

Notes on the genus *Acalolepta* Pascoe, 1858 (Coleoptera: Cerambycidae) from Indonesian Papua and the Moluccas

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Abstract: Taxonomic remarks and faunistic data concerning some *Acalolepta*-species collected in different surveys in the Moluccas (Halmahera, Seram, Saparua) and Indonesian Papua are provided. The following species are recorded for the first time from the following islands: *Acalolepta fasciata* (Montrouzier, 1855) and *Acalolepta tincturata* (Pascoe, 1866) from Misool, *Acalolepta producta* (Pascoe, 1866) from Seram and Saparua, and *Acalolepta* cf. *ternatensis* (Breuning, 1936) from Halmahera. *Dihammus fasciatus aurivarius* Gressitt, 1952 is removed from the synonymy with *A. acanthias* and considered as a younger synonym of *M. captiosus* Pascoe, 1866 syn. nov. *Monochamus uraeus* Pascoe, 1866 is removed from the synonymy with *A. antenor* (Newman, 1842) and considered as a synonym of *Monochamus captiosus* syn. nov.

Key words: Coleoptera, Cerambycidae, Lamiinae, Lamiini, *Acalolepta*, East Indonesia.

Introduction

The genus *Acalolepta* Pascoe, 1858 (formerly *Dihammus* Thomson, 1864) currently includes nearly 250 species widespread in Eastern Asia and in zone of Indo-Australian transition, and almost all of them have a more or less mottled colouration. The difficulty to interpret old descriptions due to the chronic missing of well definite characters has led to the description of many species and local forms, sometimes synonymized between them, which need a complete revision.

In March 2011 I received a lot of *Acalolepta*-specimens personally collected by the well-known coleopterist Dmitry Telnov (Rīga, Latvia) on different localities in Indonesian Papua (including the island Misool, Raja Ampat Archipelago), North Moluccas (Halmahera) and Central Moluccas (Seram and Saparua) between 2006 and 2010.

Additionally, old materials usually came from long ship trips in unsuitable means of conservation and were poor in biological and environmental data. The series of fresh material argument of this paper allow fitting both gaps and resulting of extreme interest.

Material

Studied specimens are stored in the private

collections of Dmitry Telnov (Rīga, Latvia), Mārtiņš Kalniņš (Sigulda, Latvia), and Francesco Vitali (Luxembourg).

List of species

Acalolepta australis australis (Boisduval, 1835) (Plate 40, figs 1-2)

Material: 1♂, West Papua, Manokwari S, env. Arfak Mts., ~700 m, rainforest, 1-29.III.2006, leg. local collectors; 2♀, West Papua, Bird's Neck, 40 km E from Kaimana, Triton Bay, Lobo vill. env., 130-140 m, secondary rainforest on limestone, Malaise trap, 11-17. IX.2010, leg. D.Telnov.

Taxonomic and faunistic remarks: With a maximal size of 44 mm, *A. australis* is the largest species of the genus. It is commonly widespread in the Papuan region and Moluccas (Breuning 1944). Breuning described several subspecies coming from different islands of the region, often on single specimens and on the basis of relative characters, whose exact value needs to be verified.

Remarks to species' biology: This saproxylic species has an important role in the forest ecosystem acting as primary decomposer of dead trees. Its pre-imaginal stage has been described for a long time (Lucas 1879). According to Hawkeswood & Dauber (2003), its larva is largely polyphagous



attacking both coniferous (*Araucaria cunninghamii* Aiton ex D. Don) and broad-leaved trees (*Terminalia kaernbachii* Warburg, *Anisoptera polyandra* Bl., *Hevea brasiliensis* Willd.). It has been recorded on cultivated plants (*Theobroma cacao* L.) as well but causing damages of secondary importance.

The collected specimens were found at different altitudes and in secondary forests as well, confirming the wide ecological spectrum of this cerambycid. Two females have been collected in a Malaise trap installed near a freshly fallen tree on a sunny open space at the edge of a secondary lowland dipterocarp rainforest. This locality (Plate 41, fig. 1) is situated at the foothill of Mt. Lecyansir (Plate 41, fig. 2), which is the beginning of a ~800-1100 m high limestone anticline. This mountain dominates the Western part of the Triton Bay and is a key-factor for the local climate. A lowland rainforest covers it from the foothill to up ~600 m, where it turns into lower montane and lower montane mossy rainforest. Daily, dense fog and rain accumulate around the peak and come down in the afternoon (Plate 41, fig. 3). Consequently, the local climate in the forest at the foothill and on the slopes is very moist.

