

# New *Lacconectus* Motschulsky, 1855 from Indonesia, with notes on several poorly-known species (Coleoptera, Dytiscidae)

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## New *Lacconectus* MOTSCHULSKY, 1855 from Indonesia, with notes on several poorly-known species (Coleoptera, Dytiscidae)

by Michel Brancucci

**Abstract.** This paper gives the results of a study of material collected in Indonesia, Malaysia and South-East Asia by the Natural History Museum of Vienna (NMW). Three new species of *Lacconectus* MOTSCHULSKY, 1855 (Coleoptera, Dytiscidae) are described from Sumatra: *L. schoenmanni* sp.nov., *L. jaechi* sp.nov. and *L. schoedli* sp.nov. In addition, the male of *L. punctipennis* ZIMMERMANN, 1928 is described, and the aedeagus is illustrated for the first time. Notes on the distribution of various species occurring in Indonesia and Malaysia are given.

**Key words.** Coleoptera – Dytiscidae – *Lacconectus* MOTSCHULSKY, 1855 – new species – distribution

### Introduction

As stated in my revision (BRANCUCCI 1986) and in subsequent papers (BRANCUCCI 1987, 1989), the genus *Lacconectus* MOTSCHULSKY, 1855 contains a very great number of species. The material discussed here consists of only a few dozen specimens but contains no fewer than 3 new species and small series of several species known hitherto from only one or very few specimens. As a result, the male of *L. punctipennis* ZIMMERMANN, 1928 can be described for the first time. Including the new species described here and the new species described by HENDRICH (1998), the genus *Lacconectus* now includes 45 species in the Oriental region.

**Abbreviations.** The material studied is deposited in following collections: Natural History Museum of Vienna (NMW) and Natural History Museum Basel, in coll. M. Brancucci (MB).

