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## On the Scaphidiinae (Coleoptera: Staphylinidae) of the Lesser Sunda Islands

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**Abstract:** The scaphidiines of the Lesser Sunda Islands are reviewed. Among the 45 species found within examined collections, following are described as new: *Baeocera badia* sp. nov., *B. baliensis* sp. nov., *B. barda* sp. nov., *B. basalis* sp. nov., *B. batukoqensis* sp. nov., *B. beata* sp. nov., *B. bella* sp. nov., *B. bifurcata* sp. nov., *B. bifurcilla* sp. nov., *B. bona* sp. nov., *B. brevis* sp. nov., *B. breviscula* sp. nov., *Scaphisoma ablutum* sp. nov., *S. activum* sp. nov., *S. acutatum* sp. nov., *S. acutum* sp. nov., *S. adjunctum* sp. nov., *S. adscitum* sp. nov., *S. aequum* sp. nov., *S. aereum* sp. nov., *S. affabile* sp. nov., *S. affectum* sp. nov., *S. angulare* sp. nov., *S. animatum* sp. nov., *S. antennarum* sp. nov., *S. approximatum* sp. nov., *S. aspectum* sp. nov., *Scaphobaeocera baliensis* sp. nov., *S. lombokensis* sp. nov., *Scaphoxium bilobum* sp. nov., *Xotidium bolmarums* sp. nov. *Scaphisoma gracilicorne* Achard, 1920, *S. sapitense* Pic, 1915 and *Scaphobaeocera kraepelini* (Pic, 1933) are redescribed. *Scaphisoma sapitense infasciatum* Achard, 1920 and *S. dansalanense* Löbl, 1972 are placed in synonymy of *S. luteomaculatum* Pic, 1915. Lectotypes are designated for *Scaphisoma gracilicorne* Achard, 1920, *S. luteomaculatum* Pic, 1915, *S. sapitense* Pic, 1915, *S. infasciatum* Achard, 1920, *S. testaceomaculatum* (Pic, 1915), *S. subelongatum* (Pic, 1915) and *Scaphobaeocera kraepelini* (Pic, 1933). Keys to species of *Baeocera*, *Scaphisoma*, and *Scaphobaeocera* known from the Lesser Sundas, and a key to the world species of *Xotidium* are provided.

**Keywords:** Coleoptera - Staphylinidae - Scaphidiinae - taxonomy - Lesser Sunda Islands.

### INTRODUCTION

To date, only five species of the rove beetle subfamily Scaphidiinae have been reported from the Lesser Sunda Islands, i.e., *Sapitia lombokiana* Achard, 1920, *Scaphisoma lombokense* Löbl, 1986, *S. sapitense* Pic, 1915 (with its "variety" *infasciatum* Achard, 1920), *S. sesaotense* Löbl, 1986, and *S. coarctatum* Löbl, 1976). While *Sapitia lombokiana* is widely distributed in Southeast Asia, the *Scaphisoma* species are currently known only from Lombok (Löbl, 1997), with the exception of *S. coarctatum* which was recently reported from the Moluccas (Löbl, 2014). As some of the other islands of the archipelago are readily accessible and have, unless deforested, habitats convenient for sustainability of mycophagous beetles, a major gap was obvious. I have tried to fill it at least partly during a trip to Bali and Lombok, from the end of October to mid November 1991. My work was hampered by heavy rainfalls at the beginning of the monsoon period, but other collections provided substantial complementary material. The study of the available collections yield 45 species in six genera that are reported below from Bali, Lombok, Sumbawa and Timor, among them 31 species are described as new. The absence of members of several genera, such as *Cyparium* Erichson,

1845, *Scaphidium* Olivier, 1790, *Bironium* Csiki, 1909, and *Scaphicoma* Motschulsky, 1863, suggests still pertaining gaps in the knowledge of the group as far these islands concerned. The inadequate level of information is also suggested by the fact that many species are known only from a single locality or island.

### MATERIAL AND METHODS

The material examined is housed in the following institutes: Muséum d'histoire naturelle, Genève, Switzerland (MHNG), Muséum national d'Histoire naturelle, Paris, France (MNHN), Naturalis Biodiversity Center, Leiden, the Netherlands (NBCL), Národní muzeum, Prague, Czech Republic (NMPC), and Staatliches Museum für Naturkunde, Stuttgart, Germany (SMNS).

The locality data are given verbatim as on the respective labels, different labels are separated by a slash. The body length is measured from the anterior pronotal margin to the inner apical angle of the elytra. The maximal length and width ratios of the antennomeres are given, measured on slides. Characters given for metanepisterna concern their exposed parts. The abdominal sternites are counted from the first visible one (i.e., the third morphological).

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The sides of the aedeagi refer to their morphological side, with the ostium situated dorsally, while it is in the resting position rotated 90°. Female characters are described and illustrated only in taxa for which they are discriminating. The eventually extruded parts of the internal sacs of the aedeagi are not considered in length measurements. Keys are based on well visible external characters, as far as possible.

## TAXONOMY

### *Baeocera* Erichson, 1845

**Comments:** *Baeocera* is with over 260 species widely distributed and known from all continents but is poorly

represented in northern temperate zones and absent from arid areas. Though *Baeocera* are often common in tropical and subtropical Asian forests, they are usually under-represented in collections. Adequate sampling methods, such as sifting moist forest floor litter and using berlese or winkler devices for extraction of sampled insects, provide significant amount of specimens. To date, only four species of *Baeocera* have been reported from the Indonesian Great Sunda Islands (Löbl, 1997) and three species from the Moluccas (Löbl, 2014). The species from the Lesser Sundas are members of only two monophyletic group, the *B. lenta* group, which is in Asia particularly species-rich, and the *B. serendibensis* group.

### Key to the *Baeocera* species of the Lesser Sunda Islands

- 1 Elytral punctation very fine and hardly visible at 100x magnification, similar to pronotal punctation, except on distinctly punctured minute lateromedian areas ..... *B. bella* sp. nov.
- Elytral punctation distinct and much coarser than pronotal punctation on basal halves of disc at least, often on prevailing or entire discal surface..... 2
- 2 Metanepisterna distinct, usually wide, separated from metaventricle by distinct suture. Elytra with basal striae complete, joined to lateral striae..... 3
- Metanepisterna concealed or very narrow, without distinct suture, lateral margin of metaventricle indicated by outer, eventually impressed, puncture row. Elytra usually with basal striae short, not joined to lateral striae, or basal striae absent ..... 5
- 3 Median part of sternite 1 punctate. Antennomere XI more than twice as long as wide. Parameres hardly curved at base and not widened apically in lateral view ..... *B. badia* sp. nov.
- Median part of sternite 1 impunctate. Parameres distinctly curved at base and widened apically in lateral view... 4
- 4 Antennomere XI less than twice as long as wide. Internal sac of aedeagus with narrow, elongate, curved sclerite and finely denticulate membranes ..... *B. barda* sp. nov.
- Antennomere XI more than twice as long as wide. Internal sac of aedeagus with robust, not curved sclerite and finely striate membranous structures ..... *B. baliensis* sp. nov.
- 5 Elytra with sutural striae not curved at base, basal striae absent..... *B. bona* sp. nov.
- Elytra with sutural striae curved at base and extending laterally to form basal striae ..... 6
- 6 Basal halves, or prevailing surface of basal halves of elytra coarsely punctured, apical fourth to half of elytra becoming abruptly smooth or inconspicuously punctured..... 7
- Elytral punctation distinct on entire discal surface, or on almost entire disc, including areas near apical margins, eventually becoming gradually finer toward apices ..... 9
- 7 Elytra with basal striae entire, joined to lateral striae..... *B. brevis* sp. nov.
- Elytra with basal striae shortened, not reaching sides and not joined to lateral striae ..... 8
- 8 Antennomere VIII about 3 times as long as wide. Aedeagus with parameres widened in apical third and notched at level of tip of median lobe (dorsal view)..... *B. beata* sp. nov.
- Antennomere VIII slightly more than twice as long as wide. Aedeagus with parameres narrowed in apical third...  
..... *B. bifurcilla* sp. nov.
- 9 Elytra with basal striae complete, joined to lateral striae ..... *B. batukoensis* sp. nov.
- Elytra with basal striae shortened, not reaching sides and not joined to lateral striae ..... 10
- 10 Parameres slightly notched in middle part (dorsal view) and bent dorsally in apical part (lateral view). Tip of median lobe in level with parameral mid-length or reaching slightly beyond parameral mid-length.....  
..... *B. bifurcata* sp. nov.
- Parameres not notched and not bent dorsally in apical part ..... 11
- 11 Apical process of median lobe short, with tip almost reaching apical third of parameral length. Internal sac without denticulate vesicle at level of apical part of sclerotized complex ..... *B. basalis* sp. nov.
- Apical process of median lobe long, with tip reaching apical fourth of parameral length. Internal sac with denticulate vesicle at level of apical part of sclerotized complex ..... *B. breviscula* sp. nov.

***Baeocera badia* sp. nov.**

Figs 1-5

**Holotype:** MHNG; ♂; Indonesia, Timor Camplong, 250 m monsoon forest NE of village, leaf litt. D. Agosti, 30.3.1991.

**Paratypes:** MHNG; 4 ♂, 2 ♀, 8 ex.; with the same data as the holotype (MHNG). – MHNG; 2 ♂, 5 ♀, 9 ex.; Timor NTT, Camping 25.3.91, leaf litt. D. Agosti F91598 [the latter site is NE von Cabang Luar Kota, 10°1'57.57"S 123°56'4.04"E].

**Etymology:** The species epithet is a Latin adjective meaning chestnut-brown.

**Description:** Length 1.45-1.50 mm, width 1.02-1.20 mm. Body moderately convex, without obvious microsculpture. Head and body reddish-brown, appendages and apex of abdomen lighter than body, almost yellowish. Length/width ratio of antennomeres as follows: III 20/7: IV 24/7: V 30/7: VI 27/8: VII 34/9: VIII 28/8: IX 34/15: X 32/15: XI 43/17. Lateral contours of pronotum and elytra separately arcuate. Pronotum with punctation very fine, setation hardly visible (50x magnification), lateral margins convex, anterior margin broad, basal lobe well developed; lateral pronotal carinae concealed in dorsal view. Tip of scutellum exposed. Elytra weakly narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible in dorsal view, sutural striae curved at base to form basal striae joined to lateral striae; adsutural areas flat near base, raised posteriad, parallel, punctate. Elytral impunctate or very finely punctate near base, with fairly coarse punctures on remaining surface, including apical areas, puncture intervals mostly as large to twice as large as puncture diameters. Epipleural striae reaching level of sternite 2, punctate, supraepipleural areas with puncture row. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture distinct, mesoventrite distinctly punctate, with median ridge. Mesepimera large, each about 3 times as long as wide and about 3 times as long as interval to metacoxae. Median part of metaventrite flattened, with smooth centre delimited laterally and apically by coarse punctures row. Lateral parts of metaventrite coarsely punctate, except on smooth areas near metacoxae. Punctures on lateral parts of metaventrite to part elongate, some as large as or larger than puncture intervals. Submesocoxal lines arcuate, with marginal punctures not extended laterally, submesocoxal areas about 0.05 mm long, as third of interval to metacoxae. Metanepisterna about 0.06-0.07 mm wide, narrowed anteriorly, with suture deep, broad, straight, coarsely punctate. Protibiae straight, mesotibiae and metatibiae slightly curved. Sternite 1 with coarse basal punctures uninterrupted in middle, separated by wrinkles about 0.02-0.08 mm long, remaining abdominal punctation distinct.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs

1-3, 5) 0.41-0.48 mm, fairly sclerotized. Median lobe symmetrical, with apical process shorter than basal bulb, weakly inflexed, gradually narrowed apically, with acute tip. Articular process distinct, not prominent. Parameres long, slightly narrowed from base to mid-length and somewhat bent in dorsal view, evenly narrow and straight in lateral view. Internal sac with curved, proximally widened sclerite and densely denticulate basal membranous lobe, membranes posterior sclerite extremely finely denticulate.

**Female:** Ovipositor (Fig. 4) with long distal gonocoxite hardly narrowed apically, bearing two long apical setae, gonostyle present, with two short subapical setae and one long apical seta.

**Distribution:** Indonesia: Timor.

**Type locality:** Timor, Camplong, 250 m, monsoon forest NE of village.

**Comments:** This is a member of the *B. serendibensis* group and is in external characters similar to *B. serendibensis* (Löbl, 1971) and *B. sauteri* Löbl, 1980. The aedeagal features suggest close relationships with the Australian *B. alternans* (Löbl, 1977), the New Guinean *B. bironis* (Pic, 1956), *B. insperata* (Löbl, 1977) and *B. prospecta* Löbl, 2002, and *B. agostii* Löbl, 2014 from the Moluccas. The new species may be distinguished from these species, *B. agostii* excepted, by the elytra having complete basal striae, joined to lateral striae, and all but *B. prospecta* by the distinctly punctate lateral parts of the metasternum. The shape of the sclerite of the internal sac and the absence of long, striate or hair-like structures in the proximal part of the internal sac are diagnostic for *B. badia*.

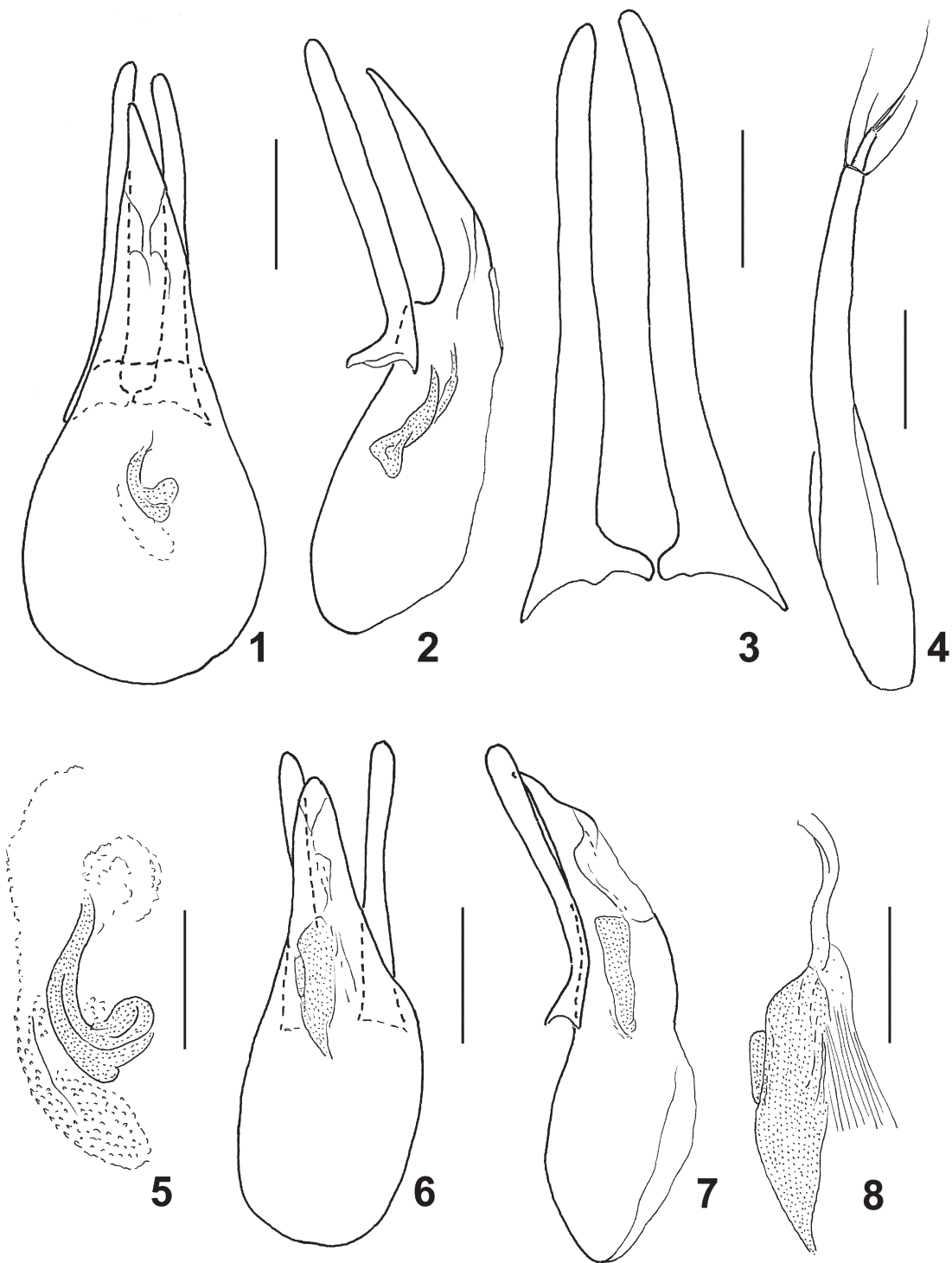
***Baeocera baliensis* sp. nov.**

Figs 6-8

**Holotype:** MHNG; ♂; Indonesia, Bali Lake Tamblingan ca 1300 m, 30.X.91 I. Löbl, forest floor litt.

**Etymology:** The species epithet is derived from the name of the island Bali.

**Description:** Length 1.55 mm, width 0.96 mm. Body convex, lacking obvious microsculpture. Head, body and femora dark reddish-brown, tibiae slightly, tarsi and antennae distinctly lighter than body. Length/width ratio of antennomeres as follows: III 30/7: IV 30/7: V 33/8: VI 25/6: VII 36/12: VIII 28/9: IX 35/14: X 32/15: XI 40/16. Lateral contours of pronotum and elytra continuously arcuate. Pronotum with punctation very fine, setation hardly visible (50x magnification), lateral margins convex, anterior margin broad, basal lobe poorly developed; lateral pronotal carinae concealed in dorsal view. Scutellum concealed. Elytra strongly narrowed apically, not covering abdominal apex, lateral margin carinae concealed in dorsal view, sutural striae curved at



Figs 1-8.

(1-5) *Baeocera badia* sp. nov., aedeagus in dorsal (1) and lateral (2) views, parameres (3) in ventral view, gonocoxite (4), internal sac in dorsal view (5).

(6-8) *Baeocera baliensis* sp. nov., aedeagus in dorsal (6) and ventral (7) views, internal sac in dorsal view (8); scale bars for aedeagi = 0.1 mm, for parameres, gonocoxite and internal sac = 0.05 mm.



base to form basal striae joined to lateral striae; adsubtural areas flat, parallel except in apical third, punctate. Elytra impunctate near base, with fairly coarse punctures on most surface, punctures becoming fine apically, puncture intervals mostly about as large to twice as large as puncture diameters. Epipleural striae reaching level of sternite 2, punctate, supraepipleural areas with puncture row. Hind wings well developed. Hypomera impressed, impunctate, smooth. Mesovenral suture distinct, mesovenrite impunctate, with median ridge. Mesepimera each about 3 times as long as wide and about 3 times as long as interval to metacoxae. Median part of metavenrite flattened, coarsely punctate except in middle part and near metacoxal process. Lateral parts of metavenrite coarsely punctate, except on smooth areas near metacoxae and metanepisterna. Punctures on lateral parts of metavenrite round, as large as or larger than puncture intervals. Submesocoxal lines arcuate, with marginal punctures not extended laterally, submesocoxal areas about 0.06 mm long, slightly longer than half of interval to metacoxae. Metanepisterna about 0.07 mm wide, parallel-sided, convex, with suture deep, broad, and coarsely punctate. Protibiae straight, mesotibiae and metatibiae slightly curved. Sternite 1 with basal punctures fairly coarse, elongate, interrupted in middle, lacking basal wrinkles, punctuation fine but distinct on lateral parts of sternite, absent from median part.

**Male:** Protarsomeres not widened. Aedeagus (Figs 6-8) 0.35 mm long, fairly sclerotized. Median lobe similar to that in *B. badia* and *B. barda*, articular process almost indistinct. Parameres long, slightly narrowed behind mid-length and almost straight in dorsal view, bent in basal third and slightly widened in apically lateral view. Internal sac with robust, straight sclerite, membranes striate laterally sclerite, denticulate structures absent.

**Distribution:** Indonesia: Bali.

**Type locality:** Bali, Lake Tamblingan, ca 1300 m.

**Comments:** This species is likely closely related with *B. praesignis* Löbl, 2002 and *B. bironis* (Pic, 1956) that possess similar aedeagi, in particular the internal sacs. These two species may be, however, readily distinguished from *B. baliensis* by the very finely punctate lateral parts of the metavenrite and by the comparatively shorter apical antennomeres.

***Baeocera barda* sp. nov.**

Figs 9-13

**Holotype:** MHNG; ♂; Indonesia, Lombok Pusuk Pass 300 m 3.XI.1991, I. Löbl degr. forest leaf litter.

**Paratypes:** MHNG; 1 ♀; with the same data as the holotype. – MHNG; 1 ♂; Lombok Bangko-Bangko (SW Lombok), 50 m degr. monsoonal for. D. Agosti

19.3.1991. – SMNS; 1 ♂; Lombok Is. Senaro, N slope of Rinjani, 2-5.Feb 1994 Bolm lgt.1100 m.

**Etymology:** The species epithet is a Latin adjective meaning slow.

**Description:** Length 1.45-1.58 mm, width 0.87-1.05 mm. Colour and most external characters as in *B. badia*. Length/width ratio of antennomeres as follows: III 17/7: IV 22/7: V 30/7: VI 26/8: VII 33/12: VIII 23/9: IX 30/13: X 28/15: XI 34/19. Mesepimera about 2.5 times as long as wide and 1.5 time as long as interval to mesocoxae. Punctuation on lateral parts of metavenrite coarser than in *B. badia*. Submesocoxal lines strongly arcuate, submesocoxal areas about as long as half of interval to metacoxae. Metanepisterna not narrowed posteriad, suture straight, with variably large punctures. Sternite 1 impunctate in middle, basal puncture row interrupted between coxae.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 9-12) 0.37-0.43 mm long, fairly sclerotized. Median lobe similar to that in *B. badia*, articular process almost indistinct. Parameres long, slightly widened to mid-length and slightly sinuate in dorsal view, bent in basal third and slightly widened in apical third in lateral view. Internal sac with almost evenly thick, curved and proximally tuberculate sclerite, basal membranous denticles well visible but distinct lobe absent.

**Female:** Ovipositor (Fig. 13) with long distal gonocoxite slightly narrowed apically, bearing two long apical and four short subapical setae, gonostyle present, with one long apical seta.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Pusuk Pass 300 m.

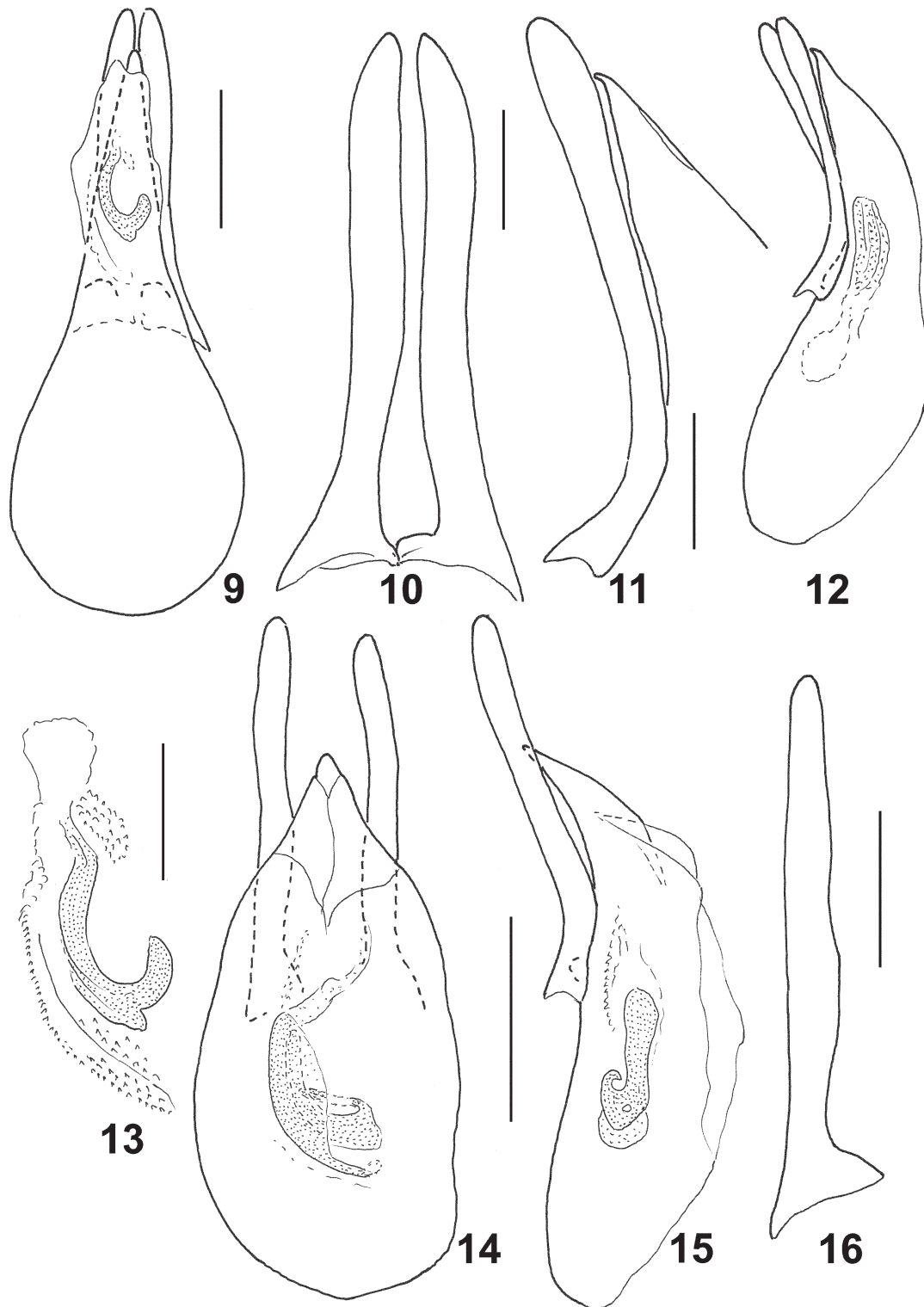
**Comments:** This species is very similar to and obviously closely related with *B. badia*. It may be reliably distinguished by its aedeagal characters, i.e., by the shape of the parameres and sclerotized piece of the internal sac. It differs from *B. badia* also by the impunctate centre of the sternite 1 and shorter apical antennomeres.

