

New species of the genera *Lebia* Latreille and *Aristolebia* Bates from Indonesia (Coleoptera: Carabidae: Lebiini)¹

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Abstract

A new species of the *Lebia karenia*-group sensu BAEHR and three new species of the genus *Aristolebia* Bates are described from Indonesia: *Lebia halmaherae* n. sp. from Halmahera, *Aristolebia apicalis* n. sp. from Sumatra, and *A. oculata* n. sp. and *A. triramosa* n. sp. from Sulawesi. *Lebia halmaherae* shows strong affinities to *L. darlingtoniana* Baehr from New Guinea and Sulawesi concerning body shape, colour pattern of pronotum and elytra, and structure of the aedeagus. The new species of *Aristolebia* belong to the *mucronata*-group which includes large species with conspicuously patterned elytra. *Lebia halmaherae* is added to a revised key to the Australian and Papuan species of the *Lebia karenia*-group. For the genus *Aristolebia* a key to all described species is provided.

Key words: Coleoptera, Carabidae, *Lebia*, *Aristolebia*, new species, Indonesia.

Zusammenfassung

Eine neue Art aus der *Lebia karenia*-Gruppe sensu BAEHR und drei neue Arten der Gattung *Aristolebia* Bates aus Indonesien werden beschrieben: *Lebia halmaherae* n. sp. von Halmahera, *Aristolebia apicalis* n. sp. von Sumatra, und *A. oculata* n. sp. und *A. triramosa* n. sp. von Sulawesi. In Körperform, Färbung und Zeichnung von Pronotum und Elytren, sowie im Bau des Aedeagus ist *Lebia halmaherae* der *L. darlingtoniana* Baehr von Neuguinea und Sulawesi am ähnlichsten. Die neuen *Aristolebia*-Arten gehören zur *mucronata*-Untergruppe, welche große Arten mit auffällig gemusterten Elytren enthält. *Lebia halmaherae* wird in einen revidierten Bestimmungsschlüssel der *Lebia karenia*-Gruppe der Papua-Australischen Region eingefügt. Für die Gattung *Aristolebia* wird ein Schlüssel für alle beschriebenen Arten vorgelegt.

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1 Introduction

Several species new to science were found among samples of unidentified Indonesian carabid material, which I recently received for identification from NHM, SMNS, A. WEIGEL (Pössneck), and R. GERSTMEIER (Munich). It includes a new species of the genus *Lebia* Latreille, 1802 from Halmahera, Moluccas, and three new species of the genus *Aristolebia* Bates, 1892 from Sumatra and Sulawesi. The new species of *Lebia* belongs to the *L. karenia*-group in the sense of BAEHR (2004a); it shows strong affinities to *L. darlingtoniana* Baehr, 2004 from New Guinea. The

three new species of *Aristolebia* are large, conspicuously patterned species and belong to the *mucronata*-group in the sense of BAEHR (2004b).

The *karenia*-group of the huge carabid genus *Lebia* (s.l.) includes comparatively large species that are mainly characterized, apart from their body size, by the conspicuous cruciate or quadrimaculate colour pattern of their elytra. The species of this group are widely distributed in the Oriental region, but also occur in the Australian-Papuan region. Five species from the latter area were recently described: *L. darlingtoniana* Baehr, 2004 from New Guinea and Sulawesi, *L. fallaciosa* Baehr, 2004 from

¹ 3rd supplement to "The genus *Lebia* Latreille in the Australian-Papuan Region".

New Guinea, *L. brisbanensis* Baehr, 2004 from southeastern Queensland, Australia, *L. weigeli* Baehr, 2005 from New Britain, and *L. edentata* Baehr, 2007 from northern Queensland, Australia (BAEHR 2004a, 2005, 2007). These five species are very similar in their external morphology (size, shape, colour pattern, surface microsculpture), but the morphology of their aedeagi is quite different, and characteristic for each species: while in *L. darlingtoniana* and *L. brisbanensis* the internal sac bears a remarkably denticulate sclerite with a different shape, *L. fallaciosa*, *L. weigeli*, and *L. edentata* lack heavily sclerotized parts in the internal sac of the aedeagus.

The six formerly recorded species of the characteristically shaped lebiine genus *Aristolebia* are distributed from southern India to China and the Philippines, and also from New Guinea to northern Australia (CSIKI 1933, JEDLICKA 1963, DARLINGTON 1968, MOORE et al. 1987, LORENZ 1998, 2005). According to DARLINGTON (1968) one species probably also occurs on or near Sulawesi. More recently, BAEHR (2004b) described an additional species from Thailand and transferred the Australian *Sarothrocrepis mucronata* Sloane, 1907 from the tribe Cyclosomini to the lebiine genus *Aristolebia*. Furthermore he confirmed that *S. mucronata* is conspecific with *Aristolebia papua* Darlington, 1968 which was described from New Guinea, but also occurs in northern and north-eastern Australia.

The main differentiating characters of the genus *Aristolebia* include the angulate external angles of the elytra, the concave excision of the elytral apex, the semicircular pronotum, the presence of two preapical excisions at the inner surface of the mesotibia in males, apparently also the odd-shaped aedeagus and the likewise odd-shaped and very large genital ring, and the wide, more or less triangular, aseptose gonocoxite 2 of the female. In many other characters, *Aristolebia* is similar to the large genus *Lebia* sensu lato with which *Aristolebia* is most probably closely related.

Most species of both genera from the Australian-Papuan region are available in small numbers or even as single specimens only, a fact which is most probably caused by inadequate sampling methods. However, using suitable sampling methods (e. g. fogging leaves, twigs, trunks, or the canopy of rain forest trees, or light sampling in higher strata of tropical forests), certain species of the genus *Lebia* can be collected in large numbers. This was exemplified by two species, *L. papuella*, Darlington 1968 and *L. gemina* Baehr, 2004, which were collected in New Guinea during the fogging and light trapping program carried out by O. MISSA in Papua New Guinea in the nineties of last century (BAEHR 2004a), as well as by large numbers of *L. australica* Baehr, 2004, recently sampled by the fogging activities of G. MONTEITH in open and closed forests in north-eastern Australia. Thus, application of these sampling methods in rain forests of southern Asia could probably reveal additional species and more satisfactory material of described species.

Even less is known of the habits of the species of *Aristolebia*, and this deficit may account for the very small numbers of specimens available for the described species.

