly sclerotized and partly furnished with short hairs. Basal piece short: ratio in length of parameres to basal piece about 3.55. Female: spermatheca as shown in Fig. 4.

Specimens examined. Thailand. 6 males, 4 females, Chonburi, Pattaya, 9-III-2003, under dead chicken, T. Keukelaar (about 50 additional specimens, same locality and collector, identified by the third author); 1 female, 1 ex., Mae Hong Son env., 1700 m, Ban Huai Po, 24 to 30-IV-1993, J. Schneider; 2 males, Chiang Dao, 600 m, 19°24'N, 98°55'E, 10 to 16-V-1991, D. Král.

Distribution. India, Philippines, Burma, Indochina, Thailand. New to Thailand.

*Chalcionellus masumotoi* Mazur et Ôhara, 2003

*Chalcionellus masumotoi* Mazur et Ôhara, 2003: 26 [Thailand].

Specimens examined. Thailand. 2 males, Doi Suthep, alt. 1100 m, Chiang Mai, 3-IV-1989, M. Nishikawa, Carrion trap in deciduous trees forest; 1 male, Doi Inthanon, alt. 1700 – 1750 m, Chiang Mai, 31-III-1989, M. Nishikawa, Carrion trap.

Distribution. Thailand.

KEY TO THE THAI SPECIES OF THE GENUS SAPRINUS

The key is modified of our previous work (Mazur and Ôhara, 2003, page 2).

- 3 (2) Frontal stria present, at least at side. Carinal striae diverging apically and joining lateral striae, and usually united with submarginal transverse apical stria. .... *Saprinus* Er.
- 4 (9) Color of elytra metallic blue or greenish-blue. Size over 4 mm.
- 5 (6) Surface of elytra wholly punctured, and with yellowish-orange maculae, at least on epipleuron. .... *S. quadriguttatus* (F.)
- 6 (5) Scutellar area of elytra nearly smooth (very minutely punctulate) and without maculae.
- 7 (8) Marginal pronotal stria abbreviated basally, progressively distant from the margin. Fourth dorsal elytral stria abbreviated at base. .... *S. splendens* (Payk.)
- 8 (7) Marginal pronotal stria complete, laying close to the margin. Fourth stria not abbreviated at base, united by an arc with sutural stria. .... *S. optabilis* Mars.
- 9 (4) Color of elytra brown, purplish-brown, or brownish-black, without metallic tinge. Size about 4 mm or under 4 mm.
- 9a (9b) Body size about 4 mm. Apical part of elytra with yellowish-orange maculae. Prosternal keel without coarse punctures. .... *S. subustus* Mars.
- 9b (9a) Body size smaller than 4 mm. Elytra without maculae. Prosternal keel with rather moderate punctures.
- 10 (11) Interspace between punctures on elytra with distinct, alutaceous microsculpture.

- Aedeagus of male genitalia: ratio in length of parameres to basal piece about 1.72. (cf. Mazur and Ôhara, 2003, fig. 15). ..... *S. diversegenitalis* Olexa
- 11 (10) Interspace between punctures on elytra with smooth or with very fine microsculpture. Aedeagus of male genitalia: ratio in length of parameres to basal piece about 2.9. (cf. Mazur and Ôhara, 2003, fig. 10). ..... *S. frontistrius* Mars.

#### A LIST OF THE THAI SPECIES OF THE SUBFAMILY SAPRININAE

- Genus *Gnathoncus* Jacquelin-Duval, 1858
1. *Gnathoncus vietnamicus* Kryzhanovskij, 1972
- Genus *Saprinus* Erichson, 1834
2. *Saprinus diversegenitalis* Olexa, 1992
  3. *Saprinus frontistrius* Marseul, 1855
  4. *Saprinus optabilis* Marseul, 1855
  5. *Saprinus quadriguttatus* (Fabricius, 1798)
  6. *Saprinus splendens* (Paykull, 1811)
  7. *Saprinus subustus* Marseul, 1855
- Genus *Chalcionellus* Reichardt, 1932
8. *Chalcionellus masumotoi* Mazur et Ôhara, 2003
  9. *Chalcionellus orobitis* (Lewis, 1888)

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