***Baeocera basalis* sp. nov.**

Figs 14-19

**Holotype:** MHNG; ♂; Indonesia, Bali Mt. Agung above Besakih Temple, 1000-1100 m, 31.X.-1.XI.91, I. Löbl for.floor litter.

**Paratypes:** MHNG; 3 ♂, 1 ♀; with the same data as the holotype. – MHNG; 5 ♂, 7 ♀; Lombok Batu Koq (N of G. Rinjani) 500 m sec. forest in gorge D. Agosti 12.03.1991. – MHNG; 3 ♂; Lombok Mt. Rinjani, ca 400 m nr. Waterfalls, 5.XI.91 Löbl, veg.debris nr.river. – MHNG; 1 ♂, 1 ♀; Lombok Gn. Rinjani 1000 m (winkler) D. Agosti F91562. – MHNG; 1 ♂, 2 ♀; Lombok



Figs 9-16

(9-13) *Baeocera barda* sp. nov., aedeagus in dorsal (9) and lateral (12) views, parameres (10) in ventral view, tip of median lobe and paramere (11) in lateral view, internal sac (13) in dorsal view.

(14-16) *Baeocera basalis* sp. nov., aedeagus in dorsal (14) and lateral (15) views, parameres (16) in ventral view; scale bars for aedeagi = 0.1 mm, for parameres, gonocoxite and internal sac = 0.05 mm.

Pusuk Pass, 300 m 3.XI.1991, I. Löbl degr. forest leaf litter. – 1 ♂; Lombok Mt. Rinjani above Senaro, 900-1100 m 6.XI.1991, I. Löbl forest floor litter. – MHNG; 1 ♂; Lombok Batu Koq (N of G. Rinjani) 500 m sec. forest in gorge D. Agosti 12.03.1991.

**Etymology:** The species epithet is a Latin adjective meaning basal.

**Description:** Length 1.15-1.42 mm, width 0.79-0.95 mm. Body strongly convex, without obvious microsculpture. Head and body very dark reddish-brown to blackish, appendages and apex of abdomen lighter than body. Length/width ratio of antennomeres as follows: III 25/7: IV 29/6: V 34/6: VI 30/6: VII 37/8: VIII 30/7: IX 35/11: X 35/12: XI 40/15. Lateral contours of pronotum and elytra continuously arcuate. Pronotum with hardly visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe well developed; lateral pronotal carinae concealed in dorsal view. Tip of scutellum exposed. Elytra fairly strongly narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae shallow, curved at bases to form basal striae abruptly ending about at mid-width of elytra; adsutural areas somewhat convex, parallel, very finely punctate. Discal punctation very fine near basal margins and along lateral striae, fairly coarse about up to apical fourth, with punctures well delimited, puncture intervals about twice to four times as large as puncture diameters, becoming finer toward apices but still distinct near apical margins. Epipleural striae entire, punctate, supraepipleural areas each with puncture row. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite punctate, lacking median ridge. Mesepimera about three times as long as wide and about twice as long as interval to metacoxae. Median part of metaventrite convex, smooth in middle, coarsely punctate around smooth centre. Entire lateral parts of metaventrite coarsely punctate, in particular near anterior margins, with punctures well delimited, mostly round, some punctures larger than puncture intervals. Submesocoxal lines arcuate, with marginal punctures not extending laterally, submesocoxal areas about 0.03 mm long, about as third of interval to metacoxae. Metanepisterna fused to metaventrite, suture indicated by not impressed outer row of coarse punctures. Tibiae straight. Sternite 1 with basal puncture row uninterrupted in middle, lateral punctures elongate, not separated by wrinkles, finely but distinctly punctate posterior basal punctures.

**Male:** Protarsomeres slightly widened. Aedeagus (Figs 14-18) 0.30-0.34 mm long, moderately sclerotized. Median lobe symmetrical, with basal bulb large, longer than apical process, latter tapering, weakly inflexed, with acute tip and slightly concave ventral side (lateral view). Articular process moderately large. Parameres slightly

bent posterior basal fourth and almost straight and evenly wide in lateral view, slightly narrowed and curved in apical halves in dorsal view. Internal sac with curved, almost evenly wide flagellum, flagellar guide-sclerite narrow, hook-like at base and blunt at apex, accessory sclerites absent, scale-like membranose structures extremely fine and hardly visible.

**Female:** Ovipositor (Fig. 19) with distal gonocoxite long, narrowed apically, parallel-sided in apical section, bearing long apical seta, gonostyle absent.

**Distribution:** Indonesia: Bali, Lombok.

**Type locality:** Bali, Mt. Agung above Besakih Temple, 1000-1100 m.

**Comments:** This species is a member of the *B. lenta* group. Its aedeagal characters suggest relationship with *B. louisi* Löbl, 2012 from Luzon. The new species may be easily distinguished by the elytral punctation and sutural striae abruptly ending at elytral mid-width.

#### *Baeocera batukoqensis* sp. nov.

Figs 20-24

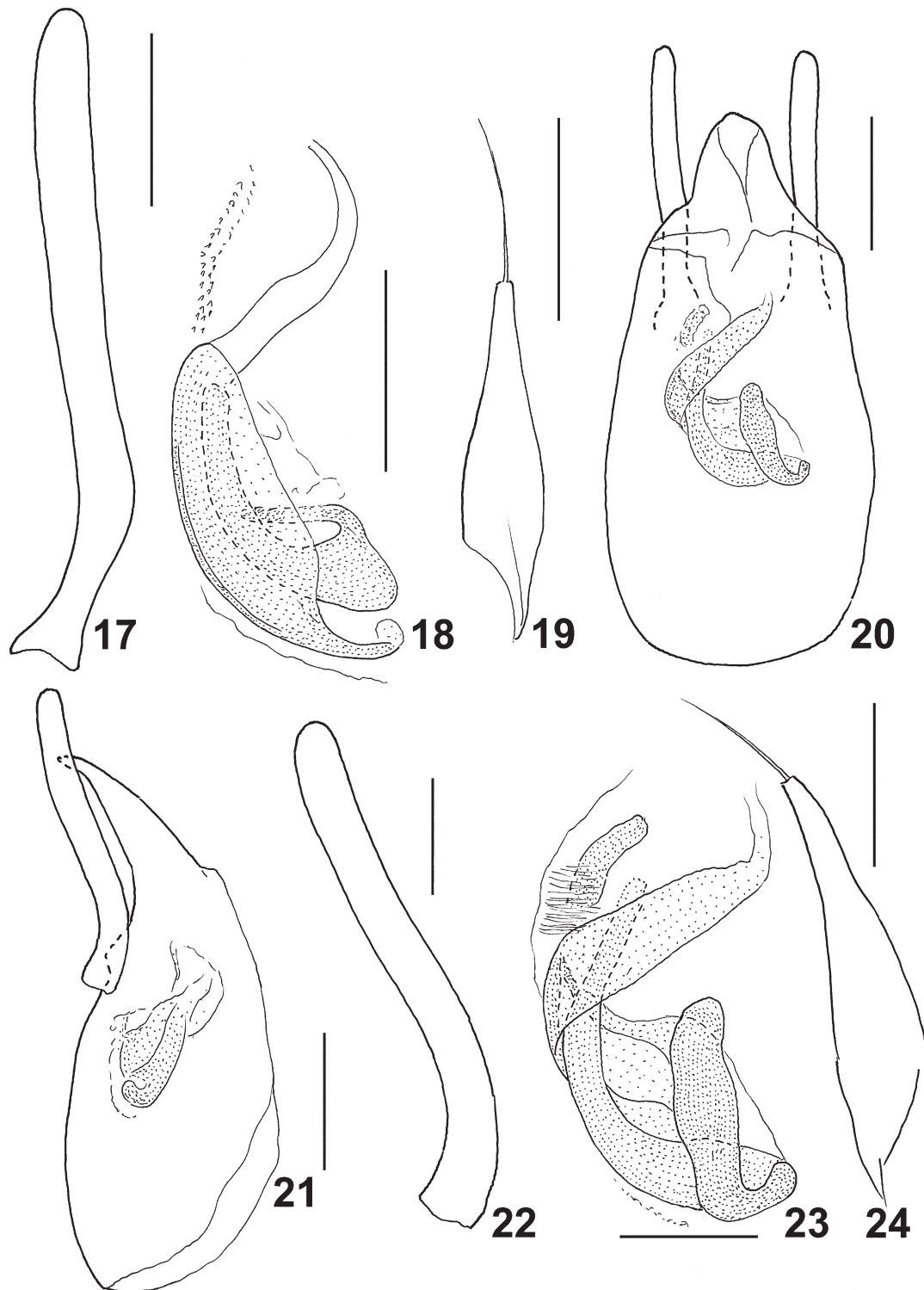
**Holotype:** MHNG; ♂; Indonesia, Lombok Batu Koq (N of G. Rinjani) 500 m sec. forest in gorge D. Agosti 12.03.1991.

**Paratypes:** MHNG; 4 ♀; with the same data as the holotype. – MHNG; 1 ♂; Lombok Gn. Rinjani 1000 m (winkler) D. Agosti F91562.

**Etymology:** The species epithet is derived from the name of the type locality.

**Description:** Length 1.14-1.20 mm, width 0.67-0.72 mm. Body strongly convex, without obvious microsculpture. Head and body reddish-brown to blackish-brown, hypomera, abdomen and appendages lighter than most of body. Length/width ratio of antennomeres as follows: III 27/6: IV 25/6: V 32/6: VI 33/6: VII 40/8: VIII 32/8: IX 38/10: X 35/12: XI 35/15. Lateral contours of pronotum and elytra almost continuously arcuate. Pronotum with hardly visible punctation and setation (50x magnification), lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Tip of scutellum hardly visible. Elytra moderately narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae shallow, not shortened, curved at bases to form basal striae extending laterally and joined to lateral striae; adsutural areas somewhat raised in middle, parallel, impunctate. Discal punctation fairly coarse and dense from bases to mid-length or to apical third, with punctures well delimited, puncture intervals about as large to twice as large as puncture diameters; apical third to half of elytra finely but distinctly punctate.





Figs 17-24

(17-19) *Baeocera basalis* sp. nov., paramere (17) in lateral view, internal sac (18) in dorsal view, gonocoxite (19).

(20-24) *Baeocera batukoqensis* sp. nov., aedeagus in dorsal (20) and lateral (21) views, parameres (22) in lateral view, internal sac (23) in dorsal view, gonocoxite (24); scale bars for aedeagus = 0.1 mm, for parameres, internal sac and gonocoxite = 0.05 mm.

tate. Epipleural striae entire, punctate, supraepipleural areas each with puncture row. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture visible, mesoventrite finely punctate, lacking median ridge. Mesepimera about 2.5 times as long as wide and about twice as long as interval to metacoxae. Metaventrite coarsely punctate, punctures on lateral parts larger than on centre, to part larger than puncture intervals, only small central area and surfaces along metacoxae impunctate. Median part of metaventrite flattened. Submesocoxal lines arcuate, with marginal punctures not extending laterally, submesocoxal areas about 0.03 mm long, as third of interval to metacoxae. Metanepisterna fused to metaventrite, suture indicated by impressed outer row of coarse punctures. Tibiae straight. Sternite 1 with basal puncture row uninterrupted in middle, basal punctures elongate and up to 0.03 mm long laterally, punctation very fine, hardly visible posterior basal puncture row.

*Male:* Protarsomeres 1 to 3 widened. Aedeagus (Figs 20-23) 0.42-0.44 mm long, fairly sclerotized. Median lobe symmetrical, with basal bulb large, longer than apical process, latter appearing short and wide in dorsal view, tapering, weakly curved, with tip bent and acute and ventral side oblique in lateral view. Articular process small. Parameres almost straight and posterior base evenly wide in dorsal view, slightly sinuate and evenly wide in lateral view. Internal sac with robust complex of sclerites, flagellum comparatively short, flagellar guide-sclerite narrow, small accessory rod joined to striate membranous structures.

*Female:* Ovipositor (Fig. 24) with long, gradually narrowed distal gonocoxite bearing long apical seta, gonostyle absent.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Batu Koq N of G. Rinjani, 500 m.

**Comments:** This species is a member of the *B. lenta* group with aedeagal characters similar to those in *B. papua* (Löbl, 1975) from New Guinea, although the parameres are sinuate in the new species (lateral view). *Baeocera batukoqensis* may be easily distinguished from *B. papua* by the abdominal ventrite 1 lacking distinct basal wrinkles.

***Baeocera beata* sp. nov.**

Figs 25-30

**Holotype:** MHNG; ♂; Indonesia, Timor between Soe and Kapan, 1000 m evergreen for. on limest. D. Agosti, 30.3.1991.

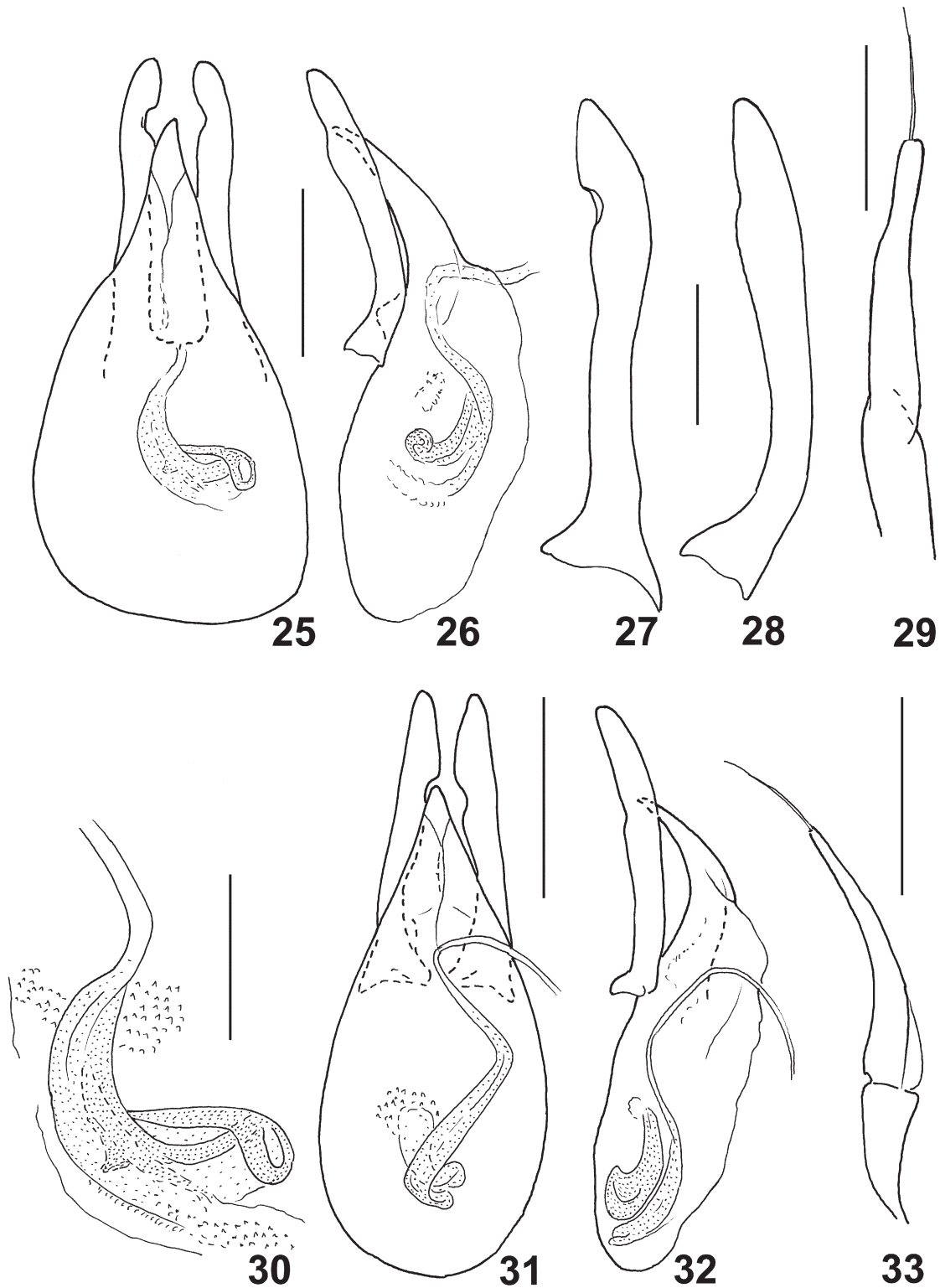
**Paratypes:** MHNG; 3 ♀; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective meaning fertile.

**Description:** Length 1.15-1.17 mm, width 0.80-0.82 mm. Body strongly convex, without obvious microsculpture. Head and body very dark reddish-brown to blackish-brown, appendages and apex of abdomen lighter than body. Length/width ratio of antennomeres as follows: III 25/7: IV 26/6: V 28/7: VI 25/7: VII 30/7: VIII 25/8: IX 30/12: X 30/13: XI 35/15. Lateral contours of pronotum and elytra almost continuously arcuate. Pronotum with hardly visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe well developed; lateral pronotal carinae concealed in dorsal view. Tip of scutellum hardly visible. Elytra weakly narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae deep, not shortened, curved at bases to form basal striae abruptly ending about at mid-width of elytra; adsutural areas somewhat convex, parallel, impunctate. Discal punctation conspicuously coarse and fairly dense from bases to apical fourth, with punctures well delimited, puncture intervals about as large to twice as large as puncture diameters; apical fourth to third of elytra extremely finely punctate, appearing impunctate. Epipleural striae entire, punctate, supraepipleural areas each with puncture row. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite coarsely punctate, with median ridge hardly visible. Mesepimera about twice as long as wide and about twice as long as interval to metacoxae. Metaventrite all over coarsely punctate, punctures on lateral parts much larger than in middle, to part much larger than puncture intervals. Median part of metaventrite flattened. Submesocoxal lines arcuate, with marginal punctures not extending laterally, submesocoxal areas about 0.04-0.05 mm long, as half of interval to metacoxae. Metanepisterna fused to metaventrite, suture indicated by outer row of coarse punctures. Tibiae straight. Sternite 1 with basal puncture row uninterrupted in middle, basal punctures elongate and separated by about 0.03-0.05 mm long wrinkles on lateral parts of sternite, posterior basal punctures appearing impunctate.

*Male:* Protarsomeres hardly widened. Aedeagus (Figs 25-28, 30) 0.34 mm long, moderately sclerotized. Median lobe symmetrical, with basal bulb large, longer than apical process, latter tapering, weakly curved, with acute tip and slightly concave ventral side (lateral view). Articular process moderately large. Parameres almost straight and distinctly widened in apical third, with shallow notch at level of tip of median lobe in dorsal view, bent in basal third in lateral view. Internal sac with gradually narrowed flagellum, lacking distinct guide-sclerite, with subbasal tubercle and membranes distinctly denticulate basally and apically.

*Female:* Ovipositor (Fig. 29) with long distal gonocoxite weakly narrowed apically, in apical section parallel-sided, bearing long apical seta, gonostyle absent.



Figs 25-33

(25-30) *Baeocera beata* sp. nov., aedeagus in dorsal (25) and lateral (26) views, parameres in dorsal (27) and lateral (28) views, gonocoxite (29), internal sac (30) in dorsal view.

(31-33) *Baeocera bella* sp. nov., aedeagus in dorsal (31) and lateral (32) views, gonocoxite (33); scale bars for aedeagi = 0.1 mm, for parameres, internal sac and gonocoxite = 0.05 mm.

**Distribution:** Indonesia: Timor.

**Type locality:** Timor, between Soe and Kapan, 1000 m.

**Comments:** This species is a member of the *B. lenta* group. The aedeagal characters, in particular the shape of the parameres and the comparatively simple internal sac, suggest relationships with *B. jankodadai* Löbl, 2012 from Palawan. The latter species differs by the comparatively short antennomere VIII and the coarse elytral punctation not extending onto apical third of elytral disc.

***Baeocera bella* sp. nov.**

Figs 31-33

**Holotype:** MHNG; ♂; Indonesia, Timor Camplong, 250 m monsoon forest NE of village, leaf litt. D. Agosti, 30.3.1991.

**Paratypes:** MHNG; 3 ♂, 8 ♀; with the same data as the holotype. – MHNG; 5 ♂, 3 ♀; Timor NTT, Camping 25.3.91, leaf lit. D. Agosti F91598 [the site is NE von Cabang Luar Kota 10°1'57.57"S 123°56'4.04"E].

**Etymology:** The species epithet is a Latin adjective meaning pretty.

**Description:** Length 0.92-1.08 mm, width 0.63-0.74 mm. Body strongly convex, without obvious microsculpture. Head and body light reddish-brown, appendages and apex of abdomen lighter than body, almost yellowish. Length/width ratio of antennomeres as follows: III 14/4.5: IV 14/4: V 18/4: VI 17/4: VII 20/7: VIII 13/4.5: IX 17/10: X 17/12: XI 25/12. Lateral contours of pronotum and elytra continuously or almost continuously arcuate. Pronotum with hardly visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe well developed; lateral pronotal carinae concealed in dorsal view. Tip of scutellum exposed. Elytra weakly narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae not shortened, curved at bases to form basal striae abruptly ending at mid-width of elytra; adsutural areas flat, parallel, impunctate. Elytral punctation very fine, as that on pronotum, except on fairly coarsely and densely punctate, about 0.10<sup>2</sup> to 0.15<sup>2</sup> mm large lateromedian areas, and along lateral striae. Epipleural striae entire, impunctate, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite very finely punctate, with median ridge hardly visible. Mesepimera large, each almost three times as long as wide and about 3 times as long as interval to metacoxae. Median part of metaventrite somewhat flattened, with smooth centre delimited apically by distinct puncture row and laterally by fine punctation. Lateral parts of metaventrite distinctly

punctate, usually smooth near metacoxae. Punctation on metaventrite consisting of round or slightly elongate punctures, mostly smaller than puncture intervals. Submesocoxal lines arcuate, with marginal punctures not extending laterally, submesocoxal areas about 0.03 mm long, as third of interval to metacoxae. Metanepisterna about 0.04-0.05 mm wide, parallel-sided, with deep, straight and punctate suture. Tibiae straight. Sternite 1 with basal wrinkles about 0.03-0.05 mm long, abdominal punctation indistinct.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 31-32) 0.28-0.33 mm long, weakly sclerotized. Median lobe symmetrical, with basal bulb longer than apical process. Apical process inflexed, tapering, with acute tip and concave ventral side. Articular process indistinct. Parameres long, extending beyond tip of median lobe, weakly curved in dorsal and lateral views, each with fairly shallow notch at level of tip of median lobe. Internal sac with flagellum gradually narrowed, lacking flagellar guide-sclerite, with single wide and short accessory sclerite and membranous structure bearing minute denticles joined to its apex.

**Female:** Ovipositor (Fig. 33) with long distal gonocoxite gradually narrowed apically, bearing single long apical seta, gonostyle absent.

**Distribution:** Indonesia: Timor.

**Type locality:** Timor, Camplong, 250 m, monsoon forest NE of village.

**Comments:** This new species is a member of the *B. lenta* group and appears closely related with *B. beata*, though it differs drastically by the elytra with coarse punctation limited onto small, lateromedian area. The shape of the parameres in combination with the narrow flagellum is diagnostic for this new species.

***Baeocera bifurcate* sp. nov.**

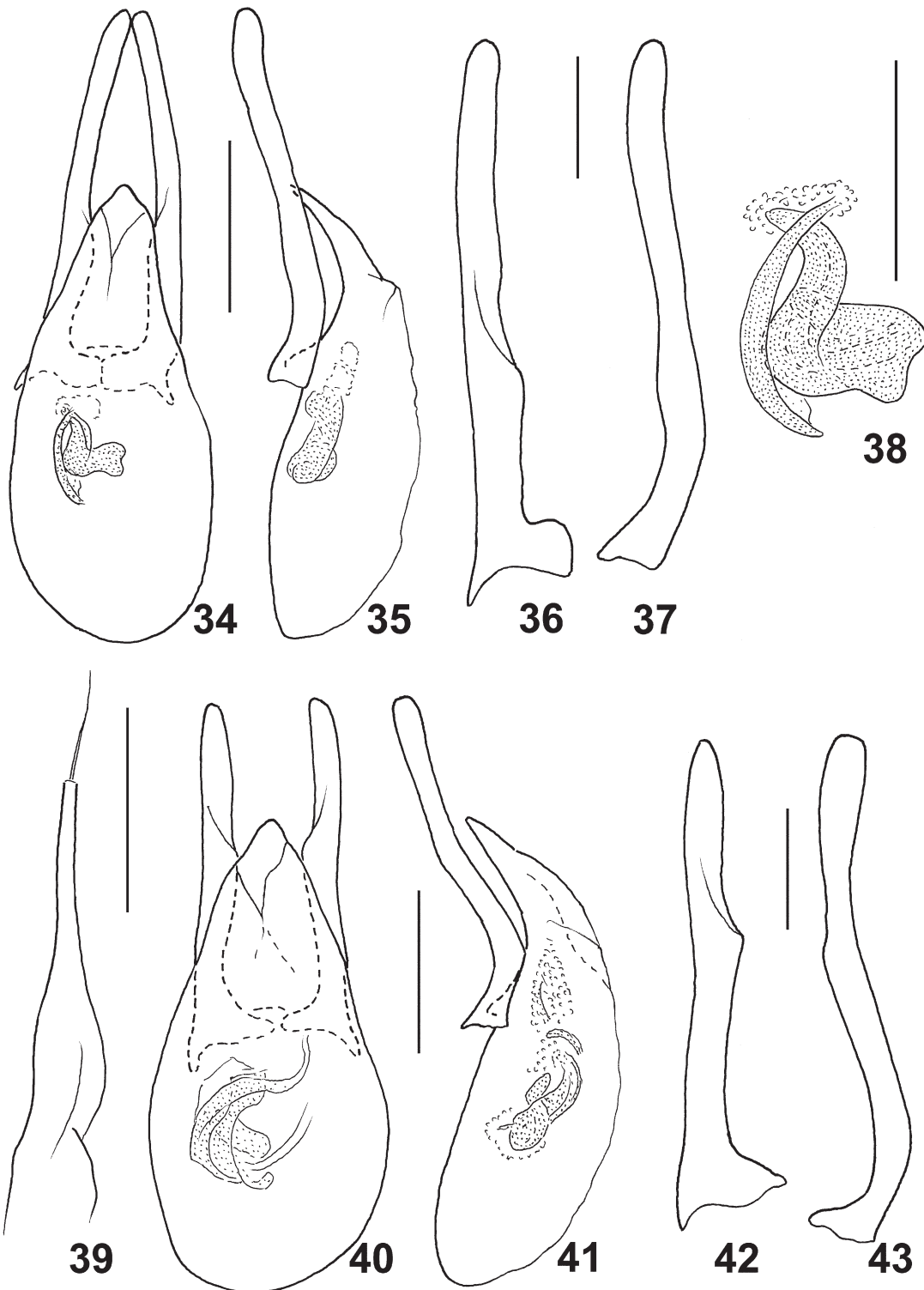
Figs 34-39

**Holotype:** MHNG; ♂; Indonesia, Bali Lake Buyan, ca 1200 m 8.-9.XI.1991, I. Löbl degr. forest floor litter.

**Paratypes:** MHNG; 1 ♀; with the same data as the holotype. – MHNG; 1 ♂; Bali Badingkayu, 300-500 m 10.-14.XI.1991, I. Löbl forest floor litter, bark.

