

## Additional Notes on the Genus *Stenhomalus* White, 1855 from New Guinea (Coleoptera, Cerambycidae)

TATSUYA NIISATO, Tokio & ANDREAS WEIGEL, Wernburg

### Abstract

Two new species of the genus *Stenhomalus* White, 1855 are described from New Guinea and are named *S. rajaampatensis* sp. n. and *S. komiyai* sp. n., respectively. *S. rajaampatensis* sp. n. is closely related to *S. satoi* Niisato and its relative species and may belong to the same lineage. *Stenhomalus komiyai* sp. n. may have closer relationships to *S. fenestratus* White. A key to the species of the genus from New Guinea is also provided.

### Zusammenfassung

#### Bemerkungen zur Gattung *Stenhomalus* White, 1855 aus Neuguinea (Coleoptera, Cerambycidae)

Zwei neue Arten der Gattung *Stenhomalus* White, 1855 werden aus Neuguinea beschrieben: *S. rajaampatensis* sp. n. und *S. komiyai* sp. n. *S. rajaampatensis* sp. n. steht der Art *S. satoi* Niisato und den verwandten Arten nahe und gehört in dieselbe Gruppe. *Stenhomalus komiyai* sp. n. könnte in die Verwandtschaft des *S. fenestratus* White gehören. Es wird ein Bestimmungsschlüssel der Gattung *Stenhomalus* von Neuguinea aufgeführt.

**Key words:** Cerambycidae, New Guinea, *Stenhomalus*, new species

### Introduction

Two endemic species of the Oribiine genus *Stenhomalus* White, 1855 (WHITE 1855: 243) have so far been known from New Guinea, viz. *S. figuratus* Gahan (GAHAN 1915: p. 4) and *S. horarius* Gressitt (GRESSITT 1940: 416), both of which are characterized by the common hourglass-shaped dark maculation on elytra. In the present paper we describe two additional species of the genus from the territory of Papua New Guinea. *Stenhomalus rajaampatensis* n. sp. has slightly relationship to *S. satoi* Niisato

(NIISATO 1989: 122, fig. 1) from Mindanao and *S. wakejimaorum* Niisato (NIISATO 1989: 125) from Borneo in the almost unicolorous yellowish orange body with the less developed eye-lobes considering the member of the genus. Other new species, *S. komiyai* n. sp. has closer relationship to *S. fenestratus* White (White 1853: 243, pl. 8, fig. 2) widely occurs in Indochina, China and Taiwan. We also list all four species including above new species from New Guinea and give the key of them.

### Abbreviations

The following abbreviations are used in the depositories of the specimens examined including the holotypes.

- NME – Naturkundemuseum Erfurt Thuringia, Germany  
 NSMT – National Science Museum (Nat. Hist.), Tokyo  
 AWW – Private collection of A. Weigel, Wernburg  
 TNT – Private collection of T. Niisato, Tokyo.

### Description

*Stenhomalus rajaampatensis* n. sp. (Figs. 1, 3, 5)

**Type series:** **Holotype** ♂, W-Papua, Raja Ampat Pr., Waywesar/Batanta bor., 0°45'26"S, 130°46'55"E, 13-I-2004, A. Weigel leg. (NME). **Paratypes:** 4 ♀♀, same data as the holotype (AWW & TNT). Knocked from dead branches in the fresh opened jungle near the village Waywesar (fig. 8).

**Description:** Length (from apical margin of clypeus to elytral apex) 4.6 mm in ♂, 6.1–6.2 mm in ♀; width (across humeri of elytra) 1.35 mm in ♂, 1.7–1.9 mm in ♀.