### Taxonomy

#### *Lacconectus jaechi* sp.nov.

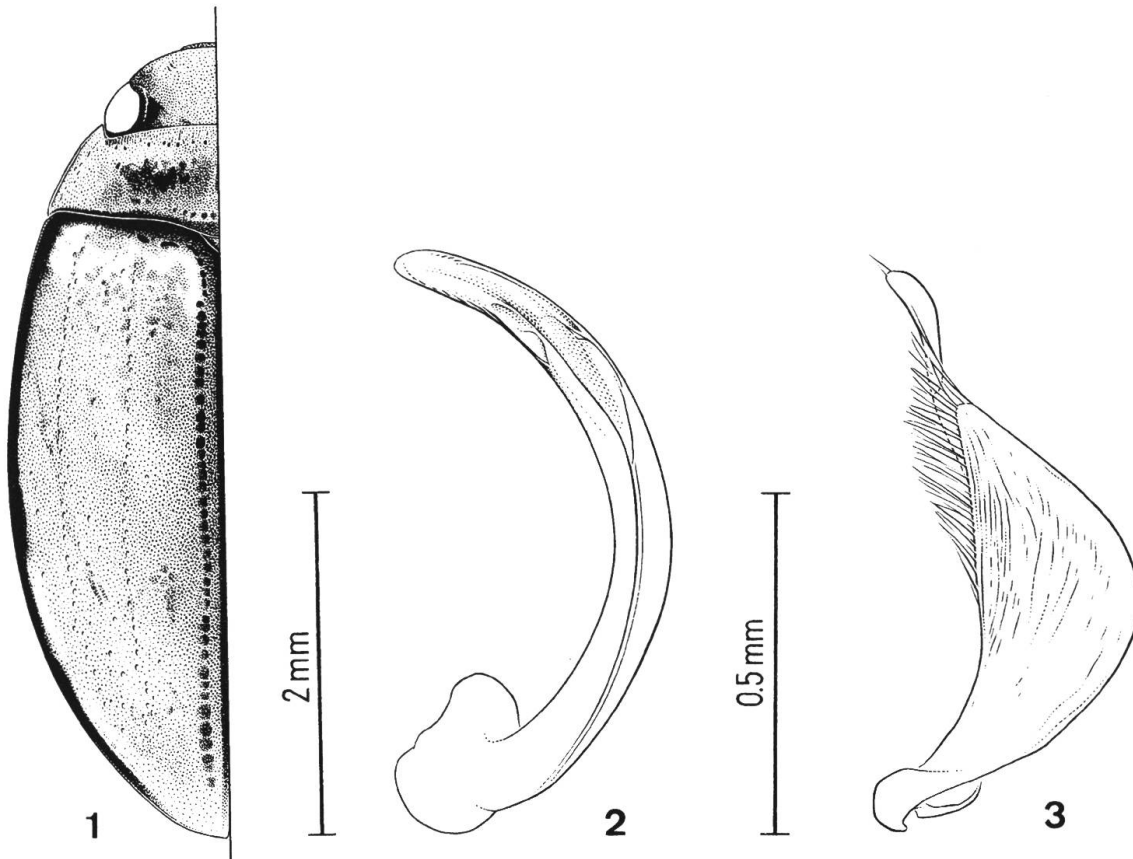
Figs 1–3

**Type material:** Holotype ♂ (NMW) and 4 paratypes (2 ♂ and 1 ♀, NMW; 1 ♂ and 1 ♀, MB); locality: “Indonesia (29), W-Sumatra, 70 km SE Padang, Gg. Talang, 1500 m, M. Jäch”.

**Description.** Body broadly oval, shining, ferrugineous-brown, disc of pronotum, basal and lateral parts of elytra dark brown (Fig. 1)

Head ferrugineous-brown, clypeus slightly paler, semi-matt. Surface sculpture consisting of small polygonal, almost rounded and well-impressed meshes and of sparse punctures on clypeus and on anterior part of frons. Clypeal grooves, a row of punctures alongside eyes and a transverse depression beside eyes coarse; the punctures large and deeply impressed. Antennae testaceous; joints short, the fifth 1.4 times as long as broad.

Pronotum ferrugineous-brown, paler at sides, shining. Microsculpture consisting of small, polygonal and well-impressed meshes and of minute punctures. Longitudinal



Figs 1–3. *Lacconectus jaechi* sp.nov.: 1, Habitus. 2, Aedeagus in lateral view. 3, Right paramere.

median suture short and deeply impressed. Anterior and lateral rows coarse. Punctures at middle of each latero-basal quarter large and partly coalescent. Lateral margins finely bordered, furrow broadly interrupted before reaching anterior border.

Elytra shining, brown with the basal and the lateral margins narrowly brownish-black. Epipleura dark-brown. Reticulation consisting of polygonal meshes distinctly visible at base, turning into a fine striolation by the middle and disappearing in the apical region. Elytra with a weakly shagreened lustre posteriorly. Puncturation consisting of minute punctures that are surrounded, particularly in the anterior part, by petal-like meshes. Sutural row of punctures very incomplete, consisting of large and well-spaced punctures, particularly before middle. Discal and sublateral rows reaching almost to base, punctures large and irregularly-distributed in apical third, close together and in a straight line anteriorly. Second interspace with very sparse punctures on apical half.

Underside ferruginous-brown. Prosternal process short, 1.4 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by a deep and short stria at their mid-length. Sternites 3, 4 and 5 each with a few sparse medium-sized punctures. Anal sternite microreticulate with a small depression on each side of the middle. Posterior margin distinctly bordered and broadly rounded.

♂. Aedeagus, in lateral view, evenly curved, almost constant in width, rapidly tapered in apical part and broadly rounded at tip (Fig. 2); in dorsal view, it is also evenly tapered and pointed at apex. Right paramere broad (Fig. 3).

♀. Similar to ♂. Valvae long and very narrow, narrowly rounded at apex. Seta short and lateral.

Total length: 4.6–4.9 mm; width: 2.5–2.6 mm.

**Distribution.** Western Sumatra.

**Differential diagnosis.** This species is closely related to *L. javanicus* BRANCUCCI, 1986 but can easily be distinguished by the elytral reticulation which is more impressed at base, and also by the aedeagus which is broadly rounded at apex and is not finely but distinctly truncated. The joints of the antennae are more slender in *L. javanicus*.

**Derivatio nominis.** Dedicated to Manfred Jäch, Vienna Natural History Museum, the collector of this beautiful species.

