

## New species, synonymy and records of *Anthelephila* (Coleoptera: Anthicidae)

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Abstract. In the present paper, *Anthelephila corbetti* (Pic, 1897), *A. longispina* (Pic, 1912), *A. paviei* (Pic, 1896), *A. praeses* (LaFerté-Sénéctère, 1849) and *A. rufopicea* (Fairmaire, 1896) are redescribed and nine new species are described: *A. cavicollis* sp. n. (India), *A. cochleola* sp. n. (Thailand), *A. fossicollis* sp. n. (China), *A. gladiatrix* sp. n. (India), *A. kanheri* sp. n. (India), *A. nigrorufa* sp. n. (Laos), *A. picta* sp. n. (Laos, Thailand), *A. siamensis* sp. n. (Thailand) and *A. sinica* sp. n. (China: Yunnan). Ten junior objective synonyms are proposed: *Anthelephila biroensis* (Pic, 1956) (= *Formicomus bidentatus* Uhmann, 1983 syn. n.), *Anthelephila taliana* (Pic, 1913) (= *Formicomus kippenbergi* Uhmann, 1978 syn. n.), *Anthelephila corbetti* (Pic, 1897) (= *Formicomus corbetti* var. *viridipennis* Pic, 1907 syn. n.), *Anthelephila longispina* (Pic, 1912) (= *Formicomus baeri* Pic, 1903, *F. vitalisi* Pic, 1914, *F. spinosus* Pic, 1929 syn. n.), *Anthelephila paviei* (Pic, 1896) (= *Formicomus paviei* var. *bimaculatipennis* Pic, 1896 syn. n.), *Anthelephila praeses* (LaFerté-Sénéctère, 1849) (= *Formicomus nigrivestis* Krekich-Strassoldo, 1931 syn. n.), *Anthelephila sikkimensis* (Pic, 1913) (= *Formicomus montivagus* Krekich-Strassoldo, 1928 syn. n.) and *Anthelephila rufobasalis* (Pic, 1913) (= *Formicomus montanus* Krekich-Strassoldo, 1924 syn. n.). Species status for *Formicomus rufopiceus* var. *rufobasalis* Pic, 1913 and *F. caeruleipennis* var. *talianus* Pic, 1913 is proposed. Thirteen new combinations are proposed: *Anthelephila basirufa* (Krekich-Strassoldo, 1928), *A. binhensis* (Pic, 1922), *A. gloriosa* (Krekich-Strassoldo, 1919), *A. maindroni* (Pic, 1903), *A. praeses* (LaFerté-Sénéctère, 1848), *A. longispina* (Pic, 1912), *A. biroensis* (Pic, 1956), *A. sikkimensis* (Pic, 1913), *A. rufobasalis* (Pic, 1913), *A. taliana* (Pic, 1913), *A. rufopicea* (Fairmaire, 1896), *A. corbetti* (Pic, 1897), *A. paviei* (Pic, 1896) comb. n. (all from *Formicomus* LaFerté-Sénéctère, 1849).

**Taxonomy, new species, new synonymy, new status, new combination, Coleoptera, Anthicidae, *Anthelephila*, *Formicomus*, Oriental region, Palearctic region**

### INTRODUCTION

Based on the examination of the type material, *Anthelephila* Hope, 1835 was found to be identical with *Formicomus* LaFerté-Sénéctère, 1849 (Kejval in prep.). The present contribution follows my previous papers on the latter genus (Kejval 1999, 2000). It is aimed mainly to present new data on taxonomy of various known species, gathered in the course of my revisional studies, along with description of newly discovered species from the Oriental and Palearctic regions.

Through the text, the following abbreviations are used:  
BMNH – British Natural History Museum, London;  
CKD – collection Zbyněk Kejval, Domažlice;  
CUP – collection Gerhard Uhmann, Pressath;  
CWW – collection Jürgen Wiesner, Wolfsburg;  
DEIC – Deutsches Entomologisches Institut, Eberswalde;  
DSC – collection Donald S. Chandler, Durham;  
HNHM – Hungarian Natural History Museum, Budapest;  
MCSN – Museo Civico di Storia Naturale, Genova;  
MHNG – Muséum d'histoire naturelle, Genève;

MNHN – Museum national d’histoire naturelle, Paris;  
NHMB – Naturhistorisches Museum, Basel;  
NHMW – Naturhistorisches Museum, Wien;  
NMPC – Národní Museum, Praha;  
USNM – National Museum of Natural History, Washington, D. C. (Smithsonian Institution);  
ZHMB – Zoologisches Museum an der Humboldt Universität, Berlin.

Author’s comments on the type material are found in square brackets [p = printed; h = handwritten]. Exact label data are quoted in the type specimens only. Separate labels are indicated by slashes (/).

## SYSTEMATICS

### *Anthelephila binhensis* (Pic, 1922) comb. n.

*Formicomus binhensis* Pic, 1922: 19.

MATERIAL EXAMINED. 2 males, 2 females, Thailand, Nakhom Nayok prov., Wang Takrai Park, 4–7.ix.1978, H. J. Bremer lgt. (CKD, CUP); 3 males, 2 females, Thailand, Umphang riv., 16°07’N 99°00’E, 1000 m, 28.iv–6.v.1991, V. Kubáň lgt. (CKD).

DISTRIBUTION. Originally described from “Tonkin” (north Vietnam). Recorded from Thailand by Uhmman (1994) and Telnov (1999). Occurrence in China (Yunnan prov.), mentioned by Uhmman (1994), was found to be based on misidentification.

### *Anthelephila gloriosa* (Krekich-Strassoldo, 1919) comb. n.

*Formicomus gloriosus* Krekich-Strassoldo, 1919: 168, fig. 3.

TYPE MATERIAL EXAMINED. Syntypes: 1 male, “Kiautschau China [p] \ TYPE [p; red label] \ 433 [number of micro. slide]; coll. Heberdey [p] \ gloriosus Kr. det. v. Krekich [p; species name handwritten] \ gloriosus Krek. [h; in black frame]” (NHMW); 1 female, the same data, without 3rd and 5th label, in addition with “female mark” (NHMW). ADDITIONAL MATERIAL EXAMINED. 163 specimens, China, Yunnan, 100 km W Kunming, Diaolin Nat. Reserve, 22.v.–2.vi.1993, E. Jendek & O. Šauša lgt. (NHMW, CUP, CKD); 4 males, 4 females, China, Sichuan, Baoxing env., ca 50 km NNW of Yaan, 30°22’N 102°50’E, 12–14.vii.1995, M. Trýzna & O. Šafránek lgt. (CKD); 3 males, 1 female, same data, except for Z. Jindra lgt. (CKD); 2 males, China, Yunnan, Lijiang, Yulong Shan, Bai Shui, 2900–3300 m, 7–18.vii.1994 (CKD); 3 females, China, Guizhou, 60 km N of Kali, Shibing Yuntai Shan, 21–26.v.1995, Šauša & Jendek lgt. (CKD); 12 males, 3 females, China, Yunnan, Gaoligong mts., 24.57N 98.45E, 2200–2500 m, 8–16.v.1995, V. Kubáň lgt. (CKD).

DISTRIBUTION. So far known only from China (Guizhou, Sichuan, Yunnan prov.).

### *Anthelephila maindroni* (Pic, 1903) comb. n.

*Formicomus maindroni* Pic, 1903b: 349.

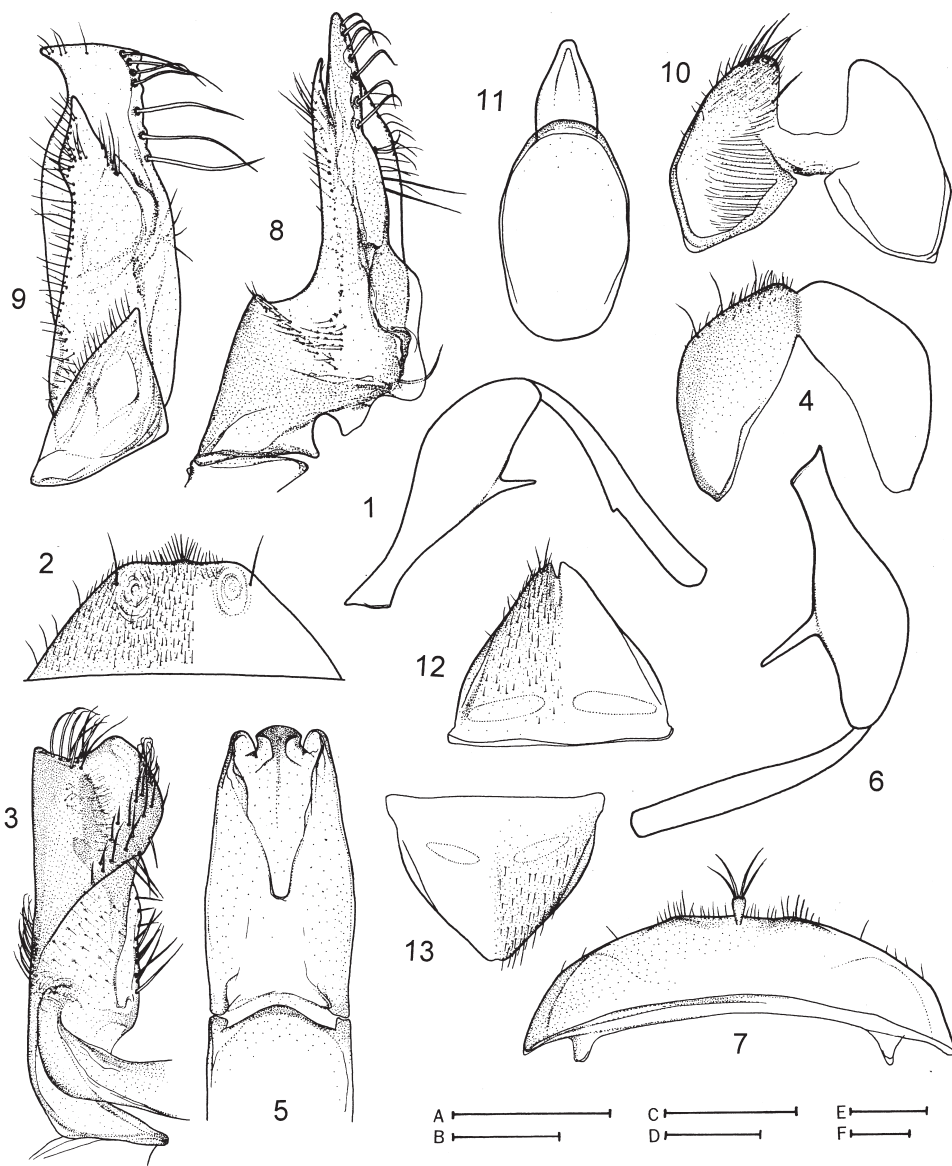
MATERIAL EXAMINED. 1 female, India, Tamil Nadu, Tanjore district, Nedugandu, 23.viii.1937 (NMPC); 2 males, Sri Lanka, Anu district, Hunuwilagama, near Wilpattu, 200 feet, 28.x.–3.xi.1976, Hevel & Dietz & Karunaratne & Balasooriya lgt. (USNM, CKD).

DISTRIBUTION. Originally described from Pondichery in south India (Tamil Nadu). Recorded from Tamil Nadu and Karnataka states (Heberdey 1934) and from Sri Lanka (Krekich-Strassoldo 1931, Bonadona 1986).

### *Anthelephila praeses* (LaFerté-Sénéctère, 1849) comb. n. (Figs 1–5)

*Formicomus praeses* LaFerté-Sénéctère, 1849: 17.

*Formicomus nigrivestis* Krekich-Strassoldo, 1931: 13, figs 26a,b; **syn. n.**



Figs 1-13. 1-5. *Anthelephila praeses* (LaFerté-Sénectère), male: 1 - front leg, 2 - sternite VII, 3 - prong of sternite VIII, 4 - tergite VIII, 5 - apical portion of tegmen of aedeagus. 6-11. *A. longispina* (Pic), male: 6 - front leg, 7 - sternite VII, 8 - prong of sternite VIII, dorsal aspect, 9 - the same, lateral (outer) aspect, 10 - tergite VIII, 11 - tegmen of aedeagus. 12-13. Tergite VII: 12 - *A. sikkimensis* (Pic), female, 13 - *A. corbetti* (Pic), male. Scale - 0.5 mm: A - 1, 12, B - 13; 0.1 mm: C - 8, 9, D - 3, 5, E - 7, 10, 11, F - 2, 4, 6.

TYPE MATERIAL EXAMINED. *Formicomus praeses* – Holotype, male [mounted on mica-label with basal margin enclosed in narrow, green paper]; “Carteromerus Praeses mihi, h. in Ind. Orient d. Nyst. [h; yellow label, pinned separately] \ [male mark] \ MUSÉUM PARIS 1952, COLL. R. OBERTHUR La Ferté \ TYPE [p; red label]” (MNHN). *Formicomus nigrivestis* – Syntype, male: “Tavoy, Burma R. N. Parker. Jan. 1927. [p] \ 713 A \ TYPE [p; red label] \ coll. Heberdey [p] \ F. nigrivestis Kr. det. V. Krekich [species name handwritten] \ nigrivestis Krek. [h]” (NHMW). According to Krekich-Strassoldo (1931), further syntypes (from Darjeeling) are deposited in the Indian museum in Calcutta and in the Forest Research Institut in Dehra-Dun (not examined).  
ADDITIONAL MATERIAL EXAMINED. 1 male, Thailand, Umphang riv., 17°07'N 99°00'E, 1000 m, 28.IV.–6.V.1991, V. Kubán leg. (CKD); 5 males, 5 females, Thailand, Chumphon prov., Pha To env., 9°48' 98°47', 1.–12.iii.1996, P. Průdek leg. (CKD). Furthermore, about 40 specimens, Thailand, Ranong prov., 9°56'98°40', Ranong: Hot Springs, K. Majer leg. (CKD).

REDESCRIPTION (male). Black, nearly unicoloured, only distal antennomeres, mouthparts and partly legs (proximal narrowed portion of femora) brown-black.

Head 1.2 times as long as wide, rounded posteriorly (posterior arch semicircular); tempora arcuately narrowing posteriad close behind eyes; hind temporal angles obsolete; base well differentiated from short neck. Dorsal surface finely and unevenly punctured, finely corrugated on frons and along inner margins of eyes; punctures becoming somewhat finer and more widely spaced towards base (especially postero-medially); fine pubescence composed of short, subdecumbent to decumbent, denser setae and few distinctly longer, erect setae. Antennae long, conspicuously exceeding humeri, only moderately enlarged distally; the most elongate middle antennomeres about twice as long as wide, antennomere X 1.7 times, antennomere XI 2.3 times as long as wide.

Pronotum 1.6 times as long as wide, distinctly narrower than head including eyes, rounded anteriorly, only moderately impressed (constricted in dorsal view) laterally in posterior half, more or less vaulted dorsally over the whole length, with dorsal outline at most flattened (not impressed) at constricted portion in lateral view. Dorsal surface punctation similar to that of head, except for more distinct, sparsely scattered coarser punctures (bearing long erect setae); basal third longitudinally corrugated and more densely punctured on each side dorso-laterally and only very sparsely punctured and rather glossy (without transverse wrinkles or rugosities) dorso-medially; lateral sides with only few, very fine punctures dorso-laterally in anterior half, largely smooth and glossy, including bottom of lateral impression, only small vaulted area situated posteriorly to lateral impression punctured to somewhat rugose and these latero-basal rugosities pass into dorso-lateral corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Both mesosternum and metasternum simply shaped.

Elytra 1.7–1.8 times as long as wide; humeri distinctly protruding, hind membranous wings well developed; postscutellar impression absent. Punctation distinctly sparser in anterior fourth, but otherwise rather dense, nearly as dense as on forebody; punctures bearing longer erect setae slightly coarser than ordinary punctures; pubescence mostly, with exception of basal portion, rather dense, composed of short, subdecumbent setae and much longer, sparsely scattered erect setae.

