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RESEARCH PAPER

Review of the *Anthelephila maindroni* complex, and description of four new species from the Indian subcontinent (Coleoptera: Anthicidae)*

Zbyněk KEJVAL

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

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Abstract. *Anthelephila maindroni* (Pic, 1903) is redescribed and *A. maindroni strigosa* (Heberdey, 1934) is elevated to the species level. Four species are newly described from India: *Anthelephila feminea* sp. nov. (Maharashtra, Karnataka), *A. nandi* sp. nov. (Karnataka), *A. sahyadrica* sp. nov. (Tamil Nadu), and *A. semistrigosa* sp. nov. (Tamil Nadu). A new synonymy, *Anthelephila maindroni* (Pic, 1903) = *Formicomus argutus* Krekich-Strassoldo, 1928, syn. nov., is proposed. A lectotype is designated for *Formicomus maindroni strigosus* Heberdey, 1934.

Key words. Coleoptera, Anthicidae, *Anthelephila*, new species, new synonymy, new status, lectotype designation, India, Oriental Region

Zoobank: http://zoobank.org/urn:lsid:zoobank.org:pub:12F03625-0D76-4E90-8984-717D63C43C54

Introduction

Anthelephila maindroni (Pic, 1903) was originally described in the genus *Formicomus* LaFerté-Sénectère, 1849 from Pondicherry, which is the capital city of the Indian union territory of Puducherry on the southeastern coast of India. It is presently regarded as a widespread species on the whole subcontinent, ranging from southern Sri Lanka to as far north as Rajasthan and Uttar Pradesh (Kejval 2002, 2010).

Heberdey (1934) established three subspecies: *Formicomus maindroni maindroni* Pic, 1903 from Karnataka, Tamil Nadu and Sri Lanka, *F. m. argutus* Krekich-Strassoldo, 1928 from Uttar Pradesh, and *F. m. strigosus* Heberdey, 1934 from Karnataka and Tamil Nadu. This subspecies concept is, however, hardly acceptable, mainly with respect to specimens of *F. m. maindroni* and *F. m. strigosus* being taken at the same localities (Fraserpet, Aiyur, Jawalagiri, Dewarbetta, and Kottur), in Heberdey (1934).

The present paper deals with the identity of the above mentioned taxa, along with description of four new species from Maharashtra, Karnataka, and Tamil Nadu.

* Studies of the genus *Anthelephila*, part 15

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 double slashes (//), 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. The terminology of body setae follows Werner & Chandler (1995).

The following abbreviations are used in the text: [p] – printed; [h] – handwritten; env. – environs of; rec. – record from; lgt. – collected by; coll. – collection.

Acronyms of collections (in parentheses):

BMNH	The Natural History Museum, London, United Kingdom;
DCDC	Donald S. Chandler collection, Durham, New Hampshire, U.S.A.;
MNHN	Museum National d'Histoire Naturelle, Paris, France;
NHMW	Naturhistorisches Museum, Wien, Austria;
NMPC	National Museum, Prague, Czech Republic;
ZKDC	Zbyněk Kejval collection, Domažlice, Czech Republic.

Systematics

Anthelephila feminea sp. nov.

(Fig. 33, 37)

Type locality. India, Karnataka, Shimoga district, Jog Falls.
Type material. Holotype: ♀, 'INDIA: Karnataka Jog Falls (Shimoga District) 26.9.1991 leg. R. SCHUH [p] // Formicomus topali Uhmann det. G. Uhmann 1993 [p+h]' (NMPC). Paratype: **INDIA: Maharashtra:** 1 ♀, 'INDIA occ., Maharashtra st. 4 km S of Lonavala, Bhushi Dam env., 500 m, 12.-15.x.2005, J. Bezděk lgt. [p]' (ZKDC).

Description. ***Female*** (holotype). Body length 4.1 mm. Head and pronotum reddish brown; elytra largely brown--black, with reddish-brown base, darker humeri and pale reddish transverse band; legs and antennae reddish-brown.

Head 1.2 times as long as wide, its base semioval, well-differentiated from short neck; tempora distinctly narrowing posteriad, temporal angles absent. Eyes medium sized and rather convex. Dorsal surface moderately glossy, rather evenly coarsely corrugate; punctures concealed by corrugations. Setation short, appressed to subdecumbent; scattered longer tactile setae. Antennae moderately enlarged in terminal third; antennomere X 1.2 times, XI 1.9 times as long as wide.

Pronotum 1.3 times as long as wide, distinctly narrower than head including eyes, evenly rounded anteriorly, strongly narrowed and impressed (constricted) postero--laterally in dorsal view; pronotal disc convex, somewhat flattened posteriorly in lateral view. Dorsal surface largely, distinctly, longitudinally corrugated, with some slight, transverse wrinkles before smooth and glossy antebasal area; antero-lateral convex sides rather glossy, minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impression finely wrinkled and adjacent basal area rugose dorso-laterally; dorsal punctation largely concealed by corrugation. Setation as on head.

Mesoventrite with slight indication of rounded, median longitudinal bulge (no median carina posteriorly); several long, coarse setae on basal part of intercoxal process.

Elytra elongate, 1.8 times as long as wide; humeri distinct; postscutellar impression slightly indicated. Surface glossy, distinctly punctate; punctation double, setiferous punctures rather widely spaced. Setation evenly developed, sparse, distinctly longer and more raised than on head, decumbent; scattered tactile setae.

Metathoracic wings fully developed.

Legs simple; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base in all tarsi.

Abdominal sternum VII simple; tergum VII simple, subtriangular, narrowly rounded apically.

***Male*.** Unknown.

Differential diagnosis. *Anthelephila feminea* sp. nov. can be easily confused with *A. maindroni* or *A. strigosa*, but differs by the dark reddish brown, unicolorous, and somewhat shorter antennae, with antennomere X 1.2 times as long as wide (1.4 times in females of *A. maindroni*, cf. Figs 37, 38). It may also resemble the sympatric *A. topali* (Uhmann, 1983), but this species differs clearly by the apically narrowly produced and bluntly pointed apex of tergum VII in females, and by the contrastingly bicoloured antennae (largely pale reddish, terminal three antennomeres brownish). Finally, *A. maharani* Kejval, 2010 from Maharashtra displays similar colouration (transverse postbasal band of elytra), but differs by the wider head and pronotum, semicircular head base, and smaller, only moderately convex eyes.

Etymology. Latin adjective *femineus* (womanly, feminine); named in reference to the lack of male specimens.

Distribution. India (Maharashtra, Karnataka).

Remarks. The holotype of *Anthelephila feminea* was originally identified as *Formicomus topali* Uhmann, 1983 and recorded as such by Uhmann (1994).