***Lacconectus schoenmanni* sp.nov.**

Figs 4–6

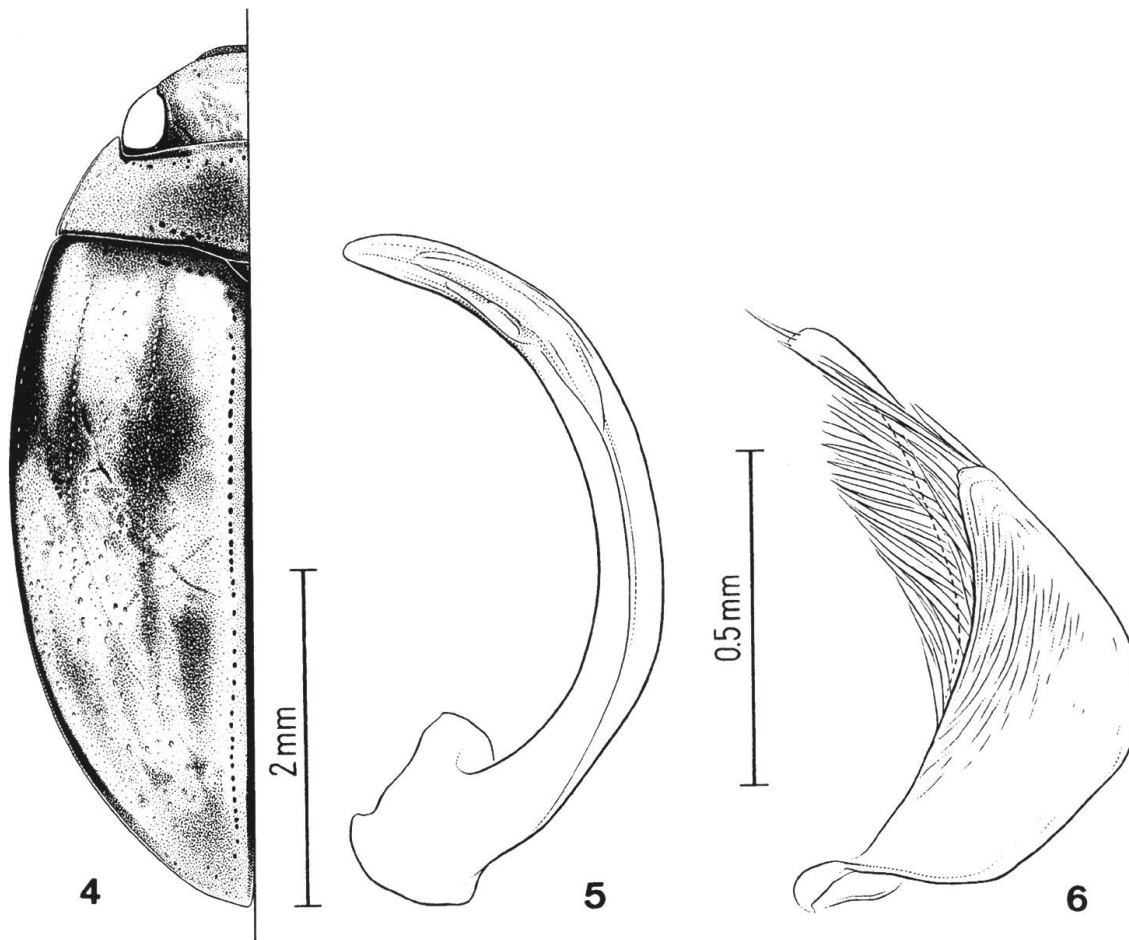
**Type material:** Holotype ♂ (NMW) and 5 paratypes (4 ♂ and 1 ♀, NMW, 1 ♂, MB); locality: “Indonesia (18), Sumatra, Aceh, Louser N.P., 30 km NW Kutacane, 23.II.1990, M. Jäch”. 2 paratypes ♂ (NMW); locality: “Indonesia (16), W-Sumatra, 25 km E Padang, NSG Taman Raya Bung Hatta 400 m, 14.II.1991, S. Schödl”. 6 paratypes (1 ♂ and 2 ♀; NMW; 1 ♂ and 1 ♀; MB); locality: “Indonesia (14), W-Sumatra, NSG Lembak Anaï, W. Padanpanjang, 12.II.1991, M. Jäch”.

**Description.** Body broadly oval, semi-matt, brown, with darker markings on the disc of pronotum and on the elytra (Fig. 4).