The new species which are described in the present paper are known only from one or two specimens each. However, as one of the *Lebia* specimens is a male and because male genitalia are highly characteristic in almost all examined Australian-Papuan species of this genus, the species is described on the basis of these few specimens. The same applies to the three new species of *Aristolebia* considering the very characteristic colour patterns of the elytra, additional to some other external characteristics.

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2 Methods

Methods of measurements, dissection, descriptions, and photographs follow BAEHR (2004a, b). The body length was measured from apex of labrum to apex of elytra including any spines. The length of the pronotum was measured along midline.

The type material of the newly described species is stored in the following institutions:

CBM/ZSM	Working collection of MARTIN BAEHR, Zoologische Staatssammlung, Munich
NHM	The Natural History Museum, London
SMNS	Staatliches Museum für Naturkunde, Stuttgart

3 Descriptions of new species

3.1 *Lebia halmaherae* n. sp. (Figs. 1, 5)

H o l o t y p e (♂): Indonesia, Halmahera S, 2–3 km N Dolik, Dolik river, 0°16'49"N 127°42'40"E, 18.I.2006, leg. A. WEIGEL, "plantage + ÜWS" (CBM/ZSM).

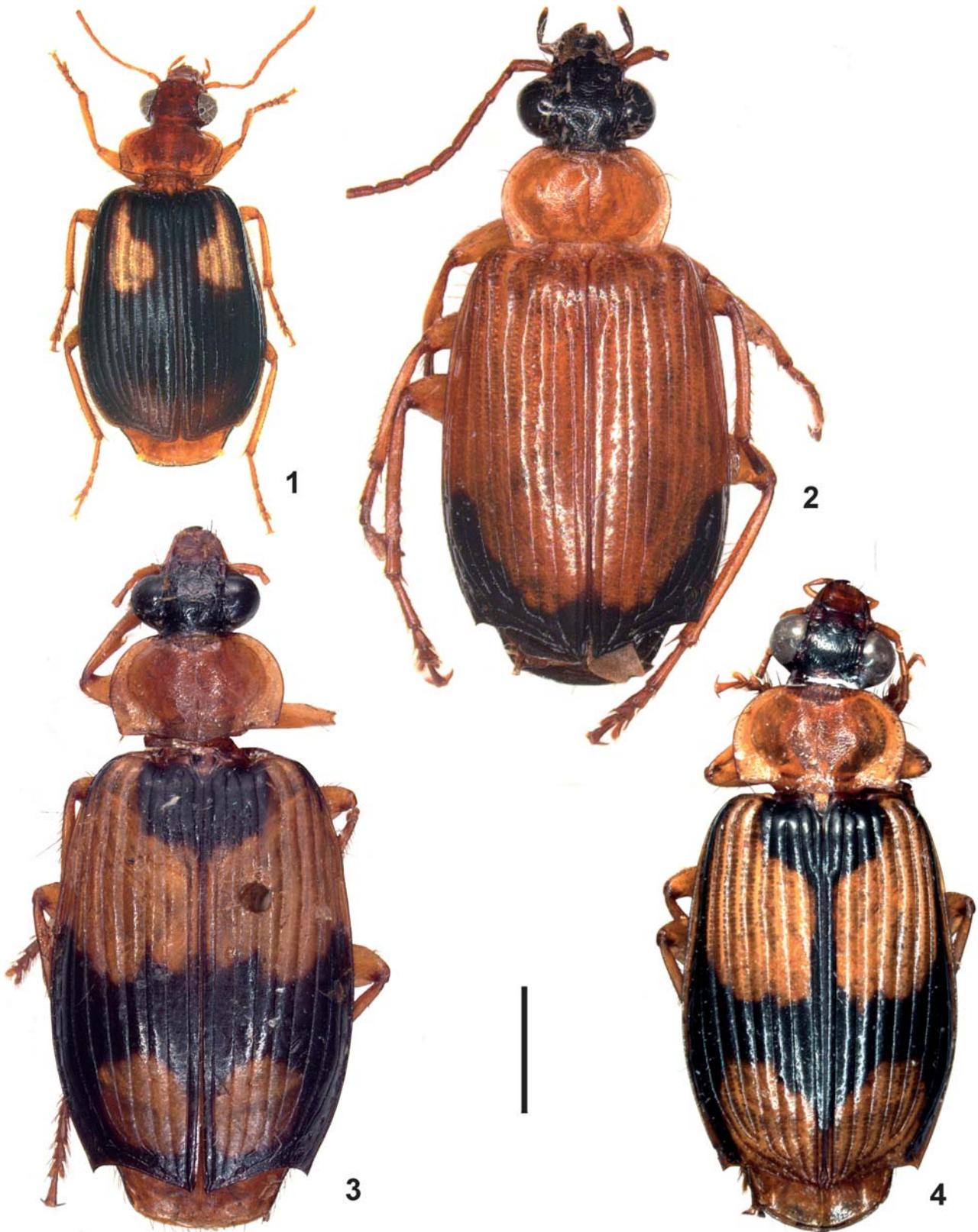
P a r a t y p e (1 ♀): Indonesia, Maluku, Halmahera Island, Tobelo, Mamuya, 20–500 m, 12.XI.1999, leg. A. RIEDEL (SMNS).

Etymology

The species name refers to the known distribution range of the new species, the island of Halmahera.

Diagnosis

A moderately large species with a dark, cruciate elytral pattern that leaves a distinct, elongate humeral-subhumeral spot yellow, and a vague, oblique preapical spot reddish. The new species is distinguished from other Australian-Papuan species of the *Lebia karenia*-group (except for *L. darlingtoniana* Baehr and *L. brisbanensis*



Figs. 1–4. *Lebia* and *Aristolebia* spp., habitus. – 1. *Lebia halmaherae* n. sp. 2. *Aristolebia apicalis* n. sp. 3. *A. oculata* n. sp. 4. *A. tri-ramosa* n. sp. – Scale bar: 2 mm.

Baehr) by the presence of a denticulate sclerite in the internal sac of the aedeagus. It is distinguished from *L. darlingtoniana* and *L. brisbanensis* by different, less extensively light elytral pattern, and by less widened aedeagus, differently shaped apex, and slightly different shape of the denticulate sclerite in the internal sac.

For further distinction see the key to the species of the *Lebia karenia*-group (chapter 4).