Anthelephila maindroni (Pic, 1903)

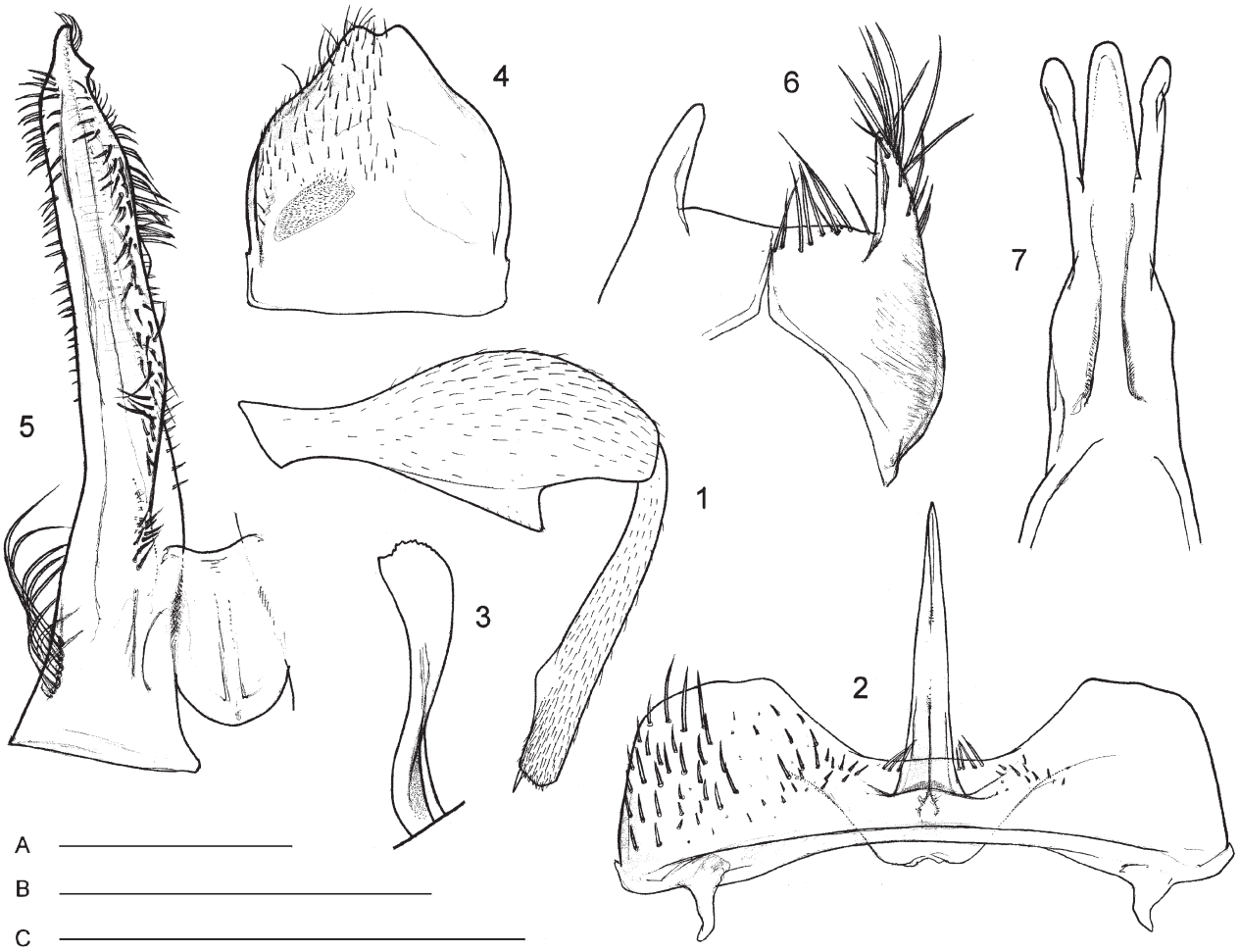
(Figs 1–7, 34, 38)

Formicomus maindroni Pic, 1903: 349.
Formicomus maindroni: Krekich-Strassoldo (1931): 7, Fig. 10 (male characters, rec. Sri Lanka); Heberdey (1934): 2 (rec. India); Bonadona (1986): 70 (rec. Sri Lanka).
Anthelephila maindroni: Kejval (2002): 244 (rec. India, Sri Lanka); Kejval (2010): 190 (rec. India).
Formicomus argutus Krekich-Strassoldo, 1928: 78, Fig. 12, **syn. nov.**
Formicomus maindroni argutus: Heberdey (1934): 7 (subspecies status).

Type localities. *Formicomus maindroni*: India, Pondicherry. *Formicomus argutus*: India, Uttar Pradesh, Faizabad (= Fyzabad).
Type material. *Formicomus maindroni* (see Remarks). Syntypes: 2 ♂♂ 4 ♀♀, bearing locality labels: 'PONDICHÉRY Aoūt 1901 [or Juin 1901; p] // COROMANDEL M. Maindron [p; yellowish label]' (MNHN).

Formicomus argutus. Syntypes: 1 ♂, 'Fyzabad, Unit. Prov., India, R. W. G. Hingston. B.M.1923–293. [p; yellow line] // male sex-mark [p] // TYPE [p; red label] // F. argutus Kr. det. v.Krekich [p+h]' (BMNH); 2 ♂♂, same data (NHMW).
Additional material. INDIA: 1 ♂, 'Nilgiri Hills' [no date and collector] (NHMW). **Puducherry:** 1 ♂, 'PONDICHÉRY Juin 1901 [p] // COROMANDEL M. Maindron [p; yellowish label] // coll. Heberdey [p] // Maindroni Pic [h]' (NHMW). **Karnataka:** 1 ♀, Bangalore, 1936, P. S. Nathan lgt. (MNHN). **Rajasthan:** 9 ♂♂ 14 ♀♀, Udaipur, Sajjan Niwas Gardens, 24°34′N 73°41′E, 600 m, 3.–8.vii.2006, Z. Kejval lgt. (ZKDC). **Tamil Nadu:** 1 ♂ 2 ♀♀, Coimbatore [no date], P. S. Nathan lgt. (MNHN); 1 ♂ 3 ♀♀, Nedungadu, 1936, P. S. Nathan lgt. (MNHN); 2 ♂♂, Ayur, North Salem, 10. and 29.iii.1930 [no collector; Forest Research Institut, Sandal Insect Survey] (NHMW); 1 ♂ 1 ♀, Shembaganur, 1904–1905, P. du Breuil lgt. (BMNH); 1 ♀, Vilupparam district, Auroville, Discipline Farm, 12°0.7′N 79°47.97′E, 1.vii.–31.viii.2013 [local collector] (ZKDC). **SRI LANKA: North Central Province:** 2 ♂♂, Anuradhapura env., iii.1953, G. Frey lgt. (ZKDC); 1 ♂, Hunuwilagama, near Wilpattu, 28.x.–3.xi.1976, G. F. Hevel et al. lgt. (ZKDC). **Southern Province:** 8 ♂♂ 3 ♀♀, Hambantota env., 26.–30.vi.2003, O. Mehl lgt. (ZKDC). **Uva Province:** 1 ♂, Kataragama env., 1.–3.vii.2003, O. Mehl lgt. (ZKDC).