Head ferruginous-brown, slightly darker along the eyes, semi-matt. Surface sculpture consisting of small polygonal and well-impressed meshes and of minute and deep punctures, particularly numerous on disc. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes well-marked. Antennae testaceous; joints slender, the fifth 1.7 times as long as broad.

Pronotum ferruginous-brown, somewhat darker on disc, semi-matt. Microsculpture consisting of small, polygonal, almost rounded and well-impressed meshes and of minute deeply impressed and numerous punctures. Longitudinal median suture short and deeply impressed. Anterior and lateral rows coarse; punctures large, deeply impressed and coalescing more often at sides. Punctures at middle of each latero-basal quarter partly coalescent. Lateral margins distinctly bordered, furrow almost interrupted before reaching anterior border.

Elytra semi-matt, testaceous-brown, with brownish-black markings reminiscent of longitudinal bands; the bands are broader and coalescing on the disc and at posterior two-thirds. Lateral margins of elytra and epipleura brownish-black. Reticulation hardly visible even at base, consisting of a fine striolation disappearing already behind middle. Elytra with a weakly shagreened lustre posteriorly. Puncturation consisting of minute punctures that are separated from each other by a distance equal to 2 to 3 meshes, and that are surrounded, particularly after the middle, by petal-like meshes. Sutural row of punctures very incomplete, consisting of large and well-spaced punctures, particularly before middle. Discal and sublateral rows reaching almost to base, punctures large and



**Figs 4–6.** *Lacconectus schoenmanni* sp.nov.: 4, Habitus. 5, Aedeagus in lateral view. 6, Right paramere.

irregularly-distributed in apical third, close together and in a straight line anteriorly. Interspaces with very sparse punctures on apical half.

Underside ferruginous-brown. Prosternal process short, 1.3 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by a deep and short stria at their mid-length. Sternites 3, 4 and 5 each with sparse and irregularly-distributed medium-sized punctures. Anal sternite microstriolate with a group of coalescent punctures on each side of the middle. Posterior margin finely bordered and broadly rounded

♂. Aedeagus, in lateral view, evenly curved, almost constant in width and rapidly tapered at apex (Fig. 5); in dorsal view, it is also evenly tapered and pointed at apex. Right paramere broad (Fig. 6).

♀. Similar to ♂. Valvae long and very narrow, narrowly rounded at apex. Seta short and lateral.

Total length: 5 mm; width: 2.8 mm.

**Variation.** The specimens from Aceh have more numerous punctures between discal and sublateral striae behind middle.

**Distribution.** Northern and Western Sumatra.

**Differential diagnosis.** This species is closely related to *L. laccophiloides* *laccophiloides* ZIMMERMANN, 1928 and to *L. javanicus*. It can be distinguished from both of these by its larger size. Furthermore, the aedeagus of *L. l. laccophiloides* is much shorter and that of *L. javanicus* is truncated at apex, giving the impression that it is broken.

**Derivatio nominis.** Dedicated to Heinrich Schönmann from the Vienna Natural History Museum.

***Lacconectus schoedli* sp.nov.**

Figs 7–9

**Type material:** Holotype ♂ (NMW) and 4 paratypes (1 ♂ and 3 ♀, NMW); locality: “Indonesia (12c), W-Sumatra, NSG Lemba Harau, 15 km, NE Payakumbu, 11.II.1991, S. Schödl”. 5 paratypes (2 ♀, NMW; 2 ♂ and 1 ♀, MB); locality: the same but M. Jäch.

