

Two new species of *Glycyphana* Burmeister, 1842 from the Australian region (Coleoptera: Scarabaeidae: Cetoniinae)

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Abstract. *Glycyphana* (*Glycyphaniola*) *tambora* sp. n. from the Sumbawa Island and *Glycyphana* (*Glycyphaniola*) *sumbana* sp. n. from the Sumba Island are described, illustrated and compared. Distributional notes on *Glycyphana* (*Glycyphaniola*) *setifera* Moser, 1914 are presented.

INTRODUCTION

All Lesser Sunda Islands lie east of the Wallace line, where the fauna is predominantly of Australian origin with only a few species of Asian origin. Although *Glycyphana* Burmeister, 1842 is widely distributed and reaches the Solomon Islands and Vanuatu, not many of its species have crossed the line east of the Greater Sundas and Sulawesi, which are much richer in species than the islands east of it. Only few *Glycyphana* species are known from the Lesser Sundas (Lombok to Timor) at the present time. The subgenus *Glycyphaniola* Mikšič, 1968 has hitherto contained only two species, *G. (Glycyphaniola) setifera* Moser, 1914 and *G. (Glycyphaniola) varicorensis* ssp. *pseudofasciata* Valck Lucassen, 1936. During an expedition to one of the highest points in the region (Mt. Tambora) two species of *Glycyphaniola* have been found flying together at one locality, *G. (Glycyphaniola) setifera* Moser, 1914 and one of the new species (*G. tambora*) described below. The author has examined several other catches of *Glycyphaniola* from the Lesser Sundas, namely from the Lombok, Sanggeang (N of NE Sumbawa) and Flores Islands, and has found all of them to belong to *G. (Glycyphaniola) setifera*. For the Lombok and Sanggeang Islands they represent the first records. The second new species described below (*G. sumbana*) is from the Sumba Island and represents the first record of *Glycyphaniola* for this island.

HISTORY

The genus *Glycyphana* was established by Burmeister (1842). Mikšič (1968) refined the taxonomy of the genus by dividing its species into seven subgenera. About 48 species are presently assigned to the subgenus *Glycyphaniola* Mikšič. Over the recent decades, only three authors have studied *Glycyphaniola* of the Australian and Pacific regions. Mikšič (1971) published revision of *Glycyphana* Burmeister and added one species for Australian

region. Bacchus (1974) revised Australian *Glycyphana* and described several new *Glycyphaniola* species, and Antoine (1995) raised *G. (Glycyphaniola) soror* Mikšic, 1971 and *G. (Glycyphaniola) pseudoaruensis* Mikšic, 1968 to species level. In comparison to the relatively well known *Glycyphaniola* fauna of the Greater Sundas, Sulawesi and more western islands, the fauna of the Mollucas, New Guinea and more eastern islands is little known and future collecting is likely to produce additional species.

MATERIAL AND METHODS

Specimen sizes exclude head and pygidium. All types are provided with printed red labels that give the name of the taxon, HOLOTYPUS or PARATYPUS designations, sex symbols, and St. Jakl det. 2008. Genitalia of all male specimens were dissected. All specimens are deposited in the author's collection.

DESCRIPTIONS

Glycyphana (Glycyphaniola) tambora sp. n.

(Figs 1-5)

Type material. Holotype (♂) labelled: Indonesia, Lesser Sundas, E. Sumbawa Isl., 2. 2006, MT. TAMBORA, 300-800 m, local collectors. Paratypes (♂♂ Nos. 1-3, ♀♀ Nos. 14-20): labelled same as holotype. Type material deposited in authors collection.

Description. Holotype length 12.1 mm, maximum humeral width 7.2 mm. Grassy green, slightly shining, with dense, moderately long yellowish setation.

Head. Frons brownish except for green medial line, very densely punctate, punctures bear long, yellowish setae. Clypeus green except for black lateral and apical parts; punctation dense, less so and finer apically. Clypeus covered with long setae except for apex. Apical margin brown, lateral margins black. Antenna dark brown.

Pronotum. Dark grassy green, matt, coarsely punctate, punctures bear long, yellowish setae. Setation denser near lateral and apical margins. Laterally bordered. Posterior angles obtusely rounded. Prescutellar part impunctate, without setation.