**Etymology:** The species epithet is a Latin adjective referring to the fork-like shape of the parameres.

**Description:** Length 1.23-1.25 mm, width 0.88 mm. Body strongly convex, without obvious microsculpture. Head and body dark brown to blackish-brown, abdomen, femora and tibiae lighter, tarsi and antennae yellowish. Length/width ratio of antennomeres as follows: III 23/5: IV 24/5: V 28/5: VI 25/5: VII 28/7: VIII 23/5: IX 33/10: X 34/12: XI 41/13. Lateral contours of pronotum and elytra separately arcuate. Pronotum with hardly



Figs 34-43

(34-39) *Baecera bifurcata* sp. nov., aedeagus in dorsal (34) and lateral (35) views, parameres in ventral (36) and lateral (37) views, internal sac (38) in dorsal view, gonocoxite (39).

(40-43) *Baecera bifurcilla* sp. nov., aedeagus in dorsal (40) and lateral (41) views, parameres in ventral (42) and lateral (43) views; scale bars for aedeagi = 0.1 mm, for parameres, internal sacs and gonocoxite = 0.05 mm.



visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Minute tip of scutellum exposed. Elytra fairly narrowed apically, not covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae curved at bases to form basal striae abruptly ending about at mid-width of elytra; adsutural areas flat, parallel, punctate. Elytral punctation very fine and similar to that on pronotum along basal margins and on apicolateral areas, coarse and densely punctate on remaining surface, many coarse punctures about as large as puncture intervals. Epipleural striae entire, punctate, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite distinctly punctate, without median ridge. Mesepimera each about twice as long as wide and twice as long as interval to metacoxae. Median part of metaventrite somewhat flattened, with small smooth area in centre delimited by coarse punctation. Lateral parts of metaventrite coarsely punctate, except on narrow smooth areas near metacoxae; punctures not elongate, to part about as large as puncture intervals. Submesocoxal lines parallel, with marginal punctures not extending laterally, submesocoxal areas about 0.02 mm long, about as fourth of interval to metacoxae. Metanepisternal suture indicated by outer row of coarse punctures. Tibiae straight. Sternite 1 with basal punctures uninterrupted in middle, coarse and slightly elongate on sides, basal wrinkles absent; punctation posterior basal puncture row distinct, becoming very fine apically.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 34-38) 0.34-0.35 mm long. Median lobe and parameres symmetrical, moderately sclerotized. Basal bulb of median lobe longer than apical process, latter inflexed, tapering, with acute tip and concave ventral side. Articular process indistinct. Parameres conspicuously long, extending far beyond tip of median lobe, straight in dorsal and lateral views, narrowed anterior level of tip of median lobe. Internal sac with complex basal sclerites forming arcuate flagellum and curved guide-sclerite joined to laterally expanded base. Membranes around apex of guide-sclerites forming small vesicle covered by scale-like structures.

**Female:** Ovipositor (Fig. 39) with long distal gonocoxite strongly narrowed toward apical half, narrow and parallel-sided in long apical section, bearing single long apical seta, gonostyle absent.

**Distribution:** Indonesia: Bali.

**Type locality:** Bali, Lake Buyan, ca 1200 m.

**Comments:** This species is a member of the *B. lenta* group and possibly allied with *B. punctata* (Löbl, 1975) from New Guinea. The shape of the sclerotized pieces of the internal sac are, however, diagnostic. In addition,

most elytral punctures are in *B. punctata* larger than puncture intervals.

***Baeocera bifurcilla* sp. nov.**

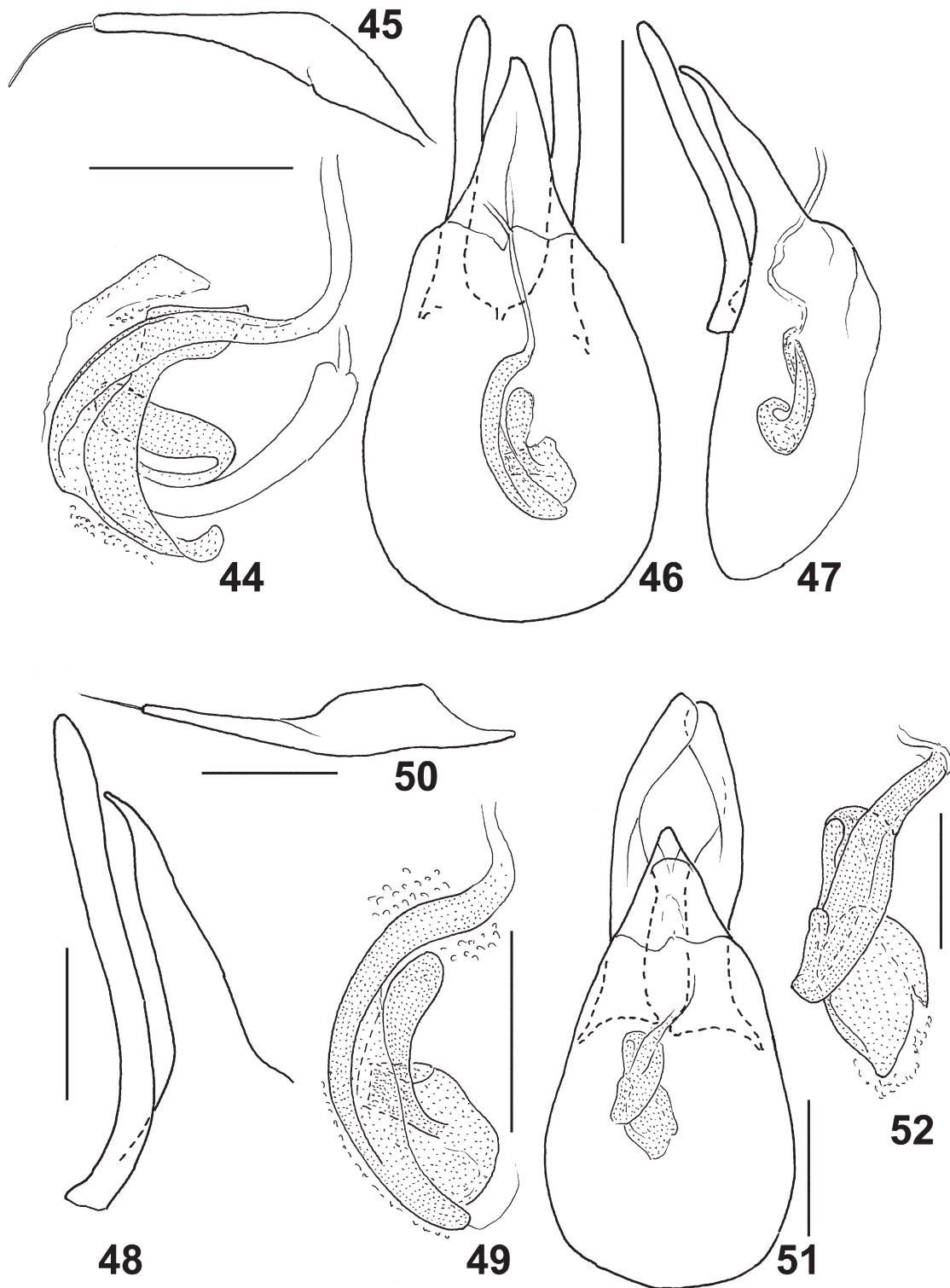
Figs 40-45

**Holotype:** MHNG; ♂; Indonesia, Bali Yehbuah (N of Yehembang, E of Mendaya), 250 m D. Agosti 25.4.1991.

**Paratypes:** MHNG; 11 ♂, 12 ♀; Indonesia, Bali Badingkayu, 300-500 m 10.-14.XI.1991, I. Löbl forest floor litter, bark.

**Etymology:** The species epithet is a Latin noun, meaning small fork and referring to the shape of the parameres.

**Description:** Length 1.06-1.21 mm, width 0.72-0.80 mm. Body strongly convex, without obvious microsculpture. Head, body and femora reddish-brown, tibiae slightly lighter, tarsi and antennae yellowish. Length/width ratio of antennomeres as follows: III 20/7: IV 16/7: V 22/7: VI 18/7: VII 30/8: VIII 16/7: IX 30/11: X 28/14: XI 32/14. Lateral contours of pronotum and elytra separately arcuate. Pronotum with hardly visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Minute tip of scutellum exposed. Elytra weakly narrowed apically, not covering abdominal apex, lateral margin carinae hardly visible in dorsal view, sutural striae curved at bases to form basal striae abruptly ending about at mid-width of elytra; adsutural areas flat, parallel in anterior two thirds, impunctate. Elytral punctation very fine along sutural striae, evanescent along bases, on humeral areas and on apical third to two fifth. Punctation coarse and dense on remaining discal surface, with punctures well delimited, about half as large to as large as puncture intervals. Epipleural striae entire, punctate, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite distinctly punctate, without median ridge. Mesepimera about 3 times as long as wide and 3 times as interval to metacoxae. Median part of metaventrite convex, with small smooth area in centre delimited laterally and posteriorly by coarse punctation. Lateral parts of metaventrite coarsely punctate, except on narrow smooth areas along metacoxae; punctures round or slightly elongate, puncture intervals usually smaller than puncture diameters. Submesocoxal lines parallel, with marginal punctures not extending laterally, submesocoxal areas about 0.02 mm long, about as fourth of interval to metacoxae. Metanepisternal suture indicated by impressed outer row of coarse punctures. Tibiae straight. Sternite 1 with coarse basal punctures, separated by wrinkles up to about 0.05 mm long, uninterrupted in middle; punc-



Figs 44-52

(44-45) *Baeocera bifurcilla* sp. nov., internal sac (44), gonocoxite (45).

(46-50) *Baeocera bona* sp. nov., aedeagus in dorsal (46) and lateral (47) views, paramere with apical process of median lobe (48) in lateral view, internal sac (49) in dorsal view, gonocoxite (50).

(51-52) *Baeocera brevis* sp. nov., aedeagus (51) and internal sac (52) in dorsal view; scale bars for aedeagi = 0.1 mm, for parameres, internal sacs and gonocoxite = 0.05 mm.

tation posterior basal puncture row distinct in middle, very fine laterally.

*Male*: Protarsomeres hardly widened. Aedeagus (Figs 40-44) 0.32-0.37 mm long. Median lobe and parameres symmetrical, moderately sclerotized. Basal bulb of median lobe longer than apical process, latter inflexed, tapering, with blunt tip and concave ventral side. Articular process indistinct. Parameres long, extending fairly beyond tip of median lobe, straight in dorsal view, narrowed at level of tip of median lobe, arcuate in basal half and straight in apical half with slightly widened apical part in lateral view. Internal sac with complex basal sclerites forming arcuate flagellum and apically widened guide-sclerite joined to laterally expanded base. Basal section of ejaculatory duct distinct. Membranes with extremely finely tubercle-like structures at base and around apex of guide-sclerites.

*Female*: Ovipositor (Fig. 45) with long distal gonocoxite strongly narrowed toward apical half, narrow and parallel-sided in long apical section, bearing single long apical seta, gonostyle absent.

**Distribution**: Indonesia: Bali.

**Type locality**: Bali, Yehbuah (N of Yehembang, E of Mendaya), 250 m.

**Comments**: This species is a member of the *B. lenta* group. Its aedeagal characters suggest close relationship with *B. bifurcata*. It may be easily distinguished by the shape of the parameres as seen in lateral view, the shorter apical section of the parameres, the shape of the flagellar guide-sclerite, and in external characters by the coarse elytral punctation abruptly ending before apical third of the disc.

### *Baeocera bona* sp. nov.

Figs 46-50

**Holotype**: MHNG; ♂; Indonesia, Lombok Batu Koq (N of G. Rinjani) 500 m sec. forest in gorge D. Agosti 12.03.1991.

**Paratypes**: MHNG; 3 ♂, 5 ♀; Indonesia, Lombok Mt. Rinjani, ca 400 m nr. Waterfalls 5.XI.91 Löbl leg. debris nr. river. – MHNG; 2 ex.; Lombok, Mt. Rinjani above Senaro, 900-1100 m 6.XI.1991, I. Löbl forest floor litter. – MHNG; 1 ♀; Lombok Pusuk Pass 300 m 3.XI.1991 I. Löbl degr. forest leaf litter. – MHNG; 3 ♂, 1 ♀, 9 ex.; Lombok Batu Koq (N of G. Rinjani) 500 m sec. forest in gorge D. Agosti 12.03.1991. – MHNG; 5 ex.; Lombok, Gn. Rinjani 1000 m (Winkler) D. Agosti F91562. – SMNS; 1 ex.; Lombok Is. Senaro N slope of Rinjani, 2.-5.Feb. 1994 Bolm lgt. 1100 m.

**Etymology**: The species epithet is a Latin adjective meaning good.

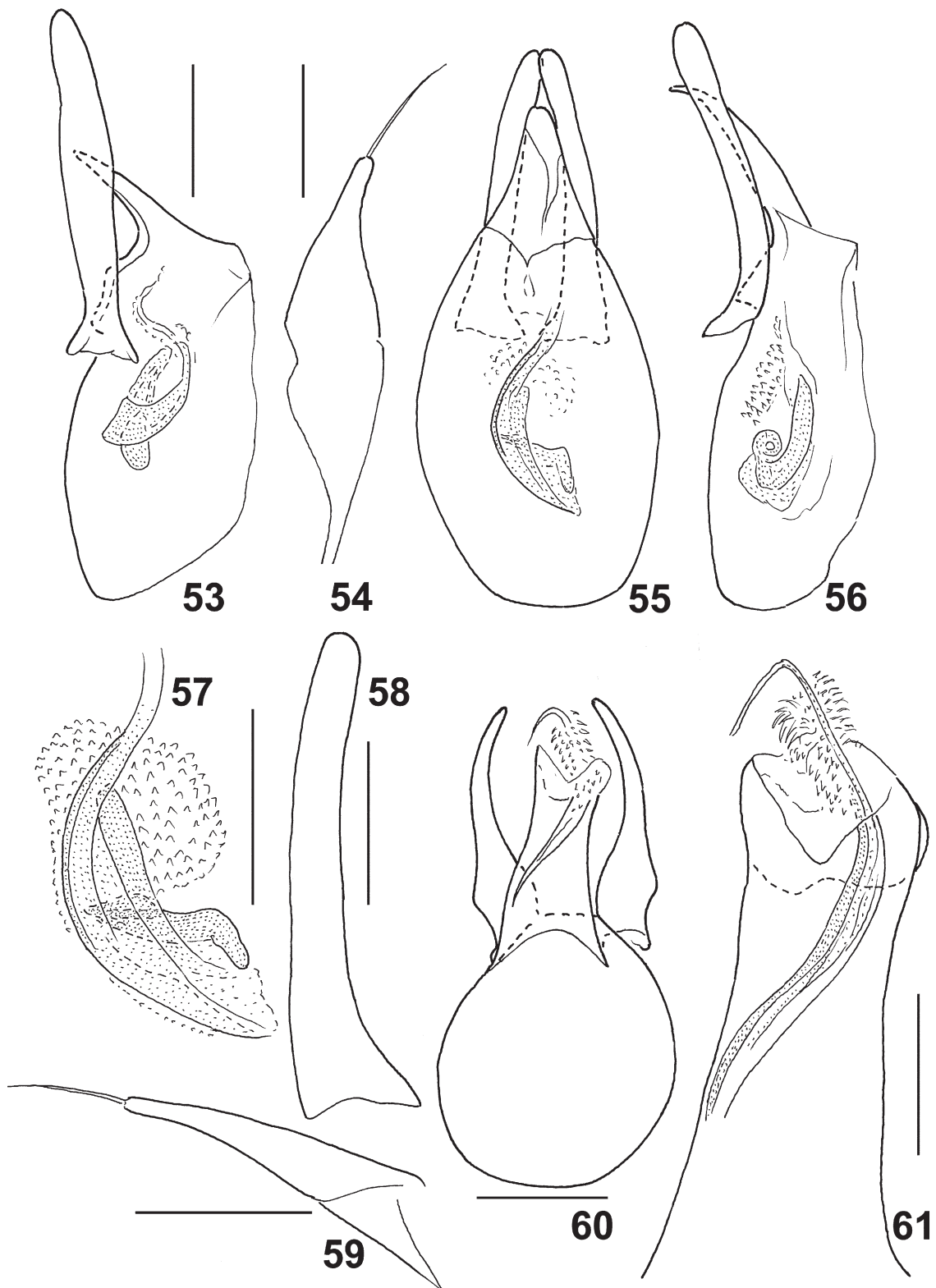
**Description**: Length 0.98-1.13 mm, width 0.65-

0.73 mm. Body rather strongly convex, lacking obvious microsculpture. Head and body reddish-brown, appendages and apex of abdomen somewhat lighter than body. Length/width ratio of antennomeres as follows: III 22/5: IV 21/5: V 29/5: VI 27/6: VII 32/7: VIII 24/7: IX 33/10: X 31/11: XI 35/13. Lateral contours of pronotum and elytra separately arcuate. Pronotum with very fine punctation and setation usually distinct (50x magnification), lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Scutellum concealed. Elytra weakly narrowed apically, usually covering abdominal apex, lateral margin carinae concealed or hardly visible near base in dorsal view, sutural striae shortened, starting posterior level on pronotal lobe; adsutural areas flat, parallel, punctate. Elytra with impunctate narrow lateroapical areas; elytral punctation coarse and dense, including along basal margins, puncture diameters on basal half about half as large to as large puncture intervals, becoming smaller apically. Epipleural striae entire, punctate, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite distinctly punctate, median ridge absent. Mesepimera fairly large, each almost 3 times as long as wide and about 3 times as long as interval to metacoxae. Median part of metaventrite slightly convex, with almost smooth centre delimited by coarse punctures. Lateral parts of metaventrite coarsely punctate, including near metacoxae. Punctation on metaventrite well delimited, consisting of punctures round, mostly larger than puncture intervals. Submesocoxal lines arcuate, with marginal punctures not extending laterally, submesocoxal areas about 0.02 mm long, as fourth of interval to metacoxae. Metanepisternal suture indicated by outer puncture row. Tibiae straight. Sternite 1 without basal wrinkles, basal punctures often elongate, forming row uninterrupted in middle, punctation near basal puncture row coarse, becoming very fine apically.

*Male*: Protarsomeres hardly widened. Aedeagus (Figs 46-49) 0.25-0.30 mm long. Median lobe symmetrical, with basal bulb longer than apical process. Apical process weakly inflexed, tapering, near tip very narrow and with concave ventral side (lateral view). Articular process small. Parameres long, extending beyond tip of median lobe, almost evenly broad, weakly curved in dorsal view, straight posterior basal third in lateral view. Internal sac with flagellum gradually narrowed, flagellar guide-sclerite weakly sclerotized, lacking accessory sclerite, membranous scale-like structures usually hardly visible. *Female*: Ovipositor (Fig. 50) with long distal gonocoxite strongly narrowed apically, in apical section parallel-sided, bearing long apical seta, gonostyle absent.

**Distribution**: Indonesia: Lombok.

**Type locality**: Lombok, Batu Koq (N of G. Rinjani) 500 m.



Figs 53-61

(53-54) *Baocera brevis* sp. nov., aedeagus (53) in lateral view, gonocoxite (54).

(55-59) *Baocera breviscula* sp. nov., aedeagus in dorsal (55) and lateral (56) views, internal sac (57) in dorsal view, paramere (58) in ventral view, gonocoxite (59); scale bars for aedeagi = 0.1 mm, parameres, internal sacs and gonocoxite = 0.05 mm.

(60-61) *Scaphisoma ablutum* sp. nov., aedeagus (60) in dorsal view; scale bar = 0.2 mm, (61) apical process of median lobe, with internal sac partly extruded; scale bar = 0.1 mm.



**Comments:** This species is a member of the *B. lenta* group. It may be readily distinguished from its Indonesian congeners, *B. kaibesara* Löbl from the Molucca Island Kai Besar excepted, by the shortened sutural striae of elytra. It shares with the latter species the shape of the median lobe and the parameres, differs however by the elytral punctation, coarser punctation on the ventrite 1, and by the shape of the sclerotized pieces of the internal sac.

***Baeocera brevis* sp. nov.**

Figs 51-54

**Holotype:** MHNG; ♂; Indonesia Bali Mt. Batukaru near Luhur Temple, 500-700 m, I. Löbl, 28.-29.X.1991.

**Paratypes:** MHNG; 6 ♂, 6 ♀, 11 ex.; with the same data as the holotype. – MHNG; 1 ♂, 1 ♀ Bali Batukaru 18.VI.84 Rougemont.

**Etymology:** The species epithet is Latin adjective meaning short and referring to the short distal gonocoxite.

**Description:** Length 0.98-1.13 mm, width 0.65-0.73 mm. Body rather strongly convex, lacking obvious microsculpture. Head and body dark reddish-brown to blackish-brown, femora and tibiae somewhat lighter than body, tarsi and antennae distinctly lighter, yellowish. Length/width ratio of antennomeres as follows: III 28/6: IV 30/6: V 34/5: VI 37/5: VII 45/7: VIII 37/6: IX 45/9: X 42/12: XI 44/12. Lateral contours of pronotum and elytra separately arcuate. Pronotum with punctation and setation very fine, usually distinct (50x magnification); lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Scutellum concealed. Elytra fairly narrowed apically, not covering abdominal apex, lateral margin carinae concealed in dorsal view, sutural striae curved at base to form complete basal striae, joined to lateral striae; adsutural areas flat, parallel, punctate. Basal halves of elytra with punctation coarse and dense, coarse punctures usually also along basal and lateral margins; puncture diameters mostly about as large as puncture intervals. Apical halves of elytra about as finely punctate as pronotum. Epipleural striae entire, punctate in basal halves, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite distinctly punctate, median ridge absent. Mesepimera fairly large, each almost 3 times as long as wide and about 3 times as long as interval to metacoxae. Median part of metaventrite slightly convex, almost entirely coarsely punctate. Entire lateral parts of metaventrite covered by coarse punctures larger than those on centre of metaventrite. Punctures on metaventrite well delimited, round, mostly larger than puncture intervals. Submesocoxal lines arcuate, with marginal punctures hardly extending laterally, submesocoxal areas about

0.02-0.03 mm long, as fifth to fourth of interval to metacoxae. Metanepisternal suture indicated by somewhat impressed outer puncture row. Tibiae straight. Sternite 1 without basal wrinkles, basal punctures usually elongate, uninterrupted in middle, and laterally usually 0.02-0.04 mm long, punctures posterior basal row very fine, similar to those on apical parts of elytra.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 51-53) 0.39-0.44 mm long. Median lobe symmetrical, with basal bulb much longer than apical process. Apical process strongly inflexed, tapering, with ventral side oblique (lateral view). Articular process small. Parameres long and comparatively broad, extending far beyond tip of median lobe, almost evenly wide in basal halves, narrowed and weakly curved in level of tip of median lobe (dorsal view), almost straight and weakly widened toward level of tip of median lobe in lateral view. Internal sac with flagellum robust, sinuate, gradually narrowed, flagellar guide-sclerite strongly sclerotized, lacking accessory sclerite, membranous scale-like structures usually hardly visible.

**Female:** Ovipositor (Fig. 54) with distal gonocoxite short, strongly and gradually narrowed apically, bearing long apical seta, gonostyle absent.

**Distribution:** Indonesia: Bali.

**Type locality:** Bali Mt. Batukaru near Luhur Temple, 500-700 m.

**Comments:** This species is a member of the *B. lenta* group. The aedeagal characters, in particular the shape of the wide parameres and the short, strongly inflexed apical process of the median lobe, suggest relationships with *B. carinata* (Löbl, 1975) from Sumatra. The sclerotized pieces of the internal sac are, however, distinctive in these two species.

***Baeocera breviscula* sp. nov.**

Figs 55-59

**Holotype:** MHNG; ♂; Indonesia, Bali Badingkayu, 300-500 m 10.-14.XI.1991, I. Löbl forest floor litter, bark.

**Paratypes:** MHNG; 5 ♂, 7 ♀; with the same data as the holotype. – MHNG; 1 ♂; Lombok Mt. Rinjani, ca 400 m nr. Waterfalls, 5.XI.91 Löbl veg.debris nr.river.