Description

Measurements and ratios. Body length: 5.9–6.1 mm; body width: 2.70–2.75 mm. Width/length of pronotum: 1.52–1.53; width of pronotum/width of head: 1.18–1.19; length/width of elytra: 1.42–1.44; width of elytra/width of pronotum: 1.78–1.80.

Colouration (Fig. 1). Head (including mouth parts) and pronotum reddish, the explanate lateral margins of pronotum and clypeus and labrum gradually changing to yellow. Elytra very dark piceous to almost black, with a distinct, elongate, yellow humeral spot which is covering the 5th and 6th intervals anteriorly and extending to the 3rd to 6th intervals posteriorly. Apex with a very vague, oblique, reddish preapical spot that leaves the extreme apex dark.

Lateral margin of the elytra narrowly yellow, marginal setae not encircled by yellow spots. Mouth parts, antenna, legs, and lower surface pale reddish.

Head. Size and shape average, narrower than pronotum. Eyes very large, semicircular. Antenna of moderate size, surpassing basal angles of pronotum by about two antennomeres, median antennomeres slightly <2 times as long as wide. Surface (except labrum which is finely microreticulate) without microreticulation, though with a few wrinkles near eyes and with very fine scattered punctures, distinctly glossy.

Pronotum. Moderately wide (in the *L. karenia*-group), widest at apical third. Apical angles widely rounded off, lateral margin convex anteriorly, oblique and straight in posterior half, slightly sinuate in front of the basal angles which are almost rectangular but slightly obtuse at tip. Base moderately produced in the middle, lateral excision deep, lateral parts of base transversal, very gently convex. Apex margined except in the middle, base coarsely margined, lateral margin explanate throughout, marginal channel wide, moderately deep. Surface with a distinct prebasal, transverse sulcus. Median line almost complete, well impressed. Anterior lateral seta located about

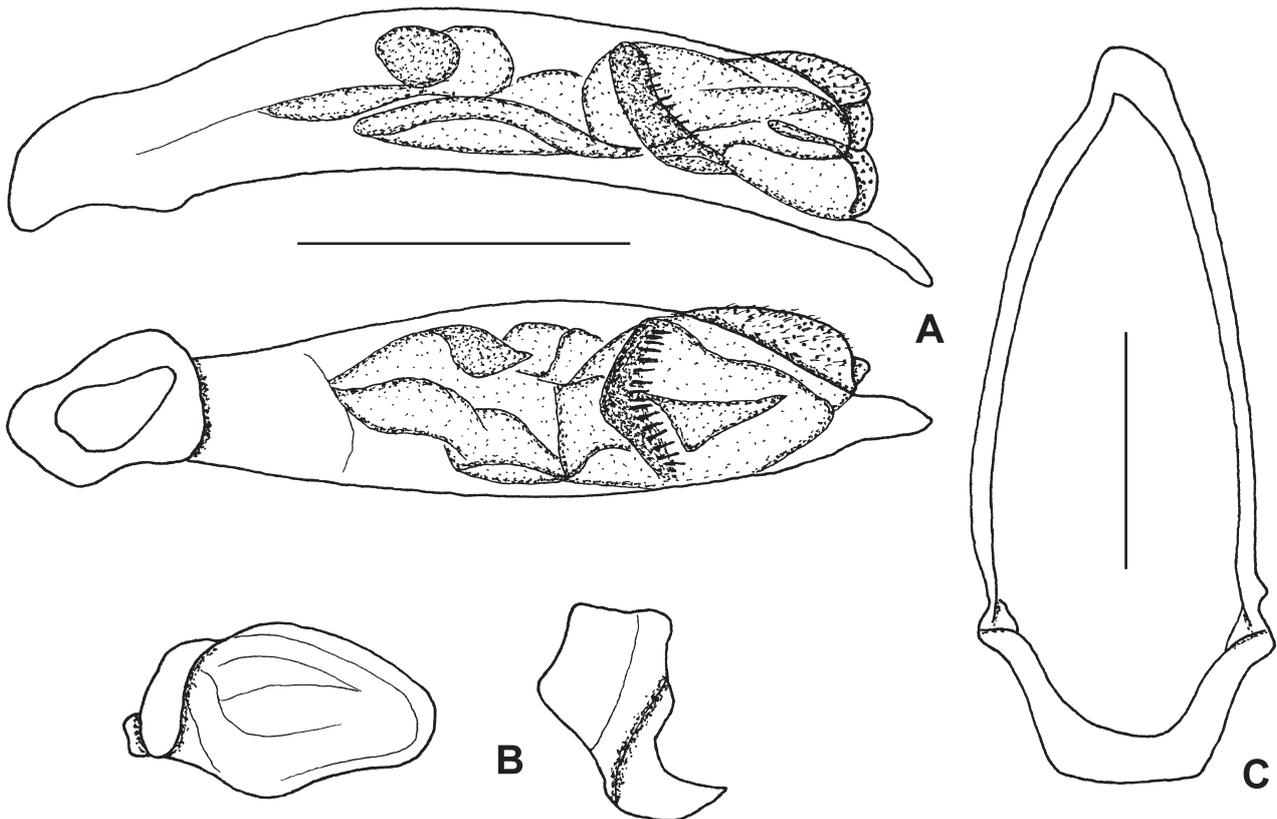


Fig. 5. *Lebia halmaherae* n. sp., male genitalia. – **A** Aedeagus, left side and lower surface. **B** Parameres. **C** Genital ring. – Scale bars: 0.5 mm.

at apical fourth, in front of widest diameter of pronotum. Posterior lateral seta located at basal angle. Surface with rather sparse, more or less superficial transverse wrinkles, with superficial microreticulation in the middle, and with very fine, scattered punctures, very glossy.

Elytra. Comparatively short, slightly oval-shaped, widest behind the middle. Humeri rounded, lateral margin obliquely convex, barely incised at basal third, apex oblique and barely sinuate, apical angles widely rounded, apical margin slightly incurved towards suture. Striae complete, deep, barely crenulate at bottom. Intervals convex throughout. 3rd interval bipunctate, punctures situated near 3rd stria. Series of marginal punctures not interrupted in the middle. Intervals with superficial, irregularly transverse microreticulation and fine, scattered punctures, very glossy. Posterior wings fully developed.

Lower surface. Metepisternum fairly elongate, about 1.7 times as long as wide. Abdomen punctate and pilose, pilosity slightly denser on terminal sternum. Terminal sternum 4-setose in both sexes.

Legs. Of moderate size. 4th tarsomeres very deeply excised. Tarsal claws with 4 elongate teeth.