Legs with femora distinctly clavate; front legs modified (Fig. 1), profemora with obliquely projecting, thorn-like, bluntly pointed process, protibia with small, dent-like protuberance at mid-length; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi somewhat flattened distally, with terminal segment articulated on its dorsal side, at about mid-length. Pubescence rather uniformly short, fine, appressed, somewhat longer, sparser and decumbent on metatibia; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 2) comparatively simply shaped, shallowly impressed on ventral side medially and with longitudinal bulge laterally (on each side of median impression), posterior margin of sternite somewhat unevenly rounded, bearing longer setae apically. Tergite VII with posterior margin simply and evenly rounded apically. Paired prongs of sternite VIII (Fig. 3) rather

wide and straight, dorso-ventrally flattened, somewhat lobe-like dilated mediad in distal half, with setose process projecting from their ventral side distally. Tergite VIII (Fig. 4) composed of two plates, rather widely connected medially, distal portion of plates (posteriorly to median connection) conspicuously short, rounded apically. Distal portion of tegmen of eadeagus rather long, 0.8 times as long as basal-piece, trilobed apically (Fig. 5), middle process wider, somewhat sclerotized and angulate, as long as simply shaped lateral lobes.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII simply shaped, with posterior margin rounded (sternite) or slightly tapering (tergite) apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 3.4–4.3 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila praeses* at first sight resembles *A. binhensis* and numerous unicoloured black species related to *A. sikkimensis* and *A. gloriosa*, but it differs from all of them, apart from male abdominal characters, by the narrow and straight, thorn-like male profemoral process, by the character of elytral punctation and pubescence (subdecumbent setae short and conspicuously dense), narrower pronotum and more prominent elytral humeri (nearly obsolete humeri in *A. binhensis*).

REMARK. Based on the syntype from SE Myanmar, *Formicomus nigrivestis* was found to be identical in all important characters with *Anthelephila praeses* and it is, therefore, regarded as junior synonym of the latter species.

DISTRIBUTION. Originally described from “Bengale”, without giving more precise locality data. Recorded from India (Karnataka state) by Telnov (1999). Based on records of the synonymized *Formicomus nigrivestis*, occurring in Thailand (Uhmann 1994, Telnov 1998) and in northeastern India (Krekich-Strassoldo 1931, the syntypes from Darjeeling). Reliably known to me only from Thailand and south Myanmar; its occurrence in India should be verified.

### *Anthelephila longispina* (Pic, 1912) comb. n.

(Figs 6–11)

*Formicomus longispinus* Pic, 1912: 7.

*Formicomus vitalisi* Pic, 1914: 19; **syn. n.**

*Formicomus spinosus* Pic, 1929: 14; **syn. n.**

*Formicomus baeri* Pic, 1903: 645; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus longispinus* – Syntypes: 1 male “Takao Formosa Sauter [p] \ 23.V.907 [h; partly illegible] \ type [h; yellowish label] \ TYPE [p; red label] \ Muséum Paris Coll. M. Pic [p] \ F. longispinus Pic [h]” (MNHN); 1 female: “Takao Formosa Sauter [p] \ type [h] \ TYPE [p; red label] \ Muséum Paris coll. M. Pic [p] \ F. formosanus Pic [h]” (MNHN). According to Pic (1912) and Gaedike (1986), further syntypes are deposited in NHMW (studied) and DEIC (not examined). *Formicomus vitalisi* – Syntype, female: “Kompong Kedy Kambodge 1914 [h; partly illegible] \ type [h; yellowish label] \ TYPE [p; red label] \ Museum Paris Coll. M. Pic [p] \ F. Vitalisi Pic [h] \ vois anthicus nitidifrons Frm [h]” (MNHN). *Formicomus spinosus* – Syntype, male: “198 [h] \ Cochinchine [h] \ voi judex [h] \ TYPE [p; red label] \ Muséum Paris Coll. M. Pic [p] \ spinosus n sp [h]” (MNHN). *Formicomus baeri* – Syntypes: 1 male: “Manille Baer [p] \ type [h; yellowish label] \ TYPE [p; red label] \ Baeri Pic [h]” (MNHN); 1 male, same data, lacking the last two labels (MNHN).

ADDITIONAL MATERIAL EXAMINED. 1 male, 1 female: “Takao Formosa Sauter” [p] (HNHM); 2 males, 4 females, Thailand, Chom Thong 24–27.iv.1991, J. Horák lgt. (CKD); 1 male, 5 females, W Thailand, Kanchanaburi, 31.iii.–1.iv.1994, J. Horák (CKD); 1 male, Thailand, Ratchaburi prov., Dong-Gabuan, 3.ix.1978, H. J. Bremer lgt. (CUP); 1 male, Thailand, Phetchaburi prov., Kang Krachan Nat. Park, light trap, 16.x.1982, Hämäläinen lgt. (CUP); 1 female, Thailand 240 km NW Bangkok, 25 km NW Lan-Sak, 110 m, on light, Thielen lgt.” (NHMW); 2 males, 4 females, Thailand, Chiang Mai prov., Mae Hia 350 m, 18.i.1992, Schwendinger lgt. (MHNG, DSC); 1 male, Thailand, Kampang-saen Nation. Biol. Control Res. Ctr, 5.ix.1995, W. Suasa lgt. (DSC); 1 female, Thailand, Ayuthaya P., 11.vi.1997, C. W. & B. O’Brien lgt. (DSC); 1 male, 1 female, Thailand, Chiang Mai prov., Chiang Mai, 330 m, 20.x.1991, Schwendinger lgt. (MHNG); 1 male, Indonesia “Batavia” [Java] 1949, C. v. Nidek lgt. (CKD); 2 males, 2 females, Indonesia, Java, Jakarta, 28.ii.1989, on light, Schödl lgt. (NHMW, CUP).

REDESCRIPTION (male). Body brown-black; pronotum slightly paler, with rufous tinge especially at base; antennae rufous-brown, distinctly darkened, brown-black distally; legs brown-black with proximal narrowed portion of femora paler; mouthparts and palpi dark brown.

Head 1.2 times as long as wide, rounded posteriorly (posterior arch long parabolic); tempora moderately convex; temporal angles entirely obsolete; base distinctly differentiated from short neck. Eyes medium, only moderately convex and protruding. Dorsal surface distinctly punctured, very slightly corrugated on frons and along medial margins of eyes; punctures becoming finer in posterior half towards base; pale pubescence composed of fine, decumbent setae and somewhat longer, only sparsely scattered erect setae. Antennae short, at most reaching to elytral humeri, moderately but distinctly enlarged distally; antennomere I short and thick, 1.8 times as long as wide; the most elongate proximal antennomeres about 2.5 times as long as wide; antennomere X 1.2 times, antennomere XI 1.8 times as long as wide.

Pronotum 1.4 times as long as wide, moderately narrower than head including eyes, regularly rounded anteriorly, strongly narrowed posteriorly, moderately impressed laterally shortly before base; dorsal outline convex in anterior half and at most flattened (not impressed) at level of lateral impressions posteriorly in lateral view. Dorsal surface finely punctured, transversely corrugated at narrowed portion; narrow transverse strip between corrugation and base nearly smooth, glossy; punctures somewhat finer and more densely spaced than those on head; lateral sides largely smooth and glossy, with only few, very fine punctures scattered dorso-laterally in anterior half; bottom of lateral impressions wrinkled and small, slightly vaulted area situated posteriorly to impression rugose and these paired rugosities pass into dorsal transverse corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra 1.6 times as long as wide, somewhat ovoid; humeri only moderately protruding but still distinct; hind membranous wings developed; postscutellar impression absent. Surface finely and sparsely but distinctly punctured (much sparser than forebody); setigerous punctures simple, interspaces seem to be extremely finely punctured, asetose; sparse pubescence composed of more numerous decumbent setae and scattered, slightly longer suberect to erect setae.

Both mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs partly modified (Fig. 6), profemora with conspicuously long and narrow, rod-like process, protibia simple; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi somewhat flattened distally, with terminal segment articulated on its dorsal side, at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 7) with posterior margin nearly simply shaped, with small median process projecting from its dorsal side close before margin and bearing about 4 long, stiff setae apically. Tergite VII with posterior margin simply rounded apically. Prongs of sternite VIII (Figs 8, 9) angulately dilated laterobasally and laterally flattened distally; each prong with flattened, apically narrowed lobe contiguous with its lateral side; apices of prongs obliquely truncate, angulate in lateral view, their dorsal margin rugged distally and with about seven long, stiff setae each; base of prongs ventrally with short, fine setae arranged in curved row and pointing towards apex of latero-basal dilatation. Tergite VIII (Fig. 10) composed of two plates comparatively widely and finely connected medially, distal portion of plates simply rounded apically. Distal portion of tegmen of aedeagus short, 0.4 times as long as basal-piece, simply shaped, narrowed towards rounded apex (Fig. 11).

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII with posterior margin simply rounded apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 2.6–3 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila longispina* can be distinguished by its small size, nearly unicoloured, simply setose body and by the male characters.

REMARKS. Based on examination of the type material, *Formicomus baeri*, *F. spinosus* and *F. vitalisi* are all regarded as synonyms of *Anthelephila longispina*. Along with the typical form, Pic (1912) described *F. longispinus* var. *formosanus*, differing by slightly more elongate bodyform and paler colouration (especially of pronotum). The examined female type is in my opinion somewhat immature specimen of *Anthelephila longispina*. Since, moreover, the types of both taxa are of the same origin (bearing the same locality labels), the name *F. l.* var. *formosanus* is herein regarded as infrasubspecific.

DISTRIBUTION. Rather widespread species, originally described from Taiwan and later recorded from this place by Uhmman (1983). Repeatedly recorded from Thailand by Uhmman (1988, 1994, 1996a, 1996b) and Telnov (1999). In addition, considering the herein listed specimens and proposed synonymy, known to me from Vietnam, Cambodia, Philippines (Luzon isl.) and Indonesia (Java isl.). Occurrence in China (Yunnan prov.), mentioned by Uhmman (1996b), was found to be based on misidentification.

### *Anthelephila biroensis* (Pic, 1956) comb. n.

*Formicomus biroensis* Pic, 1956: 83.

*Formicomus bidentatus* Uhmman, 1983: 189, figs 6–13; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus biroensis* – Syntypes: 1 female “India or. Biró 1902 [p] \ Matheran 800 m [p] \ Holotypus 1956. *Formicomus Biroensis* Pic [label with red fram; Holotypus red printed, the rest handwritten] \ *Formicomus biroensis* n. sp. [h]” (HNHM); 1 female, same locality labels, “paratype [h; red label] \ *Formicomus biroensis* n sp. [h]” (MNHN, coll. Pic); 1 male, same locality labels, “Monotypus 1956 *Formicomus Biroensis* va. *matheranus* Pic [h, p] \ *F. biroensis* v. *matheranus* mihi [h]” (HNHM). *Formicomus bidentatus* – Holotype, male: “India or. Biró 1902 [p] \ Matheran 800 m [p] \ Typus [p; red label] \ *Formicomus bidentatus* n. sp. det. G. Uhmman 1982 [p]”. Paratypes: 27 specimens, same data, except “Para-typus” (20 HNHM, 1 CKD, 6 CUP).

REMARKS. The examined type specimens of *Formicomus biroensis* and *F. bidentatus* are quite identical both morphologically and in the locality labels. Unfortunately, Pic (1956) gave no details on the type material, except for the short note about deposition of single paratype in his collection. For this reason, it is believed, that the type series of *F. biroensis* comprises only those specimens bearing Pic’s determination label.

Along with the typical form, Pic (1956) described *F. biroensis* var. *matheranus*, differing slightly only in colouration of elytra. Since, moreover, all the type specimens are of the same origin (bearing same locality labels), the name *F. b.* var. *matheranus* is herein regarded as infrasubspecific.

DISTRIBUTION. So far known only from the type locality in India (western Maharashtra state).

### *Anthelephila sikkimensis* (Pic, 1913) comb. n.

(Fig. 12)

*Formicomus sikkimensis* Pic, 1913b: 9.

*Formicomus montivagus* Krekich-Strassoldo, 1928: 80, fig. 14; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus sikkimensis* – Holotype, female: “rufopiceus Frm Sikkim [h] \ plus large que rufopiceus [h] \ Type [h; yellowish label] \ TYPE [p; red label] \ Muséum Paris Coll. M. Pic [p] \ *sikkimensis* Pic [h]” (MNHN). *Formicomus montivagus* – Syntype, bearing data: “Brit. Indien: Darjeeling (3440–4720 ft. IV, V)” (NHMW). According to the Krekich-Strassoldo (1928), further syntypes are deposited in the coll. Andrewes (BMNH, not examined).

ADDITIONAL MATERIAL EXAMINED. 1 male, 3 females, India, W-Bengal, Darjeeling distr., Peshoke, 800m, 3–4.vi.1980, G. Topál lgt. (HNHM, CUP); 3 males, 5 females, India, West Bengal, Darjeeling, below North Point, 1000m,

17.iv.1967, G. Topál lgt. (HNHM, CUP); 1 male, Nepal, Ilam distr., 5 km N of Sanishare, feet of Siwalik mts., 270–300 m, mixed Shorea forest, 3–5.iv.1988, J. Martens & W. Schawaller lgt. (CUP); 1 female, Nepal, Sankhua Sabha distr., below Karmarang to Hedangna, tree rich cultural land, 950–1350 m, 5. vi.1988, J. Martens & W. Schawaller lgt. (CUP); 1 female, E-Nepal, Arun valley, Bumlingtar-Chandanpur, 400–600 m, 18.vi.1992, J. & J. Probst lgt. (CKD); 1 male, 1 female, E-Nepal, Dhankutan distr., Hille-Pakhribas, 1400–2000 m, 29.v.1992, J. & J. Probst lgt. (CKD); 1 female, E-Nepal, Arun valley, Khandbari-Bhotebas, 950–1850m, J. & J. Probst lgt. (CWW); 3 males, E-Nepal, Arun valley, Hille-Dholikhorka, 1250–1750m, 31.v.1988, J. Probst lgt. (CWW, CUP); 1 male, 1 female, E-Nepal, Arun valley, Sobae Kohla-Tumlingtar-Khandbari, 400–950m, 4.vi.1992, J. & J. Probst lgt. (CWW); 1 female, C-Nepal, Gosaigonda distr., Halambu, 1300m, 1–16.v.1989, Pashang lgt. (CWW); 9 males, 2 female, W-Nepal, Buri Gandaki, Labubesi-Macha Khola, 1650m, 27.v.1990, J. Probst lgt. (CWW, CUP, CKD); 1 female, W-Nepal, Buri Gandaki, Sudi Labubesi, 1300–1650m, 27.v.1990, J. Probst lgt. (CWW); 1 male, 1 female, W-Nepal, Buri Gandaki, Arughat Bazar-Sudi, 1300m, 24–26.v.1990, J. Probst lgt. (CWW); 1 male, W-Nepal, Buri Gandaki, Macha Khola-Kholabenesi, 1650 m, 29.v.–4.vi.1990, J. Probst lgt. (CKD); 1 male, 1 female, Nepal, Chitwan Nat. Park, Sauraha, 4–6.vi.1999, A. Kudrna jr. lgt. (CKD); 1 female, Nepal, Chandra-kot, 25 km NW of Pokhara, Z. Andrš lgt. (CKD); 10 males, 18 females, Nepal centr., Gandaki distr., 1150–1500m, 21–29.v.2001, P. Kresl lgt. (CKD).