**Etymology:** The species epithet is Latin adjective meaning short and referring to the comparatively short parameres.

**Description:** Length 0.95-1.07 mm, width 0.61-0.77 mm. Body strongly convex, without obvious microsculpture. Head, body and femora light reddish-brown, tibiae slightly lighter, tarsi and antennae yellowish. Length/width ratio of antennomeres as follows: III 18/6: IV 17/5: V 25/5: VI 23/5: VII 28/8: VIII



23/6: IX 30/10: X 30/13: XI 33/13. Lateral contours of pronotum and elytra separately arcuate. Pronotum with hardly visible punctation and setation (100x magnification), lateral margins convex, anterior margin broad, basal lobe small; lateral pronotal carinae concealed in dorsal view. Scutellum concealed. Elytra weakly narrowed apically, not covering abdominal apex, lateral margin carinae hardly visible in dorsal view, sutural striae curved at bases to form basal striae abruptly ending about at mid-width of elytra; adsutural areas flat, parallel in anterior two thirds, impunctate. Elytral punctation fairly coarse on most of anterior two thirds of disc, evanescent on small humeral area and becoming very shallow and fine from middle third toward apex; coarse punctures well delimited, mostly about half as large as puncture intervals. Epipleural striae entire, punctate, supraepipleural areas impunctate. Hind wings well developed. Hypomera impunctate, smooth. Mesoventral suture indistinct, mesoventrite distinctly punctate, without median ridge. Mesepimera large, about 3 times as long as wide and 3 times as long as interval to metacoxae. Median part of metaventricle flat, all over coarsely punctured. Entire lateral parts of metaventricle coarsely punctate; punctures round or hardly elongate, notably smaller and denser near metacoxae than near mesepimera, puncture intervals usually smaller than puncture diameters. Submesocoxal lines parallel, with marginal punctures not extending laterally, submesocoxal areas about 0.02 mm long, about as fifth of interval to metacoxae. Metanepisternal suture indicated by impressed outer row of coarse punctures. Tibiae straight. Sternite 1 with basal punctures coarse, not or weakly elongate, up to about 0.02 mm long, not separated by wrinkles and uninterrupted in middle; punctation strongly reduced posterior basal row, usually consisting of few fine punctures.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 55-58) 0.28-0.32 mm long. Median lobe symmetrical, with basal bulb moderately longer than apical process. Apical process strongly process weakly inflexed, tapering, with most of ventral side almost oblique, tip bent and narrow (lateral view). Articular process fairly large. Parameres comparatively broad and short, moderately extending beyond tip of median lobe, almost evenly wide between basal third and apices in dorsal view, slightly widened apically in lateral view. Internal sac with flagellum narrow, arcuate, gradually narrowed, flagellar guide-sclerite weakly sclerotized, joined to basal complex of sclerites, membranous scale-like structures usually distinct.

**Female:** Ovipositor (Fig. 59) with long distal gonocoxite gradually narrowed apically, bearing long apical seta, gonostyle absent.

**Distribution:** Indonesia: Bali, Lombok.

**Type locality:** Bali, Badingkayu, 300-500 m.

**Comments:** This species is a member of the *B. lenta* group. In external characters it resembles *B. bifurcilla* from which it may be distinguished by the elytra distinctly punctured near pronotal lobe and on apical third, the median part of the metaventricle flat and entirely coarsely punctate, and the sternite 1 with basal punctures not or weakly elongate.

### *Sapitia* Achard, 1920

The genus includes three South-East Asian species, all reported also from Indonesia though only one of them from the Lesser Sundas. Members of *Sapitia* are presumably associated with termites (Leschen & Löbl, 2005).

### *Sapitia lombokiana* Achard, 1920

**Distribution:** Indonesia: Lombok, Sumatra; Vietnam; Philippines: Palawan (doubtful record).

**Comments:** The species was not represented in collections recently examined. Its description was based on specimens from Lombok: Sapit. Diagnostic characters including illustrations of the aedeagus, the synonymy with *Baeoceridium sericeum* Pic, 1922, and additional records are given in Löbl, 1978.

### *Scaphisoma* Leach, 1815

**Comments:** *Scaphisoma* is with over 600 species currently recognized as valid the most species-rich genus of the subfamily Scaphidiinae. Not surprisingly, it is with 24 encountered species also quite diverse in the Lesser Sunda Islands. All have well developed hind wings suggesting dispersal ability and possible wide distribution.

### *Scaphisoma ablutum* sp. nov.

Figs 60-62

**Holotype:** MHNG; ♂; Indonesia, Indo: Lombok G. Rinjani 1950 m mossforest D. Agosti 16.3.1991 / Agosti F91558 Lombok G. Rinjani 8 16.3.91 [handwritten].

**Paratypes:** SMNS, MHNG; 2 ♀; Indonesia, Lombok Is. Sapit-Sembalun Bumbung 14.-16.Feb.1994 Bolm lgt., 900-1500 m. – SMNS; 1 ♀; Indonesia Lombok Serano N. Slope of Rinjani, 2.-5.Feb 1994 Bolm lgt. 1100 m.

**Etymology:** The species epithet is a Latin adjective, meaning washed and referring to a heavy rainfall in Lombok.

**Description:** Length 1.90 mm, width 1.23 mm. Head and most of body light brown, apical third of elytra yellowish. Appendages somewhat darker than apical part of elytra. Pronotum and elytra not microsculptured. Antennae long, length/width ratio of antenno-

**Key to the *Scaphisoma* species of the Lesser Sunda Islands**

- 1 Elytra with sutural striae conspicuously strongly converging apically ..... 2  
 – Elytra with sutural striae parallel, or to large extent parallel, or weakly converging apically ..... 4
- 2 Pronotum and elytral disc with similar, very fine punctation. Pronotum and most of elytra very dark reddish-brown to black, apical fourth of elytra yellowish ..... *S. jacobsoni* Löbl  
 – Elytral disc with punctation much coarser than pronotal punctation. Colour pattern of pronotum and elytra different ..... 3
- 3 Pronotum bicoloured in male, dark brown to black in female. Elytra dark with light subhumeral spot and light subapical fascia. Antennomere III subcylindrical, elongate ..... *S. aspectum* sp. nov.  
 – Pronotum light, yellowish or reddish-brown in both sexes. Elytra light on prevailing surface, darkened along suture, basal margins and on transverse band posterior mid-length. Antennomere III subtriangular, short .....  
 ..... *S. dohertyi* Pic
- 4 Elytra light on prevailing surfaces, darkened along lateral margin, base and sutural striae, each elytron with small, isolated, dark discal spot ..... *S. sapitense* Pic  
 – Colour pattern of elytra different ..... 5
- 5 Elytra with sutural striae extending along basal margins to form basal striae ..... 6  
 – Elytra with sutural striae not extending along basal margin and without basal striae ..... 8
- 6 Antennomere V longer than III and IV combined, and much shorter than antennomere VIII ... *S. acutatatum* sp. nov.  
 – Antennomere V as long as III and IV combined, almost as long as antennomere VIII ..... 7
- 7 Body 1.55-1.60 mm long, uniformly reddish brown, elytra with shallow basal striae ..... *S. lombokense* Löbl  
 – Body 1.90 mm long. Pronotum dark reddish-brown, elytra coloured as pronotum along bases, apices, sutural striae and lateral margin, most of elytra much lighter, forming large reddish spot ..... *Scaphisoma* sp.
- 8 Basomedian area of sternite 1 coarsely punctate. Metaventrite with antecoxal puncture rows. Elytra coarsely punctate, light in apical third, with sutural striae abruptly obliquely bent near base ..... *S. affectum* sp. nov.  
 – Basomedian part of sternite 1 very finely punctate ..... 9
- 9 Metaventrite with median groove ..... 10  
 – Metaventrite without median groove ..... 13
- 10 Elytra and pronotum uniformly coloured ..... 11  
 – Apical third of elytra clearly lighter than remaining elytral surface and pronotum ..... 12
- 11 Pronotum and elytra reddish-brown. Submesocoxal areas about as long as submetacoxal areas *S. aequum* sp. nov.  
 – Pronotum and elytra blackish-brown to black. Submesocoxal areas clearly longer than submetacoxal areas .....  
 ..... *S. aereum* sp. nov.
- 12 Antennomeres III and IV combined shorter than V ..... *S. adjunctum* sp. nov.  
 – Antennomeres III and IV combined longer than V ..... *S. ablutum* sp. nov.
- 13 Submetacoxal areas conspicuously large, extending onto apical half of sternite ..... *S. antennarum* sp. nov.  
 – Submetacoxal areas not extending onto apical half of sternite ..... 14
- 14 Hypomera with striate microsculpture. Anterior two thirds of elytra with conspicuous coarse punctation, apical third to two fifth of elytra smooth, appearing impunctate ..... *S. rufescens* (Pic)  
 – Hypomera not microsculptured. Elytral punctation different ..... 13
- 15 Median part of metaventrite with strigulate microsculpture ..... 16  
 – Metaventrite not microsculptured ..... 19
- 16 Median part of metaventrite much coarser punctate than lateral parts, or than sternite 1, metaventrite with distinct antecoxal puncture rows ..... *S. sesaotense* Löbl  
 – Median and lateral parts of metaventrite with similar, very fine punctation ..... 17
- 17 Larger species 1.93-2.10 mm long. Elytra black, somewhat lighter along base and on adsutural areas and with narrowly yellowish apices ..... *S. angular* sp. nov.  
 – Smaller species, 1.25-1.60 mm long. Colour pattern of elytra different ..... 18
- 18 Internal sac of aedeagus with mesal row of large, triangular sclerites, long lateral denticles fused to form plates and tuft of apical denticles covered by membranous spine-like structures ..... *S. luteomaculatum* Pic  
 – Internal sac of aedeagus with few long lateral sclerites, lacking mesal row of triangular sclerites .....  
 ..... *S. obliquemaculatum* Motschulsky
- 19 Elytra and pronotum with similar, very fine punctation ..... 20  
 – Elytral punctation distinctly coarser than pronotal punctation, eventually near bases similar to pronotal, on most surface coarser ..... 21
- 20 Antennomere IV about twice as long as III, combined with III about as long as V ..... *S. coarctatum* Löbl  
 – Antennomere IV about three times as long as III, combined with III distinctly longer than V ... *S. affabile* sp. nov.

- 21 Pronotum and elytra on basal part of disc and on transverse subapical band dark brown or reddish-brown, most of elytral disc and narrow apical band light, yellowish. Submetacoxal areas large, almost reaching sternal mid-length ..... *S. animatum* sp. nov.
- Elytral colour different. Submetacoxal areas narrower ..... 22
- 22 Sternite 1 with much coarser punctation than that on metaventrite, submetacoxal lines parallel ..... *S. approximatum* sp. nov.
- Sternite 1 about as metaventrite very finely punctate, submetacoxal lines convex ..... 23
- 23 Elytral punctation fine, in particular on basal halves, consisting of poorly delimited punctures. Apical two fifth somewhat lighter than basal two fifth of elytra ..... *S. gracilicorne* Achard
- Elytral punctation distinct, fairly coarse, consisting of well delimited punctures. Elytra becoming lighter only near apical margins ..... 24
- 24 Antennomere IV about 4.5 times as long as III. Submetacoxal lines reaching sternal mid-length ..... *S. adscitum* sp. nov.
- Antennomere IV about 2.5 times as long as III. Submetacoxal lines not reaching sternal mid-length ..... 25
- 25 Aedeagus with wide apical process and bases of parameres strongly widened. Elytral punctation very fine along lateral margins, fairly coarse on most of discal surface ..... *S. activum* sp. nov.
- Aedeagus with narrow apical process and bases of parameres moderately widened. Elytral punctation fairly coarse, including on surfaces along lateral margins ..... *S. acutum* sp. nov.

meres as follows: III 16/9: IV 50/8: V 55/9: VI 55/9: VII 60/13: VIII 50/10: IX 56/15: X 55/15: XI 65/17. Antennomere III subtriangular. Pronotum finely punctate, punctures dense, well delimited, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae not visible in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin raised, sutural striae fairly deep, converging apically, not curved at base and not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation fine and dense, punctures fairly well delimited, puncture intervals mostly about twice to three times as large as puncture diameters. Hypomera smooth. Mesepimeron about 1.5 times as interval to mesocoxa, about 4 times as long as wide. Metaventrite not microsculptured, flat in middle, with deep mesal groove and two shallow apicomedian impressions; punctation even, very fine and sparse. Submesocoxal areas 0.09 mm, almost as half of interval to metacoxa, submesocoxal lines convex, with fairly coarse marginal punctures. Metanepisternum flat, in level with metaventrite, not narrowed anteriorly, with inner margin straight, rounded at angles. Tibiae straight. Abdomen very finely punctate, with striate microsculpture. Submetacoxal areas 0.04 mm, submetacoxal lines convex, with fine margin punctures.

**Male:** Tarsomere 1 of protarsi and mesotarsi conspicuously widened, wider than tibiae, with conspicuous tenent setae. Tarsomeres 2 of protarsi and mesotarsi distinctly widened, tarsomeres 3 slightly widened. Aedeagus (Figs 60-62) 0.70 mm long, asymmetrical. Median lobe with basal bulb weakly sclerotized, robust and prominent articular process excepted. Apical process strongly inflexed, almost tubular, hardly narrowed apically in dorsal view. Parameres fairly wide near bases, not lobed,

bent and narrowed in apical halves in dorsal view, sinuate and slightly narrowed apically in lateral view. Internal sac with curved flagellum and membranes bearing spine-like structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, G. Rinjani 1950 m.

**Comments:** The median lobe with robust articular process, the asymmetrical apical process, and the presence of a flagellum suggest relationships with members of the *S. unicolor* group, though the spine-like structures of the internal sac are absent in members of that group. The short and robust median lobe in *S. ablutum* resembles that in the New Guinean *S. fasciatum* Pic, 1956 while the shape of the parameres is unique. See also comments under *S. adjunctum*.

***Scaphisoma adjunctum* sp. nov.**

Fig. 63-65

**Holotype:** SMNS; ♂; Indonesia, Lombok Is. Senaro N slope of Rinjani 2.-5.Feb.1994 Bolm lgt. 1100 m.

**Paratypes:** SMNS, MHNG; 2 ♀; with the same data as the holotype. – MHNG; 2 ♀; Lombok Mt. Rinjani ca 400 m nr. Waterfalls, 5.XI.91 Löbl, veg. debris nr. river. – MHNG; 2 ♀; Indo: Lombok Batu Koq-G.Rinjani 1200 m, sec. montane for. on slope, in ravine D. Agosti, 13.3.91.

**Etymology:** The species epithet is a Latin adjective, meaning added.

**Description:** Length 1.42-1.60 mm, width 0.92-1.02 mm. Head and most of body reddish-brown, apical third of elytra, apical abdominal segments and appendages lighter, yellowish-brown. Pronotum and elytra not microsculptured. Antennae long, length/width ratio

of antennomeres as follows: III 15/8: IV 37/6: V 47/7: VI 42/6: VII 48/12: VIII 39/8: IX 50/12: X 47/13: XI 58/14. Antennomere III subtriangular. Pronotum very finely punctate, punctures dense, not well delimited, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae visible near bases in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin slightly raised, sutural striae deep, weakly converging apically, not or hardly curved at base and not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation fairly coarse, with punctures fairly well delimited, puncture intervals mostly about 1.5 to 2 times as large as puncture diameters. Hypomera smooth. Mesepimeron about as long as two thirds of interval to mesocoxa, about 4 times as long as wide. Metaventricle not microsculptured, flat in middle, with mesal groove and two fairly deep, elongate apicomedian impressions; punctation almost even, very fine and sparse. Submesocoxal areas 0.05 mm, about as two thirds of interval to metacoxa, submesocoxal lines convex, with fine marginal punctures. Metanepisterna flat, below level of metaventricle, narrowed anteriorly, with inner margin straight, rounded at angles. Tibiae straight. Abdomen very finely punctate, with striate microsculpture. Sternite 1 with submetacoxal areas 0.05-0.06 mm, as long as half of interval to apical margin, submetacoxal lines strongly convex, with distinct margin punctures.

**Male:** Tarsomeres 1 to 3 of protarsi slightly widened. Aedeagus (Figs 63-65) 0.36 mm long, asymmetrical, weakly sclerotized. Median lobe with basal bulb small, much shorter than apical process, articular process robust. Apical process narrow, strongly inflexed, parallel-sided and with blunt apex in dorsal view, tapering, with pointed apex, and most of ventral side oblique in lateral view. Parameres asymmetrical, almost straight, right paramere widest before middle, with shallow subapical notch, left paramere widest posterior mid-length, irregularly narrowed apically. Internal sac lacking flagellum or other sclerotized pieces, membranes lacking obvious denticulate or scale-like structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Senaro, N slope of Rinjani, 1100 m.

**Comments:** This species shares with *S. ablutum* the mesally grooved and apicomedianly impressed metaventricle. These two species resemble also by the colour pattern of the elytra, and both have asymmetrical median lobe. They may be easily distinguished by the size of their body, significantly larger in *S. ablutum*. *Scaphisoma adjunctum* is characterized by the unique shape of the parameres.

***Scaphisoma aequum* sp. nov.**

Fig. 66-67

**Holotype:** SMNS; ♂; Indonesia, W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m Bolm lgt. 10. Febr. 1994.

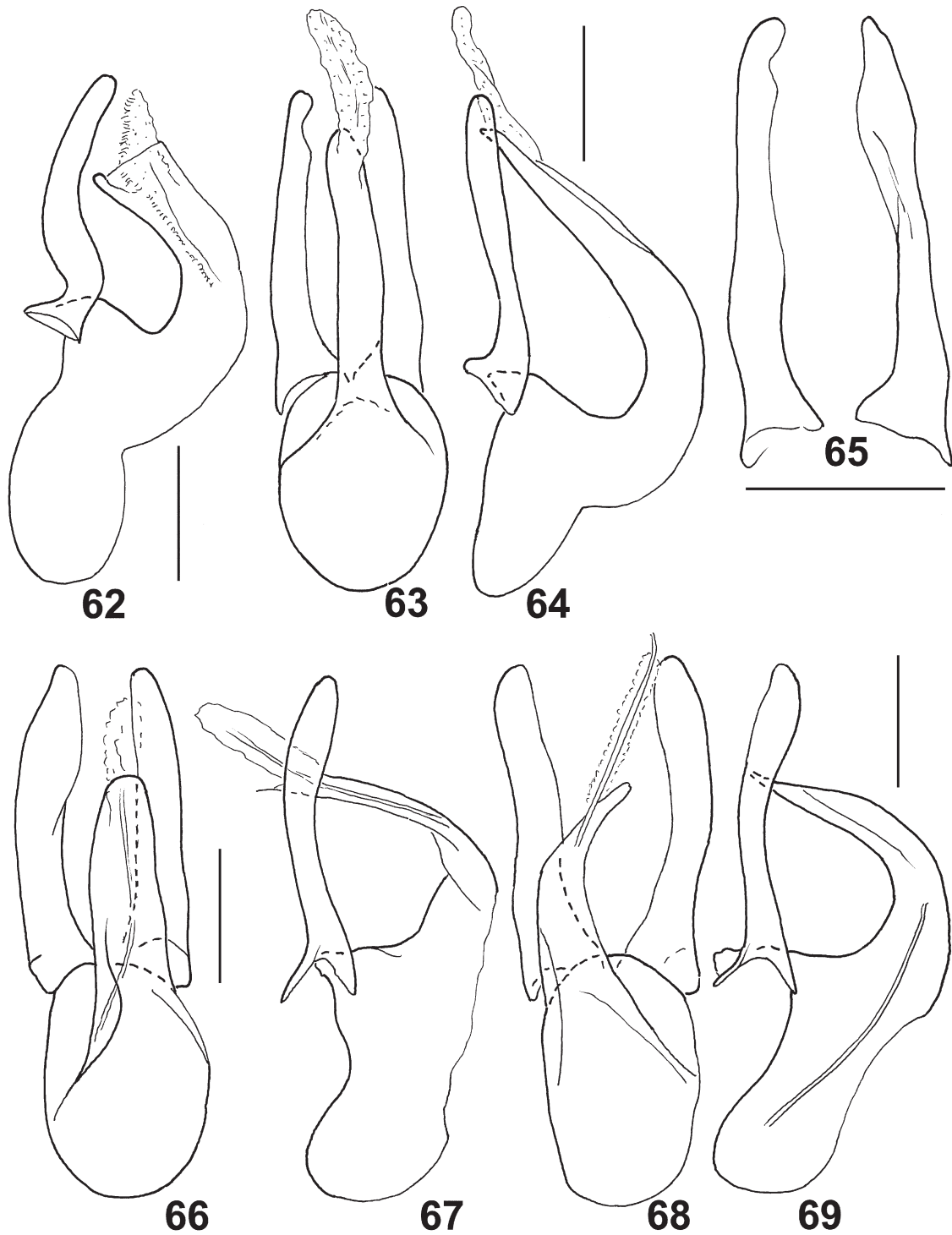
**Paratypes:** SMNS, MHNG; 2 ♂, 4 ♀; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning same, similar.

**Description:** Length 1.75-1.80 mm, width 1.12-1.15 mm. Head and most of body uniformly dark reddish-brown to black. Elytron with light reddish subapical band, narrow area posterior band usually reddish-brown, lighter than most of elytra and pronotum. Abdomen, femora and tibiae almost evenly reddish-brown, or sternite 1 darkened, almost as dark as metaventricle. Tarsi and antennae slightly lighter than tibiae. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 12/8: IV 40/6: V 50/7: VI 45/7: VII 53/10: VIII 45/8: IX 52/13: X 50/13: XI 55/14. Antennomere III subtriangular. Pronotum very finely punctate, with lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae entirely or partly exposed in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly deep, converging apically, at base hardly curved, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation sparse and fine near base, fairly coarse and dense on remaining surface. Hypomera smooth. Mesepimera about as long as interval to mesocoxa. Metaventricle very finely punctate, not microsculptured, with median part flattened, conspicuous mesal groove reaching anterior margin, and two small, shallow apicomedian impressions. Submesocoxal areas 0.06-0.07 mm, about as long as half of interval to metacoxa, submesocoxal lines convex, with very fine marginal punctures. Metanepisternum flat, narrowed apically, with inner margin oblique, impressed below margin of metaventricle. Tibiae straight. Abdomen very finely punctate, with microsculpture consisting of transverse striae. Submetacoxal areas 0.06-0.07 mm, submetacoxal lines convex, with distinct margin punctures.

**Male:** Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 66-67) 0.37-0.40 mm long. Median lobe asymmetrical, weakly sclerotized. Basal bulb moderately large, articular process not prominent. Apical process almost in axis with basal lobe, weakly narrowed apically and with blunt tip in dorsal view, arcuate, abruptly narrowed posterior membranous fold and with tip acute in lateral view. Parameres asymmetrical, irregularly bent in dorsal view, with inner margin weakly sclerotized in apical thirds, almost evenly arcuate and narrow in lateral





Figs 62-69

(62) *Scaphisoma ablutum* sp. nov., aedeagus in lateral view; scale bar = 0.2 mm.

(63-65) *Scaphisoma adjunctum* sp. nov., aedeagus in dorsal (63) and lateral (64) views, parameres (65) in ventral view; scale bars = 0.1 mm.

(66-67) *Scaphisoma aequum* sp. nov., aedeagus in dorsal (66) and lateral (67) views.

(68-69) *Scaphisoma aereum* sp. nov., aedeagus with extruded internal sac in dorsal view (68) and with internal sac in repos, in lateral (69) view; scale bars = 0.1 mm.



view. Internal sac with very narrow flagellum, surrounded by membranes.

**Distribution:** Indonesia: Sumbawa.

**Type locality:** W. Sumbawa, Batudulang, 30 km S of Sumb. Besar, 1000 m.

**Comments:** The species shares many aedeagal characters with *S. adjunctum*. It may be easily distinguished from the latter by the larger body size, colour and punctuation of the elytra, and by the shape of the parameres.

***Scaphisoma aereum* sp. nov.**

Figs 68-69

**Holotype:** SMNS; ♂; Indonesia, W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m Bolm lgt. 10. Febr. 1994.

**Paratypes:** SMNS, MHNG; 2 ♂; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning sheathed.

**Description:** Length 1.70-1.75 mm, width 1.07-1.10 mm. Head and most of body uniformly blackish-brown to black, abdomen and femora reddish-brown, tibiae, antennae and tarsi lighter, almost yellowish. Pronotum and elytra lacking microsculpture, very finely punctate. Antennae long, length/width ratio of antennomeres as follows: III 12/7: IV 38/6: V 48/6: VI 45/7: VII 51/12: VIII 35/9: IX 53/13: X 40/15 (XI missing in all specimens). Antennomere III short, subtriangular. Lateral margins of pronotum evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae exposed in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly shallow, parallel, at base somewhat curved, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctuation sparse and very fine near base, becoming more dense and less fine apically, punctures distinctly larger than those on pronotum. Hypomera smooth. Mesepimera about as long as two thirds of interval to mesocoxa. Metaventrite not microsculptured, with median part flattened, conspicuous mesal groove and two foveiform apicomedian impressions. Submesocoxal areas 0.05 mm, about as long as fourth of interval to metacoxa, submesocoxal lines convex, with very fine marginal punctures. Metanepisternum flat, narrowed toward angles, with inner margin weakly rounded, impressed below margin of metaventrite. Tibiae straight. Abdomen with microsculpture consisting of transverse striae. Submetacoxal areas 0.07 mm, submetacoxal lines convex, with distinct margin punctures.

**Male:** Protarsal segments 1 to 3 hardly widened. Aede-

gus (Figs 68-69) 0.38-0.41 mm long, fairly sclerotized. Median lobe asymmetrical, with small basal bulb, articular process robust, not prominent, apical process abruptly curved and narrowed in dorsal view, arcuate and tapering in lateral view, tip acute in dorsal and lateral views. Parameres somewhat asymmetrical, almost evenly wide, weakly arcuate in lateral view, sinuate in dorsal view, inner margins not membranous, pores scattered in basal halves. Internal sac with moderately sclerotized flagellum and very finely denticulate membranes.

**Distribution:** Indonesia: Sumbawa.

**Type locality:** W. Sumbawa, Batudulang, 30 km S of Sumb. Besar, 1000 m.

**Comments:** This species appears closely related with *S. aequum*. Both possess metaventrite with a median groove and a pair of foveiform impressions, and have similar aedeagi. These species may be easily distinguished by their colour pattern. In addition, the groove of the metaventrite is shorter, the elytral punctuation finer, and the apical process of the median lobe is abruptly narrowed in *S. aereum*.