Male genitalia (Fig. 5). Genital ring elongate, barely asymmetric, parallel, with rather wide, convex apex and elongate basis. Aedeagus moderately elongate, slightly widened in the middle, barely sinuate, lower surface very gently concave. Apex fairly elongate, depressed, straight, slightly arrow-shaped. Orificium moderately elongate. Folding of internal sac complex, at bottom with a characteristic, sinuate, densely denticulate sclerite which is bent upwards laterally on both sides. Also with a moderately sclerotized, not denticulate plate in the middle near roof of internal sac. Parameres of dissimilar shape, left paramere much larger than right one, with triangular, broadly rounded apex; right paramere very short, rhomboidal.

Female genitalia. Gonocoxites of typical *Lebia*-like shape: gonocoxite 2 short, rounded at apex, both gonocoxites lacking setae.

Variation. Apart from the slightly shorter and wider elytra in the female, very little variation noted.

Distribution

So far only recorded from Halmahera Island.

Collecting circumstances

Both specimens were apparently collected in lowland, the holotype in a plantation near a river.

Affinities

The new species is most similar to *L. darlingtoniana* Baehr from New Guinea and Sulawesi in body shape, colour pattern of elytra, and structure of its aedeagus. For the differences see couplet 10a in the key below (chapter 4).

3.2 *Aristolebia apicalis* n. sp.

(Figs. 2, 6)

H o l o t y p e (♀): Indonesia, N Sumatra, Siantar, 1.VII.1991, leg. DIEHL (SMNS).

P a r a t y p e (1 ♀): Indonesia, Nord-Sumatra, Umg. P.-Siantar, 1.-VII.91 [= 1.VII.1991], DIEHL (CBM/ZSM).

Etymology

The species name refers to the dark apical colour pattern of the elytra.

Diagnosis

Rather large species in the genus *Aristolebia*, distinguished at first glance by the elytral pattern that consists only of a narrow, contrastingly black lateral and apical stripe in the apical two fifths of the pale reddish elytra.

For recognition see also the key below (chapter 5).

Description

Measurements and ratios. Body length: 9.9–10.2 mm; body width: 4.40–4.55 mm. Width/length of pronotum: 1.53–1.56; width of pronotum/width of head: 1.23; length/width of elytra: 1.43–1.47; width of elytra/width of pronotum 1.67–1.69.

Colouration (Fig. 2). Head including clypeus, labrum, and mandibles black, pronotum and elytra red, elytra with apex and posterior two fifths of lateral margin black. Two apical palpomeres of the maxillary palpus, and the apical palpomere of the labial palpus piceous, basal palpomeres red. Antenna more or less dark reddish. Legs yellow to pale reddish. Lower surface of head except mouth parts black, thorax and two basal abdominal sterna pale reddish, rest of abdomen contrastingly black.

Head. Of moderate size. Eyes very large, semicircular, remarkably protruded laterally, orbits not perceptible. Neck with fairly deep transverse impression. Labrum anteriorly slightly convex, 6-setose. Mentum with very shallow, apically transverse or very slightly rounded convexity. Glossa elongate, polysetose at apex, paraglossae wide, foliaceous, as long as glossa and fused to it, densely setose at margin. Galea with wide, rather depressed last segment that is extremely densely pilose. Lacinia large, with very elongate terminal hook and rather dense row of teeth at inner margin. Palpi of normal size, very sparsely pilose. Mentum asetose, but submentum with a very elongate seta at either side. Mandibles short and wide, evenly curved. Antenna fairly elongate, surpassing base of pronotum by almost three antennomeres, pilose from 4th antennomere on, 6th and 7th antennomeres almost 2.75 times as long as wide. Labrum and clypeus with fine and sparse punctures, frons and neck with some wrinkles and with coarse and rather dense punctures. Microreticulation isodiametric, though superficial, thus surface glossy.

Pronotum. Moderately wide. Anterior half about semi-circular, widest at or slightly behind the middle, little narrowed towards base, therefore base much wider than apex. Apex slightly concave, apical angles very widely rounded, lateral margin convex, just in front of base oblique and straight, basal angle about 100° , though slightly obtuse at tip, base slightly produced in the middle, slightly convex laterally. Apex narrowly margined, base in the middle not or very feebly margined. Anterior transverse sulcus and median line shallow, sulcus situated close to apex. Posterior transverse sulcus deeply impressed. Lateral margin anteriorly moderately wide, widened and widely explanate towards base. Disk gently convex. Anterior lateral seta situated about at anterior third, slightly removed from margin, posterior seta situated at basal angle. Surface of disk with fine, very irregular striae, with fine, scattered punctures, and at bottom of the striae with very superficial, isodiametric microreticulation, glossy.

Elytra. Rather short and wide, widened towards apex, widest about at apical third, upper surface rather depressed. Humeri evenly rounded, lateral margin evenly convex. External apical angle angulate, forming a short, acute denticle. Sutural angle angulate but not spined, apex gently oblique, straight, only near external angles slightly excised. Striae complete, well impressed, not or very feebly crenulate. Intervals slightly raised, but depressed. 3rd interval with two setiferous punctures, both situated at inner margin of 3rd stria, the anterior one at about basal third, the

posterior one behind apical fourth. 15–16 marginal setiferous punctures present, series slightly interrupted in the middle. Punctures of intervals sparse but distinct, irregularly uniseriate, in parts biseriate. Intervals with rather superficial, about isodiametric microreticulation which is arranged in irregularly transverse rows, with sparse, very short, erect pilosity which is visible only in lateral view and at high magnification, surface rather glossy. Posterior wings fully developed.

Lower surface. Prosternal process with an elongate seta at the middle. Lower surface with sparse but elongate, erect to slightly declined pilosity. Metepisternum elongate, more than twice as long as wide at anterior margin. Terminal sternum in female 8-setose.

Legs. Of average size. 4th tarsomeres of all legs widened, deeply (> half of tarsomere) excised, with dense tarsal brush. 5th tarsomere with two rows of several setae on lower margin. Claws with 7 elongate teeth.