Redescription. ***Male*** (Pondicherry, NHMW). Body length 3.4 mm. Head and pronotum reddish; elytra largely brownish, except for reddish base and vaguely outlined, transverse, yellowish posthumeral spots, narrowly separated



Figs 1–7. *Anthelephila maindroni* (Pic, 1903), male, Pondicherry (NHMW): 1 – front leg; 2 – sternum VII; 3 – median process of sternum VII, laterally; 4 – tergum VII; 5 – prong of sternite VIII; 6 – tergite VIII; 7 – apical portion of tegmen. Scale (0.5 mm): A – Figs 1, 4; B – Fig. 6; C – Figs 2, 3. (0.2 mm): A – Figs 5, 7.

medially on suture; legs reddish, antennae reddish, slightly darkened in terminal part.

Head 1.2 times as long as wide, oval, its base clearly differentiated from short neck; tempora distinctly narrowing posteriad, posterior angles absent. Eyes medium sized, rather convex and protruding. Dorsal surface glossy, distinctly punctate and largely corrugated; punctures distinctly separated, at places somewhat concealed by corrugation; slight indication of smooth and impunctate median line posteriorly. Setation short, subdecumbent; few more raised tactile setae. Antennae moderately enlarged in terminal third; antennomere X 1.4 times, XI about twice as long as wide, simple, longitudinally oval.

Pronotum 1.5 times as long as wide, distinctly narrower than head including eyes, somewhat unevenly rounded anteriorly, narrowed and strongly impressed (constricted) postero-laterally in dorsal view; pronotal disc convex, somewhat flattened posteriorly in lateral view (slight indication of posterior bulge). Dorsal surface distinctly, longitudinally corrugated in median strip, with some vague transverse wrinkles before smooth and glossy antebasal area; antero-lateral convex sides rather glossy, minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impression finely wrinkled and adjacent basal area rugose dorso-laterally; dorsal median punctation concealed by corrugation. Setation as on head.

Mesoventrite with slight indication of rounded median longitudinal bulge. Metaventrite simple.

Elytra elongate, 1.9 times as long as wide, conjointly rounded apically; humeri distinct; postscutellar impression moderate but distinct. Surface glossy, distinctly punctate; punctation double, setiferous punctures rather widely spaced. Setation evenly developed, sparse, distinctly longer and more raised than on head, decumbent; scattered tactile setae.

Metathoracic wings fully developed.

Fore legs modified (Fig.1); profemora with rather strong, bluntly pointed process, with slight setose fringe along its outer margin and apically; protibiae moderately widened and with small lobule on inner side distally; mesotibiae slightly sinuous; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near

base in all tarsi. Meso- and metatibiae with numerous longer setae on inner side; basal mesotarsomere with dense, long, stiff setae on median margin.

Abdominal sternum VII (Fig. 2) rather deeply emarginate posteriorly, with conspicuous median process projecting from its dorsal (inner) side, denticulate on apical margin (Fig. 3). Tergum VII produced and distinctly emarginate apically (Fig. 4). Sternite VIII with simple paired prongs (Fig. 5). Tergite VIII (Fig. 6); paired sclerites narrowly connected medially, with conspicuous, postero-lateral projections. Aedeagus (Fig. 7); apical portion of tegmen nearly as long as basal-piece, elongate and trilobed apically.

Female. Externally identical with male except as follows: legs simple; setation of meso- and metatibiae generally shorter; basal mesotarsomere shortly setose medially; abdominal sternum VII simple, tergum VII simple, subtriangular, rounded apically.

Variation. Body length (♂♀) 3.4–5 mm. Moderately variable in colouration; elytra brown to brownish-black, including base; posthumeral spots more or less prominent/contrasting, separated or fused medially. Pronotum in some specimens with indication of median longitudinal impression/groove.

Differential diagnosis. *Anthelephila maindroni* is nearly identical with *A. strigosa*, differing only in details of male characters: the profemoral process lacks a conspicuous setose fringe; the protibiae are straight and more robust distally, with the lobule somewhat less prominent; the median process of sternum VII is longer, projecting from near the base of sternum, and is narrower in ventral view, with its apical margin being distinctly denticulate; tergum VII is distinctly emarginate apically; the paired prong of the sternum is somewhat narrower, being nearly straight in lateral view, with a laterobasal bunch of setae and a subapical denticle.

Distribution. India (Karnataka, Rajasthan, Tamil Nadu, Uttar Pradesh), Sri Lanka.

Remarks. Pic (1903) described *Formicomus maindroni* from seven specimens collected by Maurice Maindron in southern India (Pondicherry) and deposited in the MNHN. Searching through Pic's collection I found the relevant box of anthicid specimens collected by M. Maindron, including six syntypes of *F. maindroni*, and made brief notes on its male characters and label data. An additional male specimen from Pondicherry in the NHMW bears the same locality labels, and may represent the seventh syntype or at least a topotype (identification label displays Pic's handwriting). It was therefore used as the basis for the species redescription.

Krekich-Strassoldo (1928) described *Formicomus argutus* from an unstated number of specimens collected at the locality Fyzabad, and deposited them in his collection (presently in NHMW) and in the BMNH. It was treated by Heberdey (1934) as *F. maindroni argutus*, differing from the nominotypical subspecies only by the evenly rounded head base and smaller eyes. Having examined types of both taxa, I failed to find any differences in male characters, and *F. argutus* is thus regarded as a junior synonym of *Anthelephila maindroni*.

The additional specimens of *Anthelephila maindroni* from Udaipur were collected by beating foliage at the forest edge in a city garden. They were found to be concentrated on a single tree sustaining a population of scale insects (Kejval 2010).

Anthelephila nandi sp. nov.

(Figs 8–13)

Type locality. India, Karnataka, Nandi Hills.

Type material. Holotype: ♂, 'INDIA, Karnataka Nandi Hills, 1200 m. X–5–1985 C. W. & L. B. O'Brien [p] // Formicomus sulcipes Pic det. G. Uhmann 1997 [p+h]' (BMNH).

Description. ***Male*** (holotype). Body length 3.7 mm. Head and pronotum reddish; elytra largely reddish-brown, with paler basal fourth/third; legs and antennae reddish.