***Acalolepta fasciata* (Montrouzier, 1855)** (Plate 40, figs 3-4)

Monochamus fasciatus Montrouzier, 1855: 63 (Woodlark).

Monochamus captiosus Pascoe, 1866: 298 (Manokwari) syn. in Breuning 1944: 480.

Monochamus uraeus Pascoe, 1866: 300 (Misool)

syn. nov.

Dihammus fasciatus aurivarius Gressitt, 1952: 48 (Maffin Bay) **syn. nov.**

Material: 1♂, West Papua, Bird's Neck, 7 km NW from Kaimana, 70 m, primeval lowland forest, mountain slope on limestone, 5.IX.2010, leg. M. Kalniņš; 1♂, ditto, 40 km E from Kaimana, Triton Bay, Lobo vill. env., 130-140 m, primeval rainforest on limestone and clearing, 15.IX.2010, leg. D. Telnov; 1♀, ditto, Malaise trap, 15-17.IX.2010, leg. D. Telnov; 1♀, Raja Ampat, Misool Utara distr., Misool SW, Aduwey (= Adua), valley of river Hakau, ~5 km NNE, primeval moist lowland forest, beaten, 26.III.2009, leg. D. Telnov & K. Greķe; 1♂, ditto, ~3-5 km NNW, primeval lowland mountain forest, beaten 29.III.2009, leg. D. Telnov & K. Greķe; 1♀, ditto, ~4 km NNW, primeval lowland forest, Malaise trap near big rotten fallen tree, 25-31.III.2009, leg. D. Telnov.

Taxonomic and faunistic remarks: This species is commonly widespread in Caroline, Aru, New Guinea, New Britain, Duke of York, Woodlark,

Solomon Is., Vanuatu, Tokelau, Samoa, and North Australia (Vitali, Casadio 2006). Apparently, it has never been recorded from Misool. Actually, Pascoe (1866) described from this small island *Monochamus uraeus*, which Breuning (1944) synonymized with *Acalolepta antenor* (Newman, 1842).

Acalolepta antenor and *A. fasciata* are apparently closely related species, the former being described from Luzon, the latter from Woodlark. Both original descriptions are cryptic, but Breuning discriminated these species on the basis of only one character: the elytral apex obliquely (*A. antenor*) or rightly (*A. fasciata*) truncated. Accordingly, he synonymized many species afterwards described without minimally considering that these species belonged to two different geographic regions.

Actually, this character is completely specious: by examining even short series of *A. fasciata* coming from the same localities of continental Papua, its variability is easily observable. Consequently, all records concerning both species after Breuning are extremely doubtful.

By examining typical specimens from the Philippines and Papua, these species are easier to distinguish through their pubescence: golden, extremely bright, forming dark patches more or less united in irregular longitudinal bands (*A. fasciata*), or much less bright, greenish, forming vague pattern (*A. antenor*). Additionally, the basal swelling of the pronotum is longitudinal in *A. fasciata* and rounded in *A. antenor* as Gressitt (1952) noticed.

The check of the types is beyond the purpose of this paper, but the simple examination of the original descriptions allows establishing some points.

Monochamus acanthias Pascoe, 1875 from New South Wales seems a synonym neither of *A. fasciata* (Breuning, 1944) nor of *A. fasciata aurivaria* (Vitali, Casadio 2006). In fact, Pascoe (1875) strongly insisted on the presence of twelve antennomeres, a character never observed in such species. Moreover, according to the author, this species is larger (12 lines = 24 mm long), with antennae more than twice as long as the body (3 times as long in *A. fasciata*) and similar to *A. solata* (Pascoe, 1866).

Ignoring Vitali & Casadio (2006), Vives et al. (2008) keep using *A. fasciata fasciata*. The taxonomic status of a form with long elytral spines is not proved yet; according to Breuning (1944) it is only an individual variation without importance. The existence of another subspecies will be necessarily verified by comparing with specimens



from Woodlark since the type of *Monochamus fasciatus* is lost (Drumont, pers. comm.).

