

RESEARCH PAPER

## Studies of the genus *Anthelephila* Hope (Coleoptera: Anthicidae). Part 19. New species from Indonesia and Malaysia

Zbyněk KEJVAL

Muzeum Chodska, Chodské náměstí 96, Domažlice CZ-344 01, Czech Republic; e-mail: anthicid@seznam.cz

Accepted:  
14<sup>th</sup> May 2019

Published online:  
24<sup>th</sup> May 2019

**Abstract.** Ten species of *Anthelephila* Hope, 1833 are newly described: *Anthelephila antennalis* sp. nov. (Malaysia: Kelantan, Pahang, Perak), *A. balijava* sp. nov. (Indonesia: Bali, Java), *A. bukaba* sp. nov. (Indonesia: Sumatra), *A. jambi* sp. nov. (Indonesia: Sumatra), *A. kalabahi* sp. nov. (Indonesia: Alor, Sumbawa), *A. pectinipes* sp. nov. (Indonesia: Sumatra), *A. srivijaya* sp. nov. (Indonesia: Sumatra), *A. selamatra* sp. nov. (Indonesia: Sumatra), *A. sunda* sp. nov. (Indonesia: Sumatra), and *A. utara* sp. nov. (Indonesia: Sumatra). Male characters of all species are illustrated.

**Key words.** Coleoptera, Anthicidae, *Anthelephila*, new species, Indonesia, Malaysia, Oriental Region

**Zoobank:** <http://zoobank.org/urn:lsid:zoobank.org:pub:B538C51C-71A3-467A-9423-54B69A204CF4>

© 2019 The Authors. This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Licence.

### Introduction

*Anthelephila* Hope, 1833 is a large Old World genus of Anthicidae, most speciose in the tropics of Africa and southeast Asia (KEJVAL 2003), comprising presently nearly 500 known species. This 19<sup>th</sup> contribution to its knowledge includes descriptions of ten new species, distributed in Indonesia (Alor, Bali, Java, Sumbawa, and Sumatra Islands) and Peninsular Malaysia, and is aimed to make these new names available prior to the completion of world catalogue of the genus (Z. Kejval, in prep.).

The newly described species are mostly uniform in external appearance, differing solely in male characters. Two of them (*A. balijava* sp. nov. and *A. kalabahi* sp. nov.) are classified within the *Anthelephila praetor* species-group (KEJVAL 1999), whose members are characterized, among other, by transverse setose band in postbasal impression of elytra. As females of *Anthelephila* are mostly difficult to identify, they are in some cases not included in type series, but listed under additional material examined.

### Material and methods

Specimens were examined with a Leica MZ 9.5 stereomicroscope; morphological measurements were taken using an ocular graticule. Male genitalia were examined after being cleared in a hot 10% KOH solution and then

placed on the same card in water-soluble dimethyl hydantoin formaldehyde resin (DMHF). Illustrations were made using a drawing tube attached to an Olympus CH-2 compound microscope. Photographs were taken using a Nikon Coolpix 4500 digital camera attached to a Leica MZ 9.5 trinocular stereomicroscope; images of the same specimen at different focal planes were combined with Helicon Focus 5.2 Pro and edited with Adobe Photoshop 9.0.2. software.

Separate labels are indicated by a double slash (//) and comments on specimens and label data are placed in square brackets. Label data are quoted exactly for types and rewritten for clarity for the additional specimens. Terminology of body setae follows WERNER & CHANDLER (1995).

The following abbreviations are used in the text: [h] – handwritten; [p] – printed; lgt. – collected by; prov. – province; env. – environs of.

Acronyms of collections:

BMNH The Natural History Museum, London, United Kingdom;  
DCDC Donald S. Chandler collection, Durham, New Hampshire, U.S.A.;  
MHNG Muséum d'Histoire Naturelle, Genève, Switzerland;  
MNHN Muséum national d'Histoire naturelle, Paris, France;  
NHMB Naturhistorisches Museum, Basel, Switzerland;  
NHMW Naturhistorisches Museum, Wien, Austria;  
NMPC National Museum, Prague, Czech Republic;  
SMNS Staatliches Museum für Naturkunde, Stuttgart, Germany;  
ZKDC Zbyněk Kejval collection, Domažlice, Czech Republic;  
ZSMC Zoologische Staatssammlung, München, Germany.



## Systematics

*Anthelephila antennalis* sp. nov.

(Figs 1–4)

*Formicomus dubius* (misidentification): UHMANN (1994): 668 (specimens from Malaysia: Perak)

**Type locality.** Malaysia, Pahang, 15 km E of Kampung Dong, 3°53'N 102°01'E, Benom Mountains, altitude 700 m.

**Type material.** HOLOTYPE: ♂, 'MALAYSIA, Benom Mts., 15 km E Kampung Dong, 3.53N 102.01E, 700 m, 1.iv.1998, D. Hauck lgt. [p]' (NMPC). PARATYPES: 6 ♂♂ 5 ♀♀, same data as holotype (ZKDC, NMPC); 96 ♂♂ 58 ♀♀, 'MALAYSIA; Benom Mts., 15 km E Kampung Dong; 700 m 3,53N 102,01E; 1.iv.1998; Dembický & Pacholátko leg. [p]' (NHMB, ZKDC, DCDC); 1 ♂, 'W MALAYSIA – Pahang Banjaran Bnom Mts. 20 km S of Kampung Ulu Dong, 17-23.iv.1997, 1500-1900 m, P. Čechovský leg. [p; sic!]' (ZKDC); 6 ♂♂ 1 ♀, 'MALAYSIA W Cameron Highlands, RINGLET env., 15.iv.2000, M. Snížek leg. [p]' (ZKDC); 2 ♂♂ 5 ♀♀, 'Malaysia: Perak Bukit Baring Gerik, 800–900 m 8.2.1991 P. Schwendinge [p; P. Schwendinger lgt.] // *Formicomus dubius* Krekitch det. G. Uhmman 1993 [p+h]' (MHNG, ZSMC).

**Additional material examined.** MALAYSIA: KELANTAN: 1 ♀, Kampung Raja env., 10.–16.iv.1999, V. Kabourek lgt. (ZKDC). PAHANG: 1 ♀, Cameron Highlands, Tanah Rata env., 1600 m, 23.–31.vii.1993, R. Schuh lgt. (ZKDC). PERAK: 1 ♀, W Perak, Cameron Highlands, Ringlet, 800–1000 m, P. Pacholátko lgt. (ZKDC).

**Description. Male** (holotype). Body length 4.5 mm. Body black, unicolorous; antennae and legs brownish-black.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), distinctly differentiated from short neck; tempora strongly narrowing posteriorly, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, distinctly unevenly punctate; punctures coarser, umbiliform anteriorly, delicate and sparser

basally, distinctly separated. Setation subdecumbent; scattered longer tactile setae. Antennae only moderately enlarged in terminal third; antennomere I 2.2 times, X twice, XI 4.6 times as long as wide.

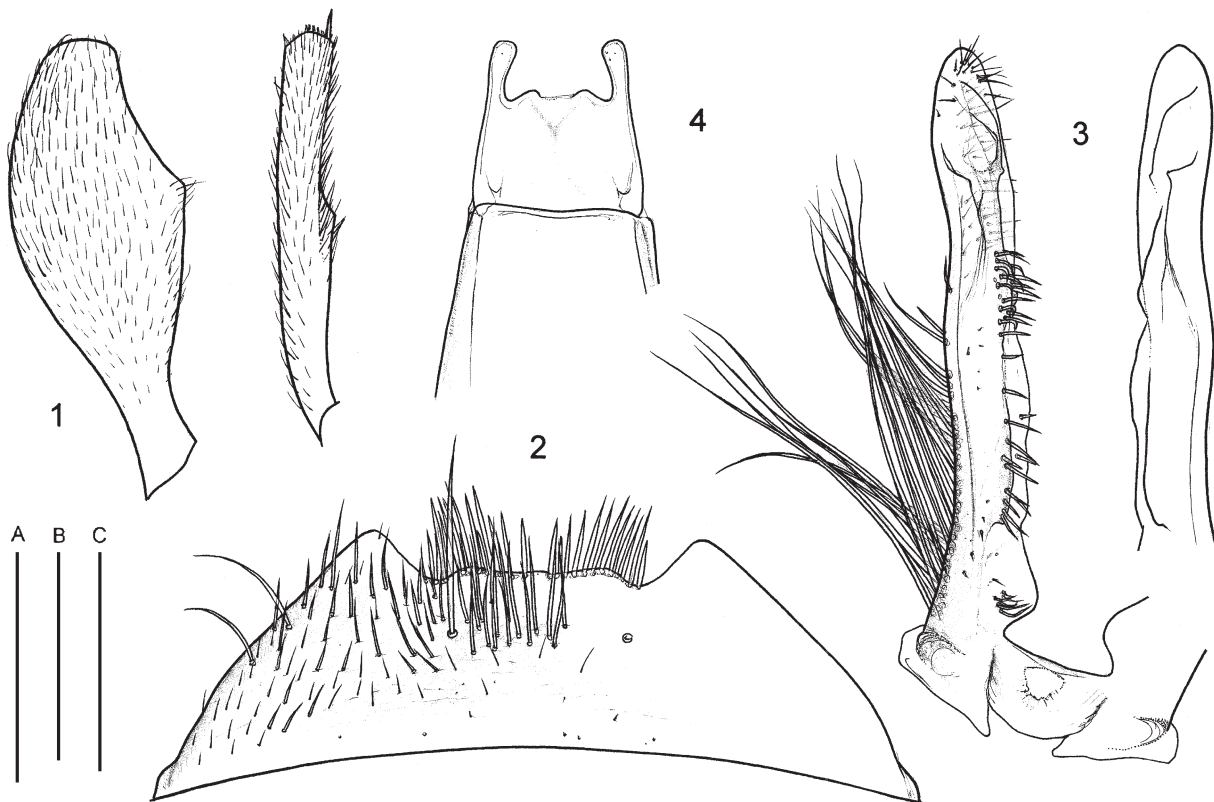
Pronotum 1.5 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, strongly narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc somewhat flattened medially, nearly evenly moderately convex in lateral view. Surface smooth and glossy; disc punctate, similarly as head, with some transverse wrinkles in front of smooth antebasal area; lateral sides largely impunctate, postero-lateral impressions wrinkled and adjacent dorso-lateral surface rugose. Setation as on head.

Mesoventrite with slight indication of simple, moderately wide, median longitudinal bulge, at most slightly convex in lateral view, narrowed and with several long, coarse setae in median line posteriorly; metaventrite simple.