Head 1.2 times as long as wide, oval, its base somewhat produced but well-differentiated from short neck; tempora distinctly narrowing posteriad, temporal angles absent. Eyes medium sized, rather convex. Dorsal surface glossy, distinctly punctate, somewhat uneven/corrugated anteriorly; punctures distinctly separated. Setation subdecumbent; scattered long tactile setae. Antennae moderately enlarged in terminal third; antennomere X 1.4 times, XI about twice as long as wide, moderately asymmetric.

Pronotum 1.4 times as long as wide, distinctly narrower than head including eyes, evenly rounded anteriorly, narrowed and strongly impressed (constricted) postero--laterally in dorsal view; pronotal disc convex, somewhat flattened posteriorly in lateral view (slight indication of posterior bulge). Dorsal surface distinctly, longitudinally corrugated in median portion, with indication of median longitudinal impression, some transverse wrinkles before smooth and glossy antebasal area; antero-lateral convex sides rather glossy, minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impression finely wrinkled and adjacent basal area rugose dorso-laterally; dorsal median punctation concealed by corrugation. Setation as on head.

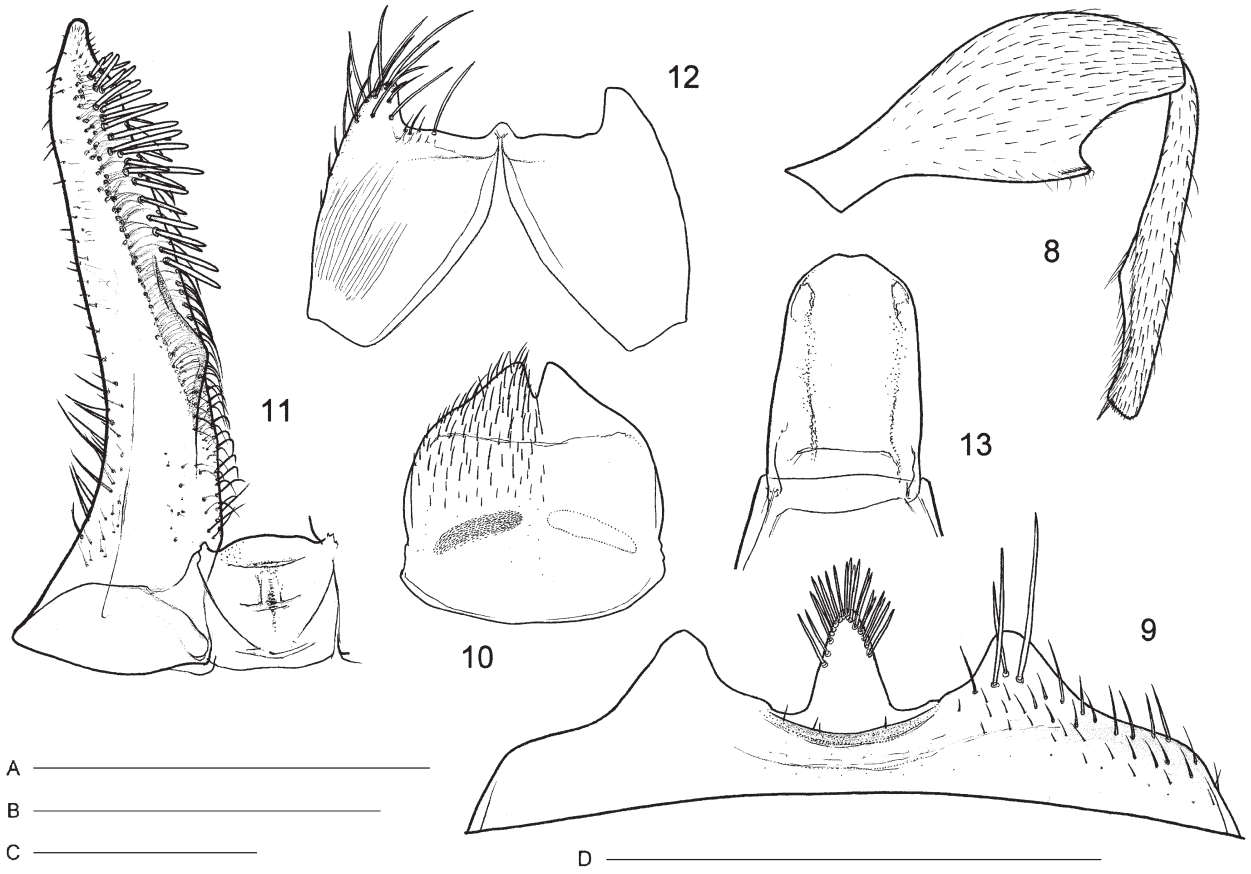
Mesoventrite with slight, flat median longitudinal bulge, merging into prominent, setose median carina posteriorly. Metaventrite with short, submedian, longitudinal, setose carinae posteriorly.

Elytra elongate, 1.7 times as long as wide; humeri distinct; postscutellar impression moderate but distinct. Surface glossy, distinctly punctate; punctation double, setiferous punctures rather widely spaced. Setation evenly developed, sparse, distinctly longer and more raised than on head, decumbent, scattered erect setae.

Metathoracic wings fully developed.

Fore legs modified (Fig. 8); profemoral process rather strong, with short apical submarginal carina and setose fringe; protibiae moderately widened and flatly impressed, with distinct angulation of lateral margin in distal half; mesotibiae with slight denticle apically on inner side; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base in all tarsi.

Abdominal sternum VII (Fig. 9) emarginate posteriorly, with narrowly produced lateral lobes and conspicuous,



Figs 8–13. *Anthelephila nandi* sp. nov., male, holotype: 8 – front leg; 9 – sternum VII; 10 – tergum VII; 11 – prong of sternite VIII; 12 – tergite VIII; 13 – apical portion of tegmen. Scale (0.5 mm): A – Fig. 10; B – Fig. 12; C – Fig. 8; D – Figs 9, 13. (0.2 mm): C – Fig. 11.

simple median process of posterior margin. Tergum VII produced and deeply incised apically (Fig. 10). Sternite VIII with simple paired prongs (Fig. 11). Tergite VIII (Fig. 12); paired sclerites narrowly connected medially, subtruncate, with distinct postero-lateral projections. Aedeagus (Fig. 13); apical portion of tegmen 0.6 times as long as basal-piece, simple, somewhat unevenly, widely rounded apically.

***Female*.** Unknown.

Differential diagnosis. *Anthelephila nandi* sp. nov. is undoubtedly very close to *A. semistrigosa* sp. nov., differing by the following details of the male characters: profemoral process dent-like, with an evenly convex outer margin, the protibiae with a distinct angulation on the inner side, the median process of sternum VII is wider, the prongs of sternite VIII are simply narrowed apically, with numerous coarse, blunt setae (cf. Figs 8, 9, 11 *versus* 20, 21, 23).