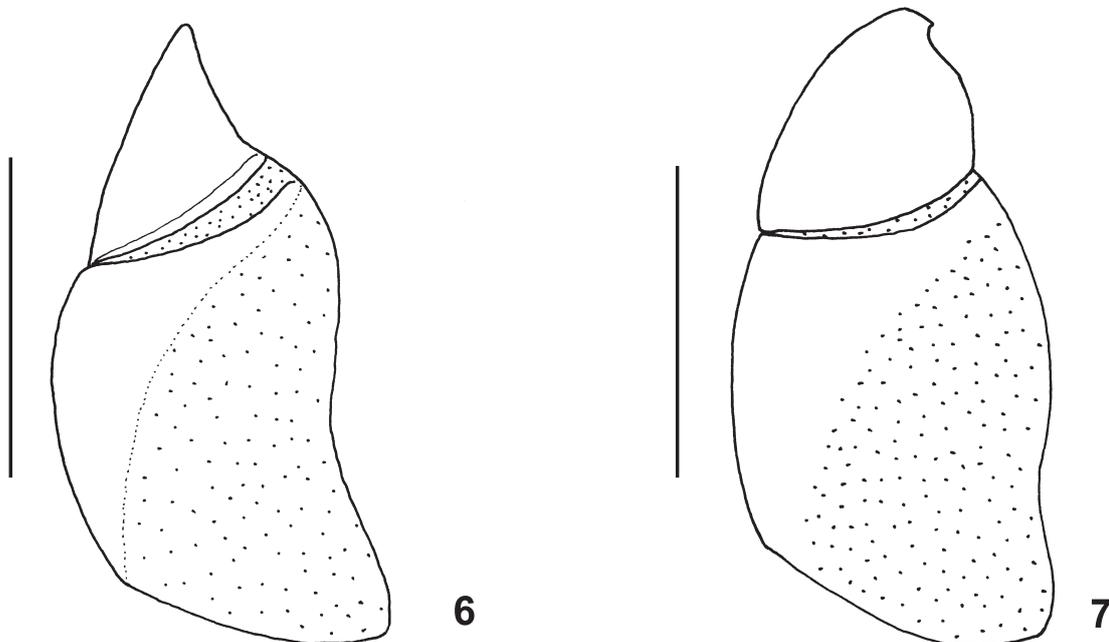
Male genitalia. Unknown.

Female genitalia. Gonocoxites see Fig. 6. Gonocoxite 2 massive, only partly sclerotized, without setae at the apical rim. Gonocoxite 1 small, short and wide, triangular, without setae.

Variation. Very little variation noted.

Distribution

Northern Sumatra. Recorded only from the type locality.



Figs. 6–7. *Aristolebia* spp., female gonocoxites. – 6. *Aristolebia apicalis* n. sp. 7. *A. oculata* n. sp. – Scale bars: 0.25 mm.

Collecting circumstances

Both specimens captured in July.

Affinities

With respect to the large size, vivid colour pattern, and structure of the tarsal claws, the new species belongs to the *Aristolebia mucronata*-group. Without knowledge of the male genitalia the relationship to other species must remain unsettled. The outstanding colour pattern does not show a clear affinity to any other species of the genus.

3.3 *Aristolebia oculata* n. sp.

(Figs. 3, 7)

H o l o t y p e (1 ♀): Indonesia, G. Tompoe, Paloe, W Celebes. 2,700', 1.1937. (J. P. A. KALIS) / ROTHSCHILD bequest, B. M. 1939-1 (NHM).

Etymology

The species name refers to the ocellate elytral pattern.

Diagnosis

The new species is a rather large species in the genus *Aristolebia*, distinguished from all vividly patterned species (except *A. triramosa* n. sp.) by the unicolourous red pronotum and the large red spot in the posterior half of the elytra. It is distinguished from *A. triramosa* by the absence of a contiguous dark sublateral stripe, black margin in the apical half of the elytra, a circular light apical spot which is completely encircled by dark colour, and wider elytra (compared with pronotum).

For recognition see also the key below (chapter 5).

Description

Measurements and ratios. Body length: 10.5 mm; body width: 4.8 mm. Width/length of pronotum: 1.55; width of pronotum/width of head: 1.35; length/width of elytra: 1.46; width of elytra/width of pronotum 1.73.

Colouration (Fig. 3). Head black, but clypeus, labrum, and mandibles dark reddish. Pronotum pale reddish; elytra largely pale red, but with a very distinct, black pattern as depicted in Fig. 3 which leaves a very large humeral spot red that meets the basal margin at the 5th and 6th intervals, and extends posteriorly from the suture to the lateral margin; in the posterior elytral half with a large red, approximately circular apical spot which extends from the 2nd to the 6th interval and is distinctly separated from the apex. Lateral margin in the apical half of the elytra black, without any trace of pale margin. Palpi, basal three antennomeres, and legs pale reddish, lower surface pale reddish, abdomen very slightly darker apicad.

Head. Of moderate size. Eyes very large, semicircular, remarkably protruded laterally, orbits not perceptible.

Neck with fairly deep transverse impression. Labrum anteriorly slightly convex, 6-setose. Mentum with very shallow, apically transverse or very slightly rounded convexity. Glossa elongate, polysetose at apex, paraglossae wide, foliaceous, as long as glossa and fused to it, densely setose at margin. Galea with wide, rather depressed last segment that is extremely densely pilose. Lacinia large, with very elongate terminal hook and rather dense row of teeth at inner margin. Palpi of normal size, very sparsely pilose. Mentum asetose, but submentum with a very elongate seta at either side. Mandibles short and wide, evenly curved. Antenna broken from 3rd or 4th antennomere, respectively, 2nd and 3rd antennomeres with very sparse and extremely short pilosity. Labrum and clypeus with fine and sparse punctures, frons and neck with some wrinkles and with coarse and rather dense punctures which are not sparser and smaller in the middle. Microreticulation isodiametric, though very superficial, thus surface glossy.

Pronotum. Moderately wide. Anterior half about semicircular, widest slightly behind the middle, little narrowed towards base, base much wider than apex. Apex almost straight, apical angles very widely rounded, lateral margin convex, just in front of base straight and slightly oblique, basal angle slightly more than rectangular, though obtuse at tip, base rather produced in the middle, very slightly convex laterally. Apex narrowly margined, base in the middle very feebly margined. Anterior transverse sulcus and median line shallow, sulcus situated close to apex. Posterior transverse sulcus slightly deeper impressed. Lateral margin anteriorly moderately wide, widened and widely explanate towards base. Disk gently convex. Anterior lateral seta situated about at anterior third, slightly removed from margin, posterior seta situated at basal angle. Surface of disk with fine, very irregular striae, with moderately fine, scattered punctures, and with very fine, rather superficial, isodiametric to slightly transverse microreticulation, fairly glossy.