DIAGNOSIS. Photo of habitus presented by Uhmman (1990a) for *Formicomus montivagus*; medium-sized (3.9–4.8 mm); forebody dark reddish-brown, elytra black with blue-green reflection. The male characters partly figured by Krekich-Strassoldo (1928) in *F. montivagus* (prongs of sternite VIII therein figured in lateral view); metasternum with a pair of posteriad pointing, dent-like protrusions close before posterior margin; profemoral process strong, lobe-like shaped; sternite VII with median process, projecting from its dorsal side, close before posterior margin, laterally flattened and widened apically; tergite VII incised apically; tegmen of aedeagus trilobed apically. Both female sternite and tergite VII tapering apically and apex of the latter (Fig. 12) distinctly incised.

*Anthelephila sikkimensis* can be easily confused with closely related *A. gloriosa* from China. They share most of external characters (including colouration), but differ by morphology of male sternite VIII and female tergite VII (the latter simply rounded apically in *A. gloriosa*).

REMARKS. The proposed new synonymy is based on identity of the examined types and the additional specimens. It is also supported by the fact, that both the type localities are very closely situated and *A. sikkimensis* has no close relatives in the Himalaya mountains.

DISTRIBUTION. Originally described from Sikkim. As *Formicomus montivagus* recorded from Nepal and India (West Bengal state) by Uhmman (1983, 1986, 1990a). Record from Thailand by Uhmman (1994) is based on misidentified specimens of uncertain identity, however, showing clear relationship to *Anthelephila taliana*.

### *Anthelephila corbetti* (Pic, 1897) comb. n.

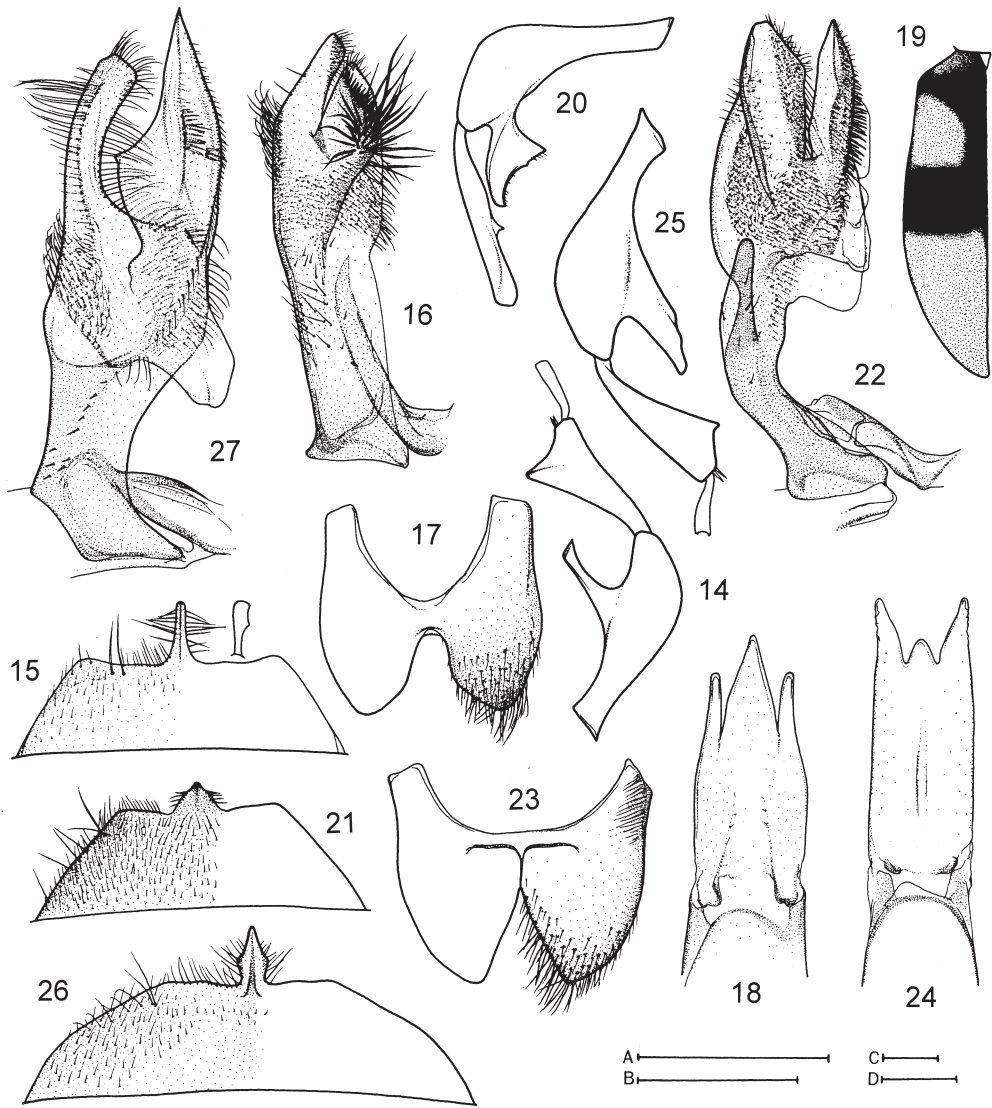
(Figs 13–18)

*Formicomus Corbetti* Pic, 1897: 75.

*Formicomus corbetti* var. *viridipennis* Pic, 1907: 341; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus corbetti* – Syntypes: 1 male: “Toungoo \ type \ TYPE [red label] \ For. Corbetti Pic” [all handwritten] (MNHN); 1 male: “Toungoo \ [male mark] \ type \ Formicomus Corbetti Pic” [all handwritten] (MNHN); 1 female: “Toungoo \ [female mark] \ type” [all handwritten] (MNHN). According to Pic (1897), further syntypes are deposited in the coll. Andrewes (BMNH, not examined). *Formicomus corbetti* var. *viridipennis* – 1 male [lacking forebody]: “Bhamo Birmania Fea VII 1886 [mostly printed, thin black frame] \ type \ TYPE [red label]” (MNHN); 2 females, same locality label (MNHN); 1 female: “Birmania Shwegoo Myo Fea X 1885 [mostly printed, thin black frame] \ type” (MNHN). According to Pic (1907), further syntypes are deposited in the coll. Fea (MCSN, not examined) and ZHMB (not examined).

ADDITIONAL MATERIAL EXAMINED. 1 male: “Bhamo, Birmania Fea VIII 1886 [mostly printed] \ Corbetti Pic det.” (NHMW); 1 male: “Toungoo [h] \ Co-type [round label; printed in green ring]” (NHMW); 1 male: “Museum Prag Hinter Indien Tenasserim [sic!], p] \ Coll. Helfer. [p] viridipennis Pic det. [h]” (NHMW).



Figs 14–27. 14–18. *Anthelephila corbetti* (Pic), male: 14 – front leg, 15 – sternite VII and apex of median process laterally, 16 – prong of sternite VIII, 17 – tergite VIII, 18 – apical portion of tegmen of aedeagus. 19–24. *A. paviei* (Pic), male: 19 – elytron, colour pattern, 20 – front leg, 21 – sternite VII, 22 – prong of sternite VIII, 23 – tergite VIII, 24 – apical portion of tegmen of aedeagus. 25–27. *A. siamensis* sp. n., male: 25 – front leg, 26 – sternite VII, 27 – prong of sternite VIII. Scale – 0.5 mm: A – 15, 17, 21, 23, 26, B – 14, 20, 25, C – 19; 0.1 mm: D – 16, 18, 22, 24, 27.

REDESCRIPTION (male). Head black with very slight greenish tinge; pronotum rufous-brown to largely black (as head) with base somewhat paler, dark rufous-brown; elytra black with rather distinct green reflection; mouthparts and palpi brown-black; antennae and legs unicoloured rufous-brown to brown-black, with proximal narrowed portion of femora somewhat paler.

Head 1.1 times as long as wide, its basal portion (behind eyes) comparatively short, posterior arch only moderately convex; tempora short, strongly narrowing posteriad immediately behind eyes; hind temporal angles entirely obsolete, base well differentiated from short neck. Eyes conspicuously large, rather convex and moderately protruding. The whole dorsal surface evenly and distinctly punctured, very finely corrugated on frons and along medial margins of eyes; frons shallowly impressed laterally (postero-medially to insertion of antennae); pubescence composed of shorter and denser subdecumbent setae and sparsely scattered, longer erect setae. Antennae long, distinctly exceeding elytral humeri, slim, at most slightly enlarged distally; antennomere I short and thick, the most elongate middle antennomeres nearly 2.5 times as long as wide, antennomere X twice, antennomere XI 2.3 times as long as wide.

Pronotum elongate, 1.5 times as long as wide, distinctly narrower than head including eyes, regularly rounded anteriorly, only moderately impressed (constricted in dorsal view) laterally in posterior half, more or less vaulted dorsally over the whole length, with dorsal outline at most flattened (not impressed) at constricted portion in lateral view. Dorsal surface rather evenly and distinctly punctured (similarly as head) and at places finely corrugated; corrugation longitudinal medially in anterior half (sometimes obsolete) and dorso-laterally in posterior half (at level of lateral impression) and transverse in posterior half shortly before base (connecting dorso-lateral wrinkles); lateral sides with only few, very fine punctures dorso-laterally in anterior half, largely smooth and glossy, including bottom of lateral impression, only small vaulted area situated posteriorly to lateral impression punctured to somewhat rugose and these latero-basal rugosities pass into longitudinal wrinkles of dorso-lateral corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra 1.9 times as long as wide; humeri rather distinct and protruding, hind membranous wings well developed; postscutellar impression absent; punctuation seems to be double, composed of coarse setigerous punctures with interspaces finely punctured, asetose; setigerous punctures slightly coarser than those on head, more widely spaced anteriorly and becoming distinctly denser in posterior half. Pubescence in general longer than on forebody; shorter setae decumbent and sparser anteriorly and becoming subdecumbent and denser in posterior half, which may resemble rather wide, vaguely delimited, transverse band; longer erect setae more distinct and numerous in posterior half, especially subapically.

Mesosternum simply shaped; metasternum with postero-median margin (between metacoxae) projecting into strong, pointed, thorn-like process, with sharp medio-longitudinal edge ventrally.

Legs with femora distinctly clavate; front legs modified (Fig. 14); profemora with long process, its apex somewhat widened and obliquely truncate; protibia strongly angulately dilated inwards in distal half; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 15) with posterior margin slightly emarginate and projecting into distinct median process; process laterally flattened in distal half and with sharp ventral edge, its lateral margins long setose. Tergite VII (Fig. 13) narrowed distally and slightly incised apically. Paired prongs of sternite VIII (Fig. 16) dorso-ventrally flattened distally and branched out in apical fourth, lateral branches narrower and moderately exceeding median ones; surface of prongs finely and shortly setose ventrally and with somewhat clustered, long, stiff setae on dorsal side distally.

Tergite VIII (Fig. 17) composed of two, paired plates, comparatively widely connected medially and simply rounded apically. Distal portion of tegmen of aedeagus 0.6 times as long as basal-piece, trilobed apically (Fig. 18); middle lobe wider and distinctly exceeding lateral lobes.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; metasternum lacking postero-medial process; both sternite and tergite VII comparatively simply shaped; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 4.6–5.3 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila corbetti* is no doubt very closely related to *A. paviei* and *A. siamensis* sp. n. They share in common similar bodyform, character of elytral punctation and pubescence and show similarity in the male characters. The following key can be used for their separation:

- 1 (4) Elytra dark unicoloured.
- 2 (3) Elytra with distinct blue reflection; base of head longer and posterior arch more convex in dorsal view, eyes smaller; dorsal punctation of pronotum uneven; antennae stronger, conspicuously enlarged distally, segment X 1.3 times as long as wide; elytral pubescence longer, posterior decumbent setae sparser; male metasternum simple, male characters as in Figs 25–29. .... *A. siamensis* sp. n.
- 3 (2) Elytra with green reflection; basal portion of head short and posterior arch less convex in dorsal view, eyes larger; dorsal punctation of pronotum even; antennae narrower, only slightly enlarged distally, segment X twice as long as wide; elytral pubescence shorter, posterior subdecumbent setae denser; male metasternum projecting into sharp process postero-medially, further male characters as in Figs 13–18. .... *A. corbetti* (Pic)
- 4 (1) Elytra light, with conspicuous, more or less extensive black marking (Fig. 19); male characters as in Figs 20–24. .... *A. paviei* (Pic)

REMARKS. According to Pic (1907) *Formicomus corbetti* var. *viridipennis* differs from the typical form by the lighter coloured, testaceous legs and by presence of posterior setose band on elytra. I can not see the latter difference in pubescence. It could be somewhat abraded in the respective specimen. Colouration of legs is no doubt variable and thus of no taxonomical value. On the other hand, the dissected male specimens (NHMW) agree fully in all male characters and for this reason, *F. c.* var. *viridipennis* is regarded as synonym of the typical form.

Bearing the same locality labels, the two male specimens from NHMW are very probably of the same origin as the types (topotypic). However, they lack any original Pic's labels (the label "Corbetti Pic det." is newly handwritten, probably by Heberdey) and thus, they are listed in the other material.

DISTRIBUTION. Originally described from Myanmar. Recorded from Thailand by Telnov (1999).

***Anthelephila paviei* (Pic, 1896) comb. n.**  
(Figs 19–24)

*Formicomus paviei* Pic, 1896: 250.

*Formicomus paviei* var. *bimaculatipennis* Pic, 1896: 250; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus paviei* – Syntype, female: "MUSEUM PARIS CAMBODGE Pavie 1886 [p; on down side handwritten: "2565 86"] \ 2565 86 [handwritten on down side; yellow round label] \ TYPE [p; red label] \ *Formicomus Paviei* n sp. Pic Pic. det. 1896 [h; two labels stuck together]" (general coll., MNHN). *Formicomus paviei* var. *bimaculatus* – Syntype, female: "MUSEUM PARIS LUANG-PRABANG & THENG Pavie 1888 [p; on down side handwritten: "977 1888"] \ 977 88 [handwritten on down side; round label] \ TYPE [p; red label] \ *Formicomus Paviei*. Pic v. *bimaculatus* Pic Pic. det. 1896 [h; two labels stuck together]" (general coll., MNHN).

ADDITIONAL MATERIAL EXAMINED. 16 males, 10 females, LAOS centr., 70 km NE Vientiane, Ban Phabat env., N 18°16.1, E 103°10.9, 150 m, E. Jendek & O. Šauša leg. (CKD); 5 males, 9 females, same data, except: M. Štrba & R. Hergovits leg. (CKD).

REDESCRIPTION (male). Head and pronotum rufous-brown to dark brown with rufous tinge, head sometimes distinctly darkened, brown-black medially; elytra yellowish-brown with rufous tinge and with more or less extensive but always conspicuous black marking (Fig. 19), not touching lateral margin; antennae, mouthparts and legs rufous-brown.

Head 1.2 times as long as wide, posterior arch rather convex; tempora arcuately narrowing posteriad immediately behind eyes; hind temporal angles obsolete, base well differentiated from short neck. Eyes large, convex and moderately protruding from lateral outlines of head. Dorsal punctation rather distinct, punctures at places slightly umbiliform, becoming sparser in posterior half towards base; the whole dorsal surface, except basal portion, finely corrugated, wrinkles mostly transversely oriented, longitudinal only laterally, along median margins of eyes; frons shallowly impressed laterally (postero-medially to insertion of antennae); pubescence composed of shorter and denser, subdecumbent setae and sparsely scattered, longer erect setae. Antennae long, distinctly exceeding elytral humeri, moderately enlarged distally; antennomere I short and thick, the most elongate middle antennomeres slightly more than twice as long as wide, antennomere X 1.5 times, antennomere XI twice as long as wide.