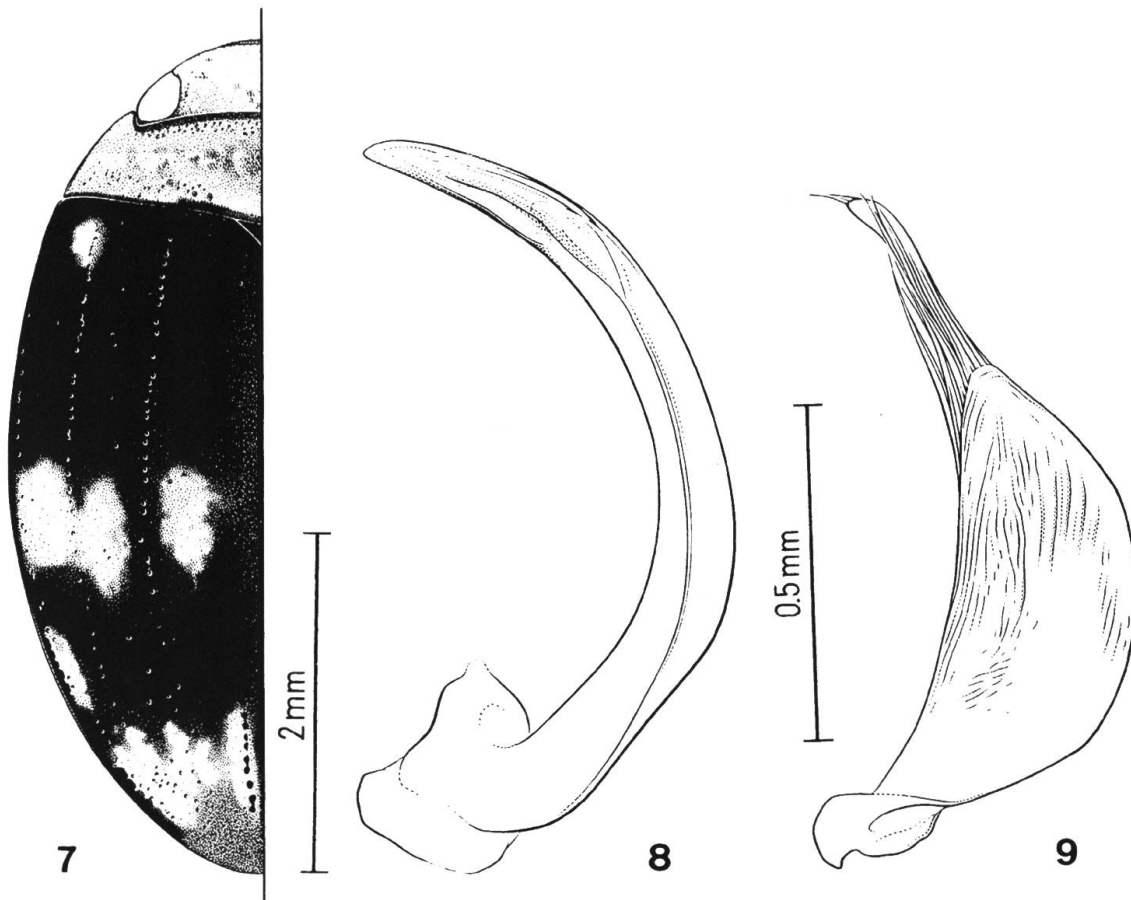
**Description.** Body broadly oval, very large in the middle, shining, head and pronotum ferruginous-brown, elytra dark brown with ferruginous spots (Fig. 7).

Head ferruginous-brown, slightly darker along the eyes, semi-matt. Surface sculpture consisting of small polygonal and well-impressed meshes and of minute punctures. Clypeal grooves, a row of deep punctures alongside eyes and a transverse depression beside eyes well-marked. Antennae testaceous; joints slender, the fifth 1.9 times as long as broad.

Pronotum ferruginous-brown, semi-matt. Microsculpture consisting of small, polygonal, almost rounded and well-impressed meshes and of minute deeply impressed and numerous punctures. Longitudinal median suture short and deeply impressed. Anterior and lateral rows of punctures coarse; punctures large, more often coalescing at sides. Punctures at middle of each latero-basal quarter large but sparsely distributed. Lateral margins distinctly bordered, furrow almost reaching anterior border.

Elytra semi-matt, dark brown with a subhumeral rounded spot as well as three postmedian and one large preapical testaceous (Fig. 7) patches. Lateral margins and epipleura brownish-black. Reticulation superficial from the base, rapidly developing into a striolation by the middle and with a shagreened lustre posteriorly. The whole surface is covered with minute but distinctly impressed punctures, giving a semi-matt appearance. Sutural row of punctures very incomplete, represented only by very few large punctures, closer together behind the middle. Discal and sublateral rows reaching almost to base, punctures large and irregularly-distributed in apical third, close together and in a straight line anteriorly. Second interspaces with a few larger punctures, particularly on apical half.