Elytra 1.7 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression at most very slightly indicated. Surface glossy, distinctly punctate; punctuation double, evenly developed, setiferous punctures widely separated. Setation uniform, longer and more raised than on head, decumbent; numerous erect tactile setae.

Metathoracic wings developed.

Fore legs modified (Fig. 1); profemoral process weakly developed; protibiae distinctly angled on inner side at about mid-length; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.



Figs 1–4. *Anthelephila antennalis* sp. nov., male, holotype: 1 – profemur (left) and protibia (right); 2 – sternum VII; 3 – prongs of sternite VIII; 4 – apical portion of tegmen. Scale bars: 0.2 mm – A (Figs 2, 3), B (Fig. 4); 0.5 mm – C (Fig. 1).

Abdominal sternum VII (Fig. 2) widely emarginate and somewhat sinuous postero-medially. Sternite VIII (Fig. 3); paired prongs elongate, slender, with several lobules on dorsal side, and conspicuously long and coarse setae laterally in basal half. Tergum VII narrowly rounded and slightly emarginate apically. Tergite VIII forming a pair of sclerites, narrowly connected medially, narrowly rounded apically. Apical sclerite of segment IX inconspicuous. Aedeagus (Fig. 4); apical portion of tegmen 0.3 times as long as basal-piece, bilobed apically.

**Female.** Externally differing from male as follows: fore legs quite simple; shorter antennae (XI 3.3 times as long as wide); abdominal sternum VII simple, moderately angled apically; tergum VII subtriangular, with slightly produced, narrowly rounded apex.

**Variation.** Body length (♂♀) 3.3–4.5 mm.

**Differential diagnosis.** *Anthelephila antennalis* sp. nov. is close to *A. utara* sp. nov., but differs in many details of male characters, e.g. more elongate terminal antennomere, slight profemoral process, more prominent protrusion of metatibiae (situated at mid-length), emarginate posterior margin of sternum VII, scantily setose apical portion of paired prongs, and longer and slender apical lobes of tegmen.

**Remarks.** Some paratypes were previously identified as *Formicomus dubius* Krekich-Strassoldo, 1929 and recorded as such by UHMANN (1994).

**Etymology.** Named in reference to the extremely elongate terminal antennomeres in males; adjective.

**Distribution.** Malaysia (Kelantan, Pahang, Perak).

### *Anthelephila balijava* sp. nov.

(Figs 5–8)

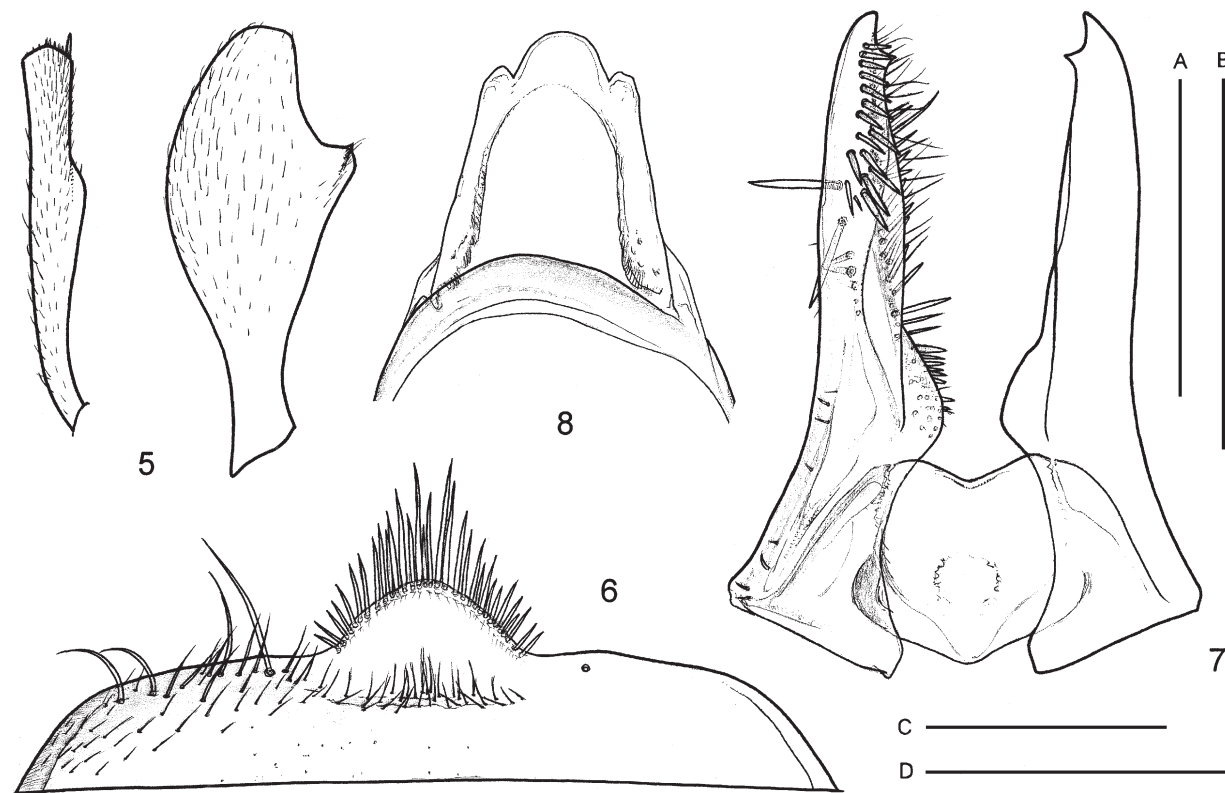
**Type locality.** Indonesia, Bali, Margarana, 15 km E of Gilimanuk.

**Type material.** HOLOTYPE: ♂, 'INDONESIEN: Bali Margarana, 15 km E Gilimanuk 23.II.1994 leg. Bolm [p; yellow label] // Formicomus apoderinus Wasmann det. G. Uhmman 1996 [p]' (SMNS). PARATYPES: 4 ♂♂ 11 ♀♀, same data as holotype (SMNS, ZSMC, ZKDC); 3 ♂♂ 5 ♀♀, 'INDONESIA, E JAWA Baluran Nat. P., 50 m Wonorejo 24.-25.2. BOLM leg. 1994 [p; yellow label] // Formicomus apoderinus Wasmann det. G. Uhmman 1996 [p]' (SMNS, ZKDC); 2 ♂♂ 2 ♀♀, 'JAVA (E) Baluran N. P. 15 km N OF Wonorejo 24.-28. Jun 2001 Bolm lgt., 50 m [p]' (SMNS). **Additional material examined.** INDONESIA: JAWA: 1 ♀, Jakarta, 6.v.1959, B. Pisarski & J. Proszynski lgt. (ZSMC).

**Description.** **Male** (holotype). Body length 3.0 mm. Head, pronotum, elytra and legs brown, at places with reddish tinge; antennae largely reddish, distinctly darkened, brownish in terminal third.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, moderately convex. Dorsal surface glossy, distinctly unevenly punctate; punctures coarser, umbiliform anteriorly, delicate and sparser basally, distinctly separated. Setation short, subdecumbent; scattered longer tactile setae. Antennae moderately enlarged in terminal third; antennomere I 1.9 times, X 1.25 times, XI 2.0 times as long as wide.

Pronotum 1.4 times as long as wide, much narrower than head including eyes, nearly evenly rounded anteriorly, narrowed and strongly impressed (constricted)



Figs 5–8. *Anthelephila balijava* sp. nov., male, holotype: 5 – protibia (left) and profemur (right); 6 – sternum VII; 7 – prongs of sternite VIII; 8 – apical portion of tegmen. Scale bars: 0.5 mm – A (Fig. 5); 0.2 mm – B (Fig. 8), C (Fig. 7), D (Fig. 6).

postero-laterally in dorsal view; pronotal disc convex anteriorly, distinctly impressed posteriorly and flattened in front of base in lateral view, anterior convex part with distinct median longitudinal impression/groove. Surface rather glossy; antero-lateral sides minutely and sparsely punctate, impunctate near procoxal cavities; disc with some coarser punctures, distinctly corrugated at constriction, in front of smooth antebasal area; postero-lateral impressions distinctly longitudinally wrinkled, adjacent dorso-lateral surface rugose. Setation as on head.

Mesoventrite simple. Metaventrite with slight indication of paired setose submedian projections close to posterior margin.

Elytra 1.6 times as long as wide, conjointly rounded apically; humeri and postscutellar impression distinct. Surface glossy, distinctly punctate; punctation uneven, double, setiferous punctures both rather widely separated and forming dense transverse band in postscutellar impression. Setation uneven, diversified, pale and whitish; ordinary pale setae somewhat longer and sparser in basal fourth, mostly subdecumbent; whitish setae short, subdecumbent, coarse, forming narrow transverse setose band in postscutellar impression; scattered, moderately longer tactile setae.

Metathoracic wings fully developed.

Fore legs modified (Fig. 5); profemoral process robust, rounded to subtruncate apically, with short fringe of stiff setae subapically; protibiae with small lobule on inner side in distal third; pro- and mesotibiae with two, metatibiae with single distinct terminal spur; metatibiae with tuft of long stiff setae on median side subapically; penultimate tar-

somere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII with rounded median lobe, coarsely setose on margins (Fig. 6). Tergum VII moderately produced and angled apically. Sternite VIII (Fig. 7); paired prongs narrow and straight in lateral view. Tergite VIII with simple paired sclerites bluntly pointed apically, narrowly connected medially. Apical sclerite of segment IX thin and inconspicuous. Aedeagus (Fig. 8); apical portion of tegmen 0.5 times as long as basal-piece, trilobed apically.