However, *A. fasciata aurivaria* from West Papua cannot be used anyway since isotopotypical West Papuan specimens have been already described as *Monochamus captiosus*. Consequently, this subspecies is removed from the synonymy with *A. acanthias* and is considered to be a junior synonym (syn. nov.) of *M. captiosus*.

The specimens collected, whose agrees in all morphological features to *A. fasciata*, prove that Misool, located close to West Papua, is logically inhabited by such species and not by *A. antenor*. Consequently, *Monochamus uraeus* is removed from the synonymy with *A. antenor* and considered as a synonym (syn. nov.) of *M. captiosus*.

Moreover, by considering the close faunistic relationship between the Philippines and the Caroline Islands (due to direct oceanic currents) and the fact that Blair (1940) considered *A. fasciata* as a synonym of *A. antenor*, the species introduced to the Caroline might be *A. antenor* rather than *A. fasciata*.

In conclusion, it seems that most of Pascoe's synonymized species should be referred to *A. fasciata* (which may be present in all the Moluccas and on Sulawesi), while *A. antenor* should be considered as a Philippine endemic.

Remarks to species' biology: Australian authors (Webb 1987; Webb et al. 1988, Hockey, De Baar 1988) quoted *Ficus* sp. and *F. watkinsiana* Bailey for both *A. fasciata* and *A. acanthias*. According to Hawkeswood (1990), these plants are the preferred hosts in natural plant communities. Later, Hawkeswood & Dauber (2003) reared this species in Papua New Guinea from dead fallen logs of *Hevea brasiliensis* Willd. Further data concerning *Artocarpus altilis* (Parkinson) Fosberg derive from observations on specimens from the Caroline Islands (Gressitt 1956), which also subsequent authors mentioned (Duffy 1963; Hinckley 1969; Hawkeswood 1990; Hawkeswood & Dauber 2003; Vitali & Casadio 2006). Nonetheless, they are questionable and maybe related to *A. antenor*.

The collected specimens add new biological data. The locality near Kaimana lies on the slope of a ~300-400 m limestone anticline at the edge of a primeval lowland dipterocarp rainforest. The specimen was beaten from branches of *Terminalia* sp. in daytime. The collecting locality near Lobo village (Plate 41, fig. 4) is a fresh clearing converting the primeval lowland dipterocarp rainforest into gardens. This site is now very open and sun exposed, with a relatively dry and therefore

hot microclimate. The specimens were observed on fading branches of fallen trees. In Misool, the specimens were collected in a river valley inside of a dense shady and very moist primeval lowland dipterocarp rainforest (Plate 42, figs 1-3). They were beaten along the riverside from freshly fallen, smelling and fading branches of various trees, including *Anisoptera* sp., *Artocarpus* sp., *Ficus* sp., and *Terminalia* sp.

According to these data, *A. fasciata* seems to be connected with *Terminalia*, a host that has never been recorded for this species. Moreover, the collecting localities indicate that *A. fasciata* is related to the primeval lowland forest.

***Acalolepta producta* (Pascoe, 1866)** (Plate 40, figs 5-6)

Material: 1♂, Indonesia E, Maluku Tengah prov., Seram N, Seram Utara distr., trans-Seram road between Masohi and Sawai, between Makariki and Horale (former Saka), 13 km SW from Horale vill., river valley, shrubs, gardens and secondary lowland forest, UV light, 5-6.IV.2009, leg. D.Telnov & K.Greke; 1♀, ditto, beaten, 5-6.IV, leg. D.Telnov & K.Greke; 2♂, ditto, edge of secondary lowland forest, white light, 7.IV.2009, leg. D.Telnov & K.Greke; 3♂, ditto, secondary lowland forest, on branches, 8.IV.2009, leg. D.Telnov & K.Greke; 1♂, Indonesia E, Maluku Tengah prov., Lease Is., Saparua, ~2.5 km E from kota Saparua, young shrubs and clearing in secondary forest, beaten from thin branches, 12.IV.2009, leg. D.Telnov & K.Greke.

Taxonomic and faunistic remarks: This species, originally described from Buru, was recorded from Ambon and Watoebela as well (Breuning 1944). It is therefore new from Saparua and Seram.

A. producta is relatively well characterised among its congeners by the elytra obliquely sub-truncated, covered with brown pubescence and glabrous or sub-glabrous spots. Actually, such spots are small areas of thinner pubescence having tendency to fall. Male pygidium is covered with dense recumbent yellow setae.