***Scaphisoma adscitum* sp. nov.**

Figs 70-71

**Holotype:** SMNS; ♂; Indonesia, Lombok Is. Senaro N slope of Rinjani 2.-5.Feb.1994 Bolm lgt. 1100 m.

**Paratype:** MHNG; ♂; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning strange.

**Description:** Length 1.34-1.36 mm, width 0.90-0.92 mm. Head and most of body reddish-brown, apical margins of elytra and appendages lighter than body. Pronotum and elytra not microsculptured. Antennae short, length/width ratio of antennomeres as follows: III 6/7: IV 28/4: V 28/5: VI 31/7: VII 37/12: VIII 34/9: IX 40/12: X 37/13: XI 50/13. Antennomere III short, subtriangular. Pronotum very finely punctate, punctures sparse, not well delimited, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae hardly visible in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae shallow, parallel, curved at base, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctuation very fine and dense near bases, distinct on remaining surface, with punctures fairly well delimited, puncture intervals mostly about 1.5 to 2.5 times as large as puncture diameters. Hypomera smooth. Mesepimeron about as long as interval to mesocoxa, about 4 times

as long as wide. Metaventricle not microsculptured, convex in middle, without impressions; punctation almost even, very fine and sparse. Submesocoxal areas 0.05 mm, about as two thirds of interval to metacoxa, submesocoxal lines convex, with fine marginal punctures. Metanepisterna flat, in level with metaventricle, narrowed anteriorly, with inner margin straight, rounded at angles. Tibiae straight. Abdomen very finely punctate, with striate microsculpture becoming obsolete on lateral parts of sternite 1. Submetacoxal areas 0.06 mm, as long as half of interval to apical margin of sternite, submetacoxal lines strongly convex, with fine margin punctures.

**Male:** Tarsomeres 1 to 3 of protarsi slightly widened. Aedeagus (Figs 70-71) 0.29-0.31 mm long, symmetrical, fairly sclerotized. Median lobe with basal bulb narrow, about as long as apical process, articular process not prominent. Apical process inflexed, weakly narrowed apically and with blunt apex in dorsal view, tapering, apex acute, ventral side arcuate in lateral view. Parameres wide near base and almost evenly broad in apical two third in dorsal view, narrowed to apical third in lateral view, not lobed, hardly bent in dorsal view. Internal sac without flagellum or other sclerotized pieces, membranes bearing denticulate structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Senaro N slope of Rinjani, 1100 m.

**Comments:** This species resembles *S. antennarum* described below but has much smaller submetacoxal areas. The aedeagal characters suggest relationship with *S. lombokense* Löbl, 1986 though the aedeagus is smaller, the median lobe has prominent articular process and the apical process is comparatively much shorter. *Scaphisoma lombokense* differs in external characters notably by the sutural striae of the elytra extended along bases to form basal striae, and the antennomere V much longer than IV.

### *Scaphisoma activum* sp. nov.

Figs 72-73

**Holotype:** SMNS; ♂; Indonesia, W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m Bolm lgt. 10. Febr. 1994.

**Paratypes:** SMNS, MHNG; 2 ♂, 2 ♀; with the same data as the holotype

**Etymology:** The species epithet is a Latin adjective, meaning active.

**Description:** Length 1.45-1.60 mm, width 0.93-1.05 mm. Most of body reddish-brown to blackish-brown, head, apices of elytra, apex of abdomen, femora and tibiae lighter, antennae and tarsi almost yellowish.

Pronotum and elytra lacking microsculpture. Antennae moderately long, length/width ratio of antennomeres as follows: III 12/9: IV 32/8: V 32/9: VI 35/9: VII 38/13: VIII 36/9: IX 39/12: X 42/12: XI 50/14. Antennomere III subtriangular. Pronotum very finely punctate, with lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Minute point of scutellum exposed. Elytra with lateral margin carinae exposed in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly shallow, parallel, at base somewhat curved, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation very fine near bases and along lateral margins, fairly coarse and dense on remaining discal surface, with punctures well delimited and puncture intervals mostly about 1.5 to 2 times as large as puncture diameters. Hypomera smooth. Mesepimera somewhat shorter than interval to mesocoxa. Metaventricle not microsculptured, with median area slightly convex, two very shallow apicomedian impression, punctation on apicomedian area fine but distinct, that on lateral areas very fine. Submesocoxal areas 0.05 mm, about as third of interval to metacoxa, submesocoxal lines convex, with very fine marginal punctures. Metanepisternum flat, narrowed anteriorly, with inner margin rounded at angles, impressed below margin of metaventricle. Tibiae straight. Abdomen with microsculpture consisting of transverse striae, except on lateral parts of sternite 1 lacking microsculpture. Submetacoxal areas 0.07-0.09 mm, submetacoxal lines convex, with distinct margin punctures.

**Male:** Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 72-73) 0.38-0.40 mm. Median lobe and parameres symmetrical. Median lobe moderately sclerotized, with basal bulb somewhat longer than apical process, articular process not prominent, apical process tapering, arcuate, with concave ventral side and acute tip in lateral view, weakly narrowed and with blunt tip in dorsal view. Parameres slightly curved and gradually narrowed in dorsal view, oblique, strongly narrowed from base to middle third and evenly wide in distal two thirds in lateral view; with scattered pores. Internal sac lacking sclerites, with very fine spinose structures in apical half, membranes with scale-like structures in basal half.

**Distribution:** Indonesia: Sumbawa.

**Type locality:** W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m.

**Comments:** The aedeagal characters suggest relationships with *S. lombokense* Löbl, 1986. This new species may be readily distinguished by the comparatively longer basal bulb of the aedeagus, the internal sac with a central tuft of denticles, the elytra with sutural striae not extended along basal margins, the comparatively much coarser elytral punctation, and the larger submesocoxal areas.

***Scaphisoma acutatatum* sp. nov.**

Figs 74-75

**Holotype:** SMNS; ♂; Indonesia, Lombok Is. Sapit-Sembalun Bumbung 14-16 Feb.1994 Bolm lgt., 900-1500 m .

**Paratype:** MHNG; ♀; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning pointed and referring to the shape of the apex of the median lobe.

**Description:** Length 1.85 mm, width 1.22 mm. Head, body and appendages almost evenly light brown, tibiae and tarsi slightly lighter than pronotum or elytra. Antennae long, length/width ratio of antennomeres as follows: III 14/8: IV 16/7: V 37/9: VI 53/11: VII 58/13: VIII 48/8: IX 60/14: X 57/15: XI 64/12. Pronotum very finely punctate, punctures dense, not well delimited, lateral margins hardly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae exposed in dorsal view, apical margins rounded, inner apical angle not prominent, situated somewhat posterior level of outer angles, sutural margin not raised, sutural striae shallow, parallel, curved at base and extending laterally about to basal mid-width, adsutural areas flat. Elytral punctation very fine and dense, similar to pronotal anterior mid-length, posterior mid-length consisting of punctures larger and not well delimited, with puncture intervals mostly about twice to three times as large as puncture diameters. Hypomera smooth. Mesepimeron about 1.5 times as interval to mesocoxa, about 4 times as long as wide. Metaventricle not microsculptured, slightly convex in middle, lacking impressions or sulci; punctation even, very fine and dense. Submesocoxal areas 0.04 mm, about as fifth of interval to metacoxa, submesocoxal lines convex, with fine marginal punctures. Metanepisternum flat, in level with metaventricle, not narrowed anteriorly, with inner margin straight. Tibiae straight. Abdomen very finely punctate, with striate microsculpture. Submetacoxal areas 0.06 mm, submetacoxal lines convex, with fine margin punctures.

**Male:** Tarsomeres 1 to 3 of protarsi slightly widened, Aedeagus (Figs 74-75) 0.58 mm long, symmetrical, fairly sclerotized. Median lobe with basal bulb narrow, longer than apical process, lacking prominent articular process. Apical process fairly inflexed, gradually narrowed apically in dorsal view, with ventral side arcuate in lateral view. Parameres narrow, not lobed, hardly bent and narrowed in subapical parts in dorsal view, almost straight and slightly widened apically in lateral view. Internal sac without flagellum or other sclerotized pieces, membranes bearing denticulate structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Sapit-Sembalun Bumbung, 900-1500 m.

**Comments:** The aedeagus of this species is similar to that of *S. irideum* Löbl, 2012 from the Moluccas island Halmahera, though the basal bulb is longer and the membranes of the internal sac are finely denticulate. It differs drastically from the latter by the not iridescent body, and from the congeners known from the Lesser Sundas by its short antennomere IV.

***Scaphisoma affabile* sp. nov.**

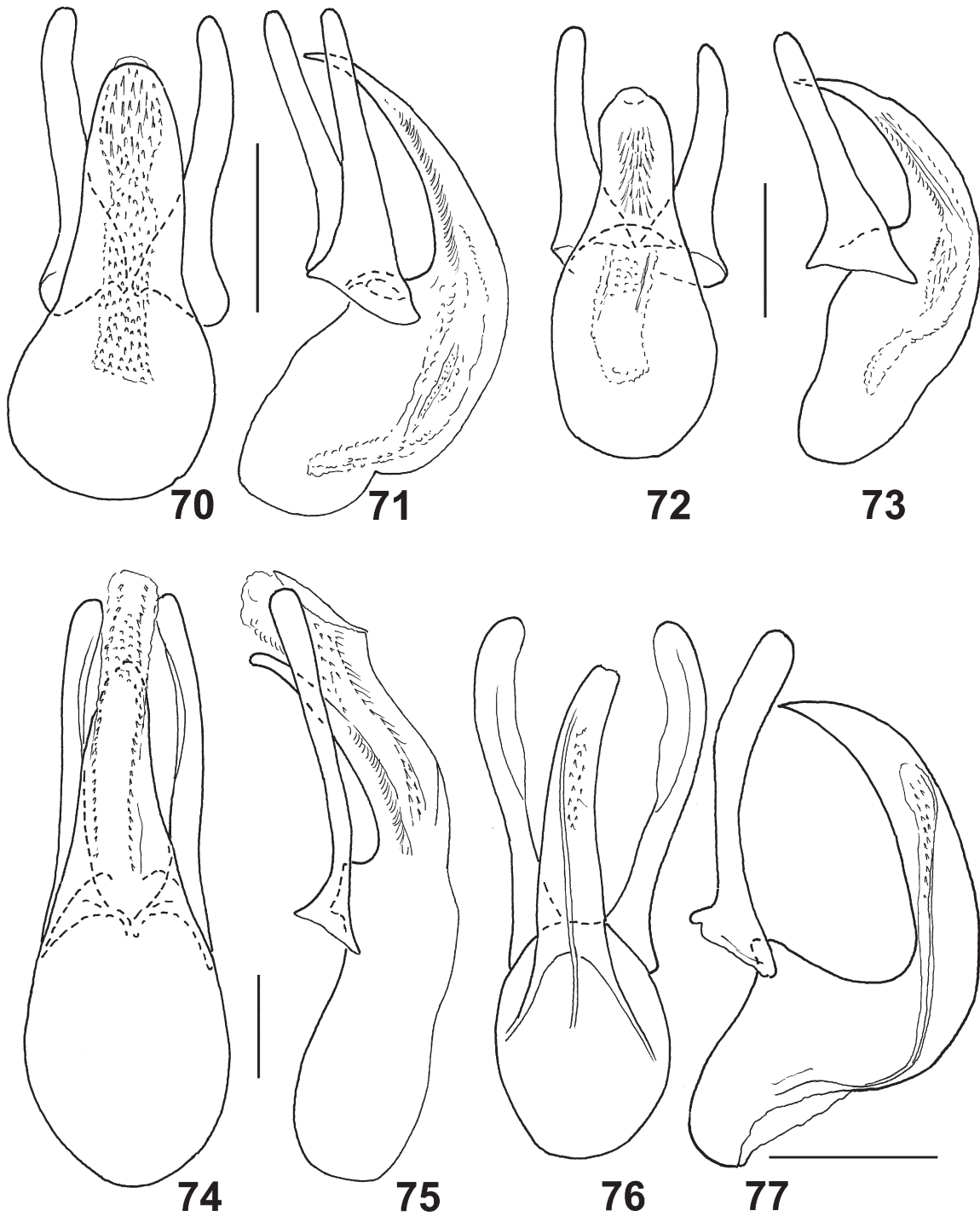
Figs 76-77

**Holotype:** MHNG; ♂; Indonesia, Indo: Timor (13) NTT: 16 km N Soe 30.3.91, evegrfor. D. Agosti, F91653.

**Etymology:** The species epithet is a Latin adjective, meaning obliging, kindness.

**Description:** Length 1.55 mm, width 1.07 mm. Head and most of body uniformly dark reddish-brown, apical parts of elytra light, yellowish, somewhat transparent. Light apical area of elytra extended from apical margin to middle third near lateral margins, narrower near sutural striae. Appendages light reddish-brown. Sternite 1 near base and apical sternites as dorsum of body, most of sternite 1 darkened. Antennae long, length/width ratio of antennomeres as follows: III 12/9: IV 35/6: V 40/7: VI 37/7: VII 45/10: VIII 32/10: IX 43/13: X 40/13: XI 48/14. Antennomere III subtriangular. Pronotum and elytra lacking microsculpture, very finely punctate, punctures on elytra larger and deeper between mid-length and light apical area than on remaining elytral surface. Lateral margins of pronotum evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae not visible in dorsal view, apical margins weakly convex, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly deep, parallel, at base somewhat curved, not extending laterad pronotal lobe, adsutural areas flat. Hypomera smooth. Mesepimeron about as long as interval to mesocoxa. Metaventricle not microsculptured, lacking mesal impressions or sulci. Submesocoxal areas 0.05 mm, as long as half of interval to metacoxa, submesocoxal lines convex, with very fine marginal punctures. Metanepisternum flat, hardly narrowed toward angles, with inner margin almost straight and impressed below margin of metaventricle. Tibiae straight. Abdomen with microsculpture consisting of transverse striae. Submetacoxal areas 0.06 mm, submetacoxal lines convex, with short margin striae.

**Male:** Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 76-77) 0.53 mm long, moderately sclerotized. Median lobe weakly asymmetrical, with small basal bulb, articular process robust, not prominent, apical process strongly curved, tapering apically, tip acute in lateral view, blunt in dorsal view. Parameres symmetrical, wide-



Figs 70-77

(70-71) *Scaphisoma adscitum* sp. nov., aedeagus in dorsal (70) and lateral (71) views.

(72-73) *Scaphisoma activum* sp. nov., aedeagus in dorsal (72) and lateral (73) views.

(74-75) *Scaphisoma acutatatum* sp. nov., aedeagus in dorsal (74) and lateral (75) views.

(76-77) *Scaphisoma affabile* sp. nov., aedeagus in dorsal (76) and lateral (77) views; scale bars = 0.1 mm.



ned in apical halves, inner margins membranous, pores scattered in proximal halves of parameres. Internal sac with moderately sclerotized flagellum, apical parts of membranes with very fine denticulate structures.

**Distribution:** Indonesia: Timor.

**Type locality:** Timor, 16 km N Soe.

**Comments:** The aedeagal characters suggest relationships with the New Guinean *S. pseudofasciatum* Löbl, 1975 and *S. triste* Löbl, 1975, though *S. pseudofasciatum* possesses apical process of the median lobe abruptly narrowed and internal sac extruded in repos. Both species may be easily distinguished by their body colour. *Scaphisoma triste* is larger, its body is over 2.1 mm long and has elytra with sutural striae extended along bases to form basal striae; it differs also conspicuously by the strongly prominent articular process of the median lobe.

***Scaphisoma antennarum* sp. nov.**

Figs 78-79

**Holotype:** SMNS; ♂; Indonesia, Lombok Is. Sapit-Sembalun Bumbung 14-16 Feb.1994 Bolm lgt. 900-1500 m.

**Paratypes:** SMNS, MHNG; 6 ♂, 1 ♀; with the same data as the holotype. – SMNS; 1 ♀; Indonesia E. Lombok Sapit, 14.-16.2.1994 SE slope of Mt. Rinjani Bolm lgt.

**Etymology:** The species epithet is a Latin adjective, referring to the antennae.

**Description:** Length 1.35-1.50 mm, width 0.96-1.06 mm. Head and body dark reddish-brown to blackish-brown. Elytra eventually darkened apically, except for narrowly light apices. Apical abdominal segments and appendages light reddish to yellowish. Pronotum and elytra lacking microsculpture. Antennae short, length/width ratio of antennomeres as follows: III 10/10: IV 15/8: V 22/9: VI 27/12: VII 42/14: VIII 26/11: IX 40/12: X 38/16: XI 50/16. Antennomere III subtriangular. Pronotum very finely punctate, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae visible in dorsal view, apical margins weakly convex, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly shallow, parallel, somewhat curved at base, not extending laterad pronotal lobe, adsutural areas flat. Punctuation very fine and sparse on basal fourth to third of elytra, becoming less fine and denser apically, punctures on apical halves of elytral disc well delimited, to part about as large as puncture intervals. Hypomera smooth. Mesepimeron about as long as interval to mesocoxa. Metaventrite not microsculptured, lacking mesal impressions or

sulci, punctuation very dense and fine on apicomedian area, with punctures to part as large as intervals, finer and sparser on anteriomedian and lateral areas. Submesocoxal areas 0.04-0.05 mm, as long as fourth of interval to metacoxa, submesocoxal lines convex, with very fine marginal punctures. Metanepisternum flat, slightly narrowed toward angles, with inner margin weakly sinuate, impressed below margin of metaventrite. Tibiae straight. Abdomen lacking obvious microsculpture, pygidium conspicuously punctured, with punctures dense, about as large as puncture intervals, sternites very finely and sparsely punctured, excepted on median part of sternite 1 with denser punctures, similar to those on apicomedian part of metaventrite. Submetacoxal areas 0.12-0.13 mm, about twice as shortest interval to apical margin of sternite, submetacoxal lines strongly convex, with fine margin punctures.

**Male:** Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 78-79) 0.23-0.27 mm long. Median lobe strongly sclerotized, slightly asymmetrical, with basal bulb small, bearing comparatively large articular process. Apical process much longer than basal bulb, narrow, tapering, in dorsal view weakly curved, in lateral view arcuate basally, straight in apical half. Parameres fairly narrow, dorsally widened at apices. Internal sac with hardly visible flagellum, membranes lacking denticulate or scale-like structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Sapit-Sembalun Bumbung, 900-1500 m.

**Comments:** The aedeagus in the new species is similar to that in *S. besucheti* Löbl, 1971 from Sri Lanka, though it is significantly smaller. These two species may be readily distinguished also by their antennae, the elytra lacking basal striae in *S. antennarum*, and the much smaller submetacoxal areas in *S. besucheti*.

***Scaphisoma animatum* sp. nov.**

Figs 80-81

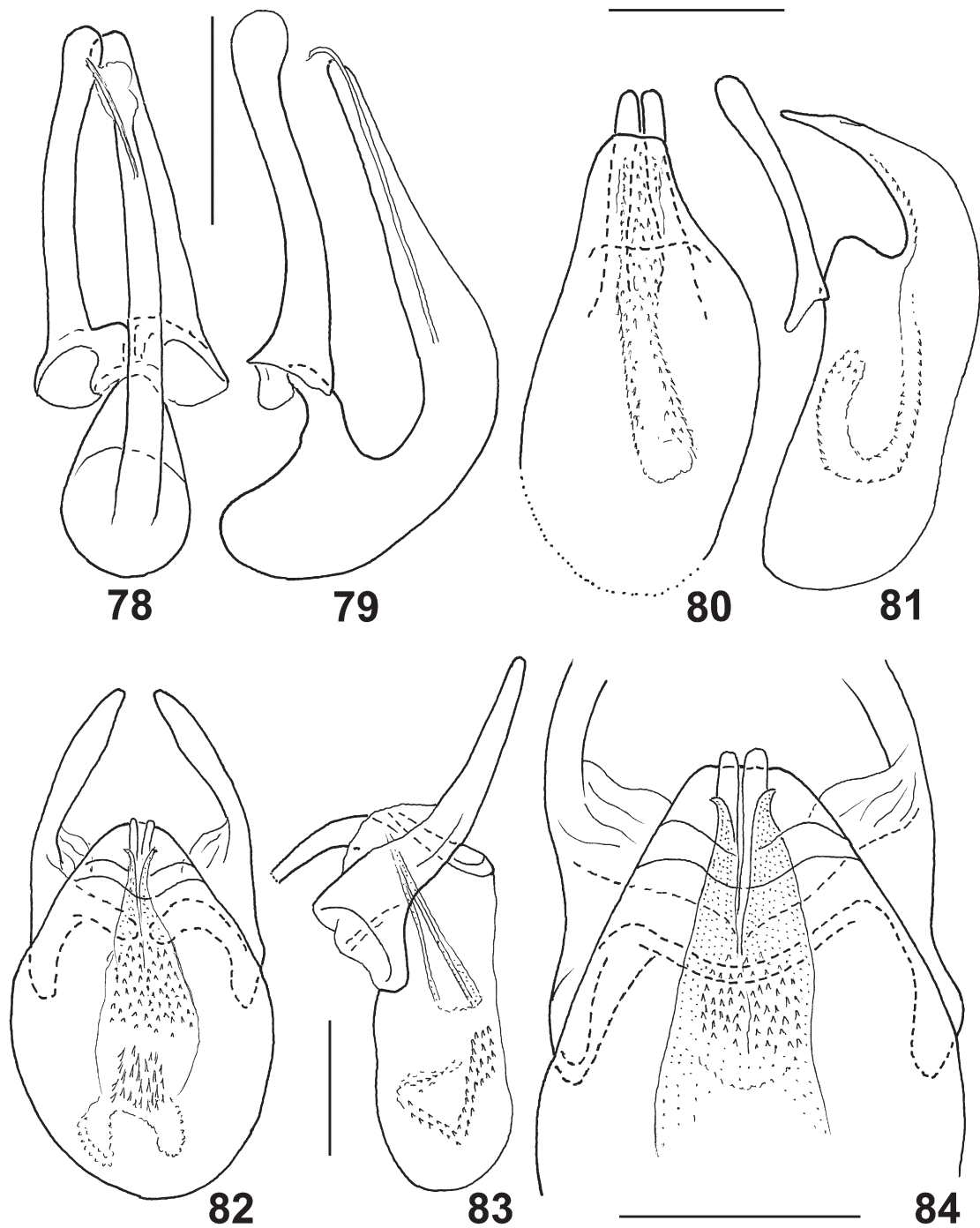
**Holotype:** SMNS; ♂; Indonesia, Lombok Is. Sapit-Sembalun Bumbung 14.-16.Feb.1994 Bolm lgt. 900-1500 m.

**Paratypes:** SMNS, MHNG; 1 ♂, 2 ♀; with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning courageous.

**Description:** Length 1.37-1.46 mm, width 0.94-0.96 mm. Head and most of body dark brown or reddish-brown. Most of elytra light, yellowish, basal fourth of elytra about as pronotum or somewhat darker, anterior halves of sutural areas slightly darkened, and each elytron with darkened subapical band. Ventral side of





Figs 78-84

(78-79) *Scaphisoma antennarum* sp. nov., aedeagus in dorsal (78) and lateral (79) views.

(80-81) *Scaphisoma animatum* sp. nov., aedeagus in dorsal (80) and lateral (81) views.

(82-84) *Scaphisoma acutum* sp. nov., aedeagus in dorsal (82) and lateral (83) views, apical part of median lobe with basal parts of parameres (84) in dorsal view; scale bars = 0.1 mm.

thorax about as dark as pronotum. Apical abdominal segments and appendages light, yellowish. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 12/7: IV 20/5: V 33/6: VI 40/8: VII 49/13: VIII 40/10: IX 48/12: X 45/11: XI 54/14. Antennomere III short, subtriangular. Pronotum very finely punctate, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae visible in dorsal view, apical margins weakly convex, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly shallow, parallel, somewhat curved at base, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation very fine and sparse, similar to pronotal near bases, more distinct on most of discal surface and with puncture intervals about 2 to 3 times as large as puncture diameters. Hypomera smooth. Mesepimeron slightly longer than interval to mesocoxa. Metaventricle not microsculptured, lacking mesal impressions or sulci, very finely punctate. Submesocoxal areas 0.04 mm, as long as third of interval to metacoxa, submesocoxal lines convex, with fine marginal punctures. Metanepisternum flat, slightly narrowed toward angles, with middle part of inner margin oblique, not impressed below margin of metaventricle. Tibiae straight. Abdomen very finely punctate, sternite 1 lacking microsculpture, apical sternites with punctate microsculpture. Submetacoxal areas 0.07-0.09 mm, almost reaching sternal mid-length, submetacoxal lines convex, with coarse margin punctures.

*Male:* Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 80-81) 0.25 mm long, moderately sclerotized. Median lobe symmetrical, with large basal bulb, articular process robust and prominent, apical process much shorter than basal bulb, strongly curved, tapering apically, tip acute in lateral view, blunt in dorsal view. Parameres symmetrical, narrow, almost straight in dorsal view, hardly bent and widened at apices in lateral view. Internal sac lacking flagellum and sclerotized pieces, membranes with fine denticulate structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Sapit-Sembalun Bumbung, 900-1500 m.

**Comments:** The aedeagal characters suggest relationship with *S. lombokense* Löbl, 1986 and *S. bugi* Löbl, 1983, although these two species have parameres widened basally, and may be easily distinguished by their colour pattern and abdominal microsculpture (abdomen with striate microsculpture, body uniformly reddish-brown in *S. lombokense*, elytra dark with lighter reddish subbasal and subapical spots in *S. bugi*; see Löbl, 1983 and 1986, respectively). See also comments under *S. ascitum*.