Etymology. Named after the type locality. Noun in apposition.

Distribution. India (Karnataka).

Anthelephila sahyadrica sp. nov.

(Figs 14–19, 35)

Type locality. India, Tamil Nadu, 32 km E of Kodaikanal.

Type material. Holotype: ♂, 'INDIA, Tamil Nadu, 32 km. E. Kodaikanal, 1050m, Sept. 25, 1985 C. W. & L. B. O'Brien [p] // Formicomus sulcipes Pic det. G. Uhmann 1997 [p+h]' (BMNH). Paratypes: **INDIA: Tamil Nadu:** 2 ♂♂ 3 ♀♀, 'INDIA: Tamil Nadu, 32 km E Kodaikanal 1050m, IX-29-1985 CW & LB O'Brien [p] // Formicomus sulcipes Pic det. G. Uhmann 1995 [p+h]' (DCDC, ZKDC); 1 ♂, same data, except: 'Formicomus maindroni Pic det. G. Uhmann 1995 [p+h]' (DCDC).

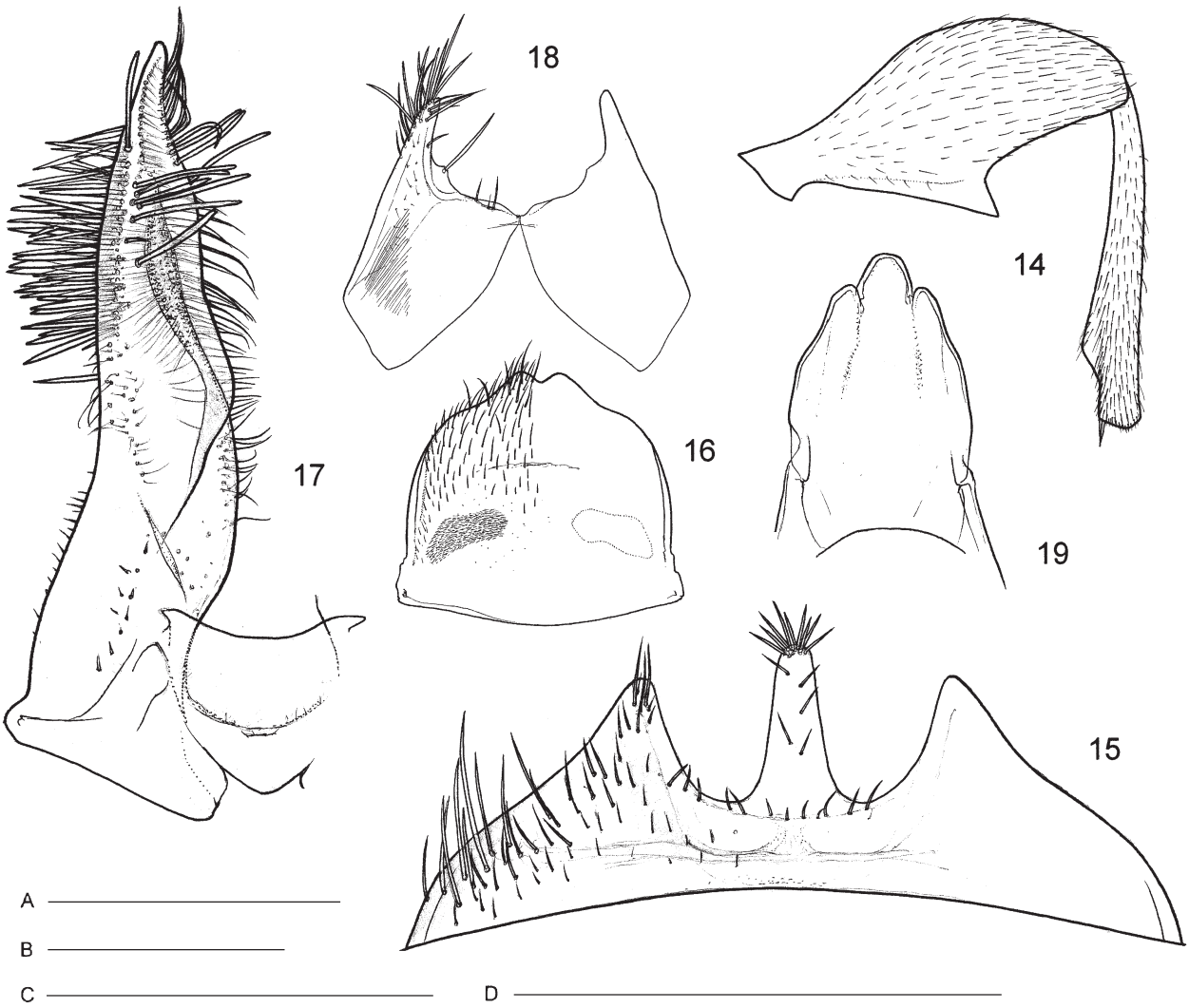
Description. ***Male*** (holotype). Body length 4.2 mm. Head and pronotum reddish-brown; elytra largely brownish-black, somewhat paler medially, with reddish base; legs and antennae reddish-brown.

Head 1.2 times as long as wide, somewhat unevenly rounded posteriorly, base well-differentiated from short neck; tempora rather strongly narrowing posteriad, temporal angles absent. Eyes medium sized, moderately convex. Dorsal surface only slightly glossy, distinctly punctate and largely rather coarsely corrugated; punctures distinctly separated. Setation subdecumbent; scattered long tactile setae. Antennae only slightly enlarged in terminal third; antennomere X 1.7 times, XI nearly 2.3 times as long as wide.

Pronotum 1.4 times as long as wide, slightly narrower than head including eyes, evenly rounded anteriorly, narrowed and moderately impressed (constricted) postero-laterally in dorsal view; pronotal disc convex. Disc distinctly punctate, with some transverse wrinkles before smooth and glossy antebasal area; antero-lateral convex sides rather glossy, minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impression shortly wrinkled and adjacent basal area rugose dorso-laterally. Setation as on head.

Mesoventrite with slight median longitudinal bulge, merging into more prominent, setose median carina posteriorly. Metaventrite simple.

Elytra 1.7 times as long as wide; humeri distinct; postscutellar impression absent. Surface glossy, distinctly punctate; punctation double, setiferous punctures rather



Figs 14–19. *Anthelephila sahyadrica* sp. nov., male, holotype: 14 – front leg; 15 – sternum VII; 16 – tergum VII; 17 – prong of sternite VIII; 18 – tergite VIII; 19 – apical portion of tegmen. Scale (0.5 mm): A – Fig. 18; B – Fig. 14; C – Fig. 16; D – Fig. 15, 19. (0.2 mm): B – Fig. 17.

widely spaced. Setation evenly developed, sparse, distinctly longer and more raised than on head, decumbent, scattered erect setae.