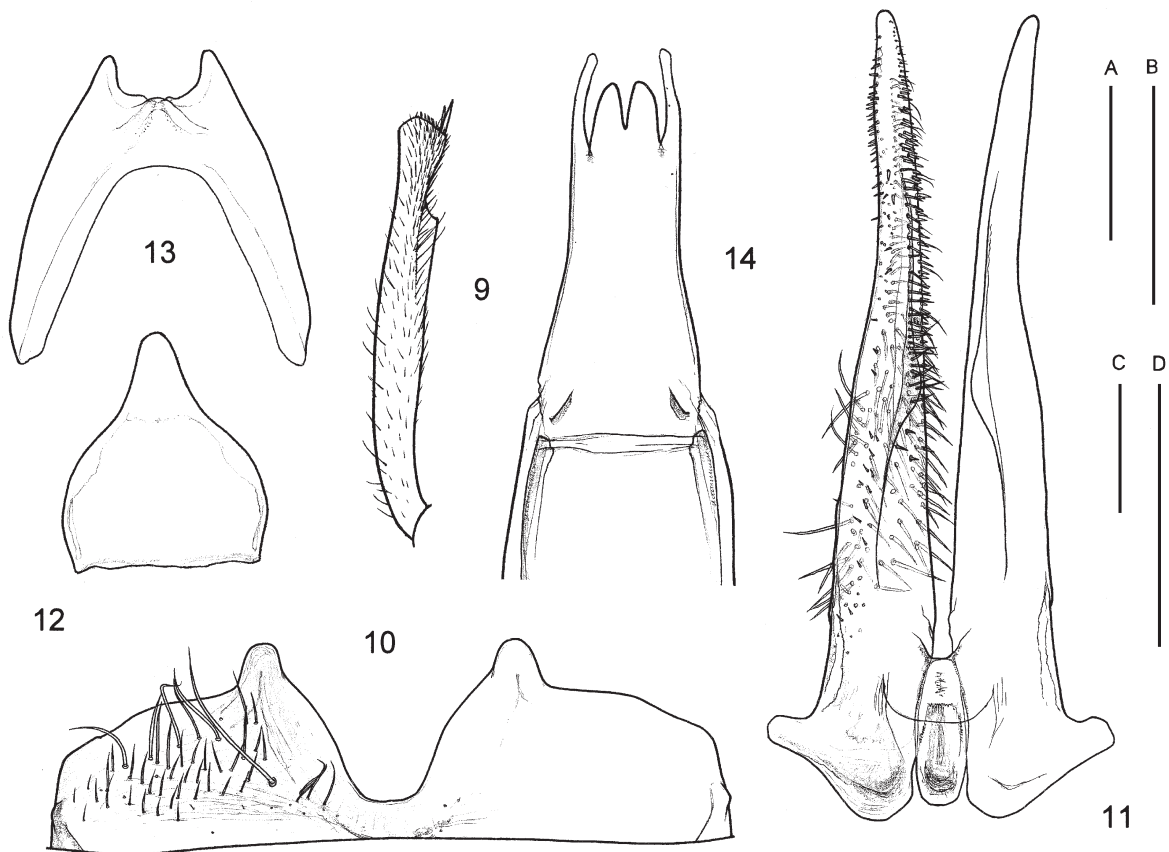
**Female.** Externally differing from male as follows: fore legs and metaventrite simple; abdominal sternum VII simple, slightly angled apically; tergum VII subtriangular, rounded apically.

**Variation.** Body length ( $\delta$ / $\eta$ ) 2.7–3.2 mm.

**Differential diagnosis.** *Anthelephila balijava* sp. nov. belongs to the *A. praetor* species-group (KEJVAL 1999). It is close to *A. celer* (Laos, Thailand, Vietnam) and *A. promiscua* (Philippines: Luzon), sharing narrower pronotum, well-developed median longitudinal impression of pronotal disc, apically narrower profemoral process and lobed median margin of male sternum VII. It can be easily confused with *A. promiscua*, considering similarity of male sternite VIII, but its paired prongs are markedly more slender, with evenly lobed dorsal margin, and prominent subapical denticle, situated very near apex; see Fig. 26 by KEJVAL (1999).

**Etymology.** Named after the Bali and Java islands; noun in apposition.

**Distribution.** Indonesia (Bali, Java).



Figs 9–14. *Anthelephila bukaba* sp. nov., male, holotype: 9 – protibia; 10 – sternum VII; 11 – prongs of sternite VIII; 12 – tergum VII; 13 – tergite VIII; 14 – apical portion of tegmen. Scale bars: 0.2 mm – A (Figs 10, 11), B (Fig. 14); 0.5 mm – C (Fig. 9), D (Fig. 13).

***Anthelephila bukaba* sp. nov.**

(Figs 9–14, 51, 52)

**Type locality.** Indonesia, Sumatra, Bengkulu Province, near Curup, Bukit Kaba Mount, 3°29'S 102°36'E, altitude 1000–1500 m.

**Type material.** HOLOTYPE: ♂, 'W SUMATRA, Bengkulu prov., nr. Curup, BUKIT KABA Mt., 3°29'S 102°36'E, 1000-1500 m, J. Bezděk lgt., 30.i.-3.ii.2000 [p]' (NMPC). PARATYPES: 12 ♂♂ 18 ♀♀, same data as holotype (ZKDC, NMPC, DCDC).

**Description. Male** (holotype). Body length 4.6 mm. Body black, unicolorous (Fig. 51); antennae and legs brownish-black, basal antennomere brownish, narrowed basal portion of femora reddish-brown.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate, wrinkled anteriorly on frons; punctures widely separated. Setation subdecumbent; scattered longer tactile setae. Antennae moderately enlarged in terminal third; antennomere I 2.7 times, X 1.9 times, XI 2.9 times as long as wide.

Pronotum elongate, 1.7 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, weakly narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc evenly shaped, nearly evenly moderately convex in lateral view. Surface smooth and glossy, including posterior third; disc sparsely punctate, similarly as head; lateral sides largely impunctate, postero-lateral impressions coarsely shortly wrinkled. Setation as on head.

Mesoventrite with inconspicuous, narrow median longitudinal bulge, somewhat uneven in lateral view, rounded anteriorly, otherwise forming coarse median carina, with several longer setae antero-laterally and in median line posteriorly; metaventricle simple, with slight indication of paired longitudinal, submedian patches of dense, coarser punctures.

Elytra 1.7 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, sparsely, rather evenly punctate; punctures delicate, widely separated. Setation uniform, distinctly longer than on head, nearly decumbent, especially in basal third; scattered tactile setae.

Metathoracic wings developed.

Fore legs partly modified (Fig. 9); profemora simple; protibiae impressed and with angled lobule on inner side distally; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 10) deeply emarginate, with narrowly produced lateral lobes, rather scantily setose. Sternite VIII (Fig. 11); paired prongs simple, long and slender, moderately bent. Tergum VII rather convex and strongly produced posteriorly, narrowly rounded apically (Fig. 12). Tergite VIII forming a pair of sclerites, rather widely connected postero-medially, narrowly produced (Fig. 13). Apical sclerite of segment IX inconspicuous, weakly sclerotized, rounded apically. Aedeagus (Fig. 14); apical portion of tegmen 0.7 times as long as basal-piece,

trilobed apically, middle lobe wider and with deep apical notch.

**Female.** Externally differing from male as follows: elytral apices conspicuously narrowly produced (Fig. 52); fore legs simple; metaventricle evenly sparsely punctate; abdominal sternum VII conspicuously, abruptly produced and slightly emarginate apically; tergum VII subtriangular, produced and narrowly rounded apically.

**Variation.** Body length (♂♀) 4.0–5.2 mm.

**Differential diagnosis.** *Anthelephila bukaba* sp. nov. is undoubtedly close to *A. pectinipes* sp. nov., as suggested by similarity of external (e.g. slender pronotum, evenly shaped pronotal disc) and numerous male characters, including morphology of tegmen apex (Figs 14, 27). It can be easily distinguished from the latter species by quite simple and delicately setose male profemora, deeply emarginate male sternum VII and apically slender prongs of male sternite VIII. Females are very conspicuous in having extremely produced and pointed elytral apices (simple, shaped similarly in both sexes in *A. pectinipes* sp. nov.).

**Etymology.** Named after the type locality (Bukit Kaba Mount); noun in apposition.

**Distribution.** Indonesia (Sumatra).

***Anthelephila jambi* sp. nov.**

(Figs 15–18)

**Type locality.** Indonesia, Sumatra, Jambi Province, Mount Tujuh, Kerinci Seblat National Park, altitude 1700–1900 m.

**Type material.** HOLOTYPE: ♂, 'SUMATRA (Jambi) GUNUNG TUJUH, Kerinci Nat. P. 1700–1900 m, 8.III.1991 Bocák & Bocáková lgt. [p]' (NMPC). PARATYPES: 1 ♂, same data as holotype (ZKDC); 9 ♂♂, 'Sumatra, Gunung Tuju, Gunung Kerinci-NP., leg. A. Riedel, 12.X.1991 [p; yellow label] // Formicomus serdangus Marseul det. G. Uhmman 1993 [p+h]' (ZKDC, DCDC); 25 ♂♂, 'SUMATRA Gn Tujuh 5 km E Karsik Dua 3.-5. May 2001 Bolm lgt., 1900 m [p]' (NHMB); 321 ♂♂, 'SUMATRA; JAMBI prov.; Kerinci Seblat N.P.; 7km E Kayuaro; Mt.TUJUH; 1750 ± 250 m; 1°45'S 101°25'E; 25.ii.-2.iii.2003 L. Dembický leg. (NMPC, ZKDC, 2 spec. each in BMNH, DCDC, MNHN, NHMW, ZSMC).

**Additional material examined. INDONESIA: SUMATRA:** 4 ♂♂, West Sumatra prov., Mount Merapi, S of Bukittinggi, 1050–1800 m, 11.iii.1991, L. Bocák & M. Bocáková lgt. (ZKDC); 4 ♂♂ 6 ♀♀, West Sumatra prov., Mount Talamau, 17 km E of Simpangempat, 750 m, 21.–25.v.2001, Bolm lgt. (SMNS, ZKDC); 2 ♀♀, Jambi prov., Mount Tujuh, Kerinci Seblat National Park, 1700–1900 m, 8.iii.1991, L. Bocák & M. Bocáková lgt. (ZKDC); 6 ♀♀, same locality, 12.x.1991, A. Riedel lgt. (ZKDC); 3 ♀♀, Jambi prov., Mount Tujuh, 5 km E of Karsik Dua, 3.–5.v.2001, Bolm lgt. (NHMB); 6 ♂♂ 96 ♀♀, Jambi prov., Kerinci Seblat National Park, 7 km E of Kayuaro, Mount Tujuh, 1°45'S 101°25'E, 1750 ± 250 m, 25.ii.–2.iii.2003, L. Dembický lgt. (NMPC, ZKDC).

**Description. Male** (holotype). Body length 3.7 mm. Black, unicolorous; antennae, mouthparts, narrowed basal portion of femora and tarsi slightly brownish.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate, with some inconspicuous wrinkles anteriorly on frons; punctures widely separated. Setation subdecumbent; scattered longer tactile setae. Antennae moderately enlarged in terminal third; antennomere I 2.4 times, X twice, XI 3.4 times as long as wide.

Pronotum elongate, 1.6 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, weakly narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc evenly shaped, evenly moderately convex in lateral view. Surface smooth and glossy, including posterior third; disc sparsely punctate, similarly as head; lateral sides largely impunctate, postero-lateral impressions coarsely shortly wrinkled. Setation as on head.

Mesoventrite with slight indication of narrow median longitudinal bulge anteriorly, largely carina-like, with several longer setae antero-laterally and in median line; metaventrite simple.