Breuning (1944) also provided a size range of 20-30 mm, but the collected specimens vary between 19 and 33 mm.

Acalolepta rotundipennis (Breuning, 1942), endemic from the neighbouring island Bandaneira, differs from this species only in the rounded elytral apex. Possibly, it is about a subspecies or a synonym of the previous.

In all likelihood, some past authors identified *A. producta* with different names. Pascoe (1866) quoted *A. rusticatrix* (Fabricius, 1801) from Buru



and Makian (and even Australia), while this species seems widespread along the Sunda Islands, without surpassing Timor eastwards (Hüdepohl 1988). The characters that this author provided in order to differentiate both species are vague and relative, while typical characters of *rusticatrix* (whitish scutellum and sutural pattern, tubercle of male tibiae) are not mentioned. Moreover, it seems that Breuning (1944) identified specimens of *A. producta* from Seram as *Dihammus hepaticus* (Pascoe, 1866). In fact, Breuning's description of this Bacan endemic does not correspond to the original description; it is equivocal and applicable to *A. producta* too. Finally, Breuning (1970) described *Acalolepta buruana* (Buru island, Central Moluccas) using characters (size, elytral apex and pattern, typical locality) perfectly corresponding to *A. producta*.

Remarks to species' biology: No bibliographic data are available for this species.

The collected specimens seem to indicate a species with a fairly wide ecological spectrum, which manages to survive in secondary forests or anthropized habitats. In fact, they were collected in secondary lowland and lower mountain rainforests and even in gardens. In Seram, this species has been beaten from thin branches of shrubs and young trees on roadsides or along riverbanks (Plate 41, figs 3-6). The collecting localities are often partially or completely sun exposed, with relatively dry and therefore hot microclimate. Some specimens were also attracted both to UV and white light.

***Acalolepta solata* (Pascoe, 1866)** (Plate 40, figs 7-8)

Material: 1♂, Indonesia E, North Moluccas, Halmahera Tengah (Central), Weda Selatan distr., Loleo vill. env., 8 km SW from Tilope vill., secondary lowland forest, beaten from freshly cut branches, 10.IX.2007, leg. D.Telnov & K.Greke; 1♀, ditto, 18 km SW from Tilope vill., edge of primary lowland forest, beaten from partly dry branches, 16.IX.2007, leg. D.Telnov & K.Greke; 1♂, Halmahera NE, Loloda Utara near Posi Posi vill., secondary rainforest, 26-28.IV.2009, leg. L.Wagner; 2♂, 2♀, Halmahera Utara, Galela region along the road between Paca and Soasio, secondary forest, XI.2009-III.2010, leg. S.S.Negara.

Taxonomic and faunistic remarks: Breuning (1943) erroneously synonymized this endemic North Moluccan species with *A. convexa* (Pascoe, 1866) from Kei Islands (Vitali 2010).

Remarks to species' biology: No bibliographic data concerning this species are available.

This species has been observed both in primeval and secondary lowland rainforests (Plate 42, figs 3-6, plate 4, fig. 1). All specimens were collected in sun exposed localities from green to partially dry branches of various shrubs and young trees in daytime.

***Acalolepta* cf. *ternatensis* (Breuning, 1936)** (Plate 40, fig. 9)

Material: 1♂, E Indonesia, North Moluccas, Halmahera Tengah (Central), Weda Selatan distr., 10 km W from Wairoro vill. env., Gunung Benteng Mt. ridge, 450 m, primary rainforest, beaten, 19.IX.2007, leg. D.Telnov & K.Greke.

Taxonomic and faunistic remarks: The identification of collected specimen with this species is not completely certain, since the body length is 20 mm (rather than 12 mm by the holotype) and the male antennae are twice as long as the body (rather than 1.75 by the holotype). This fact might depend on the size; however, *A. ternatensis* is the only species from the Moluccas that seems to correspond to this specimen in all other features: small size, kind of pubescence, head squared, vertex unpunctuated, scape narrow basally and enlarged apically, elytra apically rounded. Additionally, it has been described from the neighbouring Ternate. Moreover, Makihara & Woro Noerdjito (2004) recorded and figured a specimen of *A. ternatensis* identified by D.F.Gilmour. This beetle, 17.4 mm long and apparently coming from Java, is identical to the one mentioned in this paper.