Small species of almost entirely yellowish orange

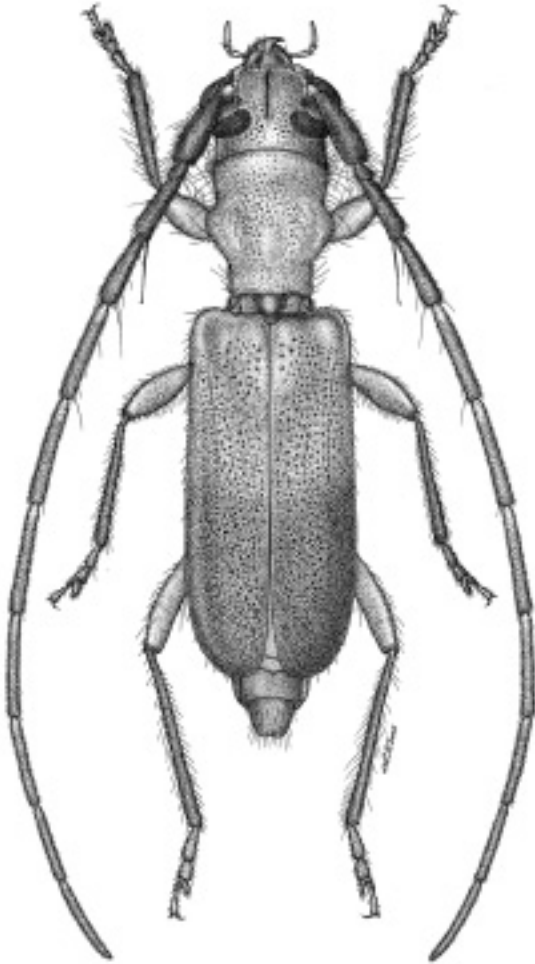


Fig. 1. *Stenhomalus rajaampatensis* n. sp., holotype ♂.

body, and slightly similar in general appearance to *S. satoi* from Mindanao and *S. wakejimaorum* from Borneo. Colour yellowish orange, shiny in general, with elytra chestnut brown in apical 3/4 or so and more or less matted, eyes and tips of mandibles black, antennae except for yellowish basal parts of segments 3-10 chestnut brown, tibiae and tarsi except for yellowish apical 2/5 of hind tibiae chestnut brown, abdomen also chestnut brown.

**Male.** Head globose and markedly voluminous, as wide as the maximum width of pronotum, 1.14 time as wide as pronotal apex, sparsely provided with coarse shallow punctures, moderately clothed with pale yellow pubescence; frons a half of the length

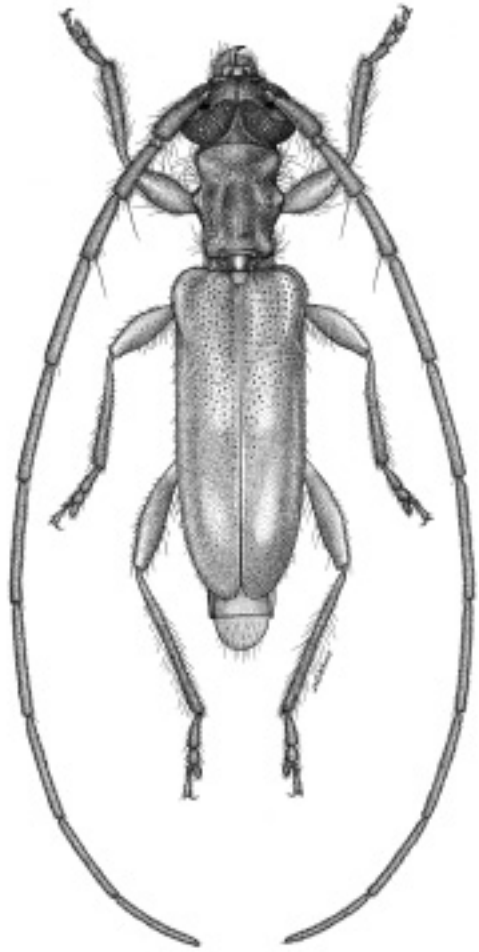


Fig. 2. *Stenhomalus komiyai* n. sp., holotype ♂.

of the basal width, parallel at sides, with a median groove deep and distinct, barely reaching vertex; mandible broad, simply arcuate, blunt at extremity; eyes weakly prominent, moderately faceted, separated by 7/20 in above or 3/5 in below the width of occiput. Antenna moderate in length, surpassed elytral apices at apex of segment 8, not so stout in basal segments, gradually thinner towards apical segments, matted and minutely pubescent, provided with sparse row of long brownish hairs along undersides of basal five segments, the hair is extremely long and stout at apex of segment 3, and supplementary with the same hair at apex of segment 6; scape elongate, moderately swollen apicad and nearly

equal in length to the following two segments combined, segments 3 and 4 weakly thickened apicad, the former slightly shorter than the latter, segment 5 the longest and 1.2 times as long as scape, terminal segment hardly arcuate.