Elytra 1.7 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, rather evenly, distinctly punctate; punctation double, setiferous punctures widely separated. Setation uniform, similar to that on head; scattered, moderately longer tactile setae.

Metathoracic wings developed.

Fore legs simple (see Variation); all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

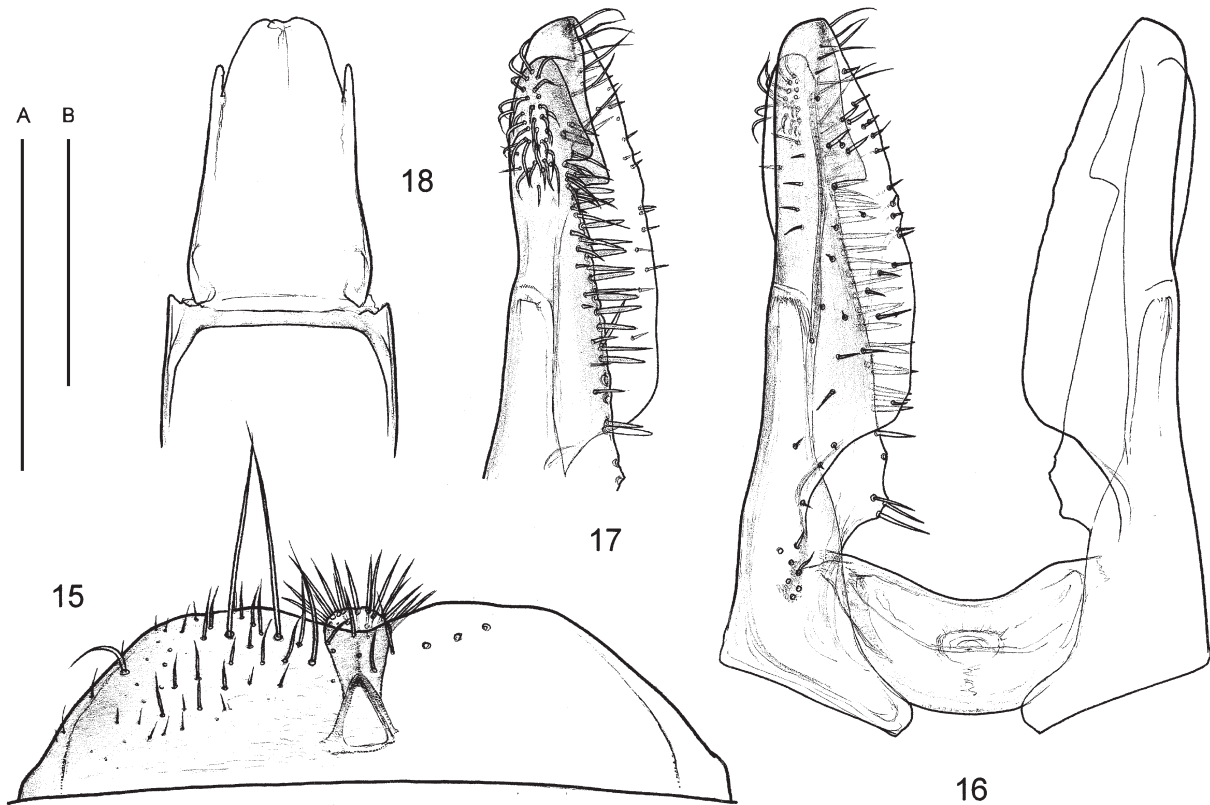
Abdominal sternum VII (Fig. 15) shallowly emarginate, with narrow, apically rounded and setose median process, projecting from inner side. Sternite VIII (Figs 16, 17); paired prongs bifurcate and moderately lobed ventrally near apex. Tergum VII nearly evenly rounded posteri-

orly. Tergite VIII forming a pair of sclerites, narrowly connected medially, narrowly rounded apically. Apical sclerite of segment IX inconspicuous. Aedeagus (Fig. 18); apical portion of tegmen 0.7 times as long as basal-piece, trilobed apically.

**Female.** Externally differing from male as follows: fore legs always quite simple; mesoventrite nearly simple (median carina absent); abdominal sternum VII simple, rounded apically; tergum VII subtriangular, rounded apically. **Variation.** Body length ( $\delta$ / $\eta$ ) 3.2–4.5 mm; protibiae in some specimens (all from Merapi and Talamau Mounts) with slight denticle on inner side at about mid-length (varying in prominence); moderately variable in shape/prominence of subapical lobules of paired prong of male sternite VIII.

**Differential diagnosis.** *Anthelephila jambi* sp. nov. appears to be close to *A. krekichi* Kejval, 2018 from Java and *A. similis* (Krekich-Strassoldo, 1925) from Sumatra, as suggested by the simple profemora, setose median projection of sternum VII, and bifurcate prongs of sternite VIII). It differs in nearly simple mesoventrite in both sexes (having prominent, denticulate median longitudinal carina in both latter species), in simple protibiae or nearly so, with slight denticle, and in the detailed shape of paired prongs of male sternite VIII, see figures by KREKICH-STRASSOLDO (1925). For its separation from externally similar, sympatric *A. sriwijaya* sp. nov. see the differential diagnosis of that species.

**Etymology.** Named after the Jambi province; noun in apposition.



Figs 15–18. *Anthelephila jambi* sp. nov., male, holotype: 15 – sternum VII; 16 – prongs of sternite VIII; 17 – apical portion of prong, ventrally; 18 – apical portion of tegmen. Scale bars: 0.2 mm – A (Figs 16, 17), B (Figs 15, 18).

**Distribution.** Indonesia (Sumatra).

**Remarks.** *Anthelephila jambi* sp. nov. appears to be more widely distributed within the Bukit Barisan Mountain Range and thus may form more or less aberrant populations, showing slight differences in male characters (mainly detailed morphology of sternite VIII). On the other hand, the most aberrant specimens (six males listed under additional material) originate directly from Mount Tujuh and may possibly belong to a different, very close species. Since, moreover, sympatric *A. srivijaya* sp. nov. differs solely in male characters, the type series comprises only males, originating from a single locality.

***Anthelephila kalabahi* sp. nov.**

(Figs 19–22, 53)

**Type locality.** Indonesia, Alor Island, 5 km NW of Kalabahi, altitude 150 m.

**Type material.** HOLOTYPE: ♂, 'NTT, Alor Island 5 km NW of Kalabahi, 150 m, 1.-8.iii.2006, S. Jakl lgt.' (NMPC). PARATYPES: 3 ♂♂, same data as holotype (ZKDC).

**Additional material examined.** INDONESIA: SUMBAWA: 2 ♀♀, Besâr, 24.iv.–2.v.2007, B. Rensch lgt. (NHMW).

**Description.** **Male** (holotype). Body length 4.1 mm. Head and pronotum reddish-brown, elytra black, with slight greenish reflection (Fig. 53); legs reddish-brown, tibiae and tarsi darker; antennae largely reddish, distinctly darkened, brownish in terminal third.

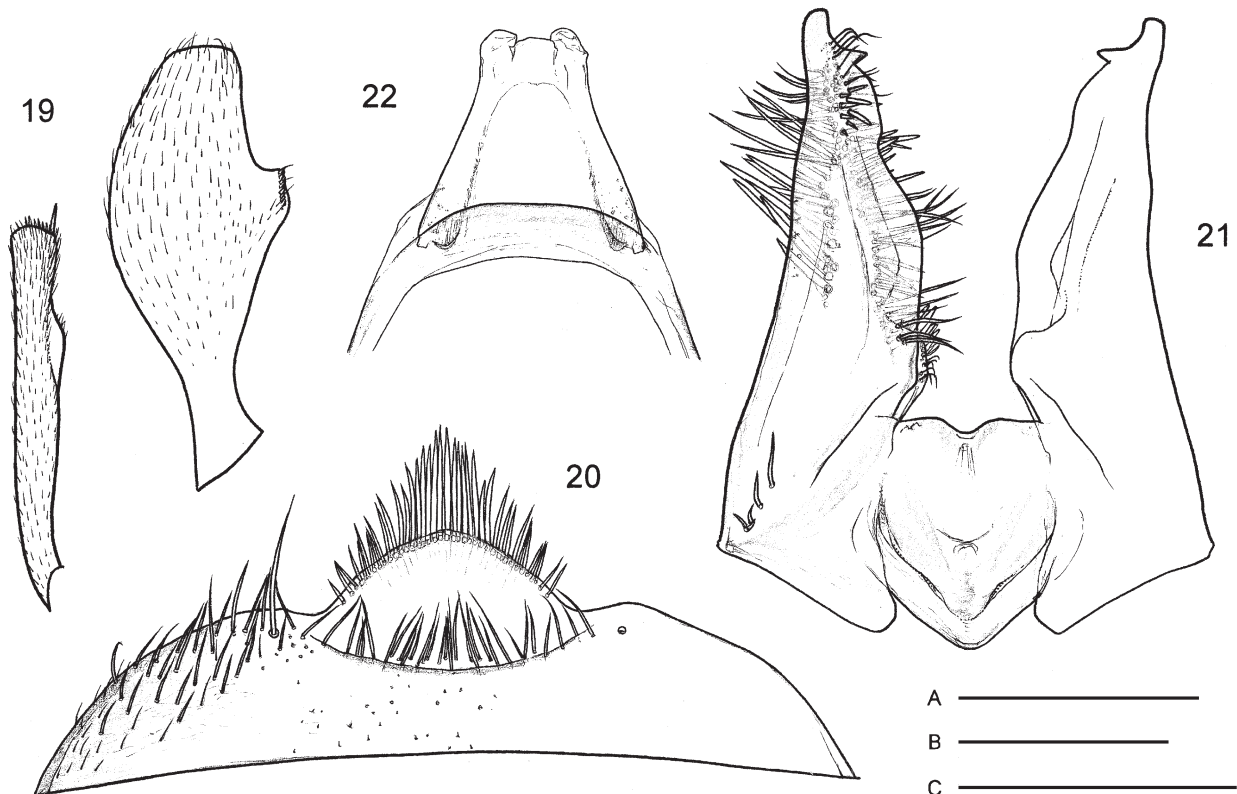
Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), differentiated from

short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface at most moderately glossy, distinctly, densely punctate and largely corrugated; punctures distinctly separated. Setation short, subdecumbent; scattered long tactile setae. Antennae moderately enlarged in terminal third; antennomere I 1.8 times, X 1.3 times, XI twice as long as wide.