***Scaphisoma acutum* sp. nov.**

Figs 82-84

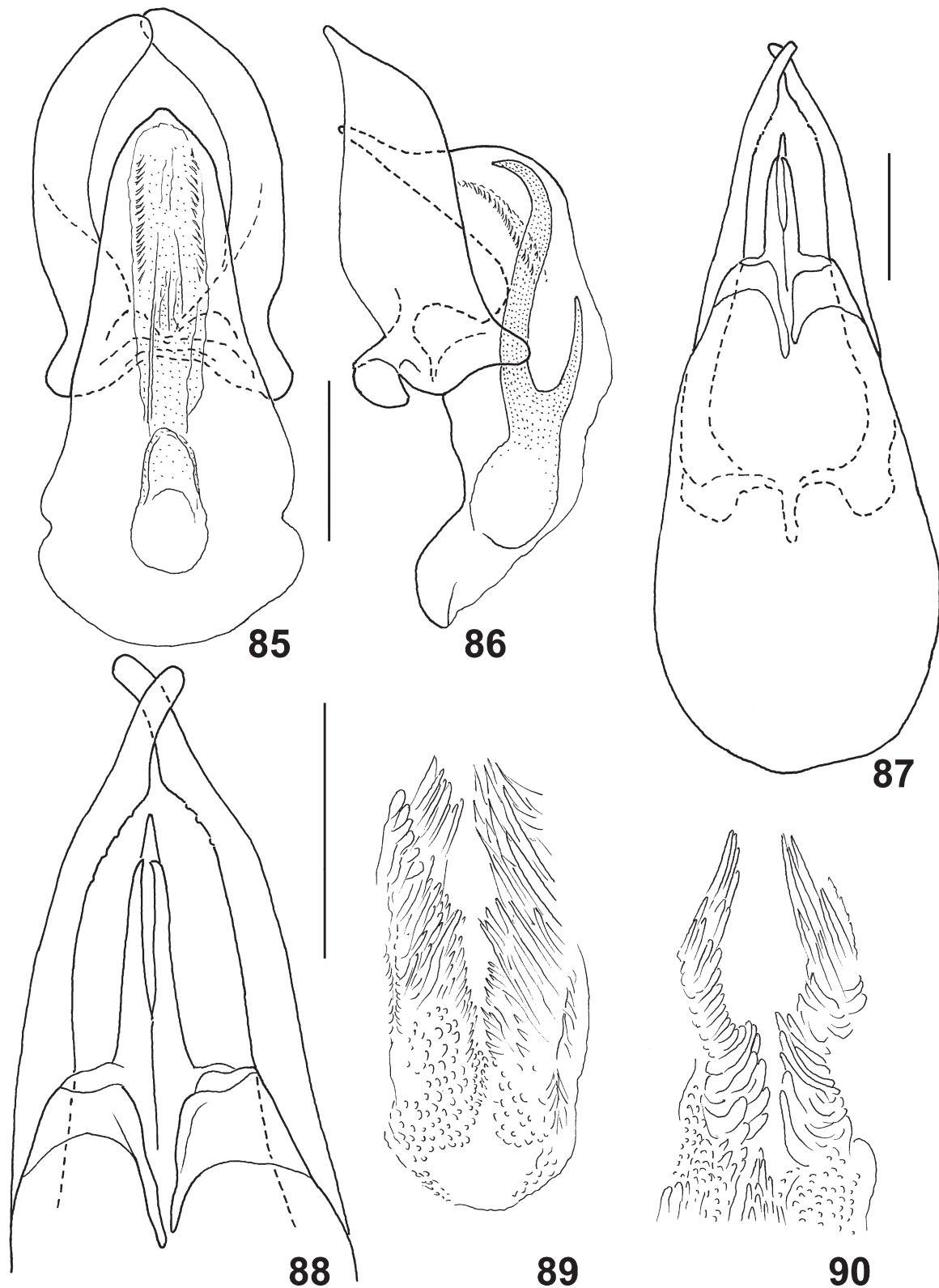
**Holotype:** MHNG; ♂; Indonesia, Indo: Lombok Batu Koq (N of G. Rinjani) 500 m, sec. forest in gorge D. Agosti 12.03.1991.

**Etymology:** The species epithet is a Latin adjective, meaning pointed and referring to pointed sclerites of the internal sac.

**Description:** Length 1.22 mm, width 0.82 mm. Head and body dark reddish-brown, appendages light. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 12/6: IV 28/5: V 40/6: VI 35/7: VII 38/11: VIII 37/8: IX 42/12 (left antennomeres X and XI, and right antennomere VIII-XI broken off). Antennomere III subtriangular. Pronotum finely punctate, punctures on basomedian area larger than near lateral and apical margins, lateral margins evenly rounded, lateral margin carinae visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae visible in dorsal view, apical margins truncate, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly deep, converging apically, somewhat curved at base, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation coarse and dense, punctures fairly well delimited, puncture intervals mostly about as large to twice as large as puncture diameters. Hypomera smooth. Mesepimeron about twice as interval to mesocoxa, about 5 times as long as wide. Metaventricle not microsculptured, lacking mesal impressions or sulci, punctation even, very fine and sparse. Submesocoxal areas 0.05 mm, almost as long as half of interval to metacoxa, submesocoxal lines convex, with fine marginal punctures. Metanepisternum flat, impressed below margin of metaventricle, slightly narrowed anteriorly, with inner margin weakly sinuate. Tibiae straight. Abdomen very finely punctate. Sternite 1 with strigulate microsculpture distinct in middle, becoming punctulate or obsolete laterally, with not well delimited lateral impression. Submetacoxal areas 0.05 mm, submetacoxal lines convex, with fine margin punctures.

*Male:* Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 82-84) 0.37 mm long, weakly sclerotized, symmetrical. Median lobe with basal bulb much longer than apical process, lacking prominent articular process. Apical process strongly inflexed and narrowed apically, concealed in dorsal view. Parameres wide in basal halves and lobed, bent in middle, narrow in apical halves in dorsal view, gradually narrowed apically in lateral view. Internal sac lacking robust sclerites, with short denticulate structures in proximal part, long, very narrow and acute denticles in apical part.

**Distribution:** Indonesia: Lombok.



Figs 85-90

(85-86) *Scaphisoma aproximatum* sp. nov., aedeagus in dorsal (85) and lateral (86) views; scale bar = 0.1 mm.

(87-90) *Scaphisoma angulare* sp. nov., aedeagus in dorsal (87) view, apical part of median lobe with parameres (88) in dorsal view, basal half of internal sac (89) and apical half of internal sac (90) in dorsal view; scale bars = 0.2 mm.

**Type locality:** Lombok, Batu Koq (N of G. Rinjani) 500 m.

**Comments:** The aedeagal characters suggest relationships of *S. acutum* with *S. sesaotense* Löbl, 1986 and the Sumatran *S. irregulare* Löbl, 1975. The new species may be distinguished from *S. sesaotense* by the much smaller aedeagus with short parameral lobes and internal sac lacking large bifid sclerite. *Scaphisoma irregulare* has distinctive elytral punctation, with punctures on middle of disc coarser and also much denser than near margins. Unlike in *S. acutum* and *S. sesaotense*, *S. irregular* has parameres finely tuberculate, the parameral lobes very narrow, and does not possess sclerotized pieces in the internal sac.

***Scaphisoma approximatum* sp. nov.**

Figs 85-86

**Holotype:** MHNG; ♂; Indonesia, Indo.: Lombok Mt. Rinjani above Senaro, 900-1100 m 6. XI 1991, I. Löbl forest floor litter.

**Etymology:** The species epithet is a Latin adjective, meaning being close.

**Description:** Length 1.65 mm, width 1.14 mm. Head, body and appendages light reddish-brown. Pronotum and elytra lacking microsculpture. Antennae long, length/width ration of antennomeres as follows: III 15/8: IV 29/6: V 35/6: VI 36/7: VII 48/15: VIII 35/9: IX 48/15: X 44/15: XI 65/15. Antennomere III subtriangular. Pronotum very finely punctate, lateral margins evenly rounded, lateral margin carinae not visible in dorsal view. Point of scutellum exposed. Elytra with lateral margin carinae visible in dorsal view, apical margins weakly convex, inner apical angle rounded, not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae fairly shallow, parallel, at base somewhat curved, not extending laterad pronotal lobe, adsutural areas flat. Punctuation very fine and sparse near elytral bases, becoming more distinct and denser apically, punctures on apical halves of elytral disc well delimited, puncture intervals mostly about as large to twice as large as puncture intervals. Pygidium distinctly, densely punctate, most punctures about as large as puncture intervals. Hypomera smooth. Mesepimeron somewhat shorter than interval to mesocoxa, about 2.5 times as long as wide. Metaventricle not microsculptured, lacking mesal impressions or sulci, with punctuation even, very fine and sparse. Submesocoxal areas 0.03 mm, as long as sixth of interval to metacoxa, submesocoxal lines parallel, with very fine marginal punctures. Metanepisternum flat, impressed below margin of metaventricle, narrowed anteriorly, with inner margin weakly sinuate. Tibiae straight. Abdomen lacking obvious microsculpture. Sternite 1 with punctuation dense and comparatively coarse on

basal half, becoming finer and sparser toward apical margin. Following sternites very finely punctate. Submetacoxal areas 0.02-0.03 mm, submetacoxal lines parallel, with fine margin punctures.

**Male:** Protarsal segments 1 to 3 hardly widened. Aedeagus (Figs 85-86) 0.37 mm long, weakly sclerotized, symmetrical. Median lobe with basal bulb longer than apical process and large, prominent articular process. Apical process moderately narrowed apically in dorsal view, strongly inflexed, with oblique ventral side, abruptly narrowed in apical part in lateral view. Parameres wide, arcuate in dorsal view, strongly widened ventrally and abruptly narrowed at tip in lateral view. Internal sac with robust bidentate sclerite and finely denticulate membranes.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok Mt. Rinjani above Senaro, 900-1100 m.

**Comments:** The species resembles *S. incomptum* Löbl, 1986 from Sumatra, though it has conspicuously longer antennae. Its aedeagal characters suggest relationships with the Sumatran *S. heissi* Löbl, 1982, that possesses larger and strongly sclerotized aedeagus with the apical process of the median lobe parallel and evenly curved. The new species may be readily distinguished from *S. heissi* by the uniformly light body colour and the elytra with parallel sutural striae.

***Scaphisoma angulare* sp. nov.**

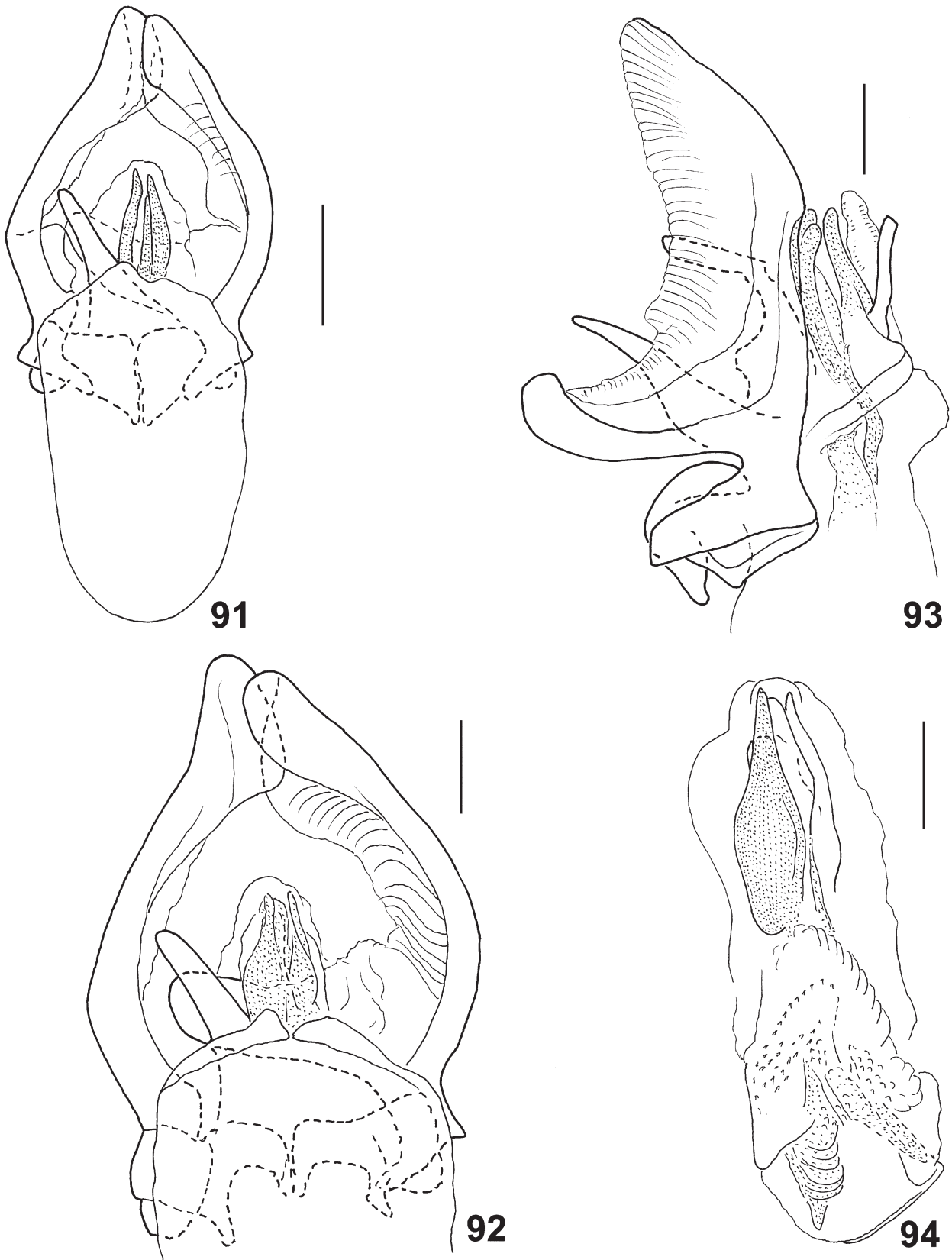
Figs 87-90

**Holotype:** SMNS; ♂; Indonesia, W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m Bolm lgt. 10. Febr. 1994.

**Paratypes:** SMNS, MHNG; 7 ♂, 1 ♀; Indonesia, with the same data as the holotype.

**Etymology:** The species epithet is a Latin adjective, meaning angulate and referring to the shape of the elytra.

**Description:** Length 1.93-2.10 mm, width 1.25-1.33 mm. Head, pronotum and hypomera very dark reddish-brown to blackish-brown. Elytra black, with base somewhat lighter, adsutural areas about as pronotum, at apices yellowish. Metaventricle very dark reddish-brown to blackish, abdomen dark brown or reddish-brown. Appendages light reddish-brown to yellowish. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 16/8: IV 40/8: V 55/10: VI 51/9: VII 58/14: VIII 51/10: IX 57/10: X 55/14: XI 65/15. Antennomere III subtriangular. Pronotum finely and densely punctate, with lateral margins evenly rounded, basal halves of lateral margin carinae visible in dorsal view. Apex of scutellum exposed. Elytra with lateral



Figs 91-94

(91-94) *Scaphisoma affectum* sp. nov., aedeagus in dorsal view (91), median lobe with parameres, without proximal part of basal bulb (92) in dorsal and (93) lateral views, interval sac (94) in dorsal view; scale bars = 0.1 mm.



margin carinae entirely exposed in dorsal view, apical margins truncate, inner apical angle rectangular, not prominent in male, prominent and tooth-like in female; situated posterior level of outer angles, sutural margin not raised, sutural striae deep, parallel, hardly curved at base, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation fairly coarse, dense, punctures well delimited, puncture intervals mostly about as large to twice as large as puncture diameters. Hypomera smooth. Mesepimera longer than interval to mesocoxa. Metaventricle with microsculpture striagulate, distinct on median area, hardly visible on lateral areas. Median area of metaventricle slightly convex, with two indistinct apicomedian impressions, punctation fine but distinct apicomedianly, elsewhere very fine. Submesocoxal areas 0.04 mm, about as fifth of intervals to metacoxae, submesocoxal lines subparallel, with coarse marginal punctures. Metanepisternum flat, hardly narrowed anteriorly, with inner margin straight in middle, rounded near angles, impressed below margin of metaventricle. Tibiae straight. Abdomen with microsculpture consisting of transverse striae. Sternite 1 all over very finely punctate. Submetacoxal areas 0.07-0.08 mm, submetacoxal lines convex, with coarse margin punctures.

*Male:* Protarsal and mesotarsal segments 1 to 3 distinctly widened. Inner apical angle of elytra not prominent. Aedeagus (Figs 87-90) 1.07-1.10 mm long. Median lobe and parameres symmetrical, strongly sclerotized. Median lobe with large basal bulb, ventral branch of apical process short, weakly inflexed in apical half, with subapical dorsal denticle, dorsal branches of apical process slightly shorter than ventral branch, articular process not prominent. Parameres in level with median lobe, arcuate in basal part, oblique posterior basal part, narrowed toward apices in lateral view, sinuate in dorsal view, lacking distinct crenulations; pores scattered, situated in basal halves. Internal sac complex, with tufts of dense denticles, large median tooth, and membranes bearing scale-like structure.

*Female:* Inner apical angle of elytra prominent, tooth-like.

**Distribution:** Indonesia: Sumbawa.

**Type locality:** W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m.

**Comments:** The aedeagus of this species is very similar to that of *S. sapitense*, suggesting close relationships. Possibly, these species are vicariant. The new species differs however conspicuously from *S. sapitense* by its colour pattern, and also by the very finely punctate basomedian part of the sternite 1 and the laterally microsculptured metaventricle. The aedeagi are in both species similar. Unlike *S. sapitense*, *S. angulare* has parameres distinctly sinuate in dorsal view and its internal sac bears a large median tooth, while it lacks the row of scale-like, flat sclerites.

***Scaphisoma affectum* sp. nov.**

Figs 91-94

**Holotype:** MHNG; ♂; Indonesia, Indo: Bali Mt. Batukaru 500-700 m, 1991 I. Löbl, 28.-29.X.

**Etymology:** The species epithet is a Latin adjective, referring to the affected characters.

**Description:** Length 1.85 mm, width 1.33 mm. Head, pronotum and most of elytra reddish-brown, apical fourth of elytra lighter, yellowish. Hypomera light brown. Mesoventrite, mesepisterna, metaventricle, metanepisterna, metepimeres and sternite 1 dark brown. Remaining exposed abdominal segments lighter, appendages yellowish. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 12/8: IV 30/6: V 52/7: VI 55/8: VII 57/13: VIII 45/10: IX 57/12: X 57/12: XI 65/13. Antennomere III triangular. Pronotum finely and densely punctate, with lateral margins evenly rounded, lateral margin carinae hardly visible in dorsal view. Apex of scutellum exposed. Elytra with lateral margin carinae entirely exposed in dorsal view, apical margins rounded, inner apical angle situated in level with outer angles, sutural margin not raised; sutural striae fairly shallow, oblique near base and not extending laterad pronotal lobe, almost parallel from oblique section to apices, adsutural areas flat. Elytral punctation fairly coarse, dense, punctures well delimited, puncture intervals mostly about as large to twice as large as puncture diameters. Hypomera finely punctate. Mesepimera about four times as long as wide, about as long as three fourth of interval to mesocoxa. Metaventricle with microsculpture between mesocoxae and metacoxae. Median area of metaventricle convex, without impressions or grooves, flattened near metacoxal process, with fairly coarse puncture rows parallel to metacoxae, punctation elsewhere very fine and sparse. Submesocoxal areas 0.05 mm, about as fourth of intervals to metacoxae, submesocoxal lines convex, with fairly indistinct marginal punctures. Metanepisternum convex, distinctly narrowed anteriorly, with inner margin slightly impressed and almost straight except at rounded posterior angles. Mesotibiae and metatibiae slightly curved. Abdomen with microsculpture consisting of transverse striae. Sternite 1 with coarse puncture on narrow basomedian area, very finely punctate on remaining surface. Submetacoxal areas 0.05 mm, submetacoxal lines convex, with coarse margin punctures.

*Male:* Protarsi with segment 1 distinctly widened, narrower than tibia, segments 2 and 3 slightly widened. Aedeagus (Figs 91-94) 1.0 mm long. Median lobe with large, moderately sclerotized basal bulb, articular process not projecting. Apical process asymmetrical, strongly inflexed, sinuate and tapering in lateral view, oblique in dorsal view. Parameres symmetrical, strongly expanded ventrally to form large, strongly sclerotized

subbasal apophyses posterior bases. Dorsal margins of parameres strongly sclerotized posterior level of apophyses, wide areas below dorsal margins membranous. Internal sac complex, with three strongly sclerotized apical teeth and basal plates, and membranes with scale-like and denticulate structures.

**Distribution:** Indonesia: Bali.

**Type locality:** Bali, Mt. Batukaru 500-700 m.

**Comments:** This species is possibly related with *S. ruficolle* (Pic, 1915) described from the East Malaysian island Bangii. Unfortunately, the apical process of the median lobe is hardly visible in the sole male of the latter species that is available for study. Both species clearly differ also by the parameres, gradually widened and with postbasal lobes situated more distally in *S. ruficolle*, and by the structures of the internal sac, in particular by the presence of a single robust tooth in *S. ruficolle*.

***Scaphisoma aspectum* sp. nov.**

Figs 95-98

**Holotype:** SMNS; ♂; Indonesia, Bali Danau Buyan, 1300 19.-21.2. 1994 Bolm lgt.

**Paratypes:** SMNS, MHNG; 17 ♂, 9 ♀; with the same data as the holotype. – SMNS, MHNG; 14 ♂, 14 ♀; Bali 12m km NW of Bedugul (Buyan Lake) 29 Apr.-2. May 2001 Bolm lgt., 950 m.

**Etymology:** The species epithet is a Latin adjective, meaning aspect.

**Description:** Length 1.95-2.15 mm, width 1.35-1.48 mm. Colour of head, pronotum and abdomen: see under male and female characters. Elytra dark brown to black, each with light, yellowish-brown or reddish subhumeral spot and subapical band, latter usually not clearly delimited. Venter of thorax, hypomera and mesoventrite excepted, and sternite 1 dark brown to black, mesoventrite somewhat lighter, exposed tergites and appendages light, yellowish-brown. Pronotum and elytra of lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 26/6: IV 37/7: V 65/7: VI 63/9: VII 65/15: VIII 57/8: IX 72/12: X 62/12: XI 77/13. Antennomere III conspicuously elongate, subcylindrical. Pronotum finely and densely punctate, with lateral margins evenly rounded, lateral margin carinae usually visible in dorsal view. Apex of scutellum exposed. Elytra with lateral margin carinae entirely exposed in dorsal view, apical margins truncate, inner apical angle situated posterior level of outer angles, sutural margin slightly raised in posterior two thirds of sutural length, sutural striae deep, not curved at base and not extending laterad pronotal lobe, conspicuously converging apically, adsutural areas flat, each

about 0.20 mm wide at level of scutellum and about 0.10 mm wide at mid-length. Elytral punctation fairly coarse, dense, punctures well delimited, puncture intervals mostly about as large to twice as large as puncture diameters. Hypomera smooth. Mesepimera about 3 to 4 times as long as wide, shorter than interval to mesocoxa. Metaventricle with striate microsculpture. Median area of metaventricle slightly convex, without impressions or grooves, with fairly coarse puncture rows parallel to metacoxae, punctation very fine and sparse elsewhere. Submesocoxal areas 0.04 mm, about as fifth of intervals to metacoxae, submesocoxal lines subparallel, with fairly coarse marginal punctures. Metanepisternum convex, weakly narrowed anteriorly, with inner margin deeply impressed and almost straight. Mesotibiae and metatibiae slightly curved. Abdomen with microsculpture consisting of transverse striae. Sternite 1 all over very finely punctate. Submetacoxal areas 0.04 mm, submetacoxal lines convex, with fairly coarse margin punctures.

**Male:** Head narrowly dark brown to black on vertex, light reddish-brown to yellowish-brown on remaining surface. Pronotum laterally and hypomera entirely light reddish-brown to yellowish-brown. Mesal part of pronotum dark brown to black. Sternite 1 dark, about as mesoventrite, following ventrites lighter. Protarsal and mesotarsal segments 1 to 3 distinctly widened. Inner apical angle of elytra not prominent. Aedeagus (Figs 95-98) 1.15-1.28 mm long. Median lobe and parameres asymmetrical. Median lobe with large, moderately sclerotized basal bulb, apical process strongly sclerotized, irregularly curved and inflexed, in lateral view wider than in dorsal view. Parameres each with large ventral lobe. Internal sac with two sclerites, left sclerite long and abruptly truncate at apex, right sclerite strongly widened in apical half; membranes bearing scale-like structures.

**Female:** Head, pronotum and hypomera uniformly or almost uniformly dark reddish-brown to black, or head somewhat lighter than pronotum. Sternites, apical excepted, about as dark as metaventricle.

**Distribution:** Indonesia: Bali.

**Comments:** This species is closely related with and similar to *S. testaceomaculatum* (Pic, 1915) from Java. The males may be easily distinguished by the pronotal colour pattern. While the dark area in *S. testaceomaculatum* is limited to a narrow band along the basal margin of the pronotum and is just moderately extended mesally, it covers the entire mesal area in *S. aspectum*. The shape of the apical process of the median lobe and of the structures of the internal sac differ drastically in these two species.

Achard (1920) downgraded *Pseudoscaphosoma subelongatum* Pic, 1915 to variety of *P. testaceomaculatum* Pic, 1915. The study of the respective type material confirms the synonymy of these names. The “thorace posticis brevis nigro notato” given by Pic for *P. testaceo-*

*maculatum* is a male character, absent in the description of *P. subelongatum*. Both names are here fixed:

*P. testaceomaculatum* Pic, lectotype MNHN; ♂; by present designation, labelled: Java occident. Pengalengan 4000' 1893 H.Fruhstorfer / Type (handwritten) / TYPE (red, printed) *Pseudoscaphosoma testaceomaculatum* Pic (handwritten by Pic) / *Scaphisoma testaceomaculatum* (Pic) der Löbl 1974 / Lectotype *Scaphisoma testaceomaculatum* (Pic) det. Löbl, 2014.

*P. subelongatum* Pic, lectotype MNHN; ♀; by present designation, labelled: Java occident. Pengalengan 4000' 1893 H.Fruhstorfer / Type (handwritten) / TYPE (red, printed) / ? *Toxidium* Lec (handwritten by Pic) / *Pseudoscaphosoma subelongatum* Pic (handwritten by Pic) / *Scaphisoma testaceomaculatum* (Pic) der Löbl 1974 / Lectotype *Scaphisoma subelongatum* (Pic) det. Löbl, 2014.

#### *Scaphisoma coarctatum* Löbl, 1976

**Additional material examined:** SMNS; 1 ♂; Indonesia, Lombok, Sapit - Sembalun Bumbung, 14.-16.Feb 1994, Bolm lgt., 900-1400 m.

**Distribution:** Indonesia: Buru, Lombok.

**Comments:** The description of this species was based on a single male form Buru (in Zoölogisch Museum, Amsterdam, at present in NBCL). The specimen from Lombok has elytra with sutural striae longer, starting at elytral bases, at each side of the pronotal lobe.

#### *Scaphisoma dohertyi* (Pic, 1915)

**Additional material examined:** SMNS, MHNG; Indonesia, Bali, Danau Buyan, 1300 m, 19.-21.2.1994, Bolm lgt., 3 ex. – SMNS, MHNG; 11 ex.; NE Sumbawa, Calabai (Tambora N.P.) 11.-13.Febr. 1994 Bolm lgt.