Remarks to species' biology: No bibliographic data are available for this species.

The collected specimen comes from a little garden inside of a pristine lowland dipterocarp rainforest in the river valley. It was beaten from green branches of a young undetermined tree during the heavy morning rain.

***Acalolepta tincturata* (Pascoe, 1866)** (Plate 40, figs 10-11)

Material: 1♀, West Papua, Bird's Neck, 40 km E from Kaimana, Triton Bay, Kamaka (formerly Warika) vill. env., 100 m, gardens and second rainforest on limestone, 10.IX.2010, leg. M.Kalniņš; 1♂, ditto, 47 km E, 50-130 m, second rainforest on limestone and clearing, 10.IX.2010, leg. D.Telnov; 1♀, ditto, 40 km E from Kaimana, Triton Bay, Lobo vill. env., 200-300 m, primeval rainforest on limestone and clearing, 15-17.IX.2010, leg. D.Telnov; 1♂, ditto, 47 km E, 50-130 m, secondary and primeval rainforest on limestone and clearing, Malaise trap, 11-17.IX.2010, leg. D.Telnov; 1♂, 1♀, Raja Ampat, Misool



Utara distr., Misool SW, Aduwey (= Adua), valley of river Hakau, 2-5 km NNW, primeval lowland forest, beaten from fresh fallen branches, 3.III.2009, leg. D.Telnov & K.Greke.

Taxonomic and faunistic remarks: This species is widely distributed throughout New Guinea and Aru Islands (Breuning 1944). Though described from the near island of Waigeo, it has never been recorded from Misool.

Breuning provided a size range of 20-26 mm, but one of the collected specimens reach 27 mm.

Remarks to species' biology: According to Hawkeswood (1990), the larva is largely polyphagous, attacking both coniferous (*Pinus patula* Schiede ex Schltl. & Cham, *Araucaria cunninghamii* Aiton ex D.Don) and broad-leaves trees (*Ficus* sp., *Anisoptera polyandra* Bl.), some of them also introduced (*Hevea brasiliensis* Willd. ex Juss., *Spathodea campanulata* Beauv., *Plumeria acutifolia* Poir.). The adults are nocturnal and attracted by houselights; nonetheless, they can also be found during daytime on fallen logs.

The collected specimens, found in various kinds of habitats, confirm the wide ecological spectrum of this species. The locality near Warika is on the edge of a very humid secondary or primeval dipterocarp lowland rainforest between Triton Bay and Lake Kamakawalar (Plate 41, figs 5-6, plate 4, fig. 2). Specimens were beaten from green to partially faded branches of various trees including *Ficus* sp. and *Terminalia* sp.

The locality near Lobo village is a fresh clearing converting the primeval lowland dipterocarp rainforest into gardens (Plate 41, fig. 4). This site is now very open and sun exposed with a relatively dry and therefore hot microclimate. The specimens

were observed on fading branches of fallen trees. The Malaise trap was installed in an open and sunny place near a recently fallen tree.

In Misool, the specimens were collected in the morning in a river valley inside of a dense shady and very moist primeval lowland dipterocarp rainforest (Plate 42, figs 1-3). They were beaten along the riverside from freshly fallen smelling and fading branches of various trees, including *Anisoptera* sp., *Artocarpus* sp., *Ficus* sp., and *Terminalia* sp.

***Acalolepta variolaris* (Pascoe, 1866)** (Plate 40-, fig. 12)

Material: 1♂, West Papua, Bird's Neck, 7-9 km NW from Kaimana, 70 m, primeval lowland forest, mountain slope on limestone, 5.IX.2010, leg. M.Kalniņš; 1♂, Raja Ampat, Misool Utara distr., Misool SW, Aduwey (= Adua), valley of river Hakau, 2-5 km NNW, primeval lowland forest, beaten from trees and shrubs, 25-27.III.2009, leg. D.Telnov & K.Greke.

Taxonomic and faunistic remarks: The island of Misool, together with Dorey (now Manokwari), are the typical localities of this species. According to Breuning (1944), *A. variolaris* is widely distributed throughout New Guinea and in New Ireland.

Remarks to species' biology: No bibliographic data are available for this species.