Underside ferruginous-brown. Prosternal process short, 1.4 times as long as broad, strongly bordered at sides and broadly rounded at apex. Metacoxal lines represented only by two or three deep punctures along their length. Sternites 3, 4 and 5 each with sparse and irregularly-distributed medium-sized punctures. Anal sternite microreticulate with a few larger and irregularly distributed punctures. Posterior margin finely bordered and broadly rounded.



Figs 7–9. *Lacconectus schoedli* sp.nov.: 7, Habitus. 8, Aedeagus in lateral view. 9, Right paramere.

♂: Aedeagus, in lateral view, evenly curved, almost constant in width, gently tapered and narrowly rounded at apex (Fig. 8); in dorsal view, it is also evenly tapered and pointed at apex. Right paramere long and broad (Fig. 9).

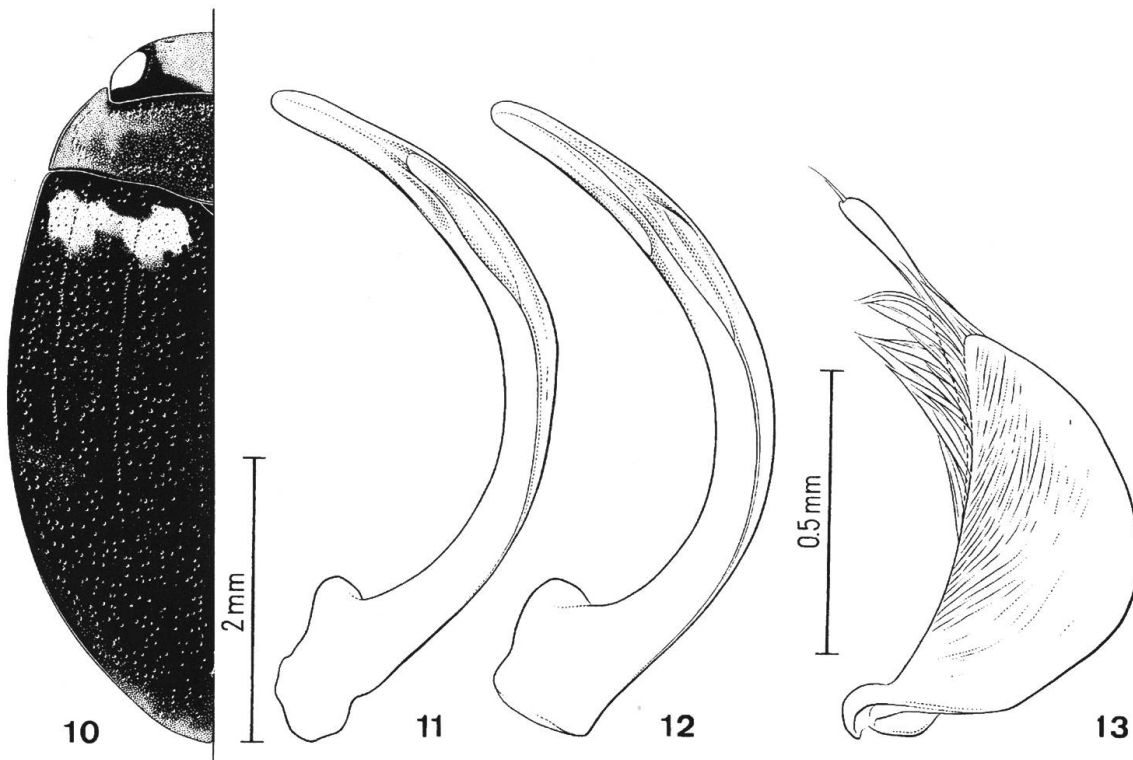
♀. Similar to ♂. Valvae long and cylindrical, distinctly constricted at posterior 3/4. Seta long and subapical.

Total length: 4.9–5.1 mm; width: 2.9–3.0 mm.

**Distribution.** Western Sumatra.

**Differential diagnosis.** Because of its characteristic extremely broadened form and its colour, this species can easily be distinguished from all other known species. The most closely related species, so far as known, are *L. tonkinensis* GUIGNOT, 1957 and *L. tonkinoides* BRANCUCCI, 1986. The aedeagus is also characteristic and enables the species to be rapidly identified.