Elytra. Rather short and wide, widened towards apex, widest about at apical third, upper surface rather depressed. Humeri evenly rounded, lateral margin evenly convex. External apical angle angulate, forming a short, acute denticle. Sutural angle angulate but not spined, apex gently oblique, straight, only near external angles slightly excised. Striae complete, well impressed, not perceptibly crenulate. Intervals fairly raised, but not much convex. 3rd interval with two setiferous punctures, both situated at inner margin of 3rd stria, the anterior one at about basal third, the posterior one behind apical fourth. 15 marginal setiferous punctures present, series slightly interrupted in the middle. Setae of very different length. Near apex at end of 4th interval with an additional setiferous puncture. Punctures of intervals rather sparse, fine to moderately fine, very irregularly biseriate. Intervals with superficial, about isodiametric microreticulation which is arranged in

irregularly transverse rows, with sparse, very short, erect pilosity which is visible only in lateral view and at high magnification, surface rather glossy. Posterior wings fully developed.

Lower surface. Prosternal process with an elongate seta at the middle. Lower surface of thorax with sparse and short, more or less erect pilosity, abdomen with more elongate, slightly declined pilosity. Metepisternum elongate, more than twice as long as wide at anterior margin. Terminal sternum in female 8-setose.

Legs. Of average size. 4th tarsomeres of all legs widened, deeply (> half of tarsomere) excised, with dense tarsal brush. 5th tarsomere with two rows of several setae on lower margin. Claws with 7 elongate teeth.

Male genitalia. Unknown.

Female genitalia. Gonocoxites see Fig. 7. Gonocoxite 2 massive, only partly sclerotized, without setae at the apical rim. Gonocoxite 1 small, short and wide, triangular-convex, with a small denticle near apex, without setae.

Distribution

Western Sulawesi. Known only from the type locality.

Collecting circumstances

Holotype captured at medium altitude.

Affinities

With respect to the large size, vivid colour pattern, and structure of the tarsal claws, the new species belongs to the *Aristolebia mucronata*-group. It shows affinities to *A. triramosa* n. sp., which is also from Sulawesi. Knowledge of the male genitalia would be required to fix the actual relationship of this species.

3.4 *Aristolebia triramosa* n. sp. (Figs. 4, 8)

Holotype (♂): Indonesia, N-Sulawesi, 5 km SE Batu-Puith, 250 m, 1°32.43'N 125°07.29'E, 18.II.2009, R. GERSTMEIER (CBM/ZSM).

Etymology

The species name refers to the three uninterrupted, narrow black lines which run anteriorly along suture and 8th interval of the elytra.

Diagnosis

The new species is a rather large species in the genus *Aristolebia*, distinguished from all vividly patterned species (except *A. oculata* n. sp.) by the unicolourous red pronotum and the large red spot in the posterior half of the elytra. It is distinguished from *A. oculata* by the presence of a contiguous dark sublateral stripe, narrow reddish

margin in the apical half of the elytra, an oblique light apical spot which broadly touches the apex, and narrower elytra (compared with pronotum).

For recognition see also the key below (chapter 5).

Description

Measurements and ratios. Body length: 9.6 mm; body width: 4.4 mm. Width/length of pronotum: 1.57; width of pronotum/width of head: 1.35; length/width of elytra: 1.45; width of elytra/width of pronotum 1.59.

Colouration (Fig. 4). Head black, but anterior part of frons, clypeus, labrum, and mandibles dark reddish. Pronotum pale reddish; elytra largely pale red, but with a very distinct cruciate black pattern as depicted in Fig. 4, which leaves a very large humeral spot red that meets the basal margin at the 5th and 6th intervals, and extends from 2nd to mid of 7th interval posteriorly; posterior elytral half with a very large red, oblique apical spot which extends from the suture to the 7th interval and broadly meets the apex. Elytra with a black sublateral stripe along its entire length, but the very lateral margin pale. Palpi, antenna, and legs pale reddish, antenna from 4th antennomere on slightly darker. Lower surface pale reddish, abdomen slightly darker apicad.

Head. Of moderate size. Eyes very large, semicircular, remarkably protruded laterally, orbits not perceptible. Neck with fairly deep transverse impression. Labrum anteriorly slightly convex, 6-setose. Mentum with very shallow, apically transverse or very slightly rounded convexity. Glossa elongate, polysetose at apex, paraglossae wide, foliaceous, as long as glossa and fused to it, densely setose at margin. Galea with wide, rather depressed last segment that is extremely densely pilose. Lacinia large, with very elongate terminal hook and rather dense row of teeth at inner margin. Palpi of normal size, very sparsely pilose. Mentum asetose, but submentum with a very elongate seta at either side. Mandibles short and wide, evenly curved. Antenna fairly elongate, surpassing base of pronotum by almost three antennomeres, 2nd and 3rd antennomeres with very sparse and extremely short pilosity, antenna densely pilose from 4th antennomere on, 6th and 7th antennomeres almost 3 times as long as wide. Labrum and clypeus with fine and sparse punctures, frons and neck with some wrinkles and with coarse and rather dense punctures which are sparser and smaller in the middle. Microreticulation isodiametric, though very superficial, thus surface glossy.

Pronotum. Moderately wide. Anterior half about semicircular, widest slightly behind the middle, little narrowed towards base, base much wider than apex. Apex straight, apical angles very widely rounded, lateral margin convex, just in front of base straight and slightly oblique, basal angle about 100°, though slightly obtuse at tip, base rather produced in the middle, laterally very slightly

convex. Apex narrowly margined, base in the middle very feebly margined. Anterior transverse sulcus and median line shallow, sulcus situated close to apex. Posterior transverse sulcus slightly deeper impressed. Lateral margin anteriorly moderately wide, widened and widely explanate towards base. Disk gently convex. Anterior lateral seta situated about at anterior third, slightly removed from margin, posterior seta situated at basal angle. Surface of disk with fine, very irregular strioles, with moderately fine, scattered punctures, and with very fine, rather superficial, isodiametric to slightly transverse microreticulation, fairly glossy.

Elytra. Rather short and wide, widened towards apex, widest about at apical third, upper surface rather depressed. Humeri evenly rounded, lateral margin evenly convex. External apical angle angulate, forming a short, acute denticle. Sutural angle angulate but not spined, apex gently oblique, straight, only near external angles slightly excised. Striae complete, well impressed, very feebly crenulate. Intervals fairly raised, convex, not depressed.