Pronotum 1.4 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, narrowed and strongly impressed (constricted) postero-laterally in dorsal view; pronotal disc convex anteriorly, nearly flattened in front of base in lateral view (slightly uneven at place of transverse corrugation). Surface moderately glossy; disc rather distinctly and densely punctate, distinctly transversely corrugated in front of smooth antebasal area; antero-lateral sides minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impressions densely wrinkled, adjacent dorso-lateral surface rugose. Setation as on head.

Mesoventrite simple. Metaventrte with paired submedian setose projections close to posterior margin near metacoxae.

Elytra 1.7 times as long as wide, conjointly rounded apically; humeri quite distinct, postscutellar impression moderate. Surface glossy, distinctly punctate; punctation uneven, distinctly double, setiferous punctures both rather widely separated and forming dense transverse band in postscutellar impression. Setation uneven, diversified,



Figs 19–22. *Anthelephila kalabahi* sp. nov., male, holotype: 19 – profemur (right) and protibia (left); 20 – sternum VII; 21 – prongs of sternite VIII; 22 – apical portion of tegmen. Scale bars: 0.5 mm – A (Fig. 19); 0.2 mm – A (Fig. 21), B (Fig. 20), C (Fig. 22).

pale and whitish; ordinary pale setae somewhat longer and sparser in basal fourth, mostly subdecumbent; whitish setae short, subdecumbent, coarse, forming conspicuous transverse setose band in postscutellar impression (Fig. 53); scattered, moderately longer tactile setae.

Metathoracic wings fully developed.

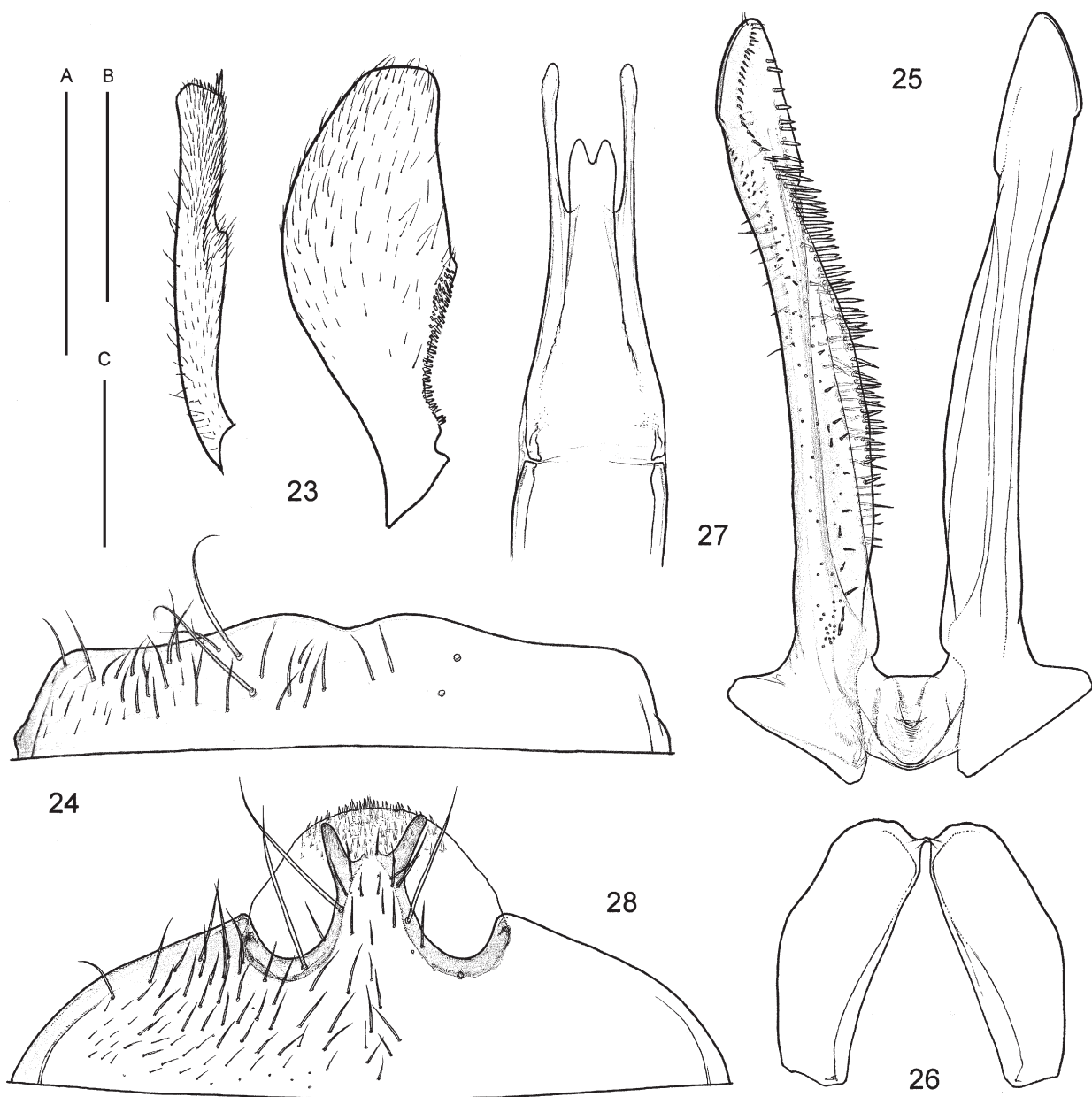
Fore legs modified (Fig. 19); profemoral process robust, rounded to subtruncate apically, with short fringe of stiff setae subapically; protibiae with slight lobule on inner side in distal third; pro- and mesotibiae with two, metatibiae with single distinct terminal spur; metatibiae with tuft of long stiff setae on median side subapically; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII with rounded median lobe, coarsely, densely setose on margins (Fig. 20). Tergum VII nearly evenly rounded apically. Sternite VIII (Fig. 21); paired prongs robust, straight in lateral view, coarsely setose ventrally in distal half. Tergite VIII with simple paired sclerites narrowly connected medially, somewhat unevenly rounded apically. Apical sclerite of segment IX inconspicuous. Aedeagus (Fig. 22); apical portion of tegmen rather short, 0.2 times as long as basal-piece, trilobed apically.

**Female.** Unknown (see Remarks).

**Variation.** Body length ( $\delta/\eta$ ) 3.9–4.1 mm.

**Differential diagnosis.** *Anthelephila kalabahi* sp. nov. belongs to the *A. praetor* species-group (KEJVAL 1999). It resembles externally *A. opiata* (Kejval, 1999) from Thailand in



Figs 23–28. *Anthelephila pectinipes* sp. nov., male, holotype: 23 – profemur (right) and protibia (left); 24 – sternum VII; 25 – prongs of sternite VIII; 26 – sternum VII; 27 – apical portion of tegmen. 28 – *A. pectinipes* sp. nov., female, paratype, sternum VII. Scale bars: 0.5 mm – A (Fig. 26), B (Fig. 23); 0.2 mm – B (Fig. 27), C (Figs 24, 25, 28).



larger, more robust body and weakly developed median longitudinal impression/groove of pronotal disc, as well as in some male characters, e.g. modification of front legs and abdominal sternum VII. It differs clearly in morphology of male sternite VIII (prongs slender, sinuous and differently setose in *A. opiata*, see Figs 49, 50 by KEJVAL (1999)).

**Etymology.** Named after the type locality, Kalabahi, noun in apposition.

**Distribution.** Indonesia (Alor, Sumbawa).

**Remarks.** The two female specimens from Sumbawa bear red 'TYPE' labels and an identification label 'cinctus Hbdy' by R. F. Heberdey, which is in my opinion a manuscript name of a never described species. They are essentially identical with types of *A. kalabahi* sp. nov., but their identification is rather tentative.

### *Anthelephila pectinipes* sp. nov.

(Figs 23–28)

**Type locality.** Indonesia, Sumatra, Bengkulu Province, near Curup, Bukit Kaba Mount, 3°29'S 102°36'E, altitude 1000–1500 m.

**Type material.** HOLOTYPE: ♂, 'W SUMATRA, Bengkulu prov., nr. Curup, BUKIT KABA Mt., 3°29'S 102°36'E, 1000-1500 m, J. Bezděk lgt., 30.i.-3.ii.2000 [p]' (NMPC). PARATYPES: 10 ♂♂ 4 ♀♀, same data as holotype (ZKDC, DCDC).

**Description. Male** (holotype). Body length 4.8 mm. Body black, unicolorous, with slight greenish reflection; antennae and legs brownish-black, basal antennomere brownish, narrowed basal portion of femora reddish-brown.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), weakly differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate; punctures widely separated. Setation subdecumbent; scattered longer tactile setae. Antennae at most slightly enlarged in terminal third; antennomere I 2.5 times, X 1.9 times, XI 3.1 times as long as wide.

Pronotum elongate, 1.6 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, weakly narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc evenly shaped, nearly evenly moderately convex in lateral view. Surface smooth and glossy, including posterior third; disc sparsely punctate, similarly as head; lateral sides largely impunctate, postero-lateral impressions coarsely shortly wrinkled. Setation as on head.

Mesoventrite with narrow median longitudinal bulge, largely forming coarse, setose median carina; metaventrite simple.

Elytra 1.6 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, sparsely, rather evenly punctate; punctation double, setiferous punctures delicate, widely separated. Setation uniform, distinctly longer than on head, nearly decumbent, especially in basal third; scattered tactile setae.

Metathoracic wings developed.

Fore legs modified (Fig. 23); profemora with slight protrusion and dense fringe of short, spine-like setae along inner carinate margin in basal half; protibiae with small

denticle close behind mid-length, flatly impressed and with carinate lateral margin distally; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 24) rather narrow, moderately produced and emarginate postero-medially. Sternite VIII (Fig. 25); paired prongs simple, long and slender, moderately bent, widened apically. Tergum VII rather convex and distinctly produced posteriorly, rounded apically. Tergite VIII forming a pair of sclerites, narrowly connected postero-medially, rounded apically (Fig. 26). Apical sclerite of segment IX inconspicuous, weakly sclerotized, rounded apically. Aedeagus (Fig. 27); apical portion of tegmen 0.7 times as long as basal-piece, trilobed apically, middle lobe wider and with apical notch.

**Female.** Externally differing from male as follows: fore legs simple; mesoventrite nearly simple, with slight indication of median carina posteriorly and several setae in median line; abdominal sternum VII conspicuously modified (Fig. 28); tergum VII subtriangular, narrowly rounded apically.