Pronotum elongate, 1.5 times as long as wide, distinctly narrower than head including eyes, regularly rounded anteriorly, only moderately impressed (constricted in dorsal view) laterally in posterior half, more or less vaulted dorsally over the whole length, with dorsal outline at most flattened (not impressed) at constricted portion in lateral view. Dorsal surface punctured largely similarly as head, more or less distinctly (variability) corrugated in posterior half: longitudinally on dorso-lateral sides and transversely before base; dorsal punctures finer in anterior third (near collar), sometimes becoming slightly umbiliform in posterior half, near corrugation; lateral sides with only few, very fine punctures dorso-laterally in anterior half, largely smooth and glossy, including bottom of lateral impression, only small vaulted area situated posteriorly to lateral impression punctured to somewhat rugose and these latero-basal rugosities pass into longitudinal wrinkles of dorso-lateral corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head, subdecumbent setae pointing mediad.

Elytra twice as long as wide; humeri rather distinct and protruding, hind membranous wings well developed; postscutellar impression absent; punctation double, composed of coarse setigerous punctures with interspaces finely punctured, asetose; setigerous punctures slightly coarser than those on head, more widely spaced anteriorly and becoming distinctly denser in posterior half. Pubescence in general longer than on forebody; decumbent setae sparser anteriorly and becoming more likely subdecumbent and distinctly denser in posterior half; erect setae more distinct and numerous in posterior half, especially subapically.

Both mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 20); profemora with conspicuous process, strongly widened and flattened distally, its dorsal side shallowly impressed and apical (outer) edge short setose; protibia with dent-like protuberance in distal half; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 21) shallowly impressed postero-medially on ventral side, with short and wide median process projecting from its posterior margin, narrowing towards bluntly pointed and slightly down-turned apex, with several short setae implanted dorsally. Tergite VII with posterior margin simply rounded apically. Paired prongs of sternite VIII (Fig. 22) narrow proximally and conspicuously widened, dorso-ventrally flattened in distal half; narrowed portion of prongs curved ventrad and with rather sclerotized, simply shaped lobe-like process on dorsal side;

distal portion of prongs branched out apically and with four extremely fine membranous lobes medially, its ventral surface largely finely and densely short setose and with somewhat clustered, very long setae arranged along median margin of lateral branch. Tergite VIII (Fig. 23) composed of two, paired plates, rather widely connected medially, with apices rounded. Distal portion of tegmen of aedeagus 0.7 times as long as basal-piece, trilobed apically (Fig. 24); middle lobe distinctly shorter than slightly divergent lateral lobes.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII simply shaped, with posterior margin rounded (sternite) or moderately tapering (tergite) apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 4.2–5.6 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila paviei* is related to *A. corbetti* and *A. siamensis* sp. n., but differs from both of them mainly by colouration (elytra with black marking as in Fig. 19) and by male characters (especially by peculiar form of profemoral process, cf. Figs 14, 20, 25). Sympatric *A. picta* sp. n. is similarly coloured as *A. paviei*, but differs by numerous morphological characters. For their separation see the diagnosis of the former species.

REMARKS. The syntype of *Formicomus paviei* var. *bimaculatipennis* is no more than somewhat darker coloured specimen of *Anthelephila paviei*, with more extensive dark marking of elytra. Being identical in morphological characters, it is regarded as synonym of the latter species.

DISTRIBUTION. Cambodia, Laos.

### *Anthelephila siamensis* sp. n.

(Figs 25–29)

TYPE MATERIAL EXAMINED. Holotype, male: "THAILAND-CHIANG MAI-MAE TAENG 15.VII.1997 KLÍCHA M. Lgt." (NMPC). Paratypes: 36 males, 15 females, same data as holotype (38 CKD, 2 BMNH, 2 CUP, 2 HNHM, 2 MHNG, 2 MNHN, 1 NHMB, 2 NHMW); 1 male: "SIAM 1930 W. R. S. Ladell N. 24 [largely printed] \ 1123 [number of slide] \ [male mark] \ TYPE [p; red label] \ Chong At light II.: 30 [partly illegible] \ coll. Heberdey \ Formicomus siamensis Hbdy Dr. R. F. Heberdey \ siamensis nov." (NHMW).

DESCRIPTION (male). Externally identical with the above redescribed *A. corbetti*, but differs in the following characters:

Elytra with blue reflection. Head moderately elongate, 1.2 times as long as wide, its basal portion (behind eyes) longer, posterior arch more convex in dorsal view. Dorsal punctation of pronotum uneven; punctures distinctly finer anteriorly and becoming gradually coarser towards base; the coarsest punctures, situated along (medially to) dorso-lateral corrugation in posterior half, distinctly larger than those on head, shallow, with interspaces smaller than their diameter; postero-dorsal transverse corrugation nearly obsolete; anterior medio-longitudinal corrugation always absent. Elytral pubescence generally longer, with shorter setae in posterior half decumbent and sparser. Both meso- and metasternum simple. Antennae strong, with distal segments distinctly enlarged and flattened, antennomere X 1.3 times, antennomere XI 1.9 times along as wide and distinctly narrower than antennomere X. Profemoral process conspicuously strong and protibia less dilated inwards in distal half (Fig. 25).

Abdomen. Sternite VII (Fig. 26) shallowly impressed postero-medially on ventral side, with median process projecting from its posterior margin, process widened at mid-length and then narrowing towards bluntly pointed apex, with distinct medio-longitudinal keel-like edge on ventral side. Tergite VII with posterior margin simply rounded apically. Paired prongs of sternite VIII (Fig. 27) somewhat dorso-ventrally flattened, branched out in distal half and with fine lobe medially in proximal half; lateral branches of prongs narrow, nearly parallel-sided and rounded to subtruncate apically, median branches wide and narrowing towards sharply pointed apex; ventral surface of

prongs at places short fine setose and with 2–3 short rows of thick setae each, margins of lateral branches long setose. Tergite VIII (Fig. 28) composed of two, paired plates, rather widely connected medially, with apices rounded to bluntly pointed. Distal portion of tegmen of aedeagus 0.6 times as long as basal-piece, trilobed apically (Fig. 29); middle lobe wide basally, lateral lobes much narrower, finger-like, moderately exceeding apex of middle lobe.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII simple, with posterior margin rounded apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 4.8–6.4 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila siamensis* sp. n. is closely related to *A. corbetti* and *A. paviei*. They can be separated by using the key in the differential diagnosis of *A. corbetti* (see above). Furthermore, *A. siamensis* sp. n. may resemble somewhat similarly coloured and wide-spread *A. ruficollis* Saunders, 1836, but differs by bodyform (elongate pronotum distinctly narrower than head; more elongate elytra with distinct humeri), much larger eyes, stronger antennae as well as by all the male characters.

ETYMOLOGY. The species was originally named by R. F. Heberdey (see Remarks).

DISTRIBUTION. Thailand.

REMARKS. This new species was discovered and named as *Formicomus siamensis* by Austrian entomologist R. F. Heberdey, however its description was never published. Since the respective specimen (NHMW) is in poor stand, bearing somewhat illegible locality data, the holotype was newly selected from recently collected material.

### *Anthelephila taliana* (Pic, 1913) comb. n.

(Figs 30–32)

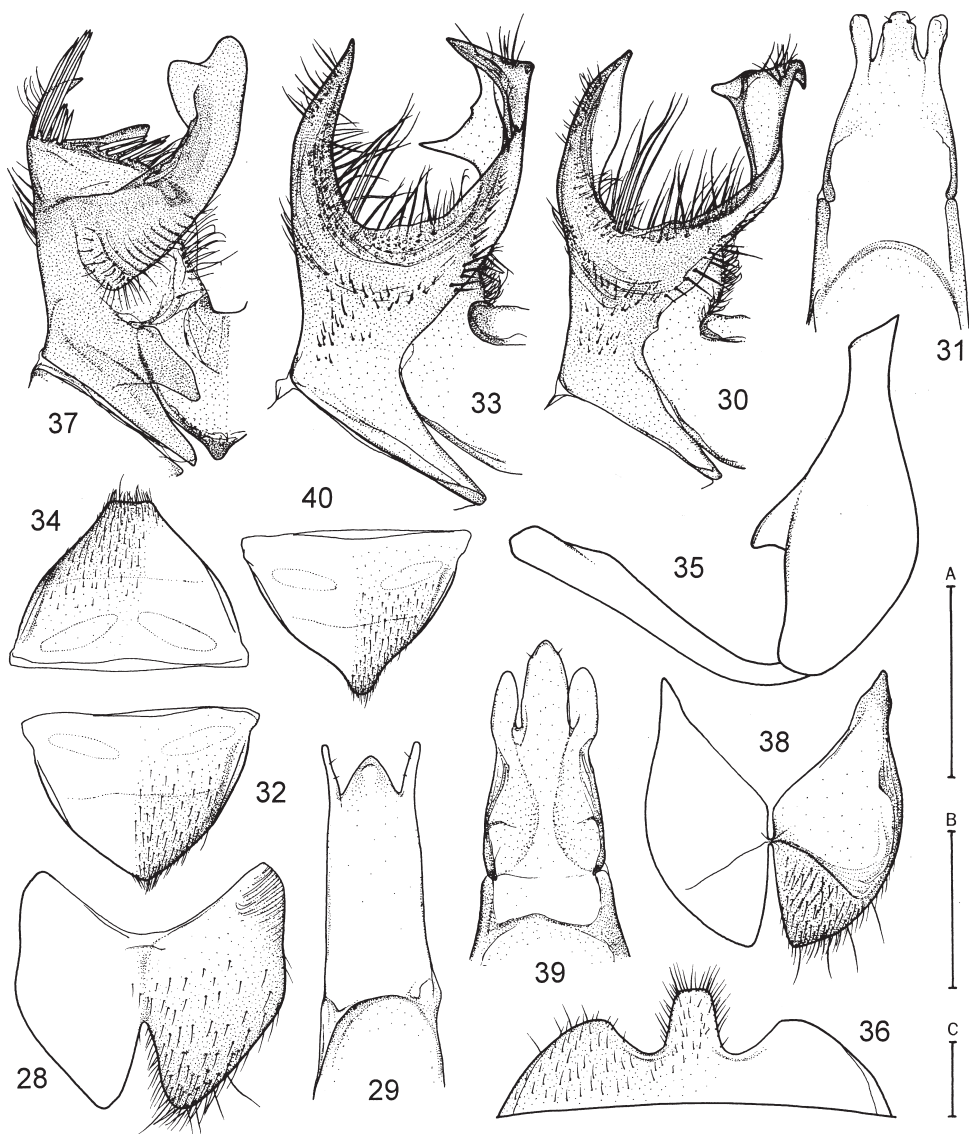
*Formicomus caeruleipennis* var. *talianus* Pic, 1913: 9.

*Formicomus kippenbergi* Uhmman, 1978: 81, figs 1–5; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus talianus* – Syntype, female: “Tali Yunnan [h] \ Type [h]; TYPE [p; red label] \ Museum Paris Coll. M. Pic [p] \ caeruleipennis v. talianus Pic [h]” (MNHN). *Formicomus kippenbergi* – Holotype, male: “China. Prov. Yunnan Vallis flumin. Soling-ho [p] \ Typus [p; red label with black frame] \ Formicomus kippenbergi nov. spec det. G. Uhmman 1975” (CUP).

ADDITIONAL MATERIAL EXAMINED. 1 male, “Yunnan Tali \ coeruleipennis v. talianus Pic” (NHMW); 1 male, “Yunnan \ in coll. Pic \ coeruleipennis v. talianus det. Pic” (NHMW); 10 males, 2 females, “China, Prov. Yunnan \ Vallis flumin. Soling-ho” (6 NHMW, 5 NMPC, 1 CKD); 11 males, 6 females, China, Yunnan, 100 km W Kunming, Diaolin Nat. Res., 22.v.–2.vi.1993, E. Jendek & O. Šauša lgt. (NHMW, CUP, CKD); 7 males, 5 females, China, Yunnan, Lugu lake – Luo Shui 27°45'N 100°45'E, 8–9.vii.1992, E. Jendek lgt. (NHMW, CUP, CKD); 1 male, China, Yunnan, env. Baoshan, 5–8.vi.1993, E. Jendek & O. Šauša lgt. (NHMW); 3 females, China, Yunnan, Lijiang 26°53'N 100°18'E, 1800 m, 23.vi.–21.vii.1992, E. Jendek lgt. (NHMW); 1 male, the same data, except: S. Bečvář lgt. (CUP); 1 female, China, Yunnan, 15 km N Lijiang, 2500–2800 m, 6.vii.1994 (CKD); 1 male, 1 female, China, Yunnan, Weishan Mt., 25.10N 100.21E, 1800–2500 m, 22–25.vi.1992, V. Kubáň lgt. (CKD); 3 males, 2 females, China, Yunnan, Dali zhou, Weishan county, Weibao Shan, 2700–3000 m, 30.vi.–17.vii.1993 (CKD); 2 males, 3 females, China, Yunnan, 10 km E of Yunlong vill., 17–18.viii.1998, O. Šafránek & M. Trýzna lgt. (CKD); 2 males, 1 female, NE-Laos, Hua Phan prov., Ban Saluei, Phu Phan Mt., 20°15'N 104°02'E, 1500–2000 m, 26.iv.–11.v.2001, J. Bezděk lgt. (CKD).

DIFFERENTIAL DIAGNOSIS. *Anthelephila taliana* is no doubt closely related to *A. basirufa*, *A. rufobasalis* and *A. sinica* sp. n., as suggested by the following, shared characters: similar colouration and bodyform; male sternite IV with a pair of short, longitudinal ribs medially (except for *A. rufobasalis*); posterior margin of male sternite VII with more or less protruding median process; rather typical general form of sternite VIII (see Figs 30, 33, 37); paired plates of tergite VIII dorsally with



Figs 28–40. 28–29. *Anthelephila siamensis* sp. n., male: 28 – tergite VIII, 29 – apical portion of tegmen of aedeagus. 30–32. *A. taliana* (Pic): 30 – prong of male sternite VIII, 31 – apical portion of tegmen of aedeagus, 32 – female tergite VII. 33. *A. lacertosa* (Krekich-Strassoldo): 33 – prong of male sternite VII. 34. *A. rufobasalis* (Pic): 34 – female tergite VII. 35–40. *A. sinica* sp. n.: 35 – male front leg, 36 – male sternite VII, 37 – prong of male sternite VIII, 38 – male tergite VIII, 39 – apical portion of aedeagus, 40 – female tergite VII. Scale – 0.5 mm: A – 28, 35, 36, 38, B – 32, 34, 40; 0.1 mm: C – 29–31, 33, 37, 39.

rib-like edge, separating their distal portion; apex of tegmen of aedeagus trilobed; both male and female mesosternum modified, with medio-longitudinal bulge.