The collecting near Kaimana lies on the slope of a ~300-400 m high limestone anticline at the edge of a primeval lowland dipterocarp rainforest (Plate 43, fig 2). The specimen was beaten from a green young unidentified tree in a partially shady place of the forest.

Provisional key to the *Acalolepta* from the Moluccas

In order to facilitate the task of identifying and recording further *Acalolepta*-species in the Moluccas, a key to the ones rightly or erroneous recorded from this area is proposed below. The typical locality is mentioned firstly followed by a semicolon. The new records are marked by an asterisk (*) and the questionable localities by a question mark.

- 1 Elytral apex spined or toothed 2
- Elytral apex mutic 7
- 2 Antennomeres I-III and base of tibiae with black spots, 26-44 mm (Carteret; Aru, Kei; widely distributed in Papuan region) *A. australis* (Boisduval, 1832)
- Antennomeres I-III and tibiae with uniform pubescence, size medially smaller 3
- 3 Elytra with opaque yellowish-brown spotted pattern 4
- Elytra with dense pubescence giving strong reflection and pattern varying according to the light 5



- 4 Elytral spine long. Antennae 2 times as long as body in ♂, 1.75 times as long as body in ♀, 23-30 mm (Bacan, Halmahera, Makian) *A. solata* (Pascoe, 1866)
 – Elytral spine short. Antennae 3 times as long as body in ♂, 2 times as long as body in ♀, 24 mm (Kei)
 *A. convexa* (Pascoe, 1866)
- 5 Size medially larger (18-30 mm). Elytral apex oblique, armed with a minute spine or none (Aru; Buru, Seram, Ternate, Timorlaut, Watubela) *A. magnetica* (Pascoe, 1866)
 – Size medially smaller (12-22 mm). Elytral spines long 6
- 6 Pubescence golden, extremely bright, forming dark patches more or less united in irregular longitudinal bands. Pronotal basal swelling elongated, 12-22 mm (Woodlark; Aru, Misool*; widely distributed in Papuan region)
 *A. fasciata* (Montrouzier, 1855)
 – Pubescence much less bright, greenish, forming vague pattern. Pronotal basal swelling rounded, 13-22 mm (Philippines; Caroline?, Bacan?, Buru?, Halmahera?, Kei?, Salawati?, Sulawesi?) ... *A. antenor* (Newman, 1842)
- 7 Elytra grey with a dark premedian band, 20-27 mm (Waigeo; Aru, Misool*, New Guinea)
 *A. tinctorata* (Pascoe, 1866)
 – Elytra without such premedian band 8
- 8 Elytra with uniform pubescence 9
 – Elytra with not uniform pubescence 10
- 9 Elytral apex obliquely truncated. Pubescence yellowish grey, 26 mm (Kei) *A. itzingeri* (Breuning, 1935)
 – Elytral apex nearly rounded. Pubescence brownish yellow, 18 mm (Buru) *A. buruensis* (Breuning, 1935)
- 10 Elytra with moderately dense, nearly opaque pubescence 11
 – Elytra with dense golden pubescence giving strong reflection and pattern varying according to the light 14
- 11 Elytra brown with two transversal grey bands united along the suture. Scutellum whitish. Male tibia with apical tubercle, 15-29 mm (Sumatra; Buru?, Makian?; from India to Timor) *A. rusticatrix* (Fabricius, 1801)
 – Different set of characters 12
- 12 Scape with obsolete cicatrix. Elytra with greyish pubescence mottled with pale reddish brown, 18 mm (Bacan; Seram?) *A. hepatica* (Pascoe, 1866)
 – Scape with opened cicatrix. Elytra with brown pubescence mottled with glabrous or sub-glabrous spots 13
- 13 Elytral apex rounded. Size unknown (Bandaneira) *A. rotundipennis* (Breuning, 1942)
 – Elytral apex sub-truncated, 19-33 mm (Buru; Ambon, Saparua*, Seram*, Watoebela)
 *A. producta* (Pascoe, 1866)
 – Indistinguishable from the previous in the description, 22-25 mm (Buru) *A. buruana* Breuning, 1970
- 14 Pubescence grey-yellow. Scape thin, 18-20 mm (Aru) *A. litigiosa* (Pascoe, 1866)
 – Pubescence brown. Scape apically large or enlarged 15
- 15 Forehead higher than wide, 25 mm (Sulawesi; Seram) *A. celebensis* (Breuning, 1935)
 – Forehead squared or transverse 16
- 16 Body comparatively smaller 12 mm (Ternate; Halmahera*, Java?) *A. ternatensis* (Breuning, 1936)
 – Body comparatively arger 27 mm (Tanimbar) *A. similis* (Breuning, 1938)