**Distribution:** Tropical Asia from north-eastern India to Yunnan, and Indonesia: Java, Bali and Sumbawa.

**Comments:** The aedeagus of the species is illustrated in Löbl, 1981a.

#### *Scaphisoma gracilicorne* Achard, 1920

Figs 99-102

**Lectotype:** MNHN; ♂; by present designation, labelled: Sumatra Coll Grovelle (handwritten) TYPE (printed, red) / *Scaphosoma gracilicorne* TYPE (handwritten by Achard) J. Achard det. / *Scaphisoma gracilicorne* Achard det. Löbl 1974 / Lectotype *Scaphisoma gracilicorne* Achard det. I. Löbl, 2014. The right elytron and the antennae from 3rd segment on are broken off and missing.

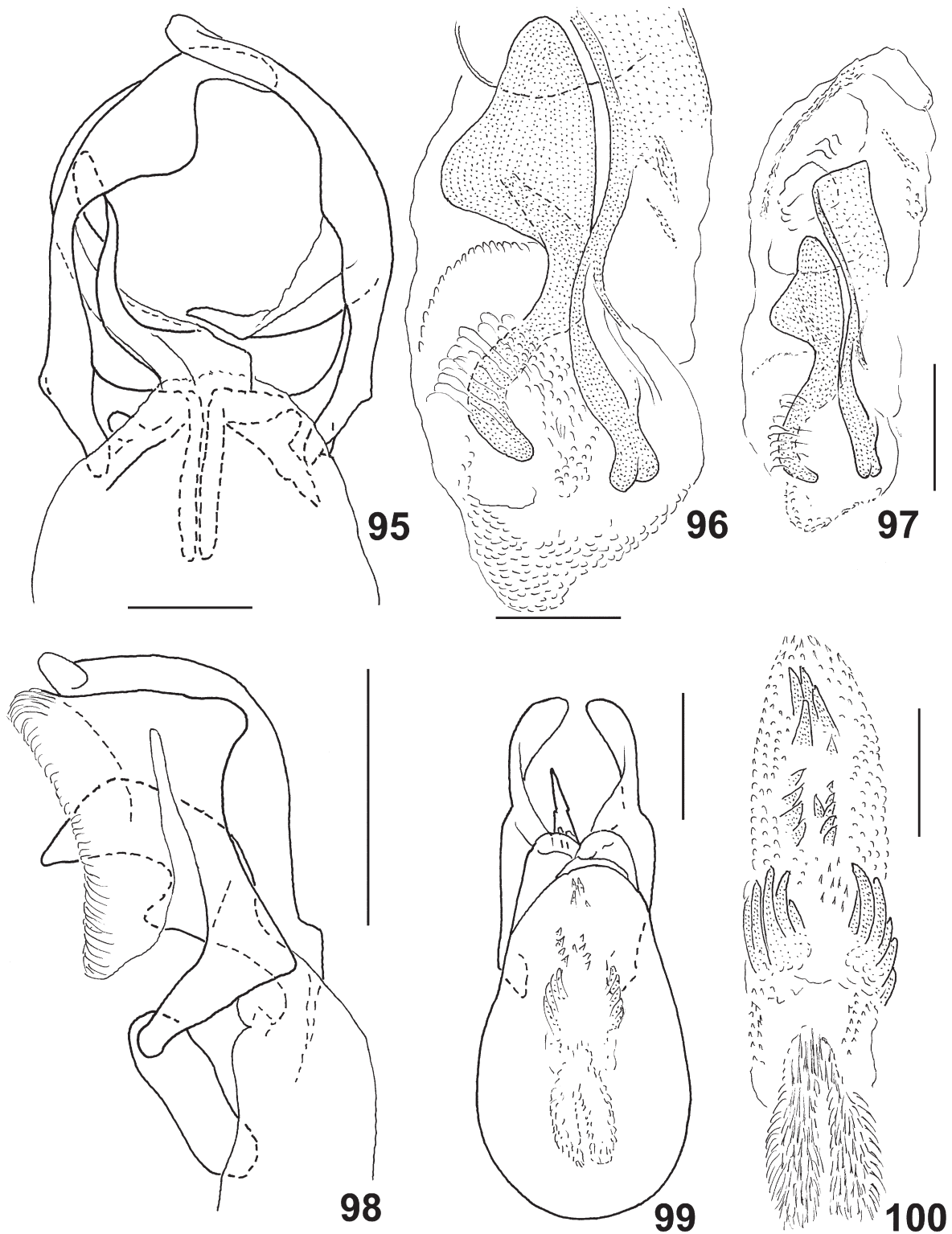
**Additional material examined:** SMNS; 1 ♂; Indonesia, Lombok, Senaro N slope of Rinjani, 2.-5.

Feb.1994, 1100 m, Bolm lgt. – MNHN; 1 ♂; Sumatra, Fort de Kock [=Bukittinggi] 920 m 1925 leg. E. Jacobson.

**Redescription:** Length 1.50-1.55 mm, width 1.0-1.05 mm. Head and body light reddish-brown to yellowish, middle part of elytra somewhat darkened, apical third to two fifth of elytra lighter. Apex of abdomen and appendages yellowish. Antennae fairly long, length/width ratio of antennomeres as follows: III 12/7: IV 25/6: V 36/6: VI 32/6: VII 40/10: VIII 36/6: IX 44/10: X 40/12: XI 50/12. Antennomere III subtriangular. Pronotum finely punctate, with lateral margins evenly rounded, lateral margin carinae hardly visible near base or in basal half in dorsal view. Apex of scutellum exposed. Elytra with lateral margin carinae visible near bases or in basal third, in dorsal view, apical margins rounded, inner apical angle not prominent, situated posterior level of outer angles, sutural margin not raised, sutural striae deep, slightly converging apically, not curved at base and not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation very fine and sparse on basal third, becoming more distinct in middle third and consisting of poorly defined, very shallow, dense and fine punctures, inconspicuous on apical third of elytra. Hypomera smooth. Mesepimera about 4 times as long as wide and 1.5 times as long as interval to mesocoxa. Metaventrite slightly flattened basomedially, lacking grooves or impressions, without microsculpture, very finely punctate. Submesocoxal areas 0.04 mm, about as third of interval to metacoxae, submesocoxal lines convex. Metanepisternum flat, hardly narrowed anteriad, with inner margin weakly rounded, somewhat impressed below margin of metaventrite. Tibiae straight. Abdomen with microsculpture consisting of transverse striae. Sternite 1 very finely punctate. Submetacoxal areas 0.06-0.07 mm, almost as half of interval to apical margin of sternite, submetacoxal lines convex, with fine margin punctures.

**Male:** Protarsal and mesotarsal segments 1 to 3 slightly widened. Aedeagus (Figs 99-102) 0.78-0.83 mm long, fairly strongly sclerotized, symmetrical. Median lobe with basal bulb large, longer than apical process, articular process inconspicuous. Ventral branch of apical process inflexed, with ventral side sinuate, subapical dorsal tooth followed by very fine dorsal crenulations, tip in dorsal and lateral views acute. Dorsal branches of apical process very short. Parameres fairly narrow in basal halves, each with large weakly sclerotized subapical lobe distinct in dorsal view, abruptly widened in apical halves in lateral view. Internal sac complex, with basal tuft of very dense spine-like structures, two admesal groups of large, curved denticles, followed by irregular rows of fairly robust mesal denticles. Membranes with scale-like structures.

**Distribution:** Indonesia: Sumatra, Lombok.



Figs 95-100

(95-98) *Scaphisoma aspectum* sp. nov., median lobe of aedeagus and parameres, without proximal part of basal bulb (95) in dorsal view, proximal half of internal sac (96) and entire internal sac (97) in dorsal view, median lobe of aedeagus and parameres, without proximal part of basal bulb (98) in lateral view; scale bars = 0.2 mm.

(99-100) *Scaphisoma gracilicorne* Achard, aedeagus (99) in dorsal view and internal sac in dorsal view (100).

Scale bars = 0.2 mm (95, 97, 99) and = 0.1 mm (96, 100).



**Comments:** The species is a member of the *Scaphisoma haemorrhoidale* group, well characterized by its aedeagus. Achard (1920) failed to give any statement about the number of specimen examined and their depository. The specimen designated here as lectotype bears his original identification label and complies with his description except for the length he gave as 1 mm.

***Scaphisoma jacobsoni* Löbl, 1975**

**Additional material examined:** SMNS, MHNG; 31 ex.; Indonesia, Bali 12 km NW of Bedugul (Buyan lake) 29.Apr.-2.May 2001 Bolm lgt., 900 m.

**Distribution:** Indonesia: Sumatra, Java, Bali; East Malaysia: Sarawak; Thailand.

**Comments:** The species may be easily distinguished by its elytra with apically strongly converging sutural striae and very fine discal punctation, in combination. The apical process of the median lobe is trilobed and symmetrical, as in members of the *S. haemorrhoidale* group, but the dorsal lobes are weakly sclerotized and concealed.

***Scaphisoma luteomaculatum* Achard, 1920**

Figs 103-106

*Scaphisoma luteomaculatum* Pic, 1915b: 5.

*Scaphisoma sapitense* Pic var. *infasciatum* Achard, 1920: 131, **syn. nov.**

*Scaphisoma dansalanense* Löbl, 1972: 95, **syn. nov.**

**Lectotype of *luteomaculatum* Pic:** MNHN; ♂; by present designation, labelled: Java merid. Palabuan 1892 H. Fruhstorfer. (printed) / type (handwritten by Pic) / TYPE (red, printed) / n. sp. (handwritten by Pic) / *Scaphisoma* (handwritten by Pic) / *Scaphisoma luteomaculatum* Pic (handwritten by Pic) / Lectotype *Scaphisoma luteomaculatum* Pic det. Löbl, 2014. The aedeagus is mounted on a celluloid slide.

**Lectotype of *infasciatum* Achard:** MNHN; ♀; by present designation, labelled: Lombok Sapit 2000' April 1896 H. Fruhstorfer /Museum Paris Coll. A. Grouvelle 1915 /*S. sapitense* Pic v. *infasciatum* TYPE (handwritten by Achard) J Achard det / TYPE (red) / Lectotype *Scaphisoma infasciatum* Achard det. Löbl, 2014.

**Additional material examined:** NMPC, MHNG; 9 ex.; with the same data as the lectotype. – SMNS; 1 ♀; Lombok, Sesaot, 500 m, 1.2.1994 Bolm lgt. – NMPC; 1 ♂; Lombok, Pringabaja, April 1896 H. Fruhstorfer. – SMNS, MHNG; 3 ♂, 3 ♀; Lombok, Senaro N slope of Rinjani, 2.-5.Feb.1994 1100 m Bolm lgt. – SMNS; 1 ♀; E Lombok, Sapit, 14.-16.2.1994 SE slope of Mt. Rinjani Bolm lgt. – MHNG; 1 ♀; Lombok, Pusut Pass 300 m, 3.XI.1991, I. Löbl. – SMNS, MHNG; 7 ♂, 5 ♀; W Sumbawa, Batudulang, 30 km S of Sumb. Besar,

1000 m Bolm lgt. 10.Feb 1994. – SMNS, MHNG; 1 ♂, 4 ♀; NE Sumbawa, Calabai (Tambora N.P.) 11.-13.Feb.1994, Bolm lgt. – MHNG; 2 ♂; Bali, Lake Dratan, 24.IV.81, Rougemont. – MHNG; 2 ♂; Bali, Gunung Agung, 19.VII.82, de Rougemont. – MHNG; 1 ♂; Sitingjaulaut, alt. 1000 m 25 km east from Padang Sumatera Barat VIII.17.1977, Sinji Nagai leg.

**Distribution:** Philippines: Mindanao; Indonesia: Sumatra, Java, Bali, Lombok, Sumbawa, Buru.

**Comments:** The colour pattern of the elytra is quite variable. Extreme are specimens with elytra uniformly light reddish, or specimens having elytra blackish with a well delimited large reddish subhumeral spot and light in apical third. The aedeagus (Figs 103-106) has a complex internal sac, and the shape of the parameres is slightly variable. The record from Burma (Myanmar) by Pic (1921) was not yet verified.

***Scaphisoma lombokense* Löbl, 1986**

**Distribution:** Indonesia: Lombok.

**Comments:** The description of this species was based on a single specimen from Sesaot (in MHNG). Additional material is unknown.

***Scaphisoma obliquemaculatum* Motschulsky, 1863**

**Additional material examined:** SMNS, MHNG; 2 ♂, 1 ♀; Indonesia, W. Sumbawa Batudulang, 30 km S of Sumb. Besar, 1000 m Bolm lgt. 10. Febr. 1994.

**Distribution:** Tropical Asia from Sri Lanka to Vietnam, Great Sunda Islands, Lesser Sunda Islands: Sumbawa, Mascarene Archipelago.

**Comments:** The species was redescribed and its aedeagus illustrated in Löbl, 1971. The female from Batudulang has a reddish anterior part of the elytron clearly separated from yellowish elytral apex by a dark transverse band, as other specimens coming from different areas. The two males from Batudulang differ by the elytra uniformly dark from their bases upto the yellowish apical bands.

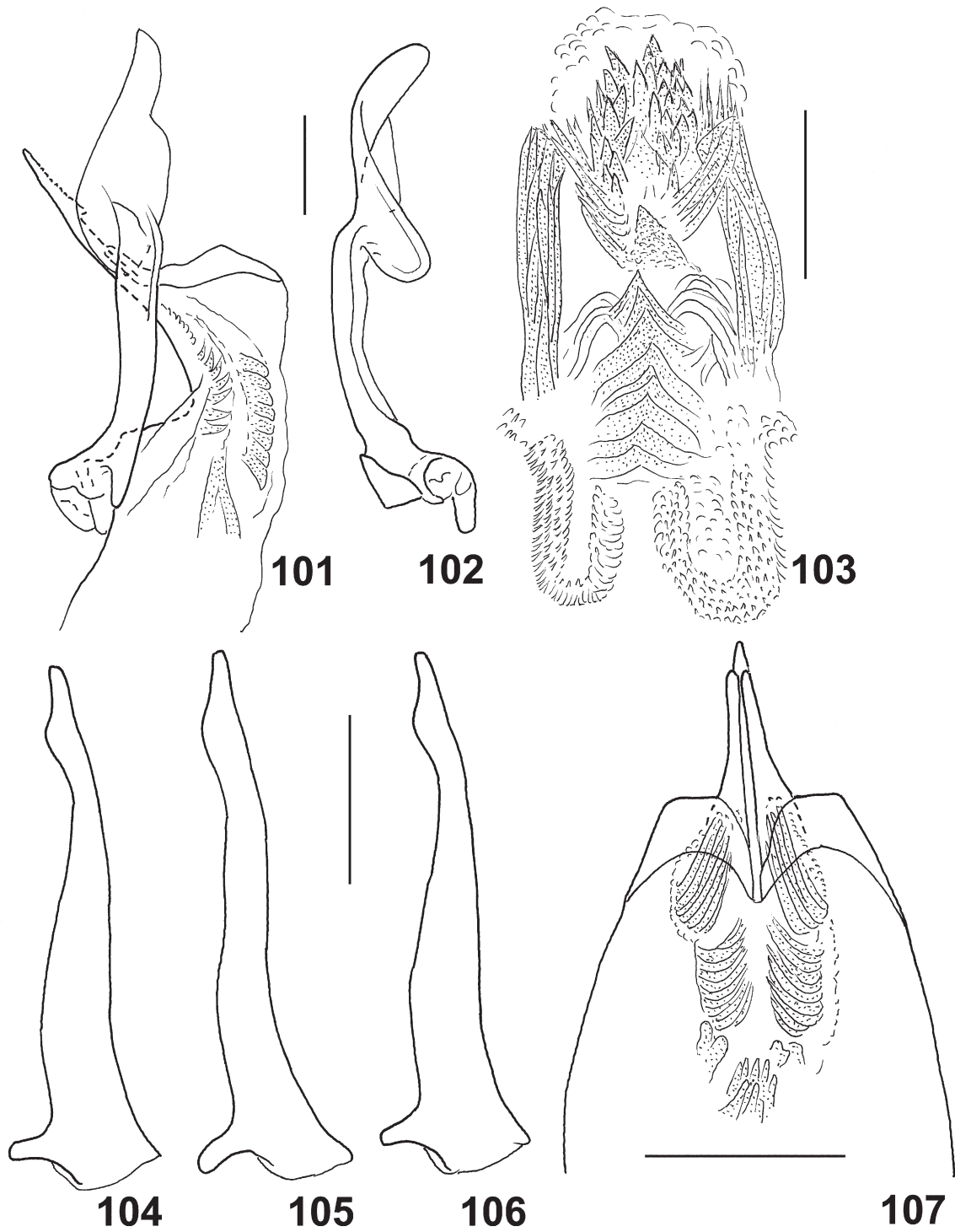
***Scaphisoma rufescens* (Pic, 1920)**

**Additional material examined:** SMNS; 1 ♂; Indonesia, Bali, Danau Buyan, 1300 m, 19.-21.2.1994, Bolm lgt.

**Distribution:** South-east Asia, from Yunnan, Vietnam, Thailand, Malaysia, Singapore to Indonesia: Kalimantan and Bali.

**Comments:** The species was redescribed and its aedeagus illustrated in Löbl, 1981b.





Figs 101-107

- (101-102) *Scaphisoma gracilicorne* Achard, aedeagus, without proximal part of basal bulb (101) in lateral view, paramere in ventral view (102).  
 (103-106) *Scaphisoma luteomaculatum* Pic, internal sac (103) in dorsal view, (104-106) parameres in ventral view, from Bali (104), Buri (105) and Mindanao (106); scale bars = 0.1 mm.  
 (107) *Scaphisoma sapitense* Pic, median lobe and internal sac in dorsal view, without proximal part of basal bulb; scale bar = 0.2 mm.

***Scaphisoma sapitense* Pic, 1915**

Figs 107-111

*Scaphosoma sapitense* Pic, 1915a: 15.

**Lectotype:** MNHN; ♀; by present designation, labelled: Lombok Sapit 2000' April 1896 H. Fruhstorfer/TYPE (red)/ *Scaphosoma sapitense* Pic (handwritten by Pic)/ Lectotype *Scaphisoma sapitense* Pic det. Löbl, 2014.

**Additional material examined:** NMPC, MHNG; 10 ex.; with the same data as the lectotype. – SMNS, MHNG; 27 ex.; Lombok, Sapit-Sembalun Bumbung 14.-16. Feb 1994 900-1500 m, Bolm lgt. – SMNS, MHNG; 2 ex.; Lombok, Sapit SE slope of Mt. Rinjani, 14.-16. Feb 1994 Bolm lgt. – SMNS, MHNG; 17 ex.; Lombok, Senaro, N slope of Rinjani, 2.-5. Feb. 1994 1100 m Bolm lgt.

**Redescription:** Length 1.90-2.15 mm, width 1.25-1.35 mm. Head, pronotum and venter of thorax dark reddish-brown to blackish. Elytra light reddish-brown to yellowish, with darkened bases and adsutural areas, each elytron with dark brown to black discal spot. Latter variable in size, usually not touching sutural stria. Abdomen with basal sternites usually dark brown, apical sternites, exposed tergites and appendages about as light as prevailing elytral surface. Pronotum and elytra lacking microsculpture. Antennae long, length/width ratio of antennomeres as follows: III 14/9: IV 36/7: V 50/8: VI 55/8: VII 52/14: VIII 45/11: IX 55/14: X 52/15: XI 63/15. Antennomere III subtriangular. Pronotum finely punctate, with lateral margins evenly rounded, lateral margin carinae visible near base or in basal half in dorsal view. Apex of scutellum exposed. Elytra with lateral margin carinae entirely exposed in dorsal view, apical margins truncate, inner apical angle rectangular, not prominent in male, prominent and tooth-like in female, situated posterior level of outer angles, sutural margin not raised, sutural striae deep, parallel, at base somewhat curved, not extending laterad pronotal lobe, adsutural areas flat. Elytral punctation fairly coarse, dense, punctures well delimited, puncture intervals mostly about as large to twice as large as puncture diameters. Hypomera smooth. Mesepimera longer than interval to mesocoxa. Metaventricle microsculptured on areas between submesocoxal lines and metacoxae, with median area slightly convex, two indistinct apico-median impression, punctation on apico-median area fine but distinct, on lateral areas very fine. Submesocoxal areas 0.04 mm, about as fifth of intervals to metacoxae, submesocoxal lines subparallel, with coarse margin punctures. Metanepisternum flat, hardly narrowed anteriorly, with inner margin almost straight, impressed below margin of metaventricle. Tibiae straight. Abdomen with microsculpture consisting of transverse striae. Sternite 1 with distinct mediobasal punctation, very finely punctate on remaining surface. Submetacoxal areas 0.06-0.07 mm, submetacoxal lines convex, with coarse margin punctures.

**Male:** Protarsal and mesotarsal segments 1 to 3 distinctly widened. Inner apical angle of elytra not prominent. Aedeagus (Figs 107-111) 1.30-1.37 mm long. Median lobe and parameres symmetrical, strongly sclerotized. Median lobe with large basal bulb, ventral branch of apical process short, in apical half weakly inflexed, with sub-apical dorsal denticle, dorsal branches of apical process slightly shorter than ventral branch, articular process not prominent. Parameres in axis with median lobe, slightly sinuate and narrowed apically in lateral view, gradually narrowed toward level of tip of median lobe in dorsal view and with finely crenulated inner margin; pores scattered, situated in basal halves. Internal sac complex, with tuft of dense denticles, overlapping median row of sclerotized scales, membranes with scale-like structure.

**Female:** Inner apical angle of elytra prominent, tooth-like.

**Distribution:** Indonesia: Lombok.

**Comments:** The original description, based on specimen/s from Lombok: Sapit, gives only the colour pattern and body length. Achard (1920: 131) reported the species from “Lombok: Sapit, altitude 2000 mètres et Pringabaja (H. Frühstorfer, avril 1896)”. In fact, the altitude on the labels is in feet, and the specimen from Pringabaja was misidentified. Achard (l. c.) mentioned also the shape of the sutural striae and of the 3rd antennomere, found the colour pattern variable, and described a new variety, *infasciatum*, distinguished from the nominal form by the elytra lacking a dark discal spot. His *infasciatum* is a distinct species and his statement about the variable colour in *S. sapitense* is erroneous. Specimens with the same locality labels as the lectotype and housed in the NMPC are possibly syntypes but not considered as such, in absence of evidence that they were used by Pic for the description.

***Scaphisoma sesaotense* Löbl, 1986**

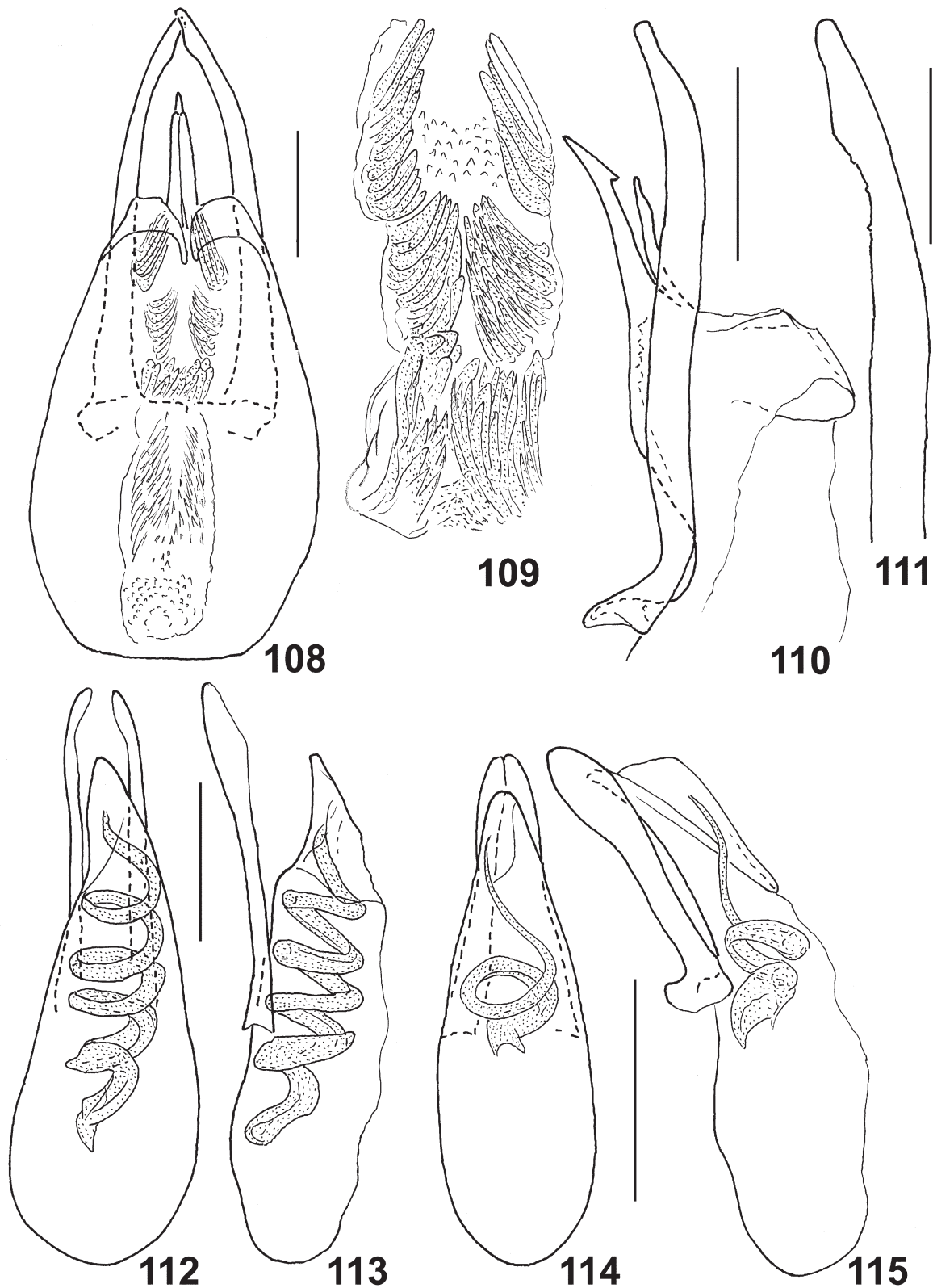
**Additional material examined:** SMNS, MHNG; 2 ♂, 1 ♀; Indonesia, NE Sumbawa, Calabai (Tambora N.P.) 11.-13. Febr. 1994 Bolm lgt.