The following key can be used for their separation:

- 1 (8) Male sternite IV with a pair of short, longitudinal ribs medially; median process of male sternite VII long and protruding, if short then pointed apically; female tergite VII more or less tapering apically.
- 2 (5) Eyes larger and less protruding (less convex); median process of male sternite VII short, narrowing towards pointed apex, similarly as figured by Uhmman (1978, Fig. 2); medio-longitudinal bulge of female mesosternum narrow, sharply delimited laterally by parallel furrow, its ventral outline straight in lateral view; female tergite VII simply shaped apically (similarly as in Fig. 32); apex of tegmen of aedeagus (Fig. 31).
- 3 (4) Male sternite VIII (Fig. 30). ..... *A. taliana* (Pic)
- 4 (3) Male sternite VIII (Fig. 33). ..... *A. lacertosa* (Krekich-Strassoldo)
- 5 (2) Eyes smaller and more protruding (more convex); median process of male sternite VII conspicuously long, rounded to subtruncate apically; medio-longitudinal bulge of female mesosternum wide, less distinctly delimited laterally, its ventral outline more or less convex in lateral view; female tergite VII distinctly produced apically (Fig. 40); apex of tegmen of aedeagus (Fig. 39).
- 6 (7) Base of elytra (at most near scutellum) rufous brown; median process of male sternite VII narrow, somewhat widening towards apex; median arms of male sternite VIII narrow and comparatively simply shaped distally; female mesosternum with medio-longitudinal bulge flatly lowering posteriorly. .... *A. basirufa* (Krekich-Strassoldo)
- 7 (6) Basal fourth of elytra rufous-brown (humeri sometimes darkened); median process of male sternite VII (Fig. 36) wide, moderately narrowing towards apex; median arms of male sternite VIII (Fig. 37) strong, somewhat widened and bilobed apically; bulge of female mesosternum with short medio-longitudinal edge posteriorly. .... *A. sinica* sp. n.
- 8 (1) Male sternite IV simple; median process of male sternite VII short and rather wide (see Fig. 11A by Krekich-Strassoldo, 1928); female tergite VII (Fig. 34) truncate apically. .... *A. rufobasalis* (Pic)

REMARKS. Excepting somewhat similar colouration, the examined female syntype of *Formicomus caeruleipennis* var. *talianus* has nothing in common with the Western-palaeartic *F. caeruleipennis* (LaFerté-Sénéctère, 1847) and its more eastwards distributed relatives and it is, therefore, raised to the species level. The above proposed new synonymy is supported mainly by identity of male characters in the male bearing Pic's determination label and data "Tali Yunnan", numerous specimens newly collected near Dali (= Tali in western Yunnan) and the type of *F. kippenbergi*.

DISTRIBUTION. So far known only from China (Yunnan prov.) and Laos. The short note by Koch (1939) about possible occurrence of *F. caeruleipennis* var. *talianus* in Iraq (specimens from Bagdad in the coll. Frey) is undoubtedly based on misidentification.

### ***Anthelephila lacertosa* (Krekich-Strassoldo, 1931) comb. n.**

(Fig. 33)

*Formicomus lacertosus* Krekich-Strassoldo, 1931: 11, fig. 23.

TYPE MATERIAL EXAMINED. Syntypes: 1 male, "W. Almora Div. Kumaon U.P. June 1918. HGC [p]; 751A [number of micro. slide] \ TYPE [p; red label] \ lacertosus Kr. det. v. Krekich [p; species name handwritten] \ coll. Heberdey [p] \ *F. talianus* Pic = lacertosus Krek. Dr. R. F. Heberdey; talianus [h]" (NHMW); 1 male, "Khaula 4500 ft. Almora, India H.G.C. [p] \ TYPE [p; red label]; 737A [number of micro. slide] \ lacertosus Kr. det. v. Krekich \ coll. Heberdey \ *F. talianus* Pic = lacertosus Krek. Dr. R. F. Heberdey" (NHMW).

ADDITIONAL MATERIAL EXAMINED. 1 female, E-Nepal, Arun Valley, Khandbari-Bhotebas, 1000–1750 m, 5.vi.1988, J. Probst lgt. (CWW); 2 males, W-Nepal, Buri Gandaki, Macha Khola Kholabenesi, 1650 m, 29.v.–4.vi.1990, J. Probst lgt. (CWW); 1 male, Nepal, Kathmandu, 27.v.–3.vi.1999, A. Kudrna jr. lgt. (CKD); 1 female, Nepal, Chandrakot, 25 km NW of Pokhara, 19.vi.1999, Z. Andriš lgt. (CKD); 1 male, 1 female, N-Nepal, Rasuwa distr., Dhunche, 2000–2500 m, 10–14.vi.1999, P. Kresl lgt. (CKD); 1 male, 1 female, Nepal centr., Godawari, 16–17.v.1992, I. Jeniš lgt. (CKD); 2 males, Nepal centr., Birethanti-Gorepani, 4–9.vi.1992, I. Jeniš lgt. (CKD).

REMARKS. As evident from the label data, *Formicomus lacertosus* was regarded as synonym of *F. talianus* by Heberdey, however, he has never published his opinion. Having compared these

species, I can see no substantial differences in general and most of the male characters, except for details in the form of male sternite VIII (cf. Figs 30, 33). Since both these forms appear to be relatively constant within examined specimens, *Anthelephila lacertosa* is herein preserved as valid species.

DISTRIBUTION. Originally described from India (Uttar Pradesh state). Recorded from Nepal by Uhmman (1985).

***Anthelephila rufobasalis* (Pic, 1913) comb. n.**

(Fig. 34)

*Formicomus rufopiceus* var. *rufobasalis* Pic, 1913b: 9.

*Formicomus montanus* Krekich-Strassoldo, 1914a: 111; **syn. n.**

TYPE MATERIAL EXAMINED. *Formicomus rufobasalis* – Syntype, female: “Mandi State [h] \ Type [h; yellowish label] \ TYPE [p; red label] \ rufopiceus var rufobasalis Pic [h] \ [illegible label]” (MNHN). *Formicomus montanus* – Syntype, male: “Punjab. Kangra Valley 1903–37. [p] \ [male mark] \ Kangra Valley 4500 ft. [p] \ June 1899 Dudgeon [p] \ 31A [number of slide] \ TYPE [p; red label] \ montanus det. v. Krekich [species name handwritten] \ coll. Heberdey \ F. rufobasalis Pic = montanus Kr. Dr. R. F. Heberdey” (NHMW). According to the original description, further syntypes are deposited in BMNH (not examined).

ADDITIONAL MATERIAL EXAMINED. 1 male [dissected by Heberdey, number of slide 1240], “Mandi State [h] \ in coll Pic \ F. rufopiceus v. rufobasalis det. Pic [h] \ coll. Heberdey \ F. rufopiceus Pic sp. pr. = montanus Krek. Dr. R. F. Heberdey” (NHMW); 1 male, India, Assam, Manas 200 m, 22.x.1978, Besuchet & Löbl lgt. (CUP); 2 males, N-India, Uttar Pradesh, Rishikesh, road to Uttarkashi (23km), 6.vii.1989, A. Riedel lgt. (CWW, CKD); 1 male, N-India, Uttar Pradesh, ca 20 km N Rishikesh, 1300 m, 6.vii.1989, Hiermeier lgt (CUP); 10 males, 2 females, W-Nepal, Gurkha distr., Tharpu-Kali Sundhara Baz., 1300–2000m, 10.vi.1993, J. & J. Probst. (CKD); 4 males, 3 females, W-Nepal, Buri Gandaki, Macha Khola Kholabenesi, 1650m, 29.v.–4.vi.1990, J. Probst. lgt. (CWW, CUP); 7 males, W-Nepal, Buri Gandaki, Labubesi Macha-Khola, 1650m, 27.v.1990, J. Probst lgt. (CWW, CUP, CKD); 1 male, 2 females, W-Nepal, Gorkha Khanchok-Arughat Bazar, 1500–1700m, 23.vi.1990, J. Probst lgt. (CWW); 1 female, W-Nepal, Anklu Khola, Kali-Sundhara-Katunjhe, 1300–2150m, 9.vi.1990, J. Probst lgt. (HNHM); 1 male, Nepal centr., Kathmandu-Balaju water garden, 7.vi.2001, P. Kresl lgt. (CKD); 2 males, 4 females, E-Nepal, Gosaigonda distr., Halambu, 1300m, 1–16.v.1989, Pashang lgt. (CWW); 2 males, E-Nepal, Trisuli distr., Samri Bhanjyang-Trisuli Bazar, 2050–2100m, 10.vi.1990, J. Probst lgt. (CWW); 2 males, E-Nepal, Anklu Khola, Katunjhe-Samri Bhanjyang, 2100–2150m, 10.vi.1990, J. Probst lgt. (CKD, CWW).

REMARKS. The examined type of *Formicomus rufopiceus* var. *rufobasalis* Pic is no doubt clearly different from the typical form (redescribed below) and it is, therefore, raised to species level. As evident from the label data, the herein proposed new synonymy of *Anthelephila rufobasalis* and *Formicomus montanus* was first discovered but never published already by Heberdey. It is based mainly on identity of the type specimens and the additionally examined male specimen (NHMW, probably topotypic), originating from the Pic’s collection.

DISTRIBUTION. Originally described from Mandi in India (Himachal Pradesh state). So far recorded only as *Formicomus montanus* from India (West Bengal, Uttar Pradesh, Himachal Pradesh states) by Krekich-Strassoldo (1914a, 1928) and from Nepal by Uhmman (1996a). Further, more eastwards located records of *F. montanus* by Uhmman (1987, 1990b) belong partly to *Anthelephila basirufa* (six specimens from Assam, MHNG, listed below) and to a species related to *A. taliana* (specimens from Thailand, MHNG).

***Anthelephila basirufa* (Krekich-Strassoldo, 1928) comb. n.**

*Formicomus basirufus* Krekich-Strassoldo, 1928: 76, fig. 10.

TYPE MATERIAL EXAMINED. Syntype, male: “Arni Gad. Mussorie. [p] \ Dr. Cameron. 28.V.21 [largely printed] \ TYPE [p; red label] \ 17A [number of micro. slide] \ coll. Heberdey [p] \ Formicomus basirufus Kr. det. V. Krekich [species name handwritten] \ basirufus Krek [h; black frame]” (NHMW). According to Krekich-Strassoldo (1928), further

syntypes from “Kaligad-Dehra-Dun” are deposited in the Forest Research Institut in Dehra-Dun, India (not examined).

ADDITIONAL MATERIAL EXAMINED. 6 males, 7 females, India, Uttar Pradesh, Mussoorie, vii.1992, Werner lgt. (CKD, CUP); 1 female, India, Uttar Pradesh, S. Garhwal, Kumaon, Champion lgt. (NHMW); 1 female, India, Uttar Pradesh, Ranikhet, Champion lgt. (NHMW); 1 male, 1 female, C-Nepal, Kathmandu valley, Balaju\Kathmandu, 1400m, 5.vii.1986, Probst lgt. (NHMW); 1 male, E-Nepal, Dhankutan Distr., Hille-Pakhribas, 1400–2000 m, 29.v.1992, J. & J. Probst lgt. (CKD); 1 male, E-Nepal, Kosi Zone, Dhankuta Distr., Arun valley, Hille-Shidua, Bhedetar, 2000–2700 m, 24–28.v.1996, P. Čechovský lgt. (CKD); 1 male, India, West Bengal, Darjeeling, Tista valley, 27.ix.1929, J. C. M. Gardner lgt. (NHMW); 1 male, 5 females, India, Assam, Manas, 200 m, 22.x.1978, Besuchet & Löbl lgt. (MHNG, CUP).

REMARKS. The figure of the male sternite VIII in the original description of *Anthelephila basirufa* is somewhat misleading, since the segment mounted in microscopic slide is strongly depressed and thus deformed. In the natural condition, distal narrowed portions of median arms of prongs are subparallel to contiguous in median row. Similarly, the original figure of tegmen of aedeagus is rather schematic and inaccurate. The real form of its apical portion is very close to that in *A. sinica* sp. n. (Fig. 39).

DISTRIBUTION. Originally described from India (Uttar Pradesh state). Recorded from Nepal by Uhmman (1990a). Its occurrence in Thailand (Uhmman 1994) seems to be doubtful.

### *Anthelephila sinica* sp. n.

(Figs 35–40)

TYPE MATERIAL EXAMINED. Holotype, male: “China – Yunnan, Maugay env., near Wuding 100 km NW of Kunming, 25 July 1995 Zd. Jindra lgt.” (NMPC). Paratypes: 3 males, 7 females, same data as holotype (CKD); 2 males, 1 female: “CHINA-Yunnan 22.5–2.6. 100 km W Kunming Diaolin Nat. Res., 1993 E. Jendek & O. Sausa leg. \ Formicomus gloriosus Krekich det. G.Uhmann 1996” (NHMW, CUP); 1 female, “YUNNAN cca 2000 m 27.15N 100.09E HUTIAO gorge Jinsha r. 18–22/7.92 Vít Kubán leg.” (CKD); 1 male, “YUNNAN Ninglang 27.19N, 100.55E S. Becvar 19.7.92 \ Formicomus mandarinus Bohem. det. G. Uhmman 2001” (CUP).

DESCRIPTION (male). Head and pronotum dark rufous; elytra largely black with blue-green reflection, with basal third mostly completely rufous or rarely (specimen from Diaolin res.) somewhat darkened on humeri and postscutellar area; mouthparts, palpi and antennae dark rufous, antennae somewhat darkened distally; legs rufous-brown to brown-black, with proximal narrowed portion of femora paler.

Head 1.1 times as long as wide; strongly narrowed posteriorly (posterior arch conical); tempora only slightly convex, strongly narrowing posteriad; temporal angles entirely obsolete; base less distinctly differentiated from short neck, boundary-line only moderately indicated both in dorsal and lateral view. Eyes medium to large, convex and protruding. Dorsal surface largely distinctly punctured, with indication of narrow, medio-longitudinal, inpunctate strip in posterior half; punctures somewhat irregularly spaced, mostly umbiliform, becoming simple and finer towards base; pale pubescence composed of shorter decumbent setae and few, longer, sparsely scattered erect setae. Antennae moderately exceeding elytral humeri, only slightly enlarged distally; antennomere I short and thick; the most elongate middle antennomeres about 2.6 times as long as wide; antennomere X 1.9 times, antennomere XI 2.4 times as long as wide.

Pronotum 1.5 times as long as wide, much narrower than head including eyes, regularly rounded anteriorly, only moderately impressed (constricted in dorsal view) laterally in posterior half, more or less convex over the whole length dorsally. Dorsal surface more finely and sparsely punctured than head (especially anteriorly), transversely corrugated in posterior half before base; punctures somewhat coarser and denser only dorso-laterally in posterior half (before transverse corrugation); narrow strip of dorsal surface between dorsal corrugation and basal margin nearly smooth,

glossy; lateral sides largely smooth and glossy, with only few, very fine punctures scattered dorso-laterally in anterior half, bottom of lateral impressions distinctly wrinkled and small, moderately vaulted area situated posterior to impression coarsely rugose and these paired rugosities pass into dorsal transverse corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra 1.8 times as long as wide; humeri only slightly sloping, rather distinct, hind membranous wings fully developed; postscutellar impression absent. Dorsal surface distinctly but more sparsely punctured than forebody (especially in basal third); setigerous punctures simple, with interspaces inpunctate, smooth and glossy; pubescence in general longer than on forebody, composed of more numerous decumbent setae and scattered, somewhat longer, erect setae.

Mesosternum with wide, rounded medio-longitudinal bulge, passing into short edge at level of anterior margin of mesocoxae, lateral sides of bulge rounded, well delimited, its ventral outline moderately convex in lateral view; metasternum simple.

Legs with femora distinctly clavate; front legs modified (Fig. 35); profemora with strong, obliquely projecting, bluntly pointed process with numerous short, stiff setae arranged along its outer edge in distal half; protibia only moderately dilated and with sharp edge on inner side distally; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite IV with a pair of short, longitudinal ribs medially. Sternite VII (Fig. 36) with posterior margin deeply emarginate and projecting medially into rather wide, dorso-ventrally flattened process, distinctly exceeding lateral lobes of emargination, lateral sides of process only moderately narrowing towards wide, somewhat truncate apex and its margins long setose. Tergite VII with posterior margin somewhat angulately rounded apically. Paired prongs of sternite VIII (Fig. 37) with two strong, trunk-like, medially converging processes, projecting from their dorsal side and arcuately curved ventrad and with wide, flattened plates (situated ventrally to processes) bearing clustered thick setae on inner side; tergite VIII (Fig. 38) composed of two, paired plates, narrowly connected medially and rounded to bluntly pointed apically, their distal portion separated dorsally by rib-like edge, extending from medial connection laterad. Distal portion of tegmen of aedeagus 0.6 times as long as basal piece, trilobed apically (Fig. 39), with middle lobe wider and distinctly longer than lateral lobes.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; sternite IV simple; sternite VII with posterior margin simply rounded apically, tergite VII (Fig. 40) narrowed and distinctly produced apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 4.1–5.2 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila sinica* sp. n. can be distinguished from the closely related species by using the key in the diagnosis of *A. taliana*.