Metathoracic wings fully developed.

Fore legs modified (Fig. 14); profemora with rather strong, simple, apically bluntly pointed process; protibiae widened and with distinct angulation in distal third; metatibiae slightly flattened medially in apical third; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base in all tarsi.

Abdominal sternum VII (Fig. 15) deeply emarginate posteriorly, with narrowly produced lateral lobes and conspicuous, simple median process of posterior margin. Tergum VII produced and moderately emarginate apically (Fig. 16). Sternite VIII with simple paired prongs (Fig. 17). Tergite VIII (Fig. 18); paired sclerites narrowly connected medially, subtruncate, with long postero-lateral projections. Aedeagus (Fig. 19); apical portion of tegmen 0.5 times as long as basal-piece, trilobed apically.

Female. In most external characters identical with male, differing by simple legs and sternum VII; tergum VII subtriangular, rounded apically.

Variation. Body length (♂♀) 3.7–4.2 mm.

Differential diagnosis. *Anthelephila sahyadrica* sp. nov. resembles *A. corrugata* (Krekich-Strassoldo, 1931) from southern India, including some of the male characters (similar shape of profemoral process, sternum VII, tergite VIII, tegmen), but differs clearly in many details, e.g. the male protibiae are widened and with a prominent angulation in their distal third (with a rather slight carina in *A. corrugata*), male metatibiae are nearly simple (robust, moderately sinuous and distinctly flattened medially in *A. corrugata*), male tergum VII is emarginate apically, the paired prongs of male sternum VIII are lacking a median projection, and with a dense lateral fringe of long robust setae.

Etymology. The specific epithet is the latinized adjective '*sahyadrica*' referring to the Western Ghats mountain range, also known as Sahyadri, where the type locality of the species is located.

Distribution. India (Tamil Nadu).

Anthelephila semistrigosa sp. nov.

(Figs 20–25, 36)

Type locality. India, Tamil Nadu, Vellore district, Kottur.

Type material. Holotype: ♂, 'Kottur, 3700, Vellore dist, F.R.I. Sandal Insect Survey 24.VI.31 [p+h] // Plot 28 [p] // coll. Heberdey [p] // semistrigosus Hbdy det. Dr.R.F.Heberdey [p+h]' (NHMW). Paratypes: **INDIA: Tamil Nadu:** 1 ♀, 'Kottur, 3700, Vellore dist, F.R.I. Sandal Insect Survey 14.IV.31 [p+h] // Plot 22 [p] // coll. Heberdey [p] // Formicomus maindroni Pic subsp. strigosus Hbdy N.C. Chatterjee det. [p+h] // semistrigosus Hbdy det. Dr.R.F.Heberdey [p+h]' (NHMW); 1 ♂, 'Kottur, 3700, Vellore dist [p] // 1282 [p; number of slide] // F.R.I. Sandal Insect Survey. [p] // 14.IV.31 [p+h] // Plot 22 [p] // coll. Heberdey [p] // semistrigosus Hbdy det. Dr.R.F.Heberdey [p+h] // semistrigosus nov. [h; ochraceous label, black frame]' (NHMW).

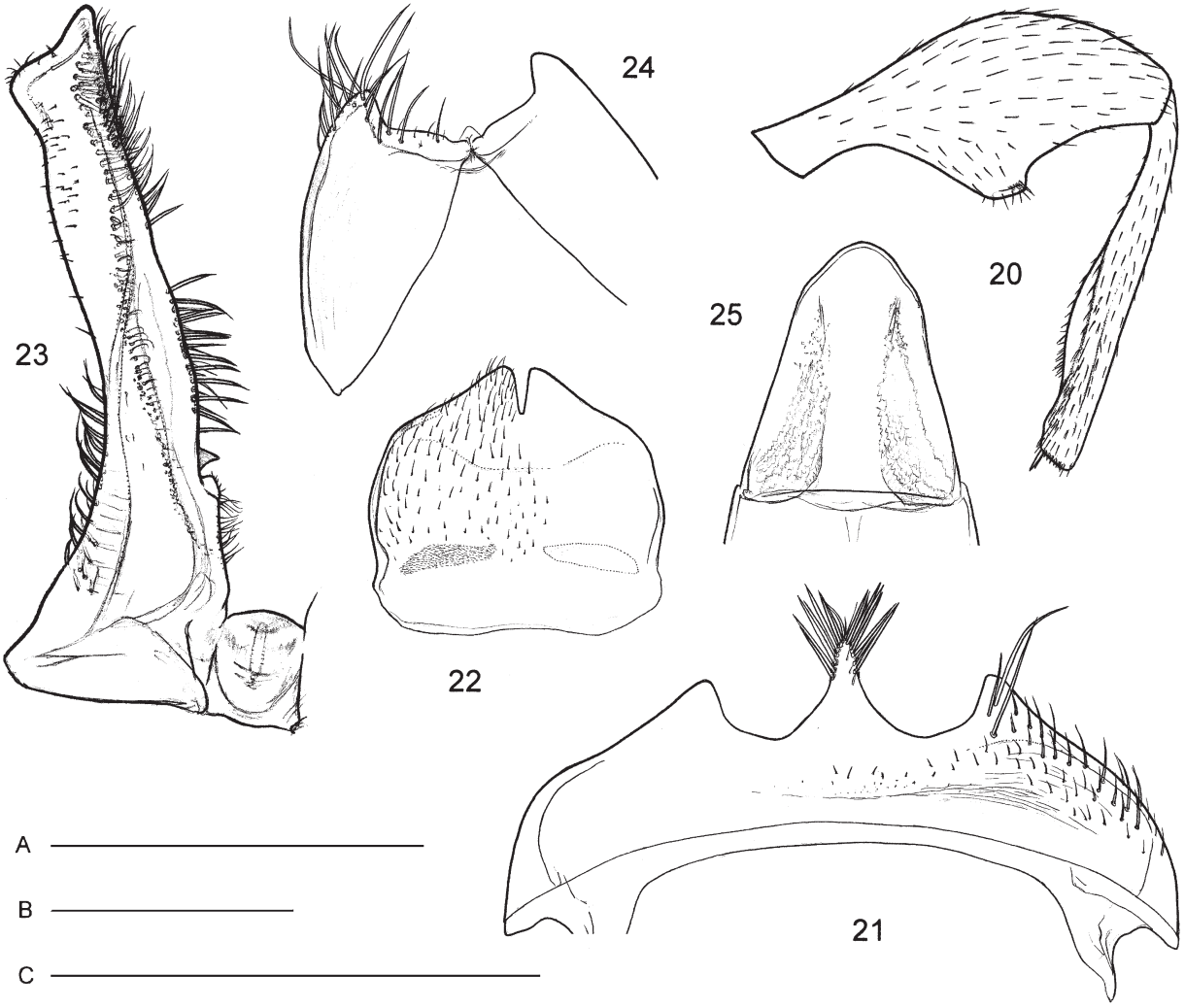
Description. ***Male*** (holotype). Body length 3.8 mm. Head and pronotum reddish; elytra largely reddish-brown, with somewhat paler base and vaguely outlined, transverse, yellowish posthumeral spots, narrowly separated medially on suture; legs and antennae reddish.