Pronotum broad and rather large, slightly longer than wide (1.1: 1), narrower than elytra (0.9: 1), strongly dilated to apex, with constricted base which is 7/10 the width of apex and gently arcuate at middle of margin; sides gently arcuate in apical third, with large prominent lateral swelling at level between apical third and basal 2/9, almost parallel in basal collar; disc slightly uneven, with two pairs of very weak swellings at sides and same one at middle, slightly impressed on apical third and near base, provided with coarse shallow punctures, clothed with a few yellowish hairs. Scutellum small, triangular though rounded at apex, smooth on surface.

Elytra short and broad, 2.2 times as long as the humeral width, weakly ample postriad; sides with rounded humeri, almost parallel in basal third, then weakly arcuately dilated and narrowed to rounded apices which are narrowly dehiscent at sutural sides; disc almost flattened, hardly concave even though the part behind scutellum, rather densely provided with large punctures except for bases and apices, densely clothed with pale yellow pubescence and sparsely with yellowish short hairs.

Ventral surface weakly chagreened in general, somewhat rugose in base of prosternum and near middle of mesosternum, clothed with pale yellow pubescence, especially dense on sides of thorax. Prosternal process flattened and strongly compressed near middle. Mesosternal process moderately in width, nearly parallel-sided. Abdomen almost straightly narrowed apicad, sparsely clothed with pale yellow hairs; first ventrite nearly quarter the whole length of abdomen; anal ventrite transverse semicircular, gently emarginate at margin. Tergite 8th quadrate, bluntly pointed forwardly at sides of apical margin, which are provided with very long setae.

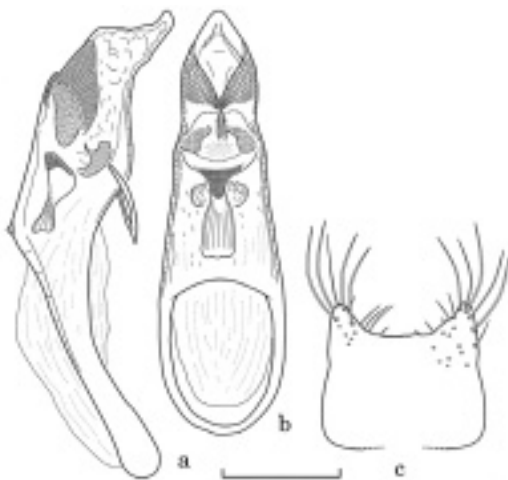
Legs rather short; hind femur gradually clavate, not so compressed; hind tarsus thick, with 1st segment nearly equal in length to the following two segments combined.

Male genital organ (fig. 3) relatively large considering body size and rather weakly sclerotized. Me-

dian lobe elongate spindle-shaped though gradually narrowed apicad and slightly swollen at apical third, about 2/5 the length of abdomen, strongly convex; in dorsal view, lateral wall of ventral plate almost conjoined at apex of small projection of dorsal plate in apical fourth, then sinuately descent towards apical twelfth; in lateral view, dorsal margin of ventral plate weakly inclined to apical fourth, then strongly convergent to extremity which is bluntly pointed and slightly warped dorsad; median struts 1/3 the length of median lobe.

**Female.** Body fairly broad. Eyes more widely separated than in ♂, the distance is 3/10 in above the width of occiput. Antenna shorter, surpassed elytral apices at apical third of segment 8. Abdomen with first ventrite 2/3 the whole length of abdomen, sparsely clothed with pale yellow hairs, ventrite 2 arcuately emarginate at margin, with dense fringe of long reddish yellow setae, ventrite 3 arcuately emarginate, with sparse rows of brownish hairs, ventrite 4 also with same hairs though angulately concave at margin, anal ventrite semicircular-formed.