ETYMOLOGY. Named after country of its discovery.

DISTRIBUTION. China (Yunnan prov.).

***Anthelephila rufopicea* (Fairmaire, 1896) comb. n.**  
(Figs 41–46)

*Formicomus rufopiceus* Fairmaire, 1896: 45; Krekich-Strassoldo, 1914b: 227, fig. 6.

TYPE MATERIAL EXAMINED. Syntype, male [lacking forebody; originally mounted on triangular label]: “Belgaum [p] \ Muséum Paris 1906 Coll. L. FAIRMAIRE [p] \ TYPE [p; red label] \ *Formicomus rufopiceus* n. sp. [h]” (coll. Fairmaire, MNHN).

ADDITIONAL MATERIAL EXAMINED. 1 male, “Belgaum [h] \ TYPE [p; red label] \ rufopiceus det. v. Krekich” (NHMW); 1 male, “Ostindien Bombay Belgaum [h] \ TYPE [p; red label] \ rufopiceus det. v. Krekich” (NHMW); 1 male, “Co-type [round label; printed in green ring] \ Kanara [p] \ Formicomus rufopiceus Pic Dr. R. F. Heberdey” (NHMW).

REDESCRIPTION (male). Head and pronotum rufous-brown; elytra largely brown-black to black, with very slight blue-green reflection, base rufous-brown; mouthparts, palpi and legs rufous to dark rufous-brown (especially hind legs darker); antennae rufous brown, distinctly darkened, brown-black distally.

Head 1.2 times as long as wide, with posterior arch widely parabolic; tempora only moderately convex, strongly narrowing close behind eyes towards base; temporal angles entirely obsolete; base of head somewhat prolonged but well differentiated from short neck. Eyes medium, convex, moderately protruding from lateral outlines of head. Dorsal surface distinctly punctured, more or less extensively, finely corrugated; punctures more densely spaced and longitudinal wrinkles more prominent in anterior half and along medial margins of eyes, becoming sparser (punctures) and less distinct (wrinkles) towards base especially medially, which may resemble indication of glossy inpunctate medio-longitudinal strip; pale fine pubescence composed of shorter decumbent setae and few longer, erect setae. Antennae exceeding elytral humeri, only slightly enlarged distally; all antennomeres distinctly longer than wide, antennomere X 1.9 times, antennomere XI 2.6 times as long as wide.

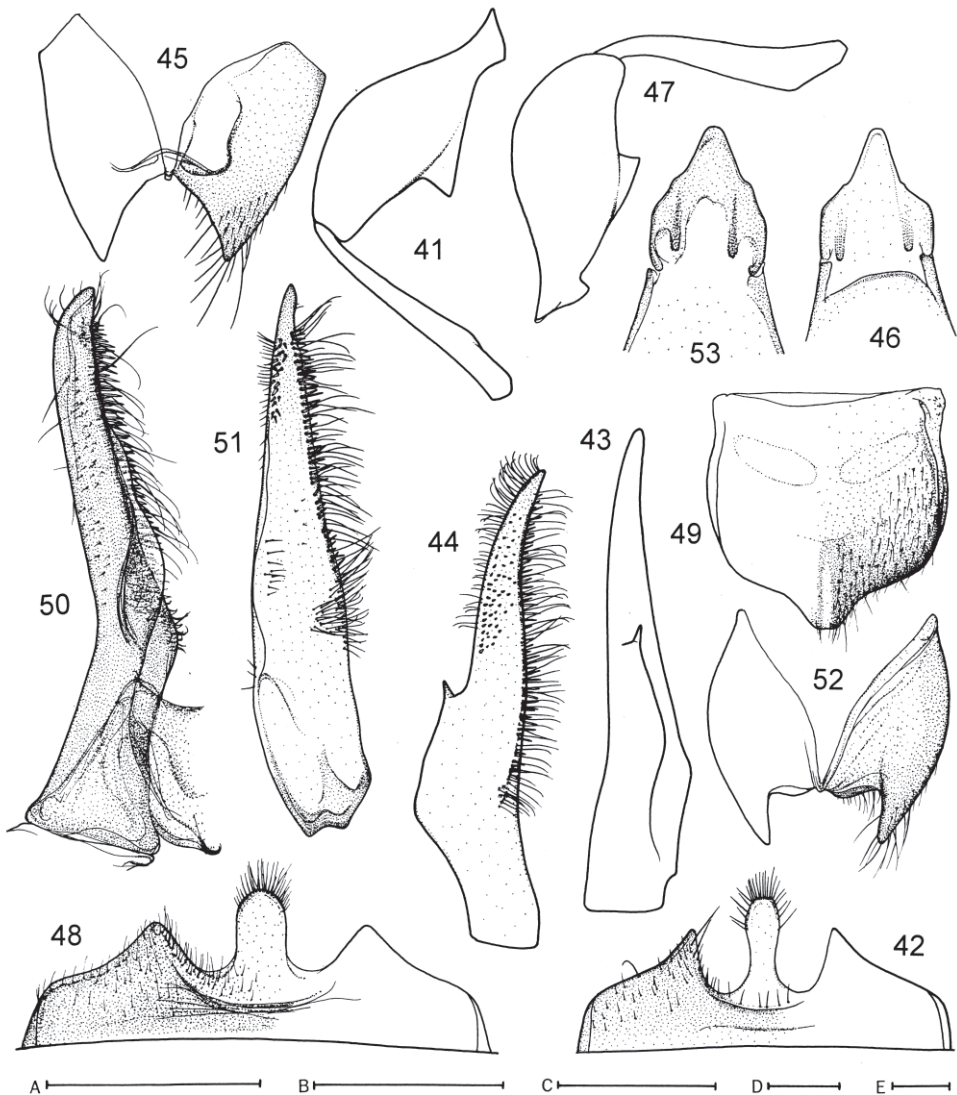
Pronotum 1.4 times as long as wide, narrower than head including eyes, nearly regularly rounded anteriorly, only moderately, shallowly impressed (constricted in dorsal view) laterally in posterior half shortly before base; dorsal face more or less convex over the whole length, its outline at most moderately flattened at constricted portion in lateral view. Dorsal surface very distinctly punctured, except small glossy area close before basal margin, and corrugated in posterior half; dorsal punctures rather coarse, larger than those on head, oval-shaped, more densely spaced (interspaces distinctly smaller than their diameter), becoming sparser in anterior third at area declivous to collar and abruptly much smaller towards lateral sides; wrinkles of postero-dorsal corrugation distinctly longitudinally oriented dorso-laterally and becoming transverse medially (connecting longitudinal wrinkles) before glossy antebasal area; antero-lateral vaulted sides rather glossy, much finer and sparser punctured; bottom of latero-basal impression finely wrinkled and small vaulted area situated posteriorly to lateral impression rugose and these rugosities pass into longitudinal wrinkles of dorso-lateral corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra longitudinally oval, 1.9 times as long as wide; humeri distinct, hind membranous wings fully developed; postscutellar impression moderately indicated. Dorsal surface comparatively glossy, only sparsely punctured; punctures smaller and much more widely spaced than those of head; pubescence distinctly longer than on forebody, composed of more numerous decumbent setae and sparsely scattered erect setae.

Both mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 41), profemora with rather strong, obliquely projecting, bluntly pointed process, its outer edge rather straight; protibia moderately dilated on inner side in distal third; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 42) deeply emarginate posteriorly, with flattened, at mid-length narrowed, median process, distinctly exceeding lateral lobes of emargination; apical margin of median process regularly rounded and long setose. Tergite VII with lateral sides abruptly narrowed



Figs 41–53. 41–46. *Anthelephila rufopicea* (Fairmaire), male: 41 – front leg, 42 – sternite VII, 43 – prong of sternite VIII, dorsal aspect (setae omitted), 44 – the same, lateral aspect, 45 – tergite VIII, 46 – apical portion of tegmen of aedeagus. 47–53. *A. kanheri* sp. n., male: 47 – front leg, 48 – sternite VII, 49 – tergite VII, 50 – prong of sternite VIII, dorsal aspect, 51 – the same, lateral aspect, 52 – tergite VIII, 53 – apical portion of tegmen of aedeagus. Scale – 0.5 mm: A – 52, B – 41, C – 47, 49; 0.1 mm: D – 43, 44, 46, 50, 51, 53, E – 42, 45, 48.

towards distinctly produced, rounded apex (similarly as in Fig. 49). Paired prongs of stenite VIII (Figs 43, 44) nearly straightly projecting in dorsal view, bluntly pointed apically; proximal half of prongs wider, moderately but distinctly lobe-like dilated dorsad and with small blunt process projecting from distal portion of dilatation; distal half of prongs simply, rather equally shaped both in dorsal and lateral view; surface of prongs with numerous longer fine and shorter stiff setae arranged along ventral and dorsal margin and with very short, stiff, blunt setae scattered on medial surface of narrowed distal portion. Tergite VIII (Fig. 45) composed of two paired plates, narrowly connected medially, distal portion of plates gradually narrowing towards bluntly pointed apex. Distal portion of tegmen of aedeagus (Fig. 46) short, 0.5 times as long as basal-piece, rather abruptly narrowed towards simply rounded apex.

SEXUAL DIMORPHISM. Female not examined (unknown).

LENGTH. 3.5–3.7 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila rufopicea* is related to *A. kanheri* sp. n.; for their separation see the differential diagnosis of the latter species.

REMARKS. Fairmaire (1896) considered *Formicomus rufopiceus* as common during rainy season, which may indicate existence of the type series. Bearing the same locality data, the two males from NHMW may represent a part of this series. However, quality of all their labels differs from that in the syntype from MNHN (the locality labels are newly handwritten and the red “TYPE” labels are those commonly used by Krekich-Strassoldo). For these reasons, the mentioned topotypic specimens are listed more likely in the additional material.

DISTRIBUTION. Originally described from “Belgaum” (India, Karnataka state) and obviously restricted to the Indian subcontinent. Based on the examination of the type material, both varieties of *Formicomus rufopiceus* described by Pic (1913, 1914) from Kashmir (*F. r.* var. *rufobasalis*, treated above) and Java (*F. r.* var. *subscutellaris*) belong to different species.

### *Anthelephila kanheri* sp. n.

(Figs 47–53)

TYPE MATERIAL EXAMINED. Holotype, male: “INDIA, Maharashtra, Kanheri, leg. Gy. Topál \ No. 725, beaten material 27.VIII.1967.” (HNHM). Paratypes 42 males, 67 females, same data as holotype (81 HNHM, 15 CKD, 13 CUP).

DESCRIPTION (male). In external characters identical with preceding *A. rufopicea*, except for punctuation of pronotum and form of front legs: punctures (especially mid-dorsally) larger more densely spaced and somewhat shallower, nearly cell-like. Profemora (Fig. 47) thicker proximally, process less projecting, nearly rectangular apically and with outer edge moderately convex; protibia more distinctly enlarged in apical third.

Abdomen. Sternite VII (Fig. 48) deeply emarginate posteriorly, with wide, flattened, parallel-sided median process, moderately exceeding lateral lobes of emargination, apical margin of median process regularly rounded and long setose. Tergite VII (Fig. 49) with lateral sides abruptly narrowed towards distinctly produced, rounded apex. Paired prongs of stenite VIII (Figs 50, 51) rather simply shaped, nearly straightly projecting, moderately angulately curved before mid-length laterad and slightly apically curved mediad in dorsal view; apices of prongs bluntly pointed, narrower in lateral view; dorsal side of prongs moderately dilated mediad at about mid-length into simple, dorso-ventrally flattened lobe; surface of prongs with numerous shorter, stiff setae and longer, fine setae arranged along ventral margin in distal half (except for the apical portion) and with another shorter row of stiff and fine setae along dorsal margin in apical third. Tergite VIII (Fig. 52) composed of paired plates, narrowly connected medially, distal portion of plates strongly and rather abruptly narrowed and bluntly pointed apically. Distal portion of tegmen of aedeagus (Fig.

53) short, 0.4 times as long as basal-piece, its lateral margins abruptly and somewhat sinuously narrowed towards simply rounded apex.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII with posterior margin simply rounded apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 3.0–4.5 mm.

DIFFERENTIAL DIAGNOSIS. Among the species known from the Indian subcontinent, *Anthelephila kanheri* sp. n. is most closely related to *A. rufopicea*. It can be distinguished from the latter by pronotal punctation and form of male front legs (see description), by the wider, parallel-sided median process of sternite VII and paired prongs of sternite VIII being differently shaped (especially in lateral view) and differently setose (cf. Figs 43, 50 and 44, 51).

ETYMOLOGY. Named after the type locality; noun in apposition.

DISTRIBUTION. India (Maharashtra).

### *Anthelephila cavicollis* sp. n.

(Figs 54–60)

TYPE MATERIAL EXAMINED. Holotype, male: “S India, Tamil Nadu, Nilgiri hills, 15 km SE of Kotagiri near Kunchappanai, alt. 900 m \ 13.–20.V.1994, 76°56'E 11°22'N, Z. Kejval lgt.” (NMPC). Paratype, female: “S-INDIA, Tamil Nadu Nilgiri hills, 15 km SE of Kotagiri 11,22N 76,56E \ Kunchappanai 17.–22.v.1997 L. Dembický & P. Pacholátko lgt.” (CKD).

DESCRIPTION (male). Head and pronotum rufous-brown; elytra largely dark brown to brown-black with basal third paler, rufous-brown; antennae rufous with three apical segments somewhat darkened; mouthparts, maxillar palpi and legs rufous to rufous-brown.

Head 1.3 times as long as wide, more or less unevenly rounded posteriorly in dorsal view; tempora moderately narrowing posteriorly close behind eyes; hind temporal angles slightly indicated to indistinct, rounded; base somewhat prolonged medially but well differentiated from short neck. Eyes medium, moderately convex and protruding. The whole dorsal surface less shining, distinctly punctured and densely, coarsely corrugated, wrinkles more or less longitudinally oriented, mutually interconnected and thus forming longitudinal, cell-like spaces; pale pubescence composed of shorter decumbent and longer, less numerous, suberect to erect setae. Antennae distinctly exceeding base of pronotum, moderately enlarged distally, with all antennomeres longer than wide; antennomere I 1.9 times as long as wide; the most elongate middle antennomeres more than twice as long as wide; antennomere X 1.3 times and antennomere XI 2.4 times as long as wide.

Pronotum 1.5 times as long as wide, narrower than head including eyes, evenly rounded anteriorly, only moderately constricted (shallowly impressed laterally) in posterior half, its dorsal outline convex over the whole length in lateral view. Dorsal surface punctured and coarsely corrugated as head, longitudinal wrinkles mostly simple and long, becoming interconnected (forming longitudinal cells) in posterior half and gradually passing into rather transversely oriented corrugation close before base; a paired, sharply incised, longitudinal cavity situated dorso-laterally in posterior half of pronotum (Fig. 54); lateral sides without corrugation (at most slightly indicated dorso-laterally), their punctation becoming sparser and finer towards procoxal cavities and lateral constriction; bottom of lateral constriction smooth, with sharp, furrow-like, sinuous incision (Fig. 54); small moderately vaulted area situated posteriorly to incision sparsely punctured; anterior collar and antebasal sulcus distinctly developed; pubescence similar to that on head, longer erect setae more numerous and rather distinct dorso-laterally in anterior half.

Elytra 1.5 times as long as wide, ovoid, rather convex both dorsally and laterally; elytral apices conjointly rounded to subtruncate in dorso-caudal view; humeri rounded to entirely obsolete,

hind membranous wings reduced; postscutellar impression absent. Surface distinctly and rather densely punctured; punctation becoming gradually finer and somewhat sparser in basal third towards base; pale to silvery pubescence longer than on forebody, composed of decumbent to subrect setae, with indication of sparse, transverse band of shorter, decumbent, silvery setae, situated in anterior half, roughly at border-line between the darker and paler coloured portion of elytra.