**Variation.** Body length (♂♀) 4.0–4.8 mm.

**Differential diagnosis.** *Anthelephila pectinipes* sp. nov. is undoubtedly close to *A. bukaba* sp. nov., as suggested by similarity of external (e.g. slender pronotum, evenly shaped pronotal disc) and numerous male characters, including morphology of tegmen (Figs 27, 14). It differs from the latter species in modified male profemora (slight protrusion and carinate inner margin), bearing coarse spine-like setae, in rather slightly emarginate male sternum VII and apically widened and flattened prongs of male sternite VIII. Females can be easily distinguished by simple, conjointly rounded elytra apices (conspicuously produced and pointed in *A. bukaba* sp. nov.) and peculiar modification of sternum VII.

**Etymology.** Composed from Latin *pecten* (comb, brush) and *pes* (foot); named in reference to peculiar dense fringe of spine-like setae on inner proximal margin of male profemora; noun in apposition.

**Distribution.** Indonesia (Sumatra).

### *Anthelephila srivijaya* sp. nov.

(Figs 29–33)

**Type locality.** Indonesia, West Sumatra Province, Mount Singgalang, altitude 1600 m.

**Type material.** HOLOTYPE: ♂, 'Gunung Singgalang (Sumatra's Westkust) 1600 M. VII 1925 leg. E. Jacobson. [p+h] // Formicomus graciosus Krekitch det. G. Uhmman 1981 [p]' (ZSMC). PARATYPES: 4 ♂♂ 1 ♀, same data as holotype (ZKDC, ZSMC); 2 ♂♂, 'SUMATRA Gn Merapi 5 km E of Kolobaru 18-25. May 2001 Bolm lgt., 1600 m [p]' (NHMB); 3 ♂♂, 'SUMATRA Gn Talantau 17 km E of Simpangempat 21.-25. May 2001 750 m Bolm lgt., (Ophir mts) [p]' (SMNS).

**Description. Male** (holotype). Body length 3.8 mm. Body black, head anteriorly and elytra apically with brownish tinge; antennae and legs brownish-black.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), distinctly differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate, corrugated

anteriorly on frons; punctures distinctly separated. Setation subdecumbent; scattered tactile setae. Antennae robust, slightly enlarged in terminal third; antennomere I 2.4 times, X 1.55 times, XI 3.4 times as long as wide.

Pronotum 1.6 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, moderately narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc nearly evenly moderately convex in lateral view. Surface smooth and glossy, including posterior part; disc delicately sparsely punctate; lateral sides largely impunctate, postero-lateral impressions wrinkled and adjacent dorso-lateral surface rugose. Setation as on head.

Mesoventrite with slight median longitudinal carina; metaventrite with paired robust submedian projections posteriorly.

Elytra 1.6 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, distinctly punctate; punctation double, setiferous punctures evenly developed, widely separated. Setation uniform, nearly decumbent; numerous longer erect tactile setae.

Metathoracic wings developed.

Fore legs modified (Fig. 29); profemora moderately lobed; protibiae abruptly narrowed and somewhat flattened distally, with distinct blunt protrusion on inner side; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 30) distinctly emarginate,

with narrow, apically rounded and setose median process, projecting from inner side. Sternite VIII (Figs 31, 32); paired prongs simple, with moderately lobed dorsal margin and hooked, laterally flattened apical part. Tergum VII simple, evenly rounded apically. Tergite VIII forming a pair of sclerites, narrowly connected medially, narrowly rounded apically. Apical sclerite of segment IX membranous, rounded apically. Aedeagus (Fig. 33); apical portion of tegmen 0.7 times as long as basal-piece, rounded apically, with indication of lateral subapical lobes.

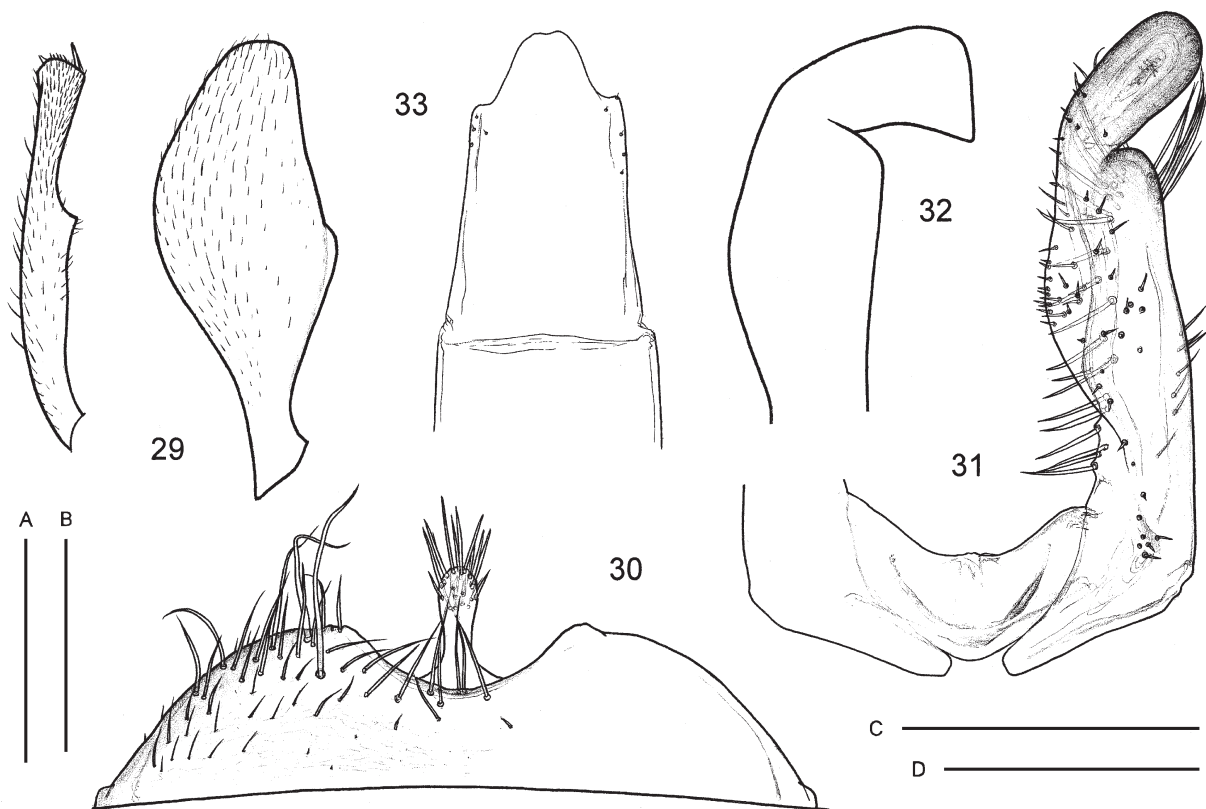
**Female.** Externally differing from male as follows: antennae slender; fore legs and metaventrite simple; mesoventrite nearly simple (median carina absent); abdominal sternum VII moderately produced and angled apically; tergum VII subtriangular, rounded apically.

**Variation.** Body length (♂♀) 3.6–3.8 mm.

**Differential diagnosis.** *Anthelephila srivijaya* sp. nov. is probably close to *A. jambi* sp. nov., as suggested by nearly simple mesoventrite and similarity in morphology of male sternum VII and tegmen. It can be distinguished by male characters only (females are essentially identical), e.g. by distinctly modified front legs, reduced lateral subapical lobes of tegmen, and mainly by the paired prongs of sternite VIII, that are rather dissimilar, robust and curved apically (cf. Figs 31, 32 versus 16, 17).

**Etymology.** Named after the ancient Srivijaya kingdom, based on the Island of Sumatra and dominating much of the Malay Archipelago; noun in apposition.

**Distribution.** Indonesia (Sumatra).



Figs 29–33. *Anthelephila srivijaya* sp. nov., male, holotype: 29 – profemur (right) and protibia (left); 30 – sternum VII; 31 – prongs of sternite VIII; 32 – apical portion of prong in outline, laterally; 33 – apical portion of tegmen. Scale bars: 0.5 mm – A (Fig. 29); 0.2 mm – B (Fig. 30), C (Figs 31, 32), D (Fig. 33).

*Anthelephila selamatra* sp. nov.

(Figs 34–39)

**Type locality.** Indonesia, Sumatra, Lampung Province, Bukit Barisan Selatan National Park, 5 km SW of Liwa, 5°04'S 104°04'E, altitude ca 600 m.

**Type material.** HOLOTYPE: ♂, 'S SUMATRA, Lampung prov., BUKIT BARISAN SELATAN N.P., 5°4'S 104°4'E, ca 600 m, 5 km SW Liwa, J. Bezděk lgt., 7-17.ii.2000 [p]' (NMPC). PARATYPES: 2 ♂♂ 2 ♀♀, same data as holotype (ZKDC); 1 ♂, 'E SUMATRA, RIAU prov. BUKIT TIGAPULUH N.P. 0°50'S 102°26'E, 18.-25.i.2000, D. Hauck lgt. [p]' (ZKDC).

**Description. Male** (holotype). Body length 4.2 mm. Head largely black, with slight reddish-brown tinge anteriorly; pronotum and elytra black, unicolorous; femora brownish-black, tibiae and tarsi black; antennae black in terminal half/third, basal antennomeres with brownish tinge.

Head 1.2 times as long as wide, somewhat produced postero-medially (widely parabolic) and weakly differentiated from short neck; tempora strongly narrowing posteriorly, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate; punctures widely separated. Setation subdecumbent; scattered longer tactile setae. Antennae at most slightly enlarged in terminal third; antennomere I 2.2 times, X 2.1 times, XI 3.1 times as long as wide.

Pronotum 1.5 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, narrowed and rather sharply impressed (constricted) postero-laterally in dorsal view; pronotal disc evenly shaped, strongly convex in lateral view. Surface smooth and glossy, including posterior third; disc sparsely punctate, similarly as head; lateral sides largely impunctate, postero-lateral impressions coarsely wrinkled. Setation as on head.

Mesoventrite with very slight indication of moderately wide median longitudinal bulge (no median carina); me-

taventrite moderately impressed medially, with indication of submedian setose patches.

Elytra rather short, 1.5 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, sparsely, rather evenly punctate; punctation double, setiferous punctures delicate, widely separated. Setation uniform, nearly decumbent, especially in basal third; scattered longer tactile setae.

Metathoracic wings developed.