**Derivatio nominis.** Dedicated to Stefan Schödl from the Vienna Natural History Museum.



**Figs 10–13.** *Lacconectus punctipennis* ZIMMERMANN: 10, Habitus. 11, Aedeagus in lateral view, ex. from Siberut. 12, Idem, ex. from Bukit. 13, Right paramere.

***Lacconectus punctipennis* ZIMMERMANN, 1928**

Figs 10–13

*Lacconectus punctipennis*: ZIMMERMANN, 1928, Sarawak Mus. J. 3: 387.

**Material studied.** Localities: “Indonesia (20): N-Sumatra, Bukit, Lawang, 26.–27.II.1990, M. Jäch” (5 ex.). “Indonesia (23): Siberut, Bakeuluk-Madobak, 18.II.1991, M. Jäch” (5 ex.); “Indonesia (24): Siberut, Madobak, W. Muarasiberut, 19.II.1991, M. Jäch” (1 ex.).

**Remarks.** In my revision (BRANCUCCI 1986), this species was re-described on the basis of two specimens ♀. Since then, several specimens have been collected, also males. The species is characterised by the strong punctures on the pronotum and elytra (Fig. 10), and the female by the strongly flattened apical part of the valvae.

**Description** ♂. Aedeagus evenly tapered and broadly rounded at apex (Fig. 11 and 12). In dorsal view, very narrow and pointed at apex. Parameres broad (Fig. 13).

**Variation.** The margin of the apical part of the aedeagus of the specimens from Bukit is slightly depressed in lateral view (Fig. 11). In the specimens from Siberut it is straight (Fig. 12).

**Distribution.** Java, Sumatra.

**Differential diagnosis.** As described in BRANCUCCI (1986), the puncturation covers the entire surface of the elytra; the punctures become somewhat sparser at the apical third. This species is morphologically close to *L. simoni* RÉGIMBART, 1893 but can easily be



distinguished by the punctures, which are rounded; these take the form of very short striae in *L. simoni*.

### ***Lacconectus oceanicus* RÉGIMBART, 1899**

*Lacconectus oceanicus*: RÉGIMBART, 1899, Ann. Soc Ent. Fr. **68**: 291. – ZIMMERMANN, 1919, Arch. Naturgesch.

**A83**: 197. – ZIMMERMANN, 1920, Coleopt. Cat. **4(712)**: 147. – ZIMMERMANN, 1928, Sarawak Mus. J. **3**: 386. – ZIMMERMANN, 1929, Ent. Bl. **25**: 13. – CSIKI, 1937, Arch. Hydrobiol. Suppl. **15**: 128 (partim). – GUÉORGUIEV, 1968, Bull. Inst. Zool. Mus. **28**: 40. – BRANCUCCI, 1986, Entomologica Basiliensia **11**: 134.

*Lacconectus* (s.str.) *oceanicus*: VAZIRANI, 1970, Or. Ins. **4**: 321. – VAZIRANI, 1977, Rec. zool. Surv. India, Occ. Pap. **6**: 59.

**Material studied.** “Indonesia (14): W. Sumatra, NSG Lembak Anaï, W. Padanpanjang, 12.II.1991, M. Jäch” (3 ex.). “Indonesia (16): W-Sumatra, 25 km E Padang, NSG Taman Raya Bung Hatta 400 m, 14.II.1991, S. Schödl” (1 ex.); Idem, M. Jäch (2 ex.). “Indonesia (23): Siberut, Bakeuluk-Madobak, 18.II.1991, M. Jäch” (6 ex.); Idem, S. Schödl (6 ex.). “Indonesia; (24): Siberut, Madobak, W. Muarasiberut, 19.II.1991, S. Schödl” (3 ex.); Idem, M. Jäch (7 ex.). “Indonesia (30): W-Sumatra, 30 km W Padang, 1050 m, 25.II.1991, M. Jäch” (1 ex.).

**Distribution.** Sumatra.

### ***Lacconectus javanicus* BRANCUCCI, 1986**

*Lacconectus javanicus*: BRANCUCCI, 1986, Entomologica Basiliensia **11**: 139.