Both mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 55), profemora with distinct, dent-like, blunt protrusion; protibia only slightly enlarged, with minute protuberance on inner side subapically; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi somewhat flattened distally, with terminal segment articulated on its dorsal side, at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 56) with posterior margin deeply emarginate to incised medially, with pointed median process, projecting from dorsal side of sternite (close before posterior margin), exceeding lateral lobes of incision and bearing longer, somewhat clustered setae laterally at about its mid-length. Tergite VII (Fig. 57) somewhat produced posteriorly, with apex shallowly emarginate. Paired prongs of sternite VIII (Fig. 58) narrow, simply shaped, with numerous setae of different length and thickness arranged along medial margin. Tergite VIII (Fig. 59) composed of two, paired plates, narrowly connected medially, their distal portion narrowing towards pointed apex. Apical portion of tegmen of aedeagus short, 0.5 times as long as basal portion, with apex trilobed (Fig. 60).

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; both sternite and tergite VII with posterior margin simply rounded apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 3.3–4.0 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila cavicollis* sp. n. is conspicuous species easily distinguishable by the following external characters: forebody coarsely corrugated dorsally; pronotum with paired cavity and incisions (Fig. 54); elytra ovoid with obsolete humeri; elytral setae forming sparse, transverse band in anterior half. The pronotal characters in *A. cavicollis* sp. n. are rather unique. As far as I know, only single species of *Anthelephila* (so far placed in the genus *Formicomus*, otherwise quite dissimilar), described by Krekich-Strassoldo (1925) from the Philippin island Mindanao, displays two pronotal cavities, but these are round-shaped and situated antero-dorsally.

ETYMOLOGY. From Latin cavum (hole, cavity) and collum (pronotum metaphorically), referring to presence of paired pronotal cavities.

DISTRIBUTION. Southern India (Tamil Nadu state).

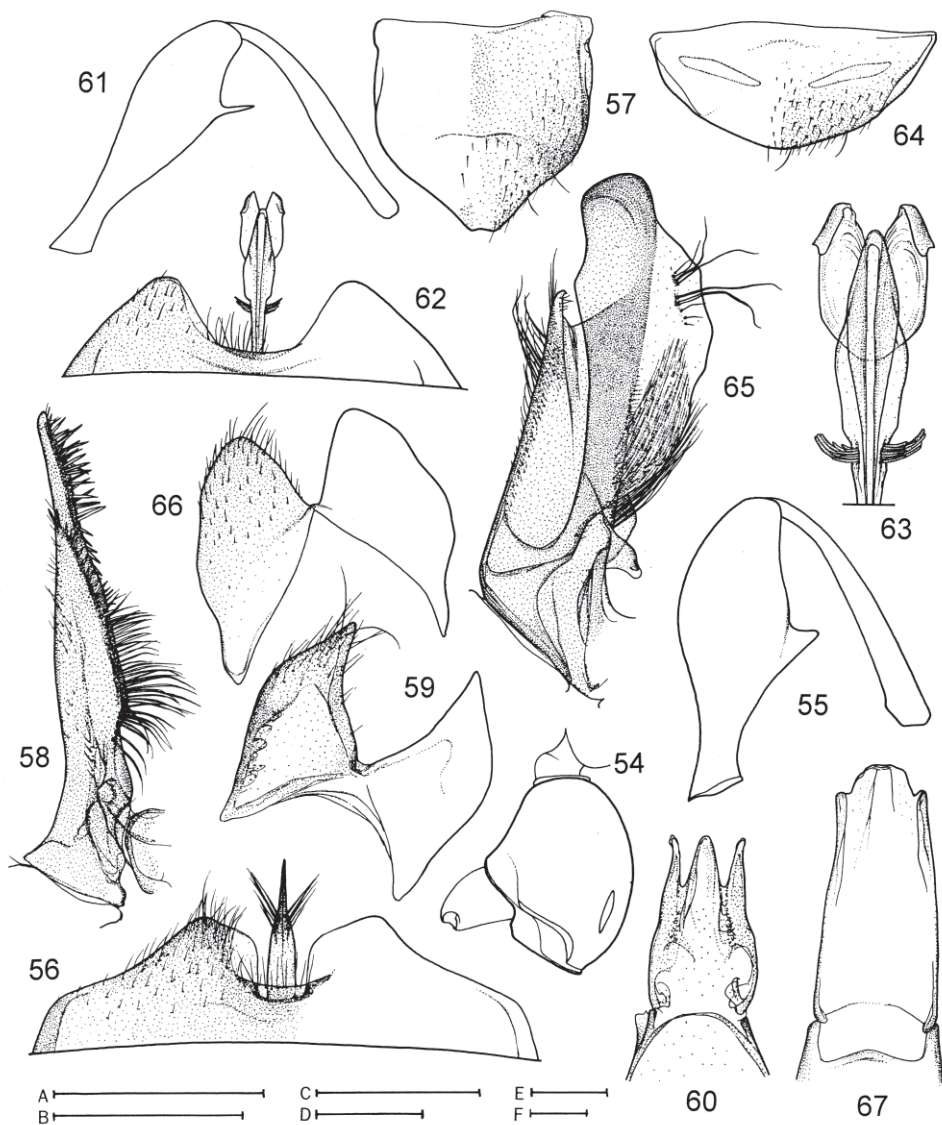
### *Anthelephila cochleola* sp. n.

(Figs 61–67)

TYPE MATERIAL EXAMINED. Holotype, male: "THAI, 4. + 7.IV.1991, ERAWAN n. p. 300 m, 14°16'N 99°12'E, Vít Kubáň leg. \ Thailand 91 "Thanon Thong Chai" D. Král & V. Kubáň" (NMPC).

DESCRIPTION (male). Unicoloured brown-black to black; legs, basal segments of antennae, mouthparts and palpi somewhat paler, with brownish tinge.

Head including neck 1.46 times longer than wide; tempora strongly narrowing close behind eyes posteriad and nearly fluently passing into long neck; hind temporal angles entirely obsolete; eyes large, conspicuous, moderately convex, somewhat protruding; dorsal surface rather glossy, distinctly but sparsely punctured; punctures of frons coarser, becoming finer and more widely



Figs 54–67. 54–60. *Anthelephila cavicollis* sp. n., male: 54 – pronotum, lateral aspect, 55 – front leg, 56 – sternite VII, 57 – tergite VII, 58 – prong of sternite VIII, 59 – tergite VIII, 60 – apical portion of tegmen of aedeagus. 61–67. *A. cochleola* sp. n., male: 61 – front leg, 62 – sternite VII, 63 – median process of sternite VII, 64 – tergite VII, 65 – prong of sternite VIII, 66 – tergite VIII, 67 – apical portion of tegmen of aedeagus. Scale – 0.5 mm: A – 58, 59, B – 55, C – 57, 62, 66, D – 54, 61, 64; 0.1 mm: E – 60, 63, 67, F – 56, 65.

spaced posteriorly; clypeus and frons (partly) finely corrugated, neck with several transverse wrinkles dorsally; pale pubescence very sparse, largely abraded. Antennae rather long, distinctly exceeding elytral humeri, slim, only slightly enlarged distally; antennomere I conspicuously elongate, 3.0 times as long as wide; the most elongate, middle antennomeres about 3.4 times as long as wide; antennomere X 2.6 times, antennomere XI 3.3 times as long as wide.

Pronotum 1.6 times as long as wide, moderately narrower than head including eyes, regularly rounded anteriorly, strongly constricted laterally in posterior half, close before base; dorsal face more or less vaulted over the whole length, moderately convex to flattened (not impressed) at constricted portion in posterior half. Dorsal surface finely punctured, with only several coarser punctures scattered dorso-laterally, very finely longitudinally corrugated dorso-laterally in posterior half (at level of lateral constriction) and with more distinct transverse wrinkles close before base; mid-dorsal punctures much finer and more densely spaced than those on frons; anterolateral vaulted sides with only few fine punctures, largely smooth and glossy; bottom of laterobasal impressions wrinkled and small vaulted area situated posteriorly to impression coarsely rugose and these rugosities pass into dorsal corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence largely abraded, probably similar to that of head.

Elytra 1.75 times as long as wide, moderately convex; humeri distinctly angulate, hind membranous wings fully developed; postscutellar impression absent. Surface rather glossy, distinctly but sparsely punctured; pubescence abraded, probably somewhat longer than on forebody.

Both mesosternum and metasternum simply shaped.

Legs rather long, with femora distinctly clavate; front legs modified (Fig. 61), profemora with narrow, sharply pointed, thorn-like process; protibia nearly simple, only slightly narrowed in distal third; all tarsi distinctly shorter than tibia, penultimate segment in all tarsi distinctly flattened, with terminal segment articulated near its base dorsally. Pubescence mostly short and fine, appressed to subdecumbent; metatibia with numerous, conspicuously long, black bristle-like setae on inner side, especially distally; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 62) deeply emarginate postero-medially, with peculiar, spoon-like median appendage (Fig. 63), projecting from its dorsall side and bearing short, stiff, clustered setae laterally in basal half. Tergite VII (Fig.) less sclerotized, simply shaped, evenly rounded apically. Paired prongs of sternite VIII (Fig. 65) well sclerotized and dark pigmented, dilated medially into large, dorso-ventrally flattened lobe, their lateral sides with narrow, apically pointed, setose projection, apices of prongs rather strong, rounded and inner side with large cluster of long, fine setae, largely hidden in dorsal view under lobe-like dilatation. Tergite VIII (Fig. 66) composed of two paired plates, narrowly connected medially, simply rounded apically. Distal portion of tegmen of aedeagus (Fig. 67) comparatively long, 0.6 times as long as basal-piece, only moderately narrowing towards widely rounded to subtruncate apex, with small lobe on each side subapically.

SEXUAL DIMORPHISM. Female unknown.

LENGTH. 6.1 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila cochleola* sp. n. is easily distinguishable from majority of species with head fluently passing into long neck by combination of the unicoloured, brown-black body and conspicuously long antennae with the first segment 3.0 times as long as wide. The male abdominal characters, especially form of the median process of sternite VII, are quite distinctive.

ETYMOLOGY. From Latin *cochleola* (small spoon), referring to peculiar, spoon-like process of the male sternite VII.

DISTRIBUTION. Thailand.

*Anthelephila gladiator* sp. n.

(Figs 68–73)

TYPE MATERIAL EXAMINED. Holotype, male: “S. INDIA Coimbatore P. S. Nathan [p; black frame] \ HOLOTYPE [p; red label] \ Muséum Paris 1952 Coll. R. Oberthur [p] \ Formicomus gladiator n. sp. P. Bonadona dét. 1976 [species name handwritten]” (MNHN). Paratypes: 3 males [two of them in rather poor stand], same data as holotype only the first label handwritten as follows: “Coimbatore Inde mérid. P. S. Nathan leg.” (MNHN).

DESCRIPTION (male). Head and pronotum rufous-brown; elytra largely dark brown, with paler base, darkened humeri and with a narrow, vaguely outlined, pale rufous to yellowish, transverse band in basal third (at postscutellar impression); legs, basal antennomeres and palpi rufous to pale rufous-brown.

Head 1.1 times as long as wide, regularly rounded posteriorly; tempora arcuately narrowing posteriorly close behind eyes; hind temporal angles entirely obsolete; eyes medium, rather convex, protruding from lateral outlines of head; base well differentiated from short neck. Dorsal surface distinctly punctured and more or less extensively wrinkled (corrugation of vertex area finer, somewhat obsolete in the holotype specimen, more prominent in the paratypes); pubescence short, pale, mostly decumbent to suberect, with few erect setae. Antennae shorter, hardly exceeding humeri, moderately enlarged and flattened distally; antennomere X 1.5 times, antennomere XI 1.8 times as long as wide.

Pronotum 1.4 times as long as wide, somewhat narrower than head including eyes, regularly rounded anteriorly, distinctly laterally constricted in posterior half, shortly before base; dorsal face more or less vaulted longitudinally over the whole length, at most somewhat flattened (not impressed) at constricted portion in posterior half. Dorsal surface, except for narrow transverse strip before basal margin, distinctly punctured and longitudinally corrugated, both punctation and corrugation most distinct medially and becoming finer laterad; vaulted antero-lateral sides rather glossy, with only few, scattered punctures; bottom of latero-basal constriction finely, longitudinally wrinkled; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra longitudinally oval, 1.9 times as long as wide; humeri somewhat sloping but distinct, hind membranous wings developed; postscutellar impression rather weak. Surface comparatively glossy, only sparsely, coarsely punctured; pubescence suberect, somewhat longer than on forebody.

Both mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 68); profemora with conspicuously strong, lobe-like protrusion, armed with stiff spines along apical edge, dorsal side of protrusion with short rib at about mid-length; protibia distinctly lobe-like dilated on inner side distally; all tarsi distinctly shorter than tibia, penultimate segment in all tarsi distinctly flattened, with terminal segment articulated near its base dorsally. Pubescence rather uniformly short, fine, appressed to subdecumbent; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 69) with posterior margin widely, somewhat sinuously emarginate, with prominent, simply shaped, flattened median process, projecting from dorsal side of sternite, close before posterior margin. Tergite VII (Fig. 70) abruptly narrowed distally, with apex moderately incised. Paired prongs of sternite VIII (Fig. 71) comparatively simply shaped, straightly projecting, covered with numerous scattered setae of various length (mostly short) in distal half. Tergite VIII (Fig. 72) composed of two, paired plates, narrowly connected medially, distal portion of plates rather abruptly narrowed, bluntly pointed apically. Distal portion of tegmen of aedeagus 0.7 times as long as basal-piece, conspicuously trilobed apically (Fig. 73).

SEXUAL DIMORPHISM. Female unknown.

LENGTH. 3.9–4.8 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila gladiatrix* sp. n. appears to be related to sympatric *A. maindroni*, as suggested by similar colouration, dorsally corrugated pronotum and by similarity in the following male characters: sternite VII with distinct median process; apex of male tergite VII somewhat produced and incised or emarginated; paired prongs of sternite VIII comparatively simply shaped, straightly projecting posteriad; paired plates of tergite VIII abruptly narrowed distally; apex of tegmen of aedeagus trilobed. It can be easily distinguished from the latter species by much stronger and differently shaped male profemoral process, short and wide median process of male sternite VII (long and narrow in *A. maindroni*) and by many details in morphology of the male sternite VIII.

ETYMOLOGY. The species was originally named by P. Bonadona (see Remarks), probably in reference to the conspicuous profemoral process in males.

DISTRIBUTION. Southern India (Tamil Nadu state).

REMARKS. This new species was discovered and named as *Formicomus gladiator* by French entomologist P. Bonadona, however its description was never published; no mention was found by going through Zoological records and Bonadona's entomological estate (deposited in MNHN).