3rd interval with two setiferous punctures, both situated at inner margin of 3rd stria, the anterior one at about basal third, the posterior one behind apical fourth. 14 marginal setiferous punctures present, series slightly interrupted in the middle. Setae of very different length. Near apex at end of 4th interval with an additional setiferous puncture. Punctures of intervals rather sparse, fine to moderately coarse, irregularly biseriate. Intervals with superficial, about isodiametric microreticulation which is arranged in irregularly transverse rows, with sparse, very short, erect pilosity which is visible only in lateral view and at high magnification, surface glossy. Posterior wings fully developed.

Lower surface. Prosternal process with an elongate seta at the middle. Lower surface of thorax with sparse and short, more or less erect pilosity, abdomen with more elongate, slightly declined pilosity. Metepisternum elongate, more than twice as long as wide at anterior margin. Terminal sternum in male 2-setose.

Legs. Of average size. 4th tarsomeres of all legs widened, deeply (> half of tarsomere) excised, with dense

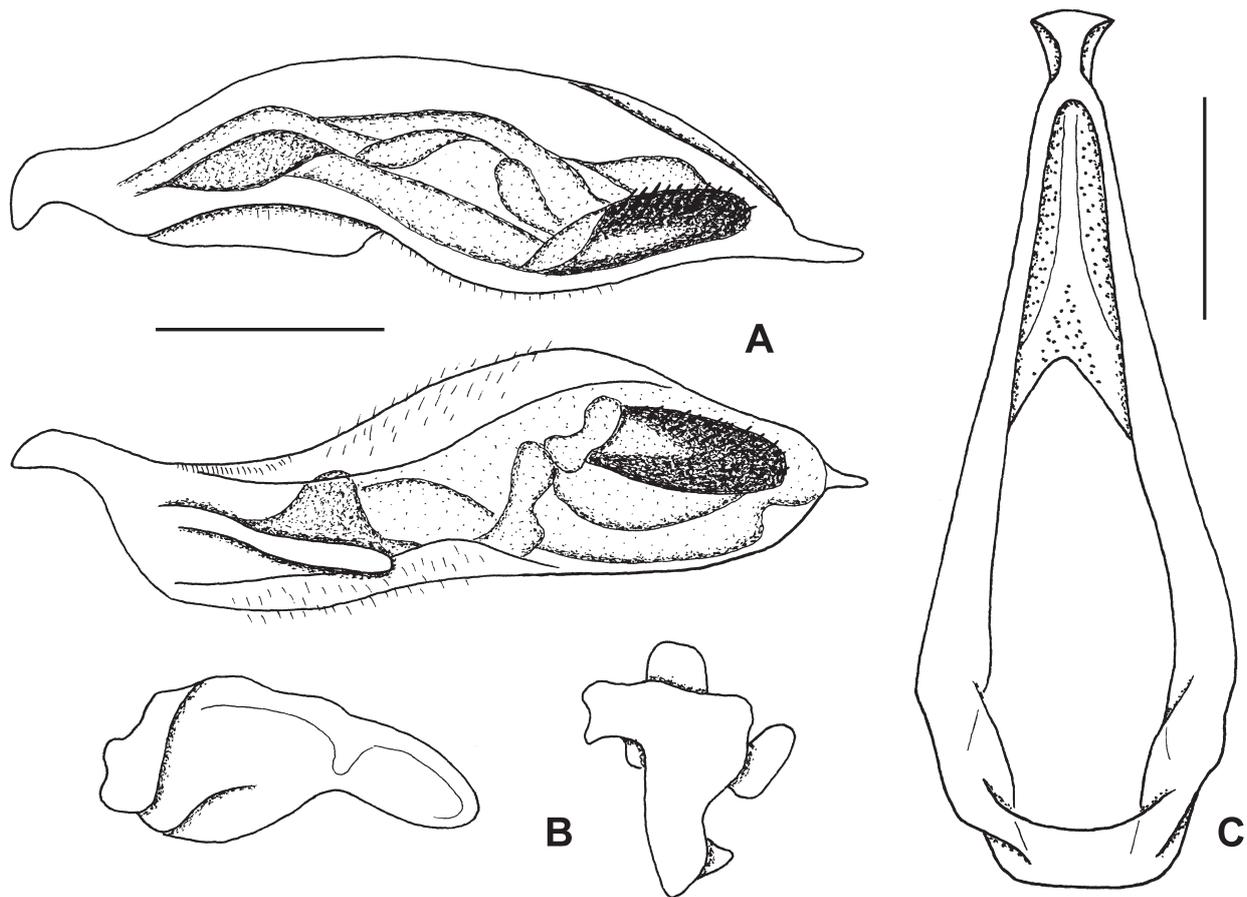


Fig. 8. *Aristolebia triramosa* n. sp., male genitalia. – **A** Aedeagus, left side and lower surface. **B** Parameres. **C** Genital ring. – Scale bars: 0.5 mm (A, B), 1 mm (C).

tarsal brush. 5th tarsomere with two rows of several setae on lower margin. Claws with 7 elongate teeth. 1st–3rd tarsomeres of male protarsus biserially squamose.

Male genitalia (Fig. 8). Both, aedeagus including parameres, and genital ring very heavily sclerotized. Genital ring very large, almost twice the length of the aedeagus, narrow, gently convex, symmetric, with shoehorn-shaped, symmetric apex which is remarkably curved inwards. Aedeagus moderately elongate, compact, both dorso-ventrally and laterally markedly sinuate, base with a narrow, median keel. Lower surface laterally with short pilosity. Orificium rather short, very gently turned to the left. Apex very narrow, straight, peg-like. Internal sac with very heavily sclerotized, denticulate, slightly twisted plate-like apical part near bottom, otherwise with rather simple folding. Parameres very dissimilar, asetose, left one elongate, right one odd-shaped.

Female genitalia. Unknown.

Distribution

North Sulawesi. Known only from the type locality.

Collecting circumstances

Probably sampled from fallen logs, at low altitude.

Affinities

With respect to the large size, vivid colour pattern, and structure of the tarsal claws, the new species belongs to the *Aristolebia mucronata*-group. It shows strong affinities to *A. oculata* n. sp., which is also from Sulawesi.