**Distribution:** New Guinea.



**Fig. 3.** Male genital organ of *Stenhomalus rajaampatensis* n. sp.: 2a – Median lobe with vestigial tegmen, lateral view; b – dito, dorsal view; c – 8th abdominal tergite. Scale: 2 mm.

**Notes:** It is no doubt that the present new species has closely relationship to *S. satoi* Niisato from Mindanao and *S. wakejimaorum* Niisato from northern Borneo. Three sibling species share with the almost entirely yellowish orange body with infus-

cate apical parts of elytra and the bi-colored each segment of antenna, the less developed and not so coarsely faceted eye-lobes, which are widely separated above, and the broad and short elytra. It may be possible to consider these sibling species also have some relationship to *S. nagaai* Hayashi (HAYASHI 1960: 11, pl. 2, fig. 1) which is endemic to western Honshu of the Japanese Islands.

**Derivatio nominis:** The species is named after its origin in the Raja Ampat Province of Western Papua (Indonesia).

*Stenhomalus komiyai* n. sp. (Figs. 2, 4, 6)

**Type series:** **Holotype** ♂, Wau, 1,200 m in alt., Morobe Pr., Papua New Guinea, 26-XII-1981, Y. Komiyaya leg. (NSMT). **Paratype:** 1 ♀, same data as the holotype but collected on 27-XII-1981 (TNT).

**Description:** Length (from apical margin of clypeus to elytral apex) 5.3 mm in ♂, 5.0 mm in ♀; width (across humeri of elytra) 1.2 mm in ♂, 1.3 mm in ♀. Small and slender species of dark yellowish brown body, with two pairs of oblong pale maculation on elytra, and similar in general appearance to *S. fenestratus*. Colour dark yellowish brown, matted, provided with two pairs of longitudinal oblong pale brown maculation on elytra, paler in palpi and peduncles of femora, infusate at apices of mandibles, eyes black.

**Male.** Head relatively large including well developed eyes, strongly wider than apex (1.4: 1) or moderately so than the maximum width (1.2: 1) of pronotum, coarsely chagreened, densely with silvery white pubescence, and with pale yellow hairs in front; frons strongly narrowed apicad, with apex nearly a half the width of base, with median groove rather distinct though does not reaching vertex; mandible broad in basal 2/3, then strongly arcuate and acute to apex; eyes large and well expanded, coarsely faceted, approximate above, separated by 1/10 in above or 1/4 in below the width of occiput. Antenna very long, 1.9 times as long as body, surpassed elytral apices at apical third of segment 7, very stout though gradually slenderer towards apical segment, densely brownish pubescent, and with sparse rows of pale brown hairs along undersides of basal four segments; scape short and thick, equal in length to

segment 3, weakly clavate, segments 3 and 4 weakly dilated apicad, the latter slightly longer the former, segment 5 the longest, 1.8 times as long as segment 3, terminal segment gently arcuate.

Pronotum rather narrow and uneven at sides, slightly longer than wide (1.1: 1), hardly divergent to apex which is 1.15 times as wide as base; sides rather distinctly arcuate just before apical fifth, distinctly constricted at apical fourth, with strongly prominent lateral swellings at middle, nearly parallel in basal fifth; disc slightly convex, not so distinctly uneven, weakly transversely impressed near apical fourth and basal collar, provided with two pairs of very weak raised areas at sides and a narrow longitudinal one near centre, coarsely chagreened throughout, densely clothed with recumbent silvery white pubescence, and with a few long light brown hairs. Scutellum narrow semicircular-formed, small and convex, densely pale pubescent.

Elytra moderate in length, slender, 2.5 time as long as the humeral width, distinctly wider than the maximum width of pronotum (1.3: 1); sides with rounded square humeri, subparallel to basal 7/20 then arcuate to narrowly rounded apices which are very narrowly dehiscent at sutural margins; disc weakly convex near suture of apical third, nearly flattened in the rests, moderately provided with medium-sized punctures in basal half, smooth in apical half, very densely clothed with silvery white pubescence, and thinly scattered with pale brown hairs.