### *Anthelephila fossicollis* sp. n.

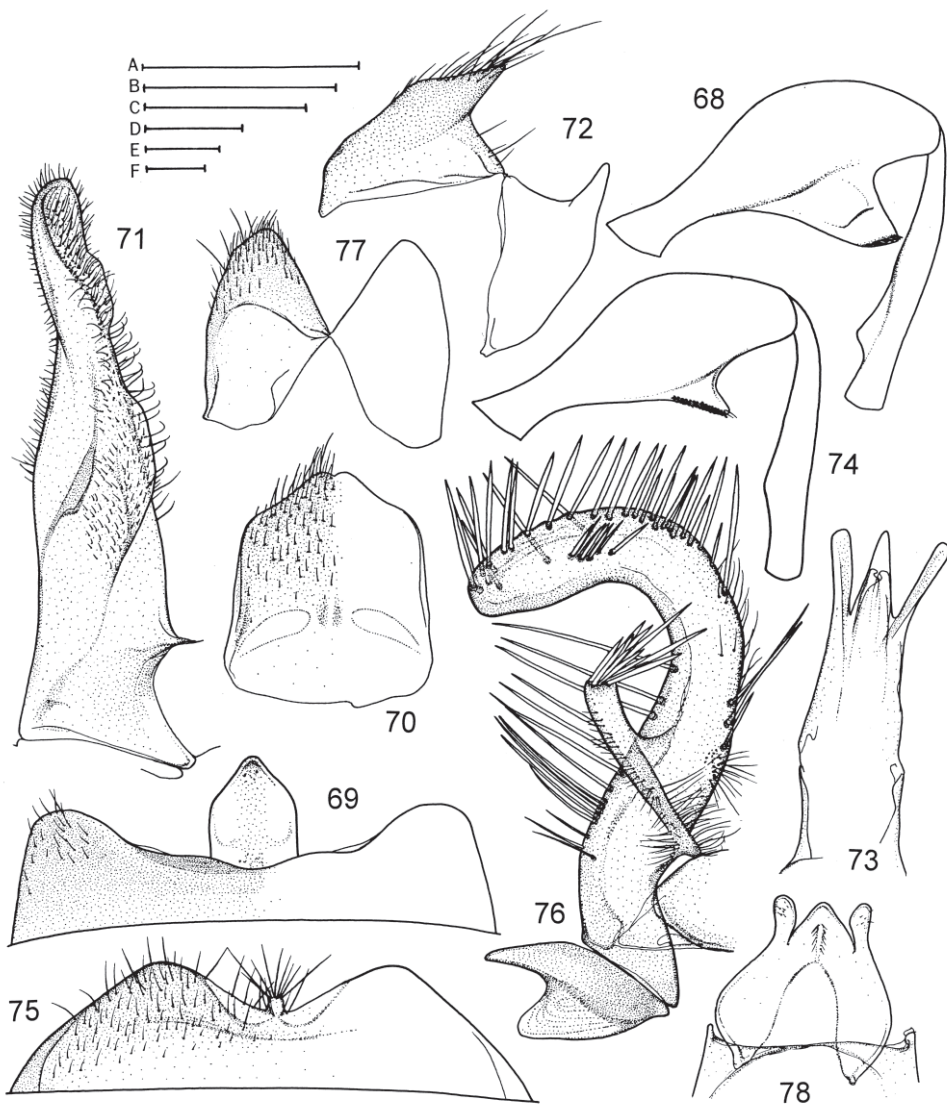
(Figs 74–78)

TYPE MATERIAL EXAMINED. Holotype, male [dissected by Heberdey, abdomen mounted partly on separate label and in slide]: “ex Hauser [h] \ [male sex-mark] \ China, Prov. Yunnan, Vallis flumin. Soling-ho [p] \ 1243 [number of slide] \ TYPE [p; red label] \ rufopiceus var. det. Pic [h] \ coll. Heberdey [p] \ Formicomus fossicollis n. sp. Dr. R. F. Heberdey [p, h] \ fossicollis nov. [h]” (NHMW). Paratypes: 1 female: “Vallis flumin. Soling-ho, Yun. [p] \ coll. Heberdey [p] \ fossicollis Hbdy. det. Dr. R. F. Heberdey [p, h]” (NHMW); 1 male: “1245 [number of slide] \ [male sex-mark] \ Yunnan Sen [h] \ Formicomus fossicollis n. sp. Dr. R. F. Heberdey [h, p]” (NHMW); 1 male: “Chine Yunnan Sen [h] \ Formicomus fossicollis n. sp. Dr. R. F. Heberdey [h, p]” (NHMW); 1 male, 2 females: “CHINA-Yunnan 22.5.–2.6.1993 100 km W Kunming Diaolin Nat. Res., E. Jendek & O. Sausa leg. \ Formicomus animatus Pic det. G. Uhmman 1996” (NHMW); 2 males, the same data, except: “Formicomus kippenbergi Uhmman det. G. Uhmman 1996” (CUP); 6 males, 7 females: “China: Yunnan Lijiang, Yulong Shan 7.–18.vii.1994 \ Bai Shui 2900–3300m” (9 CKD, 1 CUP, 1 MNHN, 1 NHMB, NMPC); 1 male, 1 female: “CHINA. Yunnan prov. KUNMING (200) 2.VII.1990 1900m Vít Kubáň leg.” (CKD); 1 male: “CHINA, Yunnan prov. 60 km SEE Kunming SHILIN (Stone Forest) 3.–4.VII.1990 Vít Kubáň leg.” (CKD).

DESCRIPTION (male). Head and pronotum rufous-brown to dark brown or brown-black with rufous tinge; elytra brown-black to black with very slight greenish reflection and rufous tinge at base; legs rufous-brown to brown-black with paler, rufous-brown tarsi and narrow proximal portion of femora; mouthparts and palpi rufous brown; antennae rufous-brown, moderately darkened distally.

Head 1.1 times as long as wide, nearly conical posteriorly; tempora only moderately convex, strongly narrowing posteriad; base somewhat prolonged but well differentiated from short neck (boundary-line evident especially in lateral view). Eyes medium to large, rather convex and protruding. Dorsal surface distinctly punctured and more or less finely, inconspicuously corrugated anteriorly and along medial margins of eyes; punctures mostly somewhat umbiliform; basal portion more finely punctured and with indication of nearly inpunctate, glossy medio-longitudinal strip. Fine pale pubescence composed of decumbent setae and slightly longer, sparsely scattered, erect setae. Antennae moderately exceeding elytral humeri, moderately enlarged distally; antennomere I short and thick; the most elongate proximal antennomeres about 2.1 times as long as wide; antennomere X 1.5 times, antennomere XI 2.2 times as long as wide.

Pronotum 1.4 times as long as wide, distinctly narrower than head including eyes, rounded anteriorly, distinctly impressed (constricted in dorsal view) laterally in posterior half and more or



Figs 68–78. 68–73. *Anthelephila gladiatrix* sp. n., male: 68 – front leg, 69 – sternite VII, 70 – tergite VII, 71 – prong of sternite VIII, 72 – tergite VIII, 73 – apical portion of tegmen of aedeagus. 74–78. *A. fossicollis* sp. n., male: 74 – front leg, 75 – sternite VII, 76 – prong of sternite VIII, 77 – tergite VII, 78 – apical portion of tegmen of aedeagus. Scale – 0.5 mm: A – 69, B – 68, 70, 74; 0.1 mm: C – 71, 76, D – 73, 78, E – 72, 75, 77.

less convex over the whole length dorsally, with dorsal outline at most straight (not impressed) at constricted portion in lateral view; postero-lateral impressions extended dorsally anteriorly and these paired shallow extensions are delimited dorsally by longitudinal, rounded edge. Dorsal surface punctation in anterior vaulted half much finer than on head, becoming gradually coarser posteriorly, especially along dorso-lateral edges and close before somewhat corrugated, very slightly raised, transverse mound; the narrow transverse area in between mound and basal margin smooth and comparatively glossy, with a pair of shallow impressions; antero-lateral vaulted sides largely smooth and glossy, with only few, fine punctures scattered dorso-laterally, bottom of lateral impressions finely wrinkled and their dorsal extensions smooth and glossy; anterior collar and ante-basal sulcus distinctly developed; pubescence as on head.

Elytra 1.7 times as long as wide, rather convex; humeri distinctly angulate, hind membranous wings fully developed; postscutellar impression absent; setigerous punctures somewhat finer and distinctly sparser than those on head, with interspaces at most very finely punctured, rather glossy, aetose; pubescence slightly longer than on forebody, mostly decumbent to suberect, with sparsely scattered, erect setae.

Mesosternum with rather inconspicuous, rounded to flattened medio-longitudinal bulge, narrowing posteriorly. Metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 74); profemora with strong, obliquely projecting, dent-like process, bluntly pointed apically, with numerous minute, stiff setae, densely arranged along its outer edge; protibia only moderately enlarged in distal half; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence mostly uniformly short, fine, appressed to subdecumbent, distinctly longer and rather decumbent on inner side of metatibia; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite III with a pair of longitudinal edges anteriorly on its intercoxal process. Sternite VII (Fig. 75) with posterior margin moderately emarginate and with small median process long setose apically. Tergite VII with posterior margin simply rounded. Paired prongs of sternite VIII (Fig. 76) narrow, strongly arcuately curved laterad, flattened, rounded apically, with numerous long, thick setae arranged along their lateral margins, each prong with narrow process projecting from its dorsal side and bearing a cluster of thick setae apically. Tergite VIII (Fig. 77) composed of two, paired plates, narrowly connected medially, simply rounded apically. Distal portion of tegmen of aedeagus short, 0.4 times as long as basal-piece, its apex trilobed (Fig. 78), with lateral lobes much narrower than wide middle lobe.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: front legs simple; medio-longitudinal bulge at most slightly more distinct, its ventral outline slightly convex in lateral view; sternite III simple; sternite VII simply shaped, moderately prolonged posteriorly and rounded to slightly subtruncate apically; tergite VIII simply shaped, nearly triangular, with apex rounded to bluntly pointed; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 3.6–4.8 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila fossicollis* sp. n. shows certain similarity with *A. taliana* and related species (keyed above), but differs by morphology of pronotum (more prominent dorso-lateral, longitudinal edges in posterior half), simple male abdominal sternite IV (lacking a pair of medio-longitudinal ribs) and by further male characters, especially quite different form of sternite VIII.

ETYMOLOGY. The species was originally named by R. F. Heberdey (see Remarks).

DISTRIBUTION. China (Yunnan prov.).

REMARKS. This new species was first discovered and named as *Formicomus fossicollis* by Austrian entomologist R. F. Heberdey, however its description was never published.

*Anthelephila picta* sp. n.

(Figs 79–83)

TYPE MATERIAL EXAMINED. Holotype, male: “LAOS centr., 27.IV.–1.V.1997 70 km NE Vientiane, BAN PHABAT env., 150 m, N 18°16.1, E 103°10.9, E. Jendek & O. Šauša leg.” (NMPC). Paratypes: 7 males, 6 females, same data as holotype (8 CKD, 1 CUP, 1 BMNH, 1 HNHM, 1 MHNG, 1 MNHN); 2 males, 3 females, same data, except: M. Štrba & R. Hergovits lgt. (CKD); 4 males, 1 female: “LAOS centr., 26.IV.1997, VIENTIANE env., 150 m, N 17°56.8, E 102°37.3, Mekong river bank, E. Jendek & O. Šauša leg.” (3 CKD, 1 NHMB, 1 NHMW); 1 male, “Thailand Nong Khai 17°52’N 102°44’E 29.VIII.1996, LEG. M. HAUSER” (CUP).

DESCRIPTION (male). Head nad pronotum rufous-brown; elytra largely rufous, with small, black humeral spot and rather wide, transverse black band at their midlength, not touching lateral margins, and with large, paired, yellowish spot at posthumeral area, touching neither suture nor lateral margins, humeral spot is sometimes extended along anterior margin of yellowish spot mediad; mouthparts, palpi, antennae and legs rufous-brown, femora slightly paler.

Head elongate, 1.3 times as long as wide, its basal portion prolonged (posterior arch long parabolic); tempora moderately arcuately narrowing posteriad; hind temporal angles indistinct; base well differentiated from short neck. Eyes small to medium, convex and protruding. Dorsal surface distinctly punctured and corrugated; punctures umbiliform, wrinkles short, variously directed, less distinct on frons; pale pubescence composed of fine, more or less decumbent setae and few, sparsely scattered, slightly longer, erect setae. Antennae slightly exceeding elytral humeri, only slightly enlarged distally; antennomere I short and thick; the most elongate proximal antennomeres slightly more than twice as long as wide; antennomere X 1.4 times, antennomere XI 2.5 times as long as wide.

Pronotum 1.6 times as long as wide, moderately narrower than head including eyes, somewhat irregularly rounded anteriorly (antero-lateral outlines less arcuate), only moderately impressed (constricted in dorsal view) laterally in posterior half, more or less convex over the whole length dorsally, dorsal outline at most straight (not impressed) at constricted portion in lateral view. Dorsal surface coarsely sculptured; punctures conspicuously large and shallow, resembling oval to somewhat angular cells, mostly nearly contiguous, becoming gradually smaller and more widely spaced towards lateral sides in anterior half; small, paired, dorso-laterally close behind mid-length situated area shallowly impressed, smooth and glossy with only 2–3 fine punctures in the middle; narrow transverse strip of dorsal surface sloping towards base smooth and glossy, with two small, pit-like depression; lateral sides largely smooth and glossy, distinctly punctured only dorso-laterally in anterior half, bottom of lateral impression wrinkled and small, vaulted area situated posterior to impression coarsely rugose and these paired rugosities pass into dorsal corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence somewhat shorter than on head and decumbent, erect setae less conspicuous.

Elytra 1.8 times as long as wide; humeri somewhat sloping but still distinct, hind membranous wings fully developed; postscutellar impression slightly indicated. Dorsal surface distinctly punctured; punctures more widely spaced in basal fourth (before black elytral band); punctures are not simple, but they appear to be surrounded by minute impressions; interspaces among setigerous punctures inpunctate, smooth and glossy; pubescence composed of decumbent setae (nearly suberect in basal fourth) and less numerous, sparsely scattered, erect setae.

Both male mesosternum and metasternum simply shaped.

Legs with femora distinctly clavate; front legs modified (Fig. 79); profemora with rather strong, obliquely projecting, apically pointed process, with a dense row of stiff setae along its straight outer edge dorsally; protibia moderately, angulately dilated inwards in distal half; mesotibia with small dent-like protuberance on inner side distally; all tarsi distinctly shorter than tibia, penulti-

mate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence mostly uniformly short, fine, appressed to subdecumbent, moderately longer on metatibia; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite III shallowly medio-longitudinally impressed ventrally, lateral sides of impression somewhat angular. Sternite VII (Fig. 80) with posterior margin shallowly emarginate and with inconspicuous medial protuberance, bearing several longer setae. Tergite VII with apex slightly protruding, simply rounded. Prongs of sternite VIII (Fig. 81) simply shaped, strongly narrowed in distal third towards pointed apex; each prong with long, narrow and straight process projecting from its ventral side, medio-basally and setose medially in distal half; ventro-lateral (outer) sides of prongs long setose and their narrowed apical portion armed with rows of stiff, straight setae. Tergite VIII (Fig. 82) composed of two, paired plates, narrowly connected medially and simply rounded apically. Apical portion of tegmen of aedeagus short, 0.4 times as long as basal-piece, with apex wide, somewhat truncate and with small rounded lobe on each side laterally (Fig. 83).

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: pronotum on each side antero-laterally (at the widest portion) with oval, ventrally sharply delimited patch of very densely spaced punctures, bearing appressed, dorsad pointing setae; mesosternum with slight indication of medio-longitudinal bulge; front legs and mesotibia simple; sternite III simple; sternite VII distinctly prolonged posteriorly (lateral outlines concave in distal half) and truncate apically; tergite VII moderately tapering apically; abdominal segment VIII inconspicuous, less sclerotized. LENGTH. 3.4–4.9 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila picta* sp. n. shares somewhat similar colouration with *A. paviei*, however, it differs clearly in many morphological characters, e. g. by the coarse dorsal sculpture of forebody (including presence of densely punctured patches in females), by more elongate oval shaped head, shorter and distally narrower antennae, by posteriorly distinctly prolonged and apically truncate female sternite VII. Male characters of both species are quite dissimilar. Modification of male mesotibia in *A. picta* sp. n. is remarkable, scarcely occurring character in *Anthelephila* and sexual dimorphism in pronotal punctation is to my best knowledge unique within this genus.

ETYMOLOGY. From Latin pictus (colourful), referring to conspicuous colour pattern of elytra.

DISTRIBUTION. Laos, Thailand.