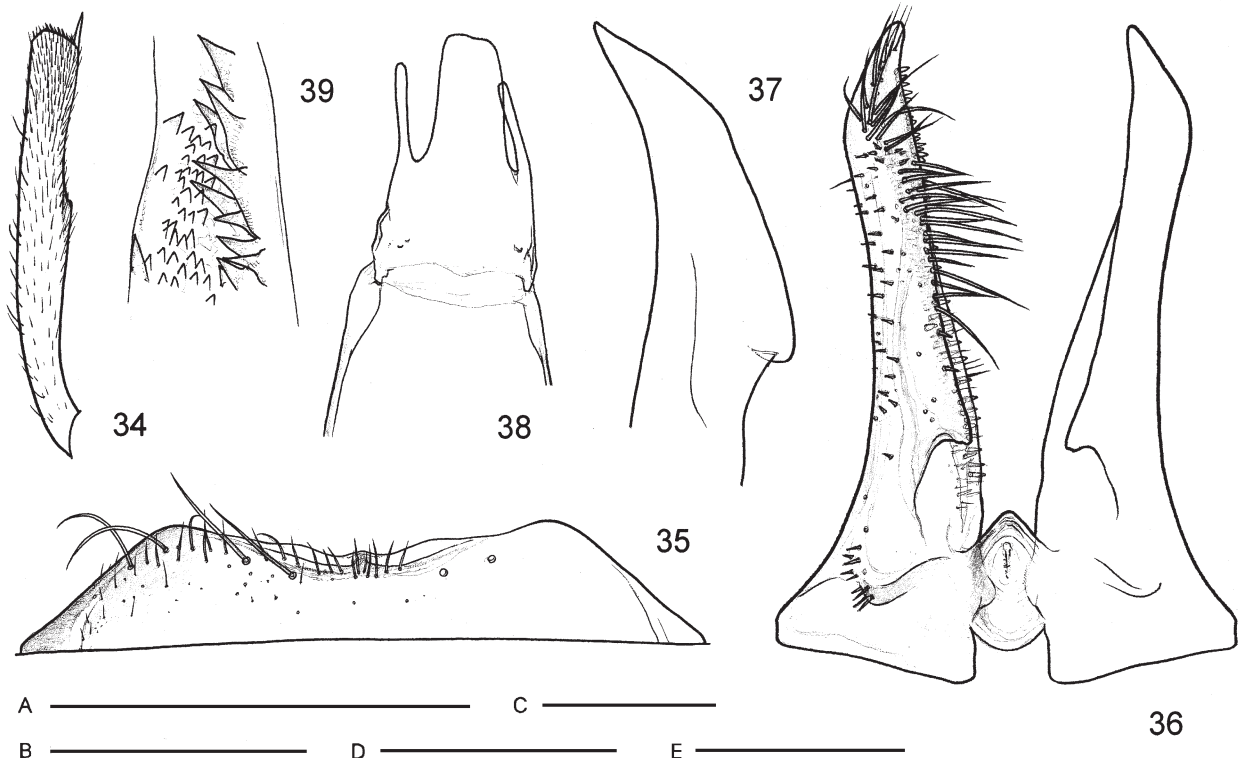
Fore legs partly modified (Fig. 34); profemora simple; protibiae with small tooth-like protrusion on inner side, close behind mid-length; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 35) moderately emarginate and sinuous posteriorly. Sternite VIII (Figs 36, 37); paired prongs simple, evenly narrowing distally in lateral view. Tergum VII rather convex and distinctly produced posteriorly, rounded apically. Tergite VIII forming a pair of sclerites, narrowly connected postero-medially, subtruncate, with moderately produced, rounded lateral apical angle. Apical sclerite of segment IX membranous, widely narrowly rounded apically. Aedeagus (Figs 38, 39); apical portion of tegmen 0.5 times as long as basal-piece, trilobed apically.

**Female.** Externally differing from male as follows: fore legs quite simple; metaventrite simple, evenly sparsely punctate; abdominal sternum VII slightly produced and rounded apically; tergum VII subtriangular, rounded apically.

**Variation.** Body length (♂♀) 4.1–4.7 mm; head largely dark reddish-brown to entirely black.

**Differential diagnosis.** *Anthelephila selamatra* sp. nov. is externally similar to *A. bogorensis* (Pic, 1913), *A. gibbithorax* (Pic, 1901), *A. modiglianii* (Pic, 1901) and



Figs 34–39. *Anthelephila selamatra* sp. nov., male, holotype: 34 – protibia; 35 – sternum VII; 36 – prongs of sternite VIII; 37 – prong in outline, laterally; 38 – apical portion of tegmen; 39 – structure of median lobe. Scale bars: 0.2 mm – A (Fig. 39), B (Figs 36, 37), C (Fig. 35), D (Fig. 38); 0.5 mm – E (Fig. 34).

*A. sunda* sp. nov., that are all distributed on Sumatra, Java or Mentawai Islands. Externally, it may resemble especially *A. gibbithorax* from Mentawai in largely black colouration and morphology of pronotum (pronotal disc evenly convex, its outline somewhat bulging posteriorly in lateral view, laterobasal impression deepened dorso-laterally), but differs in shallowly emarginate male sternum VII (deeply excavate in *A. gibbithorax*), and straight and simple prongs of male sternite VIII (quite dissimilar, strongly curved in *A. gibbithorax*). Furthermore, the two discussed species share trilobed apex of tegmen (nearly identical), but the sclerotized inner structure of median lobe appears to be different.

**Etymology.** Composed from an Indonesian word Selatan (= south) and Sumatra; named in reference to the species distribution; noun in apposition.

**Distribution.** Indonesia (Sumatra).

***Anthelephila sunda* sp. nov.**

(Figs 40–44, 54)

**Type locality.** Indonesia, Sumatra, Riau Province, Bukit Tigapuluh National Park, 0°50'S 102°26'E.

**Type material.** HOLOTYPE: ♂, 'E SUMATRA, Riau prov., BUKIT TIGAPULUH N.P., 0°50'S 102°26'E, 18.-25.i.2000, J. Bezděk lgt. [p]' (NMPC). PARATYPES: 4 ♀♀, same data as holotype (ZKDC); 4 ♀♀, same data, except: 'D. Hauck lgt.' (ZKDC).

**Additional material examined.** INDONESIA: SUMATRA: 1 ♀, Lampung prov., 5 km SW of Liwa, Bukit Barisan Selatan National Park, 5°4'S 104°4'E, ca 600 m, 7.-17.ii.2000, J. Bezděk lgt. (ZKDC).

**Description.** *Male* (holotype). Body length 4.8 mm. Head and pronotum dark reddish-brown, elytra black, unicolorous (Fig. 54); femora brownish-black, tibiae and tarsi black; antennae black in terminal half/third, basal 2–4 antennomeres paler, reddish-brown.

Head 1.2 times as long as wide, somewhat produced postero-medially (widely parabolic) and weakly differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, delicately punctate; punctures widely separated. Setation subdecumbent; scattered longer tactile setae. Antennae at most slightly enlarged in terminal third; antennomere I 2.3 times, X 2.1 times, XI 3.6 times as long as wide.

Pronotum 1.4 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, narrowed and rather sharply impressed (constricted) postero-laterally in dorsal view; pronotal disc evenly shaped, strongly convex in lateral view. Surface smooth and glossy, including posterior third; disc sparsely punctate, similarly as head; lateral sides largely impunctate, postero-lateral impressions coarsely wrinkled. Setation as on head.

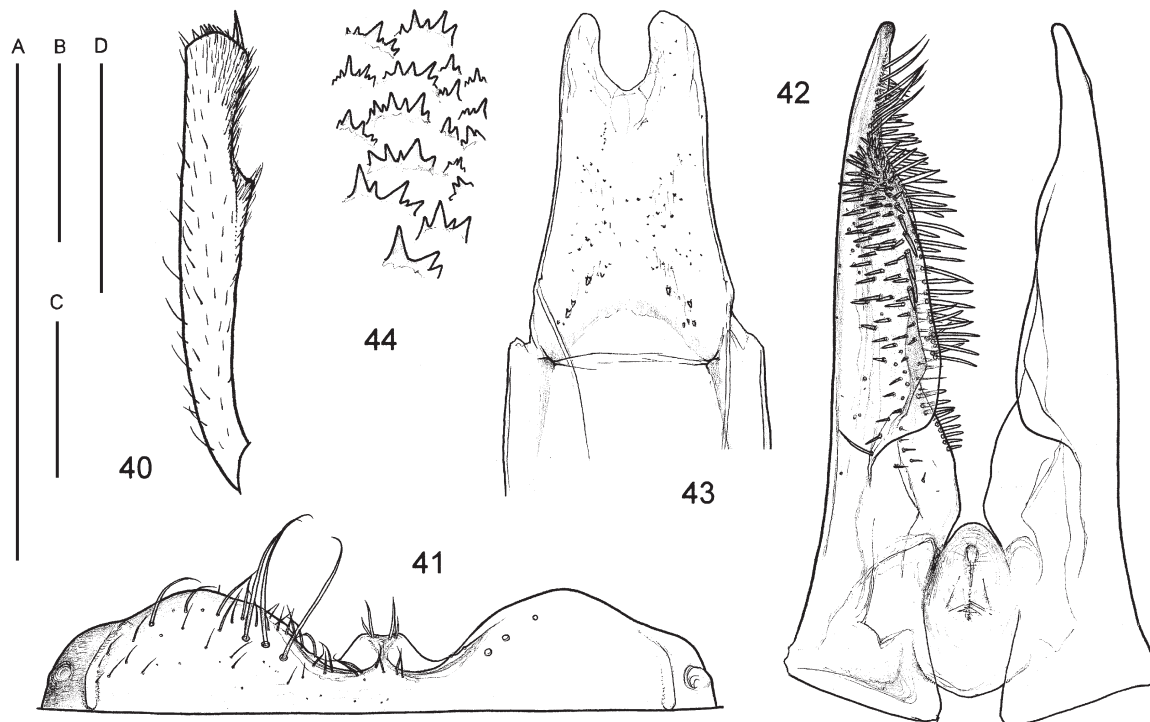
Mesoventrite quite simple; metaventrite moderately impressed medially and more distinctly punctate submedially.

Elytra rather short, 1.5 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression absent. Surface glossy, sparsely, rather evenly punctate; punctuation double, setiferous punctures delicate, widely separated. Setation uniform, nearly decumbent, especially in basal third; scattered longer tactile setae.

Metathoracic wings developed.

Fore legs partly modified (Fig. 40); profemora simple; protibiae with distinct, tooth-like protrusion on inner side, close behind mid-length; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 41) distinctly emarginate and with short, wide median process. Sternite VIII (Fig.



Figs 40–44. *Anthelephila sunda* sp. nov., male, holotype: 40 – protibia; 41 – sternum VII; 42 – prongs of sternite VIII; 43 – apical portion of tegmen; 44 – structure of median lobe. Scale bars: 0.2 mm – A (Fig. 44), B (Fig. 42), C (Fig. 41), D (Fig. 43); 0.5 mm – D (Fig. 40).