Ventral surface chagreened in general, with distinct transverse furrows on prosternum, densely clothed with silvery white pubescence on thoraces. Prosternal process not vertical and strongly compressed. Mesosternal process wide, parallel-sided, with gently emarginate apex. Abdomen distinctly narrowed in straight line towards ventrite 4, rather sparsely clothed with pale brown hairs; first ventrite 3/8 the whole length of abdomen; anal ventrite almost circular, with small triangular concavity at middle of margin. Tergite 8 membranous, weakly sclerotized at sides of apical margin which provided with a brittle of setae.

Legs rather long, stout; hind femur not compressed and moderately clavate in apical 2/3; hind tarsus not so thick, with 1st segment nearly equal in length to the following two segments combined.

Male genital organ (fig. 4) relatively large considering body size and lightly sclerotized. Median lobe slender, a little more than  $2/5$  the length of abdomen, weakly convex, distinctly narrowed in straight line to just before apex, with extremity blunt at margin and thickened in profile; in dorsal view, lateral wall of ventral plate very narrowly dehiscent from apical ninth, with anterior margin of dorsal plate broadly rounded; in lateral view, dorsal plate almost flattened, with dorsal margin of ventral plate weakly inclined to apical ninth, then sinuately narrowed to just before apex; median struts  $7/15$  the length of median lobe.

**Female.** Body not so slender as in male. Antenna shorter, 1.5 times as long as body, surpassed elytral apices at base of segment 7. Abdomen with first ventrite  $4/9$  the whole length of abdomen, sparsely clothed with pale yellow hairs, ventrite 2 gently arcuately emarginate at margin, with dense fringe of long reddish yellow setae, ventrite 3 distinctly arcuately emarginate, with sparse row of brownish hairs, ventrite 4 also with same hairs though deeply arcuately concave near middle of margin, anal ventrite semicircular-formed.

**Distribution:** New Guinea.

**Notes:** As was said in the introduction, *S. komiyai* n. sp. has closer relationship to *S. fenestratus*, and agrees in such basic characters as the brownish body with the two pairs of pale maculation on elytra, the large and approximate eyes, and the strongly uneven sides of pronotum. *Stenhomalus fenestratus* is known to have the wide distributional area in the continental side of East Asia between North China as the easternmost territory, North India as the westernmost and Indochina as the southernmost, though the range does not attain to New Guinea and the South Pacific Islands. The two sibling species seem to be isolated in the continental Asia and New Guinea, at least according to the present knowledge. *Stenhomalus kumaso* Niisato & Makihara (NIISATO & MAKIHARA 1991: 164, figs. 1-2, 4, 6-7) is a sibling species of *S. fenestratus* occurring in Kyushu of the Japanese Islands which is almost approximate to the easternmost range of the continental species. It is expecting that an unknown member of the same species group will be found in such blank areas as Sundaland and the Malay Peninsula as in the case of the

occurrence of *S. kumaso* from Southwest Japan.

According to T. Komiya, a pair of type series was collected by light trap setting in Wau.

**Derivatio nominis:** The species is named after our colleague and friend Toshiaki Komiya.

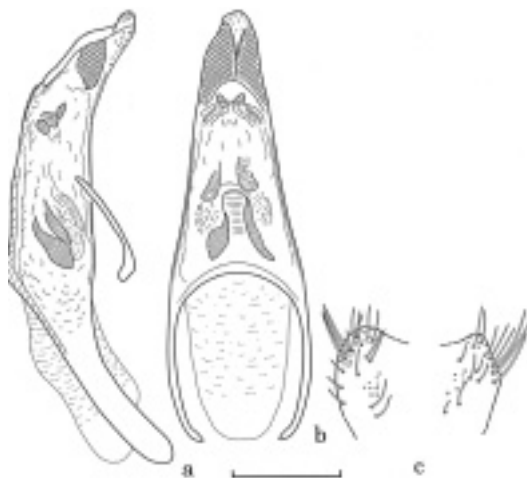
***Stenhomalus figuratus* Gahan, 1915** (Fig. 7)

*Stenhomalus figuratus* Gahan, 1915, British Ornithology Union Exped. & Wollaston Exped. Dutch New Guinea, Coleopt., 3, p. 4; type locality: Mimika River, DNG. - Gressitt, 1951, Ann. Entomol. Soc. Am., **44**, p. 20; Pacif. Ins., **1**, p.129; 1959, Pacif. Ins., **1**, p. 129.