4 Revised key to the Papuan-Australian species of the *Lebia karenia*-group

For the inclusion of *Lebia halmaherae* n. sp., the parts covering the *Lebia karenia*-group in the most recent keys to the species of the genus *Lebia* of the Papuan-Australian region (BAEHR 2004a: 239; 2005: 39; 2007: 172) are altered as follows:

- 8 Apex of dark elytral spot characteristically angulate, marginal pores encircled by a small reddish spot (BAEHR 2004a: fig. 22); pronotum densely microreticulate, dull; aedeagus barely widened, with elongate, acute apex, internal sac with three small denticulate sclerites (BAEHR 2004a: fig. 1). – India, Burma, Thailand. ***karenia*** Bates
- Apex of dark elytral spot not angulate, marginal pores unicolourous (BAEHR 2004a: figs. 23–26); pronotum barely microreticulate, glossy; aedeagus widened in the middle or near the apex, with shorter, more obtuse apex, internal sac either without any denticulate sclerites (BAEHR 2004a: fig. 4) or with sinuate denticulate band at bottom (BAEHR 2004a: figs. 2, 3). – Sulawesi, Halmahera, New Guinea, Australia. **9**
- 9 Pronotum wider (ratio width/length > 1.67), surface very glossy, wrinkles far less dense; internal sac of aedeagus without any denticulate sclerites. **9a**
- Pronotum narrower (ratio width/length < 1.61), surface less glossy, with dense wrinkles; internal sac of aedeagus

- at bottom with a denticulate sclerite (Fig. 1; BAEHR 2004a: figs. 2, 3). **10**
- 9a** Disk of pronotum black; apex of aedeagus rather wide, rectangular, spade-shaped (BAEHR 2005: fig. 1). – New Britain. ***weigeli*** Baehr
- Pronotum unicolourous reddish; apex of aedeagus acute (BAEHR 2007: fig. 1; BAEHR 2004a: fig. 4). **9b**
- 9b** Apical spot on elytra smaller, apex of elytra never completely yellow (BAEHR 2004a: fig. 26); aedeagus gently curved on lower surface, apex longer (BAEHR 2004a: fig. 4). – New Guinea. ***fallaciosa*** Baehr
- Apical spot on elytra larger, apex of elytra almost completely yellow (BAEHR 2007: fig. 2); aedeagus straight on lower surface, apex shorter (BAEHR 2007: fig. 1). – Northeastern Australia. ***edentata*** Baehr
- 10** Dark sutural spot and lateral margin of elytra completely separated (BAEHR 2004a: fig. 25); aedeagus with wide and likewise complexly sinuate denticulate band (BAEHR 2004a: fig. 3). – Australia (southeastern Queensland). ***brisbanensis*** Baehr
- Dark sutural spot and lateral margin separated or not (Fig. 1; BAEHR 2004a: figs. 23, 24); denticulate band of aedeagus either less complexly sinuate (BAEHR 2004a: fig. 2), or narrower (Fig. 5). – Halmahera, Sulawesi, New Guinea. **10a**
- 10a** Basal light spot on elytra larger, dark area in the middle less extensive, apical light spot conspicuous, or dark sutural spot and lateral margin separated (BAEHR 2004a: figs. 23, 24); aedeagus widened near apex, with somewhat spatulate apex, and with wider though less complexly sinuate denticulate band (BAEHR 2004a: fig. 2). – Sulawesi, New Guinea. ***darlingtoniana*** Baehr
- Basal light spot on elytra smaller, dark area in the middle extensive, apical light spot inconspicuous, vaguely confined (Fig. 1); aedeagus not widened near apex, with somewhat arrow-shaped apex, and with narrower though more complexly sinuate denticulate band (Fig. 5). – Halmahera. ***halmaherae*** n. sp.

5 Key to the species of *Aristolebia* Bates

- 1 Colouration almost uniformly light brown or piceous. **2**
- Vivid colour pattern present on elytra. **3**
- 2 Body length < 8 mm. – New Guinea, Australia (eastern Queensland). ***wau*** Darlington
- Body length about 12 mm. – China. ***prattiana*** (Bates)
- 3 Sutural angle of elytra rounded; tarsal claws with 5 small teeth. – Western Irian Jaya (Vogelkop Peninsula). ***capitis*** Darlington
- Sutural angle of elytra angulate; tarsal claws with 7 small teeth. **4**
- 4 Elytra with cruciate colour pattern (BAEHR 2004b: fig. 1); body length < 7.5 mm. – Thailand. ***crucigera*** Baehr
- Colour pattern of elytra different and body length > 8 mm, usually considerably larger (if about 8 mm long, then elytra with anchor-shaped dark spot in the posterior half – see JEDLICKA 1963: fig. 45 – and geographic range Philippine Islands). **5**
- 5 Elytra with anchor-shaped dark spot in posterior half (see JEDLICKA 1963: fig. 45). – Philippine Islands. ***davaonis*** (Heller)
- Colour pattern of elytra different; distribution different (Burma, Sumatra, Sulawesi, New Guinea, Australia). **6**

- 6 Elytra light red, only the latero-apical margin narrowly black (Fig. 2). – Sumatra. ***apicalis* n. sp.**
 – Colour pattern of elytra different; distribution different. ... 7
- 7 Pronotum uniformly red; apical half of elytra black with a large red spot on either elytron; lateral margin of elytra not continuously black (Figs. 3, 4). – Sulawesi. **8**
 – Disk of pronotum black; elytra either black with a large red spot in the basal half on either elytron, or with a black spot along suture which is widened behind scutellum and in the apical half; lateral margin of elytra continuously black. **9**
- 8 Elytra with a contiguous dark sublateral stripe, lateral margin in the apical half narrowly reddish; light apical spot oblique and broadly attaining the apex (Fig. 4); elytra narrower compared to pronotum (ratio width elytra/width pronotum 1.59); aedeagus see Fig. 8. – North Sulawesi. ***triramosa* n. sp.**
 – Elytra without contiguous dark sublateral stripe, lateral margin in the apical half black; light apical spot circular and completely encircled by dark colour (Fig. 3); elytra wider compared to pronotum (ratio width elytra/width pronotum 1.73); aedeagus unknown. – West Sulawesi. ***oculata* n. sp.**
- 9 Elytra black with a large red spot in basal half on either elytron. – Burma, Thailand. ***quadridentata* Bates**
 – Elytra with a black spot along suture which is widened behind scutellum and in apical half. – New Guinea, northern Australia. ***mucronata* (Sloane)**

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