**Material studied.** “W. Java (J13): Pangandaran, 21.I.1987, M. Jäch” (1 ex.).

**Remarks.** Described from various localities all over Java.

**Distribution.** Java.

### ***Lacconectus ritsemae* RÉGIMBART, 1883**

*Lacconectus ritsemae*: RÉGIMBART, 1883, Notes Leyden Mus. **5**: 229. – BRANCUCCI, 1986, Entomologica Basiliensia **11**: 139

**Material studied.** “W. Java (J7), Cibodas, Cibeureum, 16.I.1987, M. Jäch” (1 ex.).

**Remarks.** This species was originally described from Java, as stated in BRANCUCCI (1986).

**Distribution.** Java.

### ***Lacconectus minutus* BRANCUCCI, 1986**

*Lacconectus minutus*: BRANCUCCI, 1986, Entomologica Basiliensia **11**: 139.

**Material studied.** “Indonesia (16): W-Sumatra, 25 km E Padang, NSG Taman Raya Bung Hatta 400 m, 14.II.1991, S. Schödl” (3 ex.); Idem, M. Jäch (3 ex.). “Indonesia (18): Sumatra, Aceh, Louser N.P., 30 km NW Kutacane, 23.II.1990, M. Jäch” (5 ex.); Idem, S. Schödl (4 ex.). “Indonesia (20): N-Sumatra, Bukit, Lawang, 26.–27.II.1990, M. Jäch” (2 ex.). “Indonesia (30): W-Sumatra, 30 km W Padang, 1050 m, 25.II.1991, M. Jäch” (4 ex.).

**Remarks.** I described this species (BRANCUCCI 1986) from a single ♂ from Ranau in the extreme S-W Sumatra. The newly-collected specimens show that *L. minutus* is probably widespread all over Sumatra.

### ***Lacconectus krikkeni* BRANCUCCI, 1986**

*Lacconectus krikkeni*: BRANCUCCI, 1986, Entomologica Basiliensia 11: 130.

**Material studied.** “Malaysia, Durian Perangin, Langkawi, 8.II.1988, Madl” (3 ex.). “Indonesia (18): Sumatra: Aceh, Louser N.P., 30 km NW Kutacane, 23.II.1990, M. Jäch” (4 ex.); Idem, S. Schödl (1 ex.). “Indonesia (19): N-Sumatra, Sibolangit, Brastagi/Medan, 25.II.1990, M. Jäch” (5 ex.); Idem S. Schödl (2 ex.). “Indonesia (20), N-Sumatra, Bukit, Lawang, 26.–27.II.1990, M. Jäch” (1 ex.).

**Remarks.** This species seems to be widespread in Malaya and Sumatra, but it is rather rare. It will be necessary to study more specimens before being able to give a coherent distribution.

### ***Lacconectus basalis* SHARP, 1880–82**

*Lacconectus basalis*: SHARP, 1880–82, Sci. Trans. R. Dublin Soc. 2: 598. – BRANCUCCI, 1986, Entomologica Basiliensia 11: 130.

**Material studied.** “W. Thailand (8), Sai Yoh Yai N.P., N.W. Kanchnaburi, 3.XII.1990, M. Jäch” (1 ex.). “E. Thailand (13): Ko Chang, Klong Prao Tümüpel, 11.XII.1990, M. Jäch” (4 ex.). “Thailand (14): Prov. Rayong, Khao Chamao N.P., 12.XII.1990, M. Jäch” (13 ex.). “Thailand (14): Rayong, Khao Chamao N.P., 12.–13.XII.1990” (15 ex.). “Malaysia: Durian Perangin, Langkawi, 8.II.1988, Madl” (12 ex.).

**Remarks.** A very widespread species.

### ***Lacconectus punctatus* BRANCUCCI, 1986**

*Lacconectus punctatus*: BRANCUCCI, 1986, Entomologica Basiliensia 11: 144.

**Material studied.** “Thailand (2): Khao Yai N.P., 14.XI.1988, M. Jäch” (3ex.). “E. Thailand (12): Ko Chang, White Sands Beach, 10.XII.1990, M. Jäch” (8 ex.).

**Remarks.** This species was described from Cambodia and has been recorded from Vietnam. Although its occurrence in the neighbouring territory of Thailand was to be expected, this is actually the first record from that country.

### **Acknowledgements**

I should like to thank Dr. Manfred Jäch (Vienna) for the loan of interesting material collected in Indonesia. My thanks go also to Adrian Pont (Oxford) for correcting the English of my manuscript. The illustrations for this publication were made by Armin Coray, and I thank him for his excellent work.

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