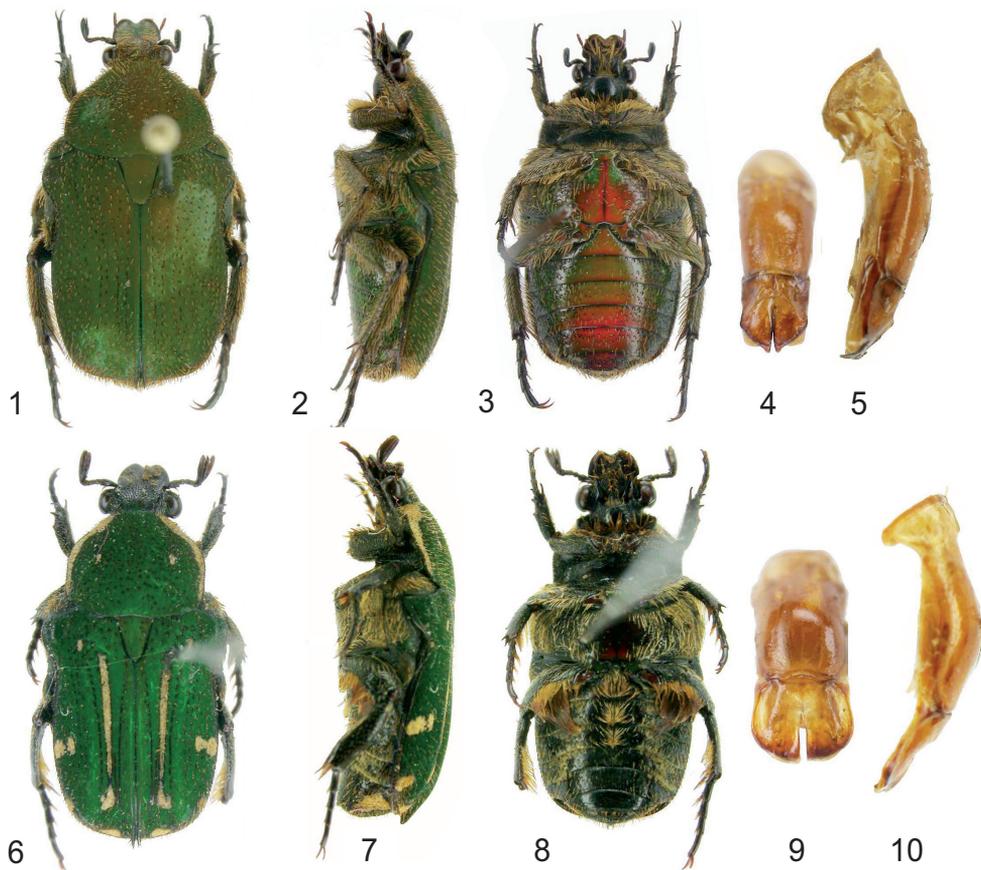
Scutellum. Dark green, triangular, apex rounded. Impunctate.

Elytra. Dark grassy to olive green, parallel-sided. Each elytron with 8-10 irregular lines of punctures that bear long yellowish setae. Humeral calli not well developed, apical calli distinct. Sutural ridge flat, elevated slightly only at two-thirds of elytral length, sharply terminated, protruding briefly beyond elytral apex. Apical setation very dense.

Pygidium. Olive green, densely striolate, covered with yellowish setae especially on disc.

Abdomen. Green, shining. Each segment with semioval, black striolae. Covered with long, yellowish hairs, especially near lateral margins. Ultimate three segments with purpurous lustre.

Metasternum. Green, shining. Disc almost glabrous, other parts densely to very densely striolate. Pilosity very long, especially near lateral margins. Mesometasternal process short,



Figs 1-10. 1-5. *Glycyphana (Glycyphaniola) tambora* sp. n.: 1- habitus dorsal aspect; 2- habitus lateral aspect; 3- habitus ventral aspect; 4- aedeagus; 5- aedeagus lateral aspect. 6-10. *Glycyphana (Glycyphaniola) sumbana* sp. n.: 6- habitus dorsal aspect; 7- habitus lateral aspect; 8- habitus ventral aspect; 9- aedeagus; 10- aedeagus lateral aspect.

very wide, flat, its apex straight, not protruding.

Prosternum, mentum. Blackish brown with very long and dense yellowish hairs. Punctuation strong and dense.

Legs. Black, moderately long, covered with yellowish setae especially at the first basal half of tibia. Protibia tridentate, basal tooth very small and obtuse. Metatibial spurs long and sharp. Brushes of yellow setae at inner sides of meso- and metatibiae present throughout length.

Genitalia. Inner part of paramere distinctly longer than outer part, its apex curves downward. Apicolateral bend of inner part of paramere only briefly elevated (Figs 4-5).

Variation. Colour grassy green to brown green. Some specimens with one tiny postdiscal and two tiny posteromedial white tomentose maculae on each elytron. One specimen with a pair of very small maculae also on pronotal disc. Paratype No. 13 completely black. Length 10.6-12.1 mm.

Sexual dimorphism. Females larger and broader than males. Colour grassy green to brown green or brown. Lateral margins of pronotum bordered by very narrow band of tomentum. One female with two pairs of small discal maculae on pronotum. Legs short and more robust. Length 11.8-12.8 mm.

Differential diagnosis. The only similar species known from the region is *G. (Glycyphaniola) setifera* Moser, 1914, which differs by: (1) smaller size (9.5-11.3 mm); (2) presence of lateral tomentation of the pronotum throughout length; (3) short setation on the pronotum and elytra (setae 2x longer in *G. tambora* sp. n.); (4) stronger elytral maculation; (5) presence of white tomentum on the pygidium; (6) different shape of parameres - apex of the inner paramere not extending beyond that of the outer part of paramere and its apicolateral bend is more highly elevated.