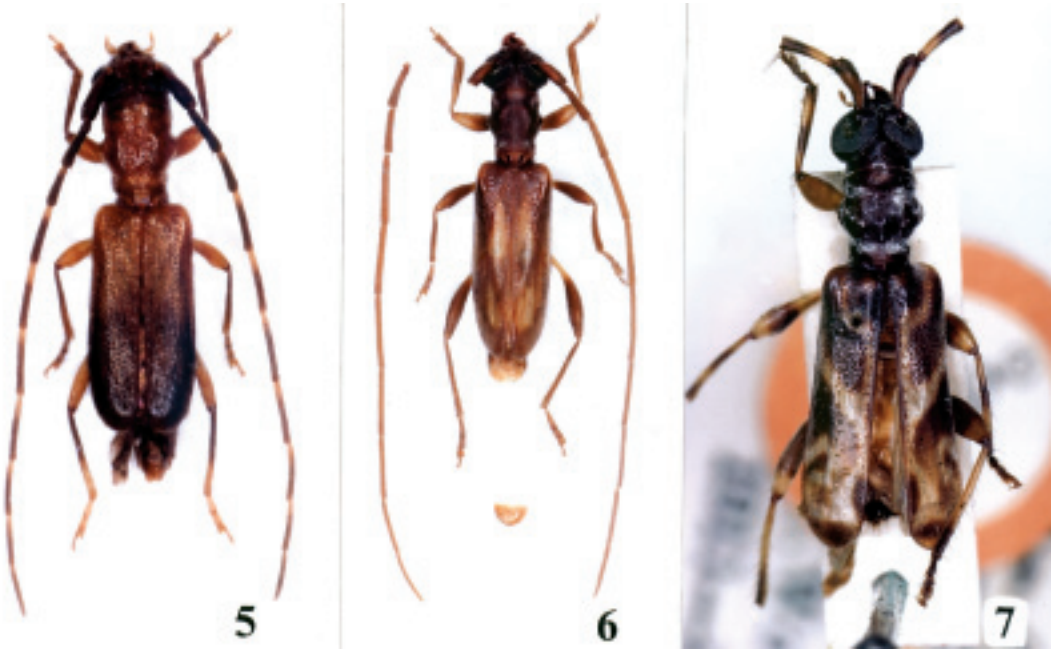
**Specimens examined:** 1 ♀ (type), Mimika River, New Guinea (NHML); 1 ♀, Wau, 1200 m in alt., Morobe Pr., Papua New Guinea, 3-I-1981, Y. Komiya leg. (TN); 1 ♀, 10 km S Garaina, 1,500-1,800 m in alt., Morobe Pr., Papua Neu Guinea, 23-III-1998, A. Riedel leg. (AWW).

**Distribution:** New Guinea; New Britain.

**Notes:** This species seems rather common since two dozens specimens were recorded from the various areas of New Guinea and New Britain (GRESSITT 1951, 1959). According to the personal communication by Y. Komiya, the above additional specimen examined was collected by light trap.



**Fig. 4.** Male genital organ of *Stenhomalus komiyai* n. sp.: 4a – Median lobe with vestigial tegmen, lateral view; b – dito, dorsal view; c – 8th abdominal tergite. Scale: 2 mm.



Figs. 5-7. Holotype specimens of *Stenhomalus* spp.: 5 - *S. rajaampatensis* n. sp.; 6 - *S. komiyai* n. sp.; 7 - *S. figuratus* Gahan.