**Distribution:** Indonesia: Lombok, Sumbawa.

**Comments:** One of the males and the female from Calabai have elytra darkened along their bases, the sutural striae and on a narrow transverse band, while the other male has the elytra uniformly reddish-brown, as mentioned in the description of this species, based on a single specimens from Lombok, Sesaot.

***Scaphisoma* sp.**

**Material examined:** SMNS; 1 ♀; Indonesia, Bali 12 km NW of Bedugul (Buyan lake) 29. Apr.-2. May 2001 Bolm lgt., 900 m.



Figs 108-115

(108-111) *Scaphisoma sapitense* Pic, aedeagus (108) in dorsal view; scale bar = 0.2 mm, apical half of internal sac (109) in dorsal view; scale bar = 0.1 mm, median lobe and parameres (110), without proximal part of basal bulb, in lateral view, paramere (111) in dorsal view, without its base; scale bars = 0.2 mm.

(112-113) *Scaphobaeocera baliensis* sp. nov., aedeagus in dorsal (112) and ventral (113) views.

(114-115) *Scaphobaeocera lombokensi* sp. nov., aedeagus in dorsal (114) and ventral (115) views; scale bars = 0.1 mm.

**Comments:** This is one of the larger Indonesian species of *Scaphisoma*. It is 1.90 mm long, 1.25 mm wide and has conspicuous colour pattern and antennae: the elytra are as the pronotum very dark around margins, most of the elytral disc is covered by light, reddish, somewhat oblique spot. The antennomeres III and IV are minute, much narrower, and combined much shorter than V. In addition, the species is characterized by the sutural striae of elytra extending along bases to form basal striae reaching beyond elytral basal width, in combination with very finely punctate ventral side of the body and strigulate abdominal microsculpture.

### *Scaphobaeocera* Csiki, 1909

**Comments:** Currently, 94 species of *Scaphobaeocera* are recognized as valid, most of them occurring in tropical and subtropical Asia. The range of the genus is, however, extended northwardly to Far East Russia, and to Queensland and Subsaharian Africa in the south. *Scaphobaeocera kraepelini* (Pic, 1933) from Java is the sole so far mentioned Indonesian species, and for practical reasons redescribed below. Most members of this genus possess elytra with distinct parasutural striae, unknown in other scaphidiines, any many have elytra, eventually also other parts of the body, iridescent, a character state rather unusual in other genera of the subfamily.

### *Scaphobaeocera baliensis* sp. nov.

Figs 112-113

**Holotype:** MHNG; ♂; Indonesia, Bali, Mt. Batukaru nr. Luhur Temple, 500-700 m, I. Löbl, 28-29.X.1991.

**Etymology:** The species epithet is derived from the name of the island Bali.

**Description:** Length 1.10 mm, width 0.56 mm, dorsoventral diameter 0.67 mm. Head and most of body

very dark reddish-brown, thorax almost blackish. Abdomen somewhat lighter than thorax and elytra. Femora and tibiae reddish-brown, tarsi and antennae lighter. Thorax and elytra lacking obvious microsculpture, hardly iridescent. Pronotal and elytral punctation very fine, elytral punctures slightly coarser than pronotal. Length/width ratio of antennomeres as follows: III 16/6: IV 19/6: V 26/6: VI 18/6: VII 35/9: VIII 15/8: IX 40/11: X 40/12: XI 50/13. Minute tip of scutellum exposed. Elytra with sutural striae starting at margin of pronotal lobe, parasutural striae very fine but distinct. Hypomera without striae. Middle part of metaventricle convex, lacking impression or groove, smooth on narrow anteriomesal area, densely and distinctly punctate and with short pubescence on lateromesal areas and entire posterior half. Lateral parts of metaventricle lacking microsculpture, very finely punctate, with sparse, short pubescence. Submesocoxal areas about 0.02 mm long, submesocoxal lines with very fine marginal punctures not extending along mesepimera. Metanepisternum flat, parallel-sided, 0.06 mm wide. Tibiae straight. Abdominal sternite 1 with fairly coarse, elongate basal punctures, remaining punctation very fine.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 112-113) 0.36 mm long. Median lobe narrow, with short, hardly inflexed apical process. Ventral side of apical process weakly concave. Articular process of median lobe indistinct. Parameres very narrow in basal two thirds, distinctly widened in apical third (lateral view), widest subapically, about in level with tip of median lobe; straight but at apices curved mesally in dorsal view. Internal sac with flagellum fairly wide, forming four complete loops, slightly narrowed posterior basal loop.

**Distribution:** Indonesia: Bali.

**Type locality:** Bali, Mt. Batukaru nr. Luhur Temple, 500-700 m.

**Comments:** The aedeagal characters suggest relationships between *S. baliensis* and *S. kraepelini* from Java,

### Key to the *Scaphobaeocera* species of the Lesser Sunda Islands

- 1 Antennomere VII more than twice as long as VIII, antennomere XI almost 4 times as long as wide. Aedeagus with flagellum spiral, forming four complete loops ..... *S. baliensis* sp. nov.
- Antennomere VII less than twice as long as VIII, antennomere XI about 2 to 3 times as long as wide. Aedeagus with flagellum spiral and forming single complete loop, or not spiral..... 2
- 2 Apicomedian part of metaventricle with sparse pubescence, middle of metaventricle smooth. Aedeagus with flagellum short, not spiral ..... species near *S. weneri* Löbl
- Entire median part of metaventricle with dense and short pubescence. Aedeagus with long flagellum..... 3
- 3 Antennomere VIII twice as long as wide. Median lobe of aedeagus with large, prominent articular process.....  
..... *S. pseudotenella* Löbl
- Antennomere VIII about 2.5 times as long as wide. Median lobe of aedeagus without prominent articular process ..... 4
- 4 Aedeagus with flagellum filiform, forming loop posterior mid-length ..... *S. bulbosa* Löbl
- Aedeagus with flagellum proximally widened, forming basal loop..... *S. lombokensis* sp. nov.



*S. confusa* Löbl, 1986 from Queensland, and *S. spira* Löbl, 1990 from Thailand. These three species share comparatively short apical process of the median lobe, apically widened parameres (in lateral view) and spiral flagellum forming multiple loops. The new species may be distinguished by the thicker flagellum forming only four complete loops, the apical process of the median lobe being almost in axis with the basal bulb, and the parameres with the widest points situated about in level with the tip of the median lobe. In addition, *S. baliensis* differs from its allied by the comparatively longer apical antennomeres. *Scaphobaeocera dorsalis* Löbl, 1980, widely distributed in Southeast Asia, possesses also a flagellum forming four loops. It differs by the much broader flagellum, the apical process of the median lobe inflexed, and in external characters by the hypomera each with a longitudinal stria.

#### *Scaphobaeocera bulbosa* Löbl, 2011

**Material examined:** MHNG; 18 ♂, 20 ♀; Indonesia, Bali, Mt. Batukaru nr. Luhur Temple, 500-700 m I. Löbl, 28-29.X.1991.

**Distribution:** Philippines: Luzon; Indonesia: Bali.

**Comments:** All males were dissected and their aedeagi examined. Several additional males in poor condition remain unidentified.

#### *Scaphobaeocera lombokensis* sp. nov.

Figs 114-115

**Holotype:** MHNG; ♂; Indonesia, Lombok Pusuk Pass, 300 m 3.XI.1991, I. Löbl degr. forest leaf litter.

**Paratypes:** MHNG; 1 ♂, 3 ♀; with the same data as the holotype.

**Etymology:** The species epithet is derived from the name of the island Lombok.

**Description:** Length 1.05-1.12 mm, width 0.53-0.55 mm, dorsoventral diameter 0.62-0.64 mm. Head and body fairly light reddish-brown, mesoventrite and metaventrite eventually darkened. Apex of abdomen, femora and tibiae slightly lighter, tarsi and antennae much lighter. Thorax and elytra lacking obvious microsculpture, not iridescent. Pronotal and elytral punctation similar, very fine. Length/width ratio of antennomeres as follows: III 14/5: IV 19/5: V 22/5: VI 20/5: VII 21/7: VIII 15/6: IX 24/9: X 24/10: XI 35/11. Scutellum concealed. Elytra with sutural striae starting at margin of pronotal lobe, parasutural striae indistinct. Hypomera without striae. Middle part of metaventrite flat, lacking impression or groove, entirely densely and distinctly punctate and with short pubescence. Lateral parts of metaventrite lacking microsculpture, very finely

punctate, with sparse, short pubescence. Submesocoxal areas about 0.03 mm long, submesocoxal lines impunctate. Metanepisternum flat, parallel-sided, 0.03 mm wide. Tibiae straight. Abdominal sternite 1 without distinct basal punctures, punctation very fine.

**Male:** Protarsomeres 1 to 3 distinctly widened. Aedeagus (Figs 114-115) 0.27 mm long. Median lobe narrow, with long, moderately inflexed apical process. Apical process tapering in lateral view, with ventral side weakly concave. Articular process of median lobe small, not prominent. Parameres narrow between bases and apical halves, widened in apical halves and weakly sinuate in lateral view, with widest points being about in level with tip of median lobe; almost straight in dorsal view. Internal sac with flagellum fairly wide in proximal part, forming single complete loop, gradually narrowed apically.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok Pusuk Pass, 300 m

**Comments:** The aedeagal characters suggest relationships with *S. curvipes* Löbl, 1977 from Australia, *S. fratercula* Löbl, 1984, *S. molesta* Löbl, 1999 from China, *S. variabilis* Löbl, 1981 from Japan and *S. mussardi* Löbl, 1971 known from the Indian subcontinent. *Scaphobaeocera curvipes* and *S. mussardi* possess flagellum forming two loops, and the parameres in the former species bear each a ventral membranous lobe, while they are gradually widened apically in the latter species. The new species may be readily distinguished from *S. curvipes* by its smaller body-size and straight tibiae. *Scaphobaeocera variabilis* is distinctly microsculptured and iridescent dorsally and ventrally, has parameres widened in apical two thirds and flagellum forming three loops. *Scaphobaeocera fratercula* has the flagellum forming a single, incomplete loop and differs notably by its elytra with distinct parasutural striae and by the impunctate and grooved centre of the metaventrite. The flagellum in *Scaphobaeocera molesta* is marrow with abruptly widened base; in addition this species has a large and iridescent body, striate hypomera, and elytra with distinct parasutural striae.

#### *Scaphobaeocera pseudotenella* Löbl, 2011

**Material examined:** MHNG; 2 ♂; Indonesia, Bali, Mt. Batukaru nr. Luhur Temple, 500-700 m I. Löbl, 28-29.X.1991.

**Distribution:** Philippines: Luzon; Indonesia: Bali.

**Comments:** The parameres are broader in the two specimens from Bali than in those from Luzon (see Löbl, 2011: 712). More material would be needed to assess the variability of the character.



*Scaphobaeocera* sp.

**Material examined:** MHNG; 1 ♂, 1 ♀; Indonesia, Bali Lake Buyan ca 1200 m 8.-9.XI.1991, I. Löbl degr. forest floor litter.

**Comments:** The single available male has its aedeagus deformed, with the internal sac extruded. It possesses characters of *S. wernerii* Löbl, 2011 from Mindanao but the narrow apical part of the flagellum is shorter and the metanepisterna are broader.

*Scaphobaeocera kraepelini* (Pic, 1933)

Figs 116-117

*Toxidium kraepelini* Pic, 1933: 72.

**Lectotype:** MNHN; ♂; by present designation, labelled: Buitenzorg, Java K. Kraepelin leg. 24.II.-12.III.1904 ded. 8. VI.1904 (printed) / T. Kraepelini desire (handwritten by Pic) / *Scaphobaeocera kraepelini* (Pic) det. Löbl 1977 / Lectotype (red, printed) / Lectotype *Toxidium kraepelini* Pic det. Löbl, 2014.

**Redescription:** Length 1.05 mm, width 0.62 mm, dorsoventral diameter 0.64 mm. Head and body light reddish-brown, mesoventrite and metaventrite slightly darkened. Abdomen, femora and tibiae slightly lighter, tarsi and antennae yellowish. Thorax and elytra lacking obvious microsculpture, not iridescent. Pronotal and elytral punctation similar, very fine, hardly visible at 100x magnification. Length/width ratio of antennomeres as follows: VIII 20/6: IX 28/11: X 30/12: XI 42/14 (antennomeres III to VII missing). Minute point of scutellum exposed. Elytra with sutural striae starting at margin of pronotal lobe, parasutural striae absent. Hypomera lacking striae. Middle part of metaventrite convex, lacking impression or groove, entirely densely and distinctly punctate, bearing short pubescence. Lateral parts of metaventrite lacking microsculpture, very finely punctate, with sparse, short pubescence. Submesocoxal areas hardly 0.02 mm long, about as fourth of interval to metacoxae. Submesocoxal lines parallel, with coarse, elongate marginal punctures. Metanepisternum flat, large, about 0.07 mm wide, slightly narrowed apically, strongly narrowed anteriorly, with deep, convex suture. Tibiae straight. Abdominal sternite 1 with striagulate microsculpture, and coarse, elongate basal punctures, remaining punctation very fine.

**Male:** Protarsomeres hardly widened. Aedeagus (Figs 116-117) 0.25 mm long. Median lobe gradually narrowed, with apical process short, hardly inflexed, very narrow at tip in lateral view. Articular process of median lobe indistinct. Parameres irregularly bent and strongly narrowed toward apices. Internal sac with narrow flagellum forming four complete loops.

**Distribution:** Indonesia: Java.

**Comments:** M. Pic usually failed to mention numbers of specimens he examined, nor to designate holotypes. This is also true for *Toxidium kraepelini* as for the other taxa described in the same paper (Pic, 1933). However, Pic stated that “cotypes” of three species, including of *Toxidium kraepelini*, are in his collection, actually in MNHN, while other specimens belong to the collection of the Zoological Museum, Hamburg. According to Horn *et al.* (1990), the latter collection was destroyed in 1943. Thus, the specimen of *Toxidium kraepelini* housed in MNHN is the sole syntype actually preserved and is here designated as lectotype. Its characters and label data fit the Pic’s description.

The species was transferred to *Scaphobaeocera* in Löbl, 1984: 82, but not redescribed.

*Scaphoxium* Löbl, 1979

**Comments:** The range of this genus is similar to that of *Scaphobaeocera*, though it is with 41 species currently recognized less species-rich and usually poorly represented in collections. The genus was not yet reported from Indonesia. *Scaphoxium* may be readily distinguished from other scaphidiines having strongly approximate middle and hind coxae by the curved 3rd antennomere and lobed ventral margins of the hypomera.

*Scaphoxium bilobum* sp. nov.

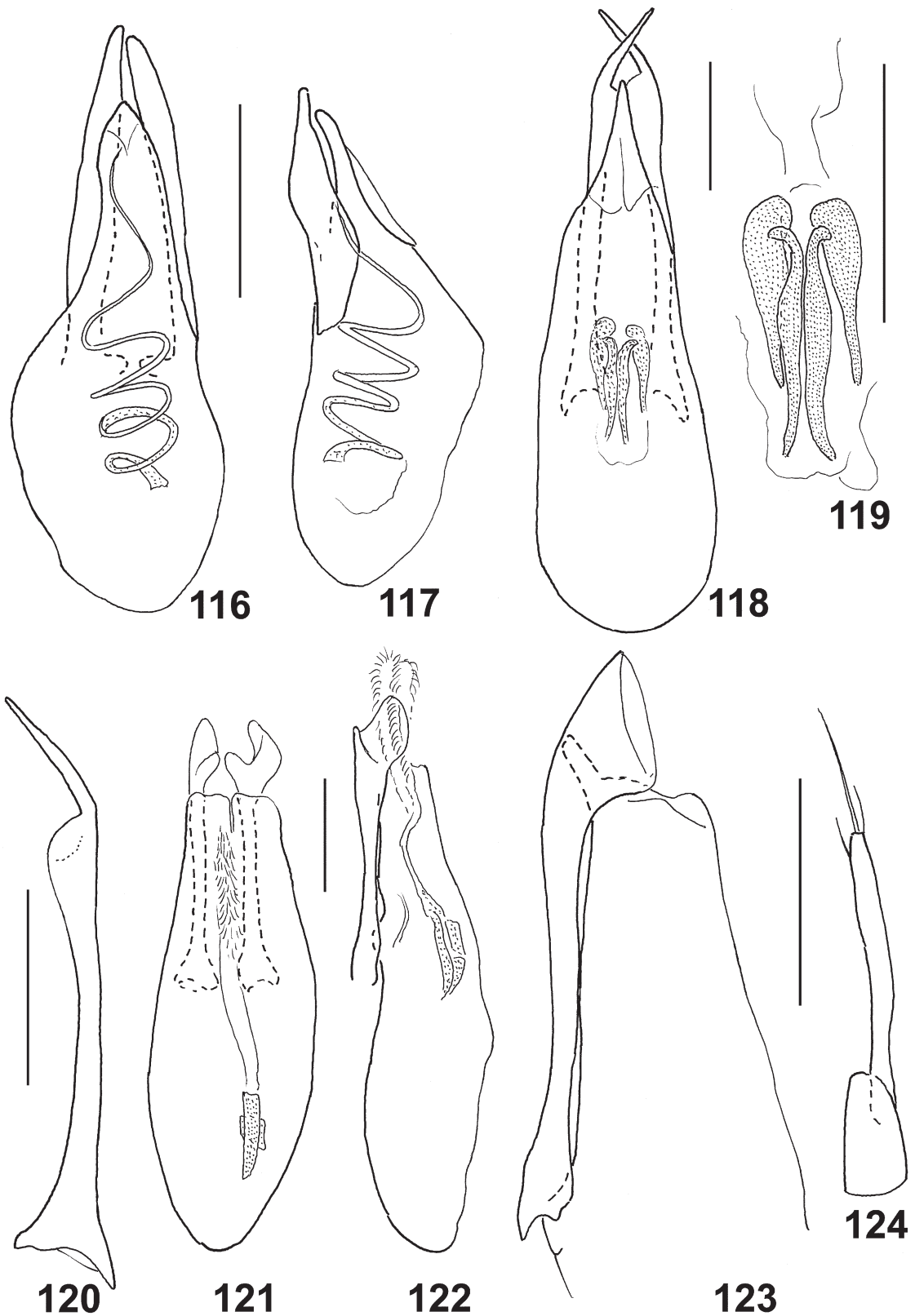
Figs 118-120

**Holotype:** MHNG; ♂; Indonesia, Lombok, Mt. Rinjani, ca 400 m nr. Waterfalls, 5.XI.91 Löbl, veg. debris nr. river.

**Paratypes:** MHNG; 3 ♂; Indonesia, Lombok Mt. Rinjani above Senaro 900-1100 m 6.XI.1991, I. Löbl forest floor litter. – MHNG; 1 ♀; Lombok Batu Coq (N of G. Rinjani) 500 m, sec. forest in gorge D. Agosti, 12.03.1991.

**Etymology:** The species epithet is a Latin adjective referring to the lobed parameres.

**Description:** Length 1.38-1.45 mm, width 0.65-0.67 mm, dorsoventral diameter 0.74-0.76 mm. Body fairly dark reddish-brown. Femora and tibiae slightly lighter, apex of abdomen, tarsi and antennae light, almost yellowish. Length/width ratio of antennomeres as follows: III 17/5: IV 16/4: V 25/5: VI 35/6: VII 35/9: VIII 28/10: IX 33/10: X 30/10: XI 38/10. Pronotal punctation very fine, hardly visible at 50x magnification. Scutellum concealed. Elytral punctation somewhat less fine than pronotal punctation; sutural striae starting about 0.15 to 0.25 mm behind margin of pronotal lobe. Mesoventrite with narrow median groove, not striate. Mesepisterna very finely punctate. Median



Figs 116-124

(116, 117) *Scaphobaecocera kraepelini* (Pic), aedeagus in dorsal (116) and ventral (117) views.

(118-120) *Scaphoxium bilobum* sp. nov., aedeagus (118) in dorsal view, internal sac (119) in dorsal view, paramere (120) in ventral view.

(121-124) *Xotidium bolmarum* sp. nov., aedeagus in dorsal (121) and ventral (122) views, (123) median lobe, without basal bulb, and paramere in lateral view, (124) gonocoxite.

Scale bars = 0.1 mm.

part of metaventricle slightly convex, flattened near metacoxal process, very finely punctate. Lateral parts of metaventricle with several comparatively coarse punctures, impunctate near apical margin. Submesocoxal areas about 0.05 mm long, shorter than interval to metacoxae. Submesocoxal lines coarsely punctate. Metanepisternum flat, 0.05 mm wide, with straight suture. Abdomen with distinct punctate microsculpture, basal punctures on sternite 1 distinct, remaining abdominal punctation hardly visible.

**Male:** Protarsi hardly widened. Aedeagus (Figs 118-120) 0.41-0.44 mm long. Median lobe with acute tip. Parameres narrowed between bases and subapical lobe, latter rounded, with strongly narrowed apical section about as long as fourth of parameral length. Internal sac with pair of mesal rods and pair of admesal plates tapering proximally, membranes lacking denticulate or spine-like structures.

**Distribution:** Indonesia: Lombok.

**Type locality:** Lombok, Mt. Rinjani, ca 400 m nr. Waterfalls.

**Comments:** Following congeners possess lobed parameres and internal sac bearing two pairs of sclerites: *S. oxyurum* (Löbl, 1977) and *S. cuspidatum* (Löbl, 1977) from Australia, *S. keralense* Löbl, 1979 from India, *S. taiwanum* Löbl, 1980 from Taiwan, and *S. avidum* Löbl, 1990 and *S. topali* Löbl, 1981 from Vietnam. The latter species differs drastically by the parameres abruptly widened posterior subapical lobes. *Scaphoxium cuspidatum*, *S. oxyurum*, and *S. avidum* may be distinguished from *S. bilobum* by the internal sac having an additional small sclerite. The sclerotized pieces of the internal sac are very small and distant in *S. keralense*, and this species has also denticulate membranes in the middle part of the internal sac. Finally, *S. bilobum* may be easily distinguished from *S. taiwanum* by the narrower parameres and the proximally strongly narrowed admesal pair of sclerites of the internal sac.

#### Key to the species of *Xotidium*

- |   |  |                               |
|---|--|-------------------------------|
| 1 | Elytra lacking basal striae, sutural striae shortened.....   | <i>X. mauritanum</i> (Vinson) |
| – | Elytra with basal striae joined to sutural striae.....   | 2                             |
| 2 | Elytra uniformly reddish-brown to black.....   | 3                             |
| – | Elytra with distinctive colour pattern.....  | 6                             |
| 3 | Body length 1.10-1.25 mm. Aedeagus with short, evenly thick and sinuate flagellum.....   | <i>X. pygmaeum</i> (Löbl)     |
| – | Body length 1.35-1.65 mm.....  | 4                             |
| 4 | Widened apical section of parameres about as long as half of parameres. Internal sack with very long, weakly sclerotized and simple tube.....                    | <i>X. tubuliferum</i> Löbl    |
| – | Widened apical section of parameres much shorter than half of parameres.....   | 5                             |
| 5 | Internal sac of aedeagus with U-shaped, basally thickened flagellum.....   | <i>X. uniforme</i> Löbl       |
| – | Internal sac of aedeagus with short basal sclerites followed by long membranous tube.....  | <i>X. bolmarum</i> sp. nov.   |
| 6 | Elytra dark, each with light transverse fascia situated in basal half of elytron and light apical part. Pronotum entirely dark.....                              | <i>X. montanum</i> (Löbl)     |
| – | Elytra light, each darkened along basal and apical margins, usually also darkened along sutural margin. Pronotum light, usually with dark transverse fascia..... | <i>X. notatum</i> (Löbl)      |

#### *Xotidium* Löbl, 1992

**Comments:** This genus is characterized by 2-segmented labial palpi. Currently, it includes six species, known from Sri Lanka, Nepal Himalaya, the Philippines, Australia, and Mauritius. An additional species was found in Lombok.

#### *Xotidium bolmarum* sp. nov.

Figs 121-124

**Holotype:** SMNS; ♂; Indonesia, Lombok Senaro, N slope of Rinjani, 2.-5.Feb.1994 Bolm lgt. 1100 m.

**Paratypes:** SMNS, MHNG; 3 ♂, 8 ♀; Indonesia, with the same locality data as the holotype. – SMNS; 1 ♂; Lombok Is. Sapit-Semalun Bumbung 14.-16.Feb.1994 Bolm lgt. 900-1500 m.

**Etymology:** The species epithet is patronymic.

**Description:** Length 1.35-1.46 mm, width 0.80-0.85 mm, dorsoventral diameter 0.78-0.80 mm. Body reddish-brown, apex of abdomen yellowish, femora and tibiae somewhat lighter than pronotum and elytra, tarsi and antennae yellowish-brown to yellowish. Antennae long, length/width ratio of antennomeres as follows: III 29/6: IV 33/6: V 38/7: VI 40/6: VII 48/12: VIII 45/7: IX 46/10: X 43/13: XI 44/15. Dorsal surface of body very finely punctate. Elytra with sutural striae shallow, curved along bases to form basal striae joined to lateral striae. Adsutural areas flat. Mesal part of metaventricle flattened. Submesocoxal areas about 0.05 mm long, submesocoxal lines coarsely punctate. Remainder of metaventricle very finely punctate. Abdomen without obvious microsculpture, with fairly coarse basal punctures, remaining punctation hardly visible.

**Male:** Male protarsus hardly widened. Aedeagus (Figs 121-123) 0.45-0.48 mm long. Widened apical part of parameres short, bent dorsally, with weakly sclerotized

margins. Internal sac with short basal sclerites followed by membranous tube bearing very fine spine-like structures.

*Female*: Ovipositor (Fig. 124) with long distal gonocoxite slightly narrowed between base and mid-length, bearing one short subapical seta, and one long and one short apical setae, gonostyle absent.

**Distribution**: Indonesia: Lombok.

**Type locality**: Lombok Senaro, N slope of Rinjani, 1100 m.

**Comments**: This new species may be easily distinguished from other congeners by characters given in the key. It is unambiguously defined by the shape of the parameres in combination with the sclerotized structures of the internal sac.

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