Head 1.2 times as long as wide, oval, its base somewhat produced but differentiated from short neck; tempora rather strongly narrowing posteriad, temporal angles absent. Eyes medium sized, rather convex and protruding. Dorsal surface glossy, distinctly punctate and somewhat uneven/corrugated; punctures distinctly separated. Setation short, subdecumbent, with few decumbent setae. Antennae moderately enlarged in terminal third; antennomere X 1.4 times, XI about twice as long as wide, asymmetric.

Pronotum 1.5 times as long as wide, distinctly narrower than head including eyes, somewhat unevenly rounded anteriorly, narrowed and strongly impressed (constricted) postero-laterally in dorsal view; pronotal disc convex, somewhat flattened posteriorly in lateral view (slight indication of posterior bulge). Dorsal surface distinctly, longitudinally corrugated in median portion, with some transverse wrinkles before smooth and glossy antebasal area; antero-lateral convex sides rather glossy, minutely and sparsely punctate, impunctate near procoxal cavities; postero-lateral impression finely wrinkled and adjacent basal area rugose dorso-laterally; dorsal median punctation concealed by corrugation. Setation as on head.

Mesoventrite with flat median longitudinal bulge, well-delimited by carinate lateral margins, and merging into short, setose median carina posteriorly. Metaventrite with distinct paired submedian projections posteriorly.

Elytra elongate, 1.9 times as long as wide, somewhat tapering apically; humeri distinct; postscutellar impression



Figs 20–25. *Anthelephila semistrigosa* sp. nov., male, holotype: 20 – front leg; 21 – sternum VII; 22 – tergum VII; 23 – prong of sternite VIII; 24 – tergite VIII; 25 – apical portion of tegmen. Scale (0.5 mm): A – Fig. 12; B – Figs 20, 22; C – Figs 21. (0.2 mm): B – Figs 23, 25.

moderate but distinct. Surface glossy, distinctly punctate; punctation double, setiferous punctures rather widely spaced. Setation evenly developed, sparse, distinctly longer and more raised than on head, decumbent, with scattered erect setae.

Metathoracic wings fully developed.

Fore legs modified (Fig. 20); profemora with rather strong, apically subtruncate process; protibiae moderately widened and flatly impressed, with slight angulation of lateral margin in distal half; mesotibiae with slight denticle apically on inner side; penultimate tarsomere widened/flattened distally, with terminal tarsomere articulated dorsally near base in all tarsi.

Abdominal sternum VII (Fig. 21) moderately emarginate posteriorly, and with conspicuous median process of posterior margin. Tergum VII produced and rather deeply incised apically (Fig. 22). Sternite VIII with simple paired prongs (Fig. 23). Tergite VIII (Fig. 24); paired sclerites narrowly connected medially, subtruncate, with distinct postero-lateral projections. Aedeagus (Fig. 25); apical portion of tegmen 0.6 times as long as basal-piece, simple, somewhat unevenly rounded apically.

***Female*.** In most external characters identical with male, differing by simple legs and sternum VII, tergum VII subtriangular, moderately produced and narrowly rounded apically.

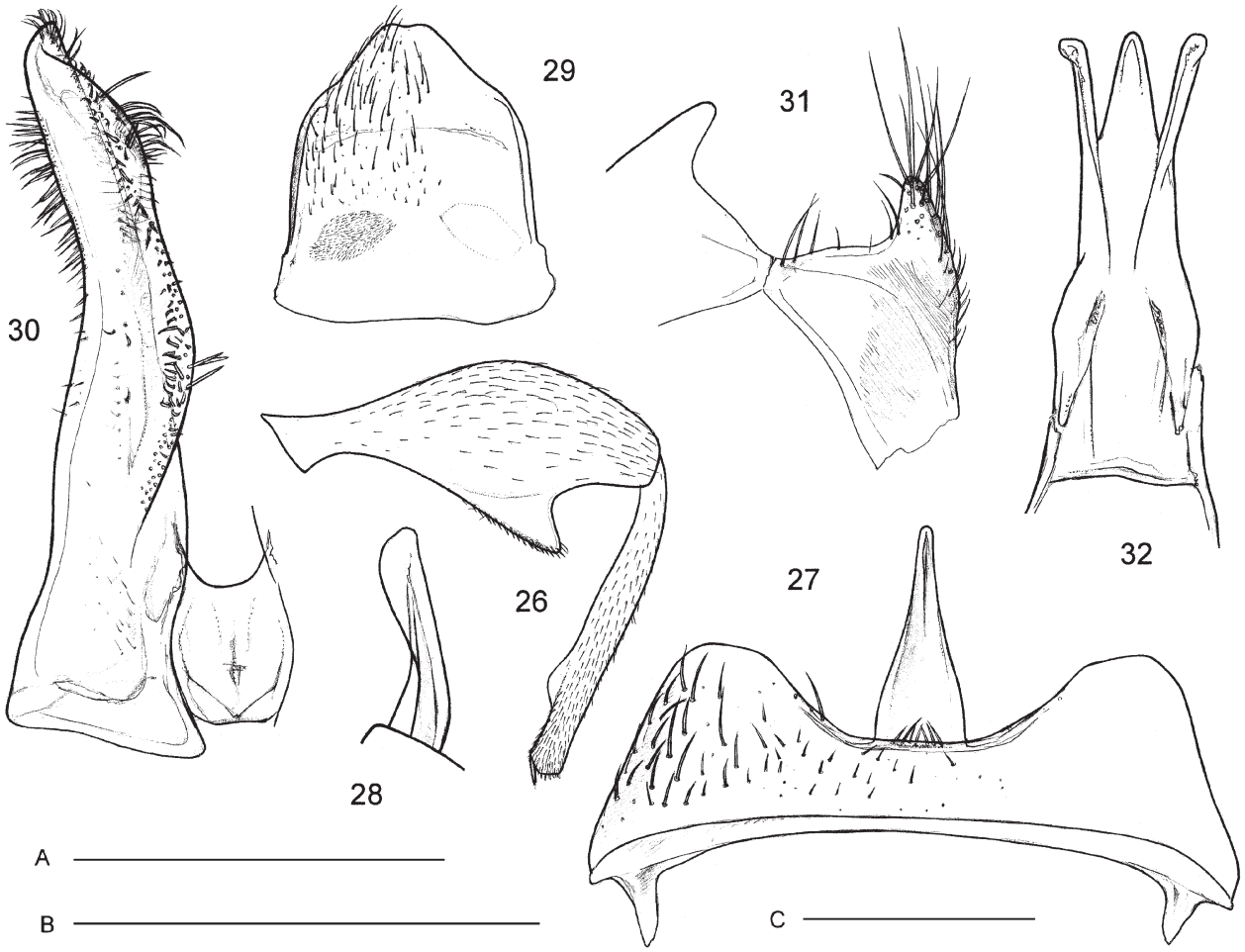
Variation. Body length (♂♀) 3.8–4.0 mm; longitudinal corrugation of pronotal disc distinct to vaguely indicated medially.