Fig. 8. Collecting habit of *Stenhomalus rajaampatensis* n. sp. near the village Waywesar/Batanta island

Photo: A. Weigel (13.01.2004)

## *Stenhomalus horarius* Gressitt, 1940

*Stenhomalus horarius* Gressitt, 1940, Hawaiian Ent. Soc. Proc., **10**, p. 416; type locality: Koitaki, Papua; 1959, Pacif. Ins., **1**, p. 129.

No additional specimen examined.

**Distribution:** New Guinea.

## Key to the New Guinean Species of the Genus *Stenhomalus*

- 1(6) Eyes well developed and approximate above; elytra decorated with brownish or pale maculation.
- 2(3) Elytra with two pairs of oblong pale brown spots; antennae unicolored, very long considering body size, 1.9 times as long as body in male ..... *S. komiyai* n. sp.
- 3(2) Elytra with a hourglass-shaped common marking; antennae bicolored at least in middle segment.
- 4(5) Antennae provided with long bristles at apices of segments 3-5; elytra dark brown, with pale brown oblique bands running from shoulders to suture, a hourglass-shaped pale brown marking on posterior 3/4, apices dark ..... *S. figuratus* Gahan
- 5(4) Antennae without long bristles at apices of middle segments; elytra dark brown, with a hourglass-shaped pale brown marking on posterior 3/5, apices pale ..... *S. horarius* Gressitt
- 6(1) Eyes less developed and rather widely separated above; elytra reddish yellow, slightly infusate in apical 3/4 ..... *S. rajaampatensis* n. sp.

## Acknowledgements

We wish to express our hearty thanks to Dr. Yoshiaki Komiya of Tokyo for his offer of the valuable material used in our study, and also to Mrs. Sharon Shute of Natural History Museum, London, for allowing the examination of the type specimen deposited in the museum.

## References

- GAHAN, C.J. (1915): Part III. - in: ARROW, G.J., A.K. MARSHALL, C.J. GAHAN & K.G. BLAIR: Report on the Coleoptera collected by the British Ornithologists Union Expedition and the Wollaston Expedition in Dutch New Guinea, 1-21 [38-58].
- GRESSITT, J.L. (1940): New Longicorn beetles from islands in the southwestern Pacific (Coleoptera, Cerambycidae). - Proc. Hawaii. Entomol. Soc. **10**: 415-419.
- (1951): Longicorn beetles from New Guinea and the South Pacific (Coleoptera, Cerambycidae). Part II. - Ann. Entomol. Soc. Am. **44**: 1-30, pl. 1.
- (1959): Longicorn beetles from New Guinea, I. - Pacif. Ins. **1**: 59-171.
- HAYASHI, M. (1960): Studies on Cerambycidae from Japan and its adjacent regions (XII). - Ent. Rev. Japan **12**: 11-13.
- NIISATO, T. (1989): Two new *Stenhomalus* (Coleoptera, Cerambycidae) from Mindanao and Borneo. - Jpn. J. Ent. **57**: 122-126.
- & H. MAKIHARA (1991): Discovery of a sibling species of *Stenhomalus fenestratus* (Coleoptera, Cerambycidae) from Kyushu, Japan. - Elytra **19**: 163-166.
- WHITE, A. (1855): Catalogue of Coleopterous Insects in the Collection of the British Museum. Part VIII. Longicornia II: 175-412, 10 pls.

## Authors address:

Tatsuya Niisato,  
Bioindicator Co., Ltd.,  
Yarai-chô 126, Shinjuku  
Tokyo, 162-0805 Japan

Andreas Weigel  
Am Schloßgarten 6  
D-07381 Wernburg  
Germany

# ZOBODAT - [www.zobodat.at](http://www.zobodat.at)

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Veröffentlichungen des Naturkundemuseums Erfurt \(in Folge VERNATE\)](#)

Jahr/Year: 2005

Band/Volume: [24](#)

Autor(en)/Author(s): Nisato T., Weigel Andreas

Artikel/Article: [Additional Notes on the Genus \*Stenhomalus\* White, 1855 from New Guinea \(Coleoptera, Cerambycidae\) 101-107](#)