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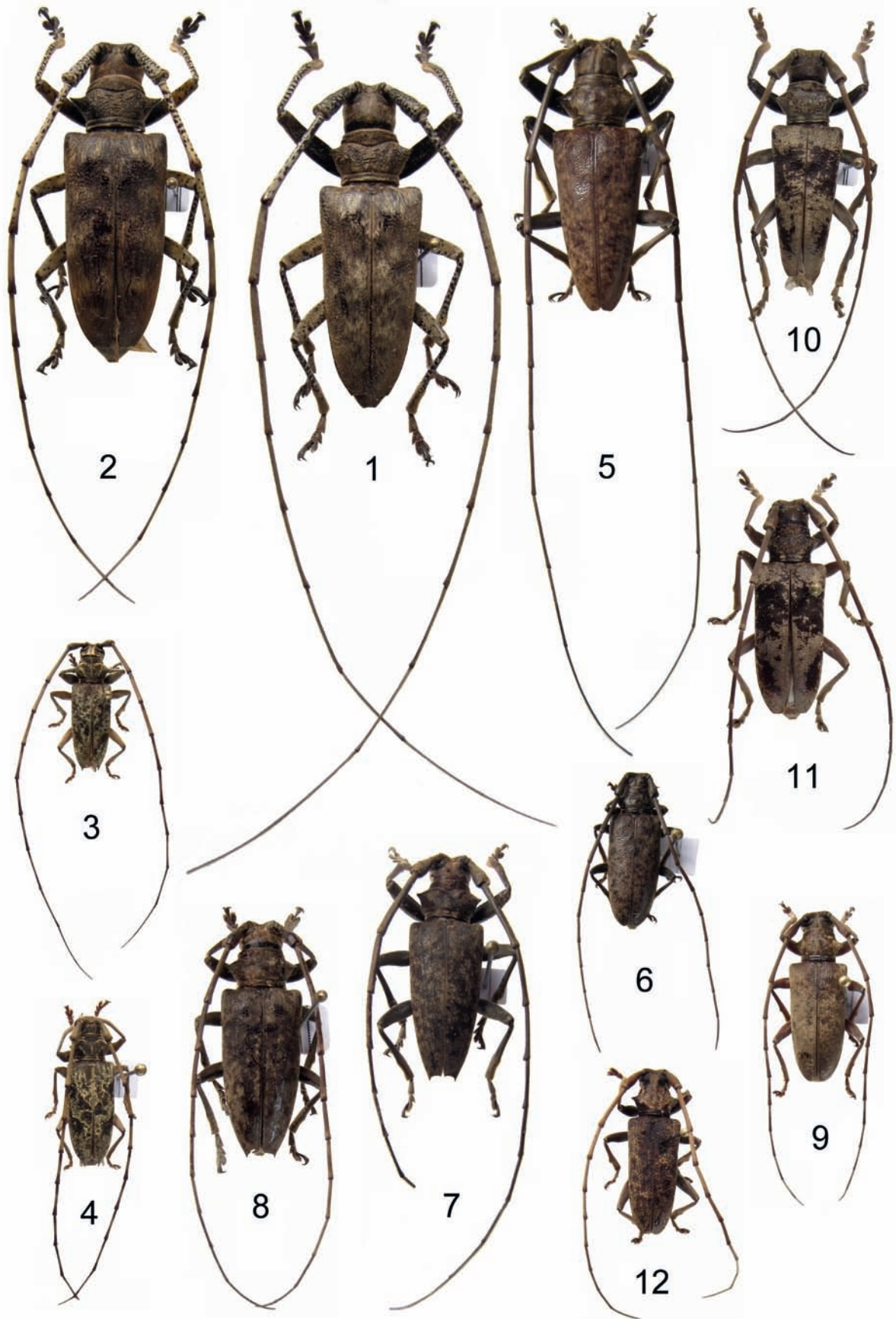
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Plate 40

VITALI F.: Notes on the genus *Acalolepta* Pascoe, 1858 from Indonesian Papua and the Moluccas



Figures 1-12. *Acalolepta* spp. (dorsal view).