Differential diagnosis. Externally *Anthelephila semistrigosa* sp. nov. can be easily confused with *A. maindroni*, showing only a somewhat more conical base of the head, asymmetric terminal antennomeres, and more produced elytral apices (lateral margins straight subapically). On the other hand, it differs clearly from the latter species in all male characters. For its separation from the generally very close *A. nandi* sp. nov. see the differential diagnosis under this species.

Etymology. The specific epithet is a Latin adjective composed from the prefix *semi-* (= half) and *rugosus* (= wrinkled).

Distribution. India (Tamil Nadu).

Remarks. The type specimens of *Anthelephila semistrigosa* bear an identification label '*Formicomus semistrigosus*' by R. F. Heberdey, which is, in my opinion, a manuscript name that was never published for this species. They probably originate from additional material compiled by N. C. Chatterjee and later identified by R. F. Heberdey judging from the label data and his comments (Heberdey 1934).



Figs 26–32. *Anthelephila strigosa* (Heberdey, 1934), male, Hambantota (ZKDC): 26 – front leg; 27 – sternum VII; 28 – median process of sternum VII, laterally; 29 – tergum VII; 30 – prong of sternite VIII; 31 – tergite VIII; 32 – apical portion of tegmen. Scale (0.5 mm): A – Fig. 19; B – Figs 15, 16; C – Figs 14, 17. (0.2 mm): C – Figs 18, 20.

Figs 33–38. 33–36 – habitus: 33 – *Anthelephila feminea* sp. nov. (holotype); 34 – *A. maindroni* (Pic, 1903), Pondicherry (NHMW); 35 – *A. sahyadrica* sp. nov. (holotype); 36 – *A. semistrigosa* sp. nov. (holotype). 37–38 – antenna of females: 37 – *A. feminea* sp. nov. (holotype); 38 – *A. maindroni*, Hambantota (ZKDC). Scale (0.5 mm): Figs 37, 38.

Anthelephila strigosa (Heberdey, 1934) stat. nov.

(Figs 26–32)

Formicomus maindroni strigosus Heberdey, 1934: 6, Fig. 203.

Type locality. India, Karnataka, Coorg district, Fraserpet.
Type material. Lectotype (hereby designated): ♂, 'Fraserpet Coorg. [p] // F. R. I. Sandal Insect Survey [p] // male sex-mark [p] // 13.II.30 [p+h] // 1197 [p; number of slide] // TYPE [p; red label] // coll. Heberdey [p] // Formicomus strigosus Hbdy. Dr. R. F. Heberdey [p+h] // s. strigosus nov. [h; ochraceous label, black frame]' (NHMW). Paralectotypes: **INDIA: Karnataka:** 1 ♂, same data, except: '10.II.30 // 1186' and lacking the last label (NHMW). **Tamil Nadu:** 1 ♂, 'Jawalagiri North Salem. [p] // F. R. I. Sandal Insect Survey [p] // male sex-mark [p] // 1.IV.30 [p+h] // 1183 [p; number of slide] // TYPE [p; red label] // coll. Heberdey [p] // Formicomus strigosus Hbdy. Dr. R. F. Heberdey [p+h]' (NHMW); 1 ♀, 'Daverbetta, North Salem [p] // F.R.I. Sandal Insect Survey [p] // coll. Heberdey [p] // Formicomus strigosus Hbdy. Dr. R.F. Heberdey [p+h]' (NHMW).
Additional material. SRI LANKA: Southern Province: 1 ♂, Hambantota env., 26.–30.vi.2003, O. Mehl lgt. (ZKDC).

Variation. Body length (♂♀) 3.1–4.2 mm. Fringed setae on margin of profemoral process thin and rather inconspicuous (India) to coarse (Sri Lanka). The single male from Jawalagiri is moderately aberrant in male characters, having more distinctly widened protibiae (median margin clearly sinuous), and slight tuft/fringe of longer setae at base of prongs laterally.
Differential diagnosis. *Anthelephila strigosa* is nearly identical with *A. maindroni*, differing only in several details of male characters: the profemoral process with a distinct setose fringe (Fig. 26, see Variation); protibiae with a slightly sinuous median margin, that is somewhat narrowed distally, the lobule on the inner margin is more prominent; the median process of sternum VII is shorter, projecting at the posterior margin of the sternum, being wider in ventral view, its apical margin is at most somewhat uneven (not distinctly denticulate, Figs 27, 28); tergum VII is at most slightly emarginate apically (Fig. 29); the paired prongs of the sternum are somewhat wider, being moderately arcuate in lateral view, lacking the laterobasal bunch of setae and subapical denticle (Fig. 30).
Distribution. India (Karnataka, Tamil Nadu), Sri Lanka.
Remarks. Heberdey (1934) described *Formicomus maindroni strigosus* from a series of specimens collected at the localities Fraserpet, Jawalagiri and Daverbetta. It is regarded herein as a separate species, very close to *Anthelephila maindroni*. However, further material from more localities is needed to confirm this status. A lectotype is designated with respect to the different origins of the syntypes (three distant localities), and the differences mentioned above for the male specimen from Jawalagiri.

All three male syntypes from NHMW were dissected, with parts of the abdomen mounted on microscope slides in Canada balsam by R. F. Heberdey. In all cases, Heberdey did not separate sternum and tergum VIII, and consequently published (Heberdey 1934) a confusing drawing of the whole segment in ventral view. For these reasons, only a male from Sri Lanka was used for illustration of the male characters.

The record of *Formicomus maindroni strigosus* from Kottur (Heberdey 1934: 3) is probably based on the type specimens of *Anthelephila semistrigosa* sp. nov., which is described above.

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