42); paired prongs simple, straight, narrowed apically, with dense short, coarse setae dorso-laterally in apical half. Tergum VII rather convex and distinctly produced posteriorly, rounded apically. Tergite VIII forming a pair of sclerites, narrowly connected postero-medially, widely rounded to subtruncate apically. Apical sclerite of segment IX inconspicuous, weakly sclerotized, narrowly rounded apically. Aedeagus (Figs 43, 44); apical portion of tegmen 0.8 times as long as basal-piece, bilobed apically; median lobe with peculiar spinulose scale-like structures (Fig. 44).

**Female.** Externally differing from male as follows: fore legs quite simple; metaventrite simple, evenly sparsely punctate; abdominal sternum VII produced and narrowly rounded to subtruncate apically; tergum VII sharply truncate and slightly emarginate apically.

**Variation.** Body length (♂♀) 3.6–4.2 mm.

**Differential diagnosis.** *Anthelephila sunda* sp. nov. is externally similar to *A. bogorensis*, *A. gibbithorax*, *A. modiglianii*, and *A. selamatra* sp. nov., that are all distributed on Sumatra, Java or Mentawai Islands. It may resemble especially *A. bogorensis* from Sumatra and Java and *A. modiglianii* from Mentawai in partly reddish-brown colouration, but differs in evenly convex pronotal disc (lacking median longitudinal impression, indicated in the latter two species), in rather conspicuous tooth-like protrusion of protibiae, situated closely behind its mid-length, in emarginate male sternum VII, with distinct median process, bilobed apex of tegmen, and in more robust, apically simply narrowed prongs of sternite VIII.

**Etymology.** Named after the Sunda, a group of islands including Sumatra; noun in apposition.

**Distribution.** Indonesia (Sumatra).

### *Anthelephila utara* sp. nov.

(Figs 45–50)

**Type locality.** Indonesia, Sumatra, North Sumatra Province, Pematang Siantar 20 km direction Prapat, altitude ca. 1000 m.

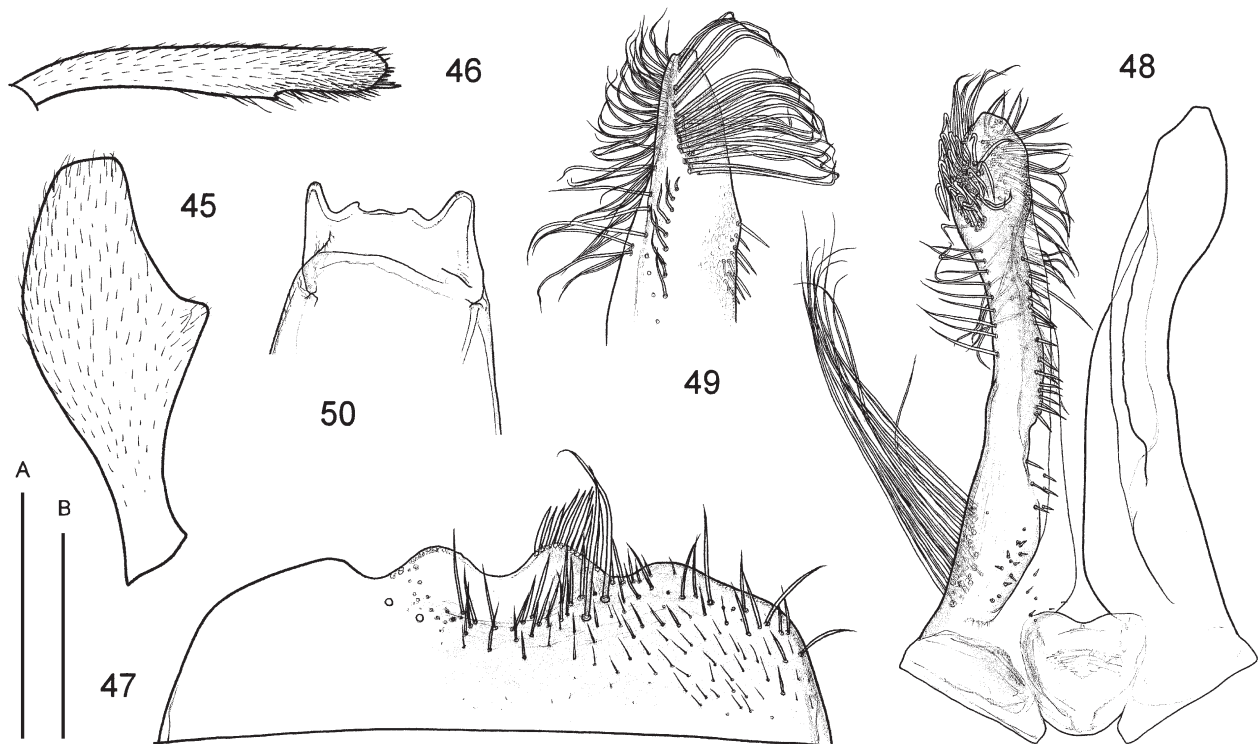
**Type material.** HOLOTYPE: ♂, 'N - Sumatra P - Siantar 20 km Richtung Prapat [h] // ca 1000 m Lichtfang April-September 1986 leg. Dr. Diehl [h] // Formicomus bataviensis Pic det. G. Uhmman 1987 [p]' (ZSMC). PARATYPES: 1 ♂ 1 ♀, 'Gunung Singgalang (Sumatra's Westkust) 1600 M. VII 1925 leg. E. Jacobson. [p+h]' (ZKDC).

**Description. Male (holotype).** Body length 4.0 mm. Black, nearly unicolorous, legs partly with brownish tinge, antennae brownish-black, basal antennomeres paler.

Head 1.2 times as long as wide, somewhat angled postero-medially (widely parabolic), distinctly differentiated from short neck; tempora strongly narrowing posteriad, posterior angles absent. Eyes medium-sized, rather convex. Dorsal surface glossy, distinctly punctate; punctures largely umbiliform, more delicate basally, distinctly separated. Setation subdecumbent; scattered longer tactile setae. Antennae only moderately enlarged in terminal third; antennomere I 1.9 times, X 1.7 times, XI 3.7 times as long as wide.

Pronotum 1.5 times as long as wide, distinctly narrower than head including eyes, nearly evenly rounded anteriorly, strongly narrowed and impressed (constricted) postero-laterally in dorsal view; pronotal disc somewhat flattened medially, nearly evenly moderately convex in lateral view. Surface smooth and glossy; disc punctate, similarly as head, with some transverse wrinkles in front of smooth antebasal area; lateral sides largely impunctate, postero-lateral impressions wrinkled and adjacent dorso-lateral surface rugose. Setation as on head.

Mesoventrite with simple, moderately wide, median longitudinal bulge, at most slightly convex in lateral view,



Figs 45–50. *Anthelephila utara* sp. nov., male, holotype: 45 – profemur; 46 – protibia; 47 – sternum VII; 48 – prongs of sternite VIII; 49 – apex of prong, laterally; 50 – apical portion of tegmen. Scale bars: 0.2 mm – A (Figs 48, 49), B (Figs 47, 50); 0.5 mm – B (Figs 45, 46).



Figs 51–54. Habitus: 51 – *Anthelephila bukaba* sp. nov., male, holotype; 52 – same species, female, paratype; 53 – *A. kalabahi* sp. nov., male, holotype; 54 – *A. sunda* sp. nov., male, holotype.

with short setae scattered along margins, and a few long, coarse setae postero-medially; metaventrite simple.

Elytra 1.7 times as long as wide, conjointly rounded apically; humeri distinct, postscutellar impression at most slightly indicated. Surface glossy, distinctly punctate; punctuation double, rather evenly developed, setiferous punctures widely separated. Setation uniform, distinctly longer and more raised than on head, nearly decumbent; numerous erect tactile setae.

Metathoracic wings developed.

Fore legs modified (Figs 45, 46); profemoral process tooth-like, short and bluntly pointed; protibiae with longitudinal carina, abruptly ending distally with minute denticle; all tibiae with two terminal spurs; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base for all tarsi.

Abdominal sternum VII (Fig. 47) distinctly sinuous postero-medially. Sternite VIII (Figs 48, 49); paired prongs elongate, slender, with conspicuously long and coarse setae laterally in basal half and tufted, longer setae subapically. Tergum VII narrowly rounded apically. Tergite VIII forming a pair of sclerites, narrowly connected medially, narrowly rounded apically. Apical sclerite of segment IX inconspicuous. Aedeagus (Fig. 50); apical portion of tegmen 0.2 times as long as basal-piece, wide and bilobed apically.

**Female.** Externally differing from male as follows: fore legs simple; abdominal sternum VII simple, very slightly produced and rounded to subtruncate apically; tergum VII subtriangular, rounded apically.

**Variation.** Body length (♂♀) 4.0–4.3 mm.

**Differential diagnosis.** *Anthelephila utara* sp. nov. is close to *A. antennalis* sp. nov., but differs in many details of

male characters, e.g. less elongate terminal antennomere, robust profemoral process, slight protrusion of metatibiae (situated rather distally), nearly sinuous posterior margin of sternum VII, paired prongs bearing conspicuous subapical tuft of long setae, and in shorter apical lobes of tegmen.

**Etymology.** The species name *utara* is the Malay word for north, and should be treated as noun in apposition; named in reference to the location of type locality in the North Sumatra province ('Sumatera Utara').

**Distribution.** Indonesia (Sumatra).

### Acknowledgements

I am grateful to Giulio Cuccodoro (MHNG), Isabelle Zürcher and Matthias Borer (NHMB), Wolfgang Schawaller (SMNS), and Katja Neven and Michael Balke (ZSMC) for loans of specimens. Furthermore, my thanks are due to Jan Bezděk (Mendel University of Agriculture and Forestry, Brno, Czech Republic) and Jiří Hájek (NMPC) for reviewing the manuscript.

### References

- KEJVAL Z. 1999: Revisional notes on Oriental Formicomus La Férte-Sénectère, 1848 (Insecta: Coleoptera: Anthicidae). *Annalen des Naturhistorischen Museums in Wien, B* **101**: 309–347.
- KEJVAL Z. 2003: The genus *Anthelephila* Hope, 1833 (Coleoptera: Anthicidae). *European Journal of Entomology* **100**: 381–392.
- KREKICH-STRASSOLDO H. VON 1925: Eine neue Anthicidae von Sumatra. *Treubia* **6**: 97.
- UHMANN G. 1994: Südostasiatische Anthiciden aus dem Naturhistorischen Museum in Genf, 4 (Coleoptera Anthicidae). *Revue Suisse de Zoologie* **101**: 655–676.
- WERNER F. G. & CHANDLER D. S. 1995: *Anthicidae* (Insecta: Coleoptera). *Fauna of New Zealand* **34**. Manaaki Whenua Press, Lincoln, 59 pp.