1: *A. australis australis* (Boisduval, 1835) ♂; 2: ditto ♀; 3: *A. fasciata* (Montrouzier, 1855) ♂; 4: ditto ♀; 5: *A. producta* (Pascoe, 1866) ♂; 6: ditto ♀; 7: *A. solata* (Pascoe, 1866) ♂; 8: ditto ♀; 9: *A. cf. ternatensis* (Breuning, 1936) ♂; 10: *A. tincturata* (Pascoe, 1866) ♂; 11: ditto ♀; 12: *A. variolaris* (Pascoe, 1866) ♂.

Plate 41

VITALI F.: Notes on the genus *Acalolepta* Pascoe, 1858 from Indonesian Papua and the Moluccas



Figure 1. West Papua, Triton Bay, panoramic view of Lobo village with Mt. Lecyansir in background (photo: D.Telnov). Green arrow indicates sampling site.



Figure 2. West Papua, Triton Bay, Lobo village, valley stream on Mt. Lecyansir (photo: D.Telnov).



Figure 3. Midday fog moving from Mt. Lecyansir down to Lobo village, Triton Bay (photo: D.Telnov).



Figure 4. Small recent clearing established for a garden in primeval lowland rainforest in River Lengguru valley near Lobo (photo: M.Kalniņš).



Figure 5. Coastal view in Triton Bay near Warika village in southern Bird's Neck, Indonesian Papua (photo: D.Telnov).



Figure 6. Small gardens and clearings around Warika village in Triton Bay, from where several *Acalolepta* specimens were recorded (photo: D.Telnov).

Plate 42

VITALI F.: Notes on the genus *Acalolepta* Pascoe, 1858 from Indonesian Papua and the Moluccas



Figure 1. Primeval lowland dipterocarp rainforest in Hakau River valley near Aduway village, Misool (photo: D.Telnov).



Figure 2. *Acalolepta* specimens were observed on green riverside vegetation in Hakau River valley, Misool (photo: M.Kalniņš).



Figure 3. Primeval lowland dipterocarp rainforest in Hakau River valley near Aduway village, Misool (photo: D.Telnov), where *Acalolepta* specimens were observed.

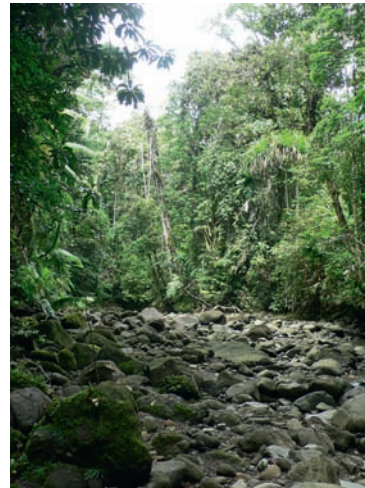


Figure 4. Dry riverbed on Benteng Ridge, South Halmahera (photo: D.Telnov). *Acalolepta* specimens could be observed on dry branches of trees along this river.



Figure 5. Primeval lowland dipterocarp rainforest on Benteng Ridge, South Halmahera (photo: D.Telnov).



Figure 6. Riverside clearing & garden surrounded by primeval rainforest of Benteng Ridge, South Halmahera, is an ideal spot for observing *Acalolepta* (photo: K.Greke).

Plate 43

VITALI F.: Notes on the genus *Acalolepta* Pascoe, 1858 from Indonesian Papua and the Moluccas



Figure 1. Primeval lowland rainforest in Oham area with new road under construction, South Halmahera (photo: D.Telnov).



Figure 2. Several *Acalolepta* specimens observed near Lake Kamakawalar on southern Bird's Neck of Indonesian Papua (photo: D.Telnov).



Figure 3. Lower bog near Horale village on north coast of Seram (photo: D.Telnov).



Figure 4. *Acalolepta* collecting locality in riverbed in Central Seram (photo: M.Kalniņš).



Figure 5. Midday rain cloud is moving down from Manusela Ridge in Central Seram (photo: D.Telnov).



Figure 6. Sampling spot for *Acalolepta* in primeval rainforests of Manusela Ridge, Central Seram (photo: D.Telnov).