Etymology. Named after Mt. Tambora, the highest peak of the Sumbawa Island.

Distribution. Indonesia, Lesser Sundas, Sumbawa Island, Mt. Tambora.

***Glycyphana (Glycyphaniola) sumbana* sp. n.**
(Figs 6-10)

Type material. Holotype (♂) labelled: Indonesia, Sumba Is., I. 1996. Type material deposited in authors collection.

Description. Holotype length 9.5 mm, maximum humeral width 5.1 mm. Small, grassy green species with white pronotal and elytral tomentation unusual unique in this subgenus.

Head. Base of frons green, rest of head black. Very densely, coarsely punctate, covered with long yellowish setae except at apical part of clypeus. Antenna brown.

Pronotum. For three-quarters of length nearly parallel sided, then abruptly narrowing toward base. Base colour velvet green, with a pair of medial discal maculae. Lateral margins bordered by white tomentum widening to apex and covering anterior angles. Except for prescutellar part coarsely punctate, more so laterally, punctae bear moderately long yellowish setae.

Scutellum. Triangular, apex obtusely rounded, with several coarse punctures in anterior corners.

Elytra. Base colour grassy green, maculation silvery white. Maculation pattern rather unique for this subgenus: Each elytron with one small, longitudinal postbasal spot and three much larger spots, one apical, one subapical and one (largest) postmedial. Third interval

covered by tomentum nearly throughout elytral length, from scutellum down to apical calli. Striation lines of two kinds, four lines adjacent to the sutural ridge almost uninterrupted, and those more lateral with chailink pattern. Sutural ridge elevated in anterior third, its termination sharp and apical overlap long. Humeral calli flat, apical calli more distinct. Setation well developed, but less dense than on pronotum. Epimeron blackish, covered with long yellow hairs.

Pygidium. Black, densely wrinkled, covered with long yellow setae. Posterior angles decorated with white tomentose maculae.

Abdomen. Black, shining, medially with the bronze reflection. First to fourth segments laterally with white tomentum. Striation and yellow pilosity denser laterally. Medial furrow well defined.

Metasternum. Disc bronze, glabrous and shining, remainder black, densely striolated and covered with long yellowish hairs. Lateral margins with white tomentum. Mesometasternal process green, glabrous, shining, wider than long, very flat, with a row of hairs at apex.

Legs. Dark brown, teeth, spurs and joints lighter brown. Covered with pale yellow setae. Protibia tridentate, mesotibia with one transverse carina; meso- and metatibia each with a row of long, dense yellowish hairs on inner side.

Genitalia. Similar to those of *G. (Glycyphaniola) australiana* Mikšić and *G. (Glycyphaniola) stolata* Fabricius from Australia, but parameres much short and very wide (Figs 9-10).

Variation and sexual dimorphism. Only holotype known.

Differential diagnosis. Very small size, pronotal and elytral ornamentation pattern, whitish tomentation of the ventrum and shape of the parameres distinguish the new species from *G. (Glycyphaniola) setifera* Moser known from Lombok, Sumbawa, Sanggeang and Flores, and *G. (Glycyphaniola) varicorensis pseudofasciata* Valck Lucassen known from Timor. The Australian *G. (Glycyphaniola) australiana* Mikšić and *G. (Glycyphaniola) stolata* Fabricius have rather similar parameres, but their proportions are nevertheless different. In both Australian species the parameres are always longer than wide, whereas in *G. (Glycyphaniola) sumbana* sp. n. they are wider than long. In addition, the two Australian species are large and differ in their dorsal tomentation.

Etymology. Named after the Sumba Island.

Distribution. Indonesia, the Lesser Sundas, Sumba Island

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REFERENCES

- ANTOINE Ph. 1995: Nouvelle combination, nouveaux rangs, synonymies et espèce nouvelle dans la famille des Cetoniidae (Coleoptera). *Bulletin de la Société des Sciences Naturelles* 83: 25-30.
- BACCHUS M. E. 1974: A revision of the Australian species of the genus *Glycyphana* Burmeister (Coleoptera, Scarabaeidae). *Journal of the Australian Entomological Society* 13: 111- 128.
- BURMEISTER H. C. C. 1842: *Handbuch der Entomologie. Dritter Band. Coleoptera Lamellicornia Melitophila*. Berlin: T. E. F. Enslin, xx + 826 + 1 pp.
- MIKŠIĆ R. 1968: Vorläufige Diagnosen einiger neuer Arten und rasen der Gattung *Glycyphana* Burm. *Zeitschrift der Arbeitsgemeinschaft Österreichischen Entomologen* 20: 48-50.
- MIKŠIĆ R. 1971: Revision der Gattung *Glycyphana* Burmeister (Coleoptera, Cetoniinae). *Zoologische Verhandlungen* 118: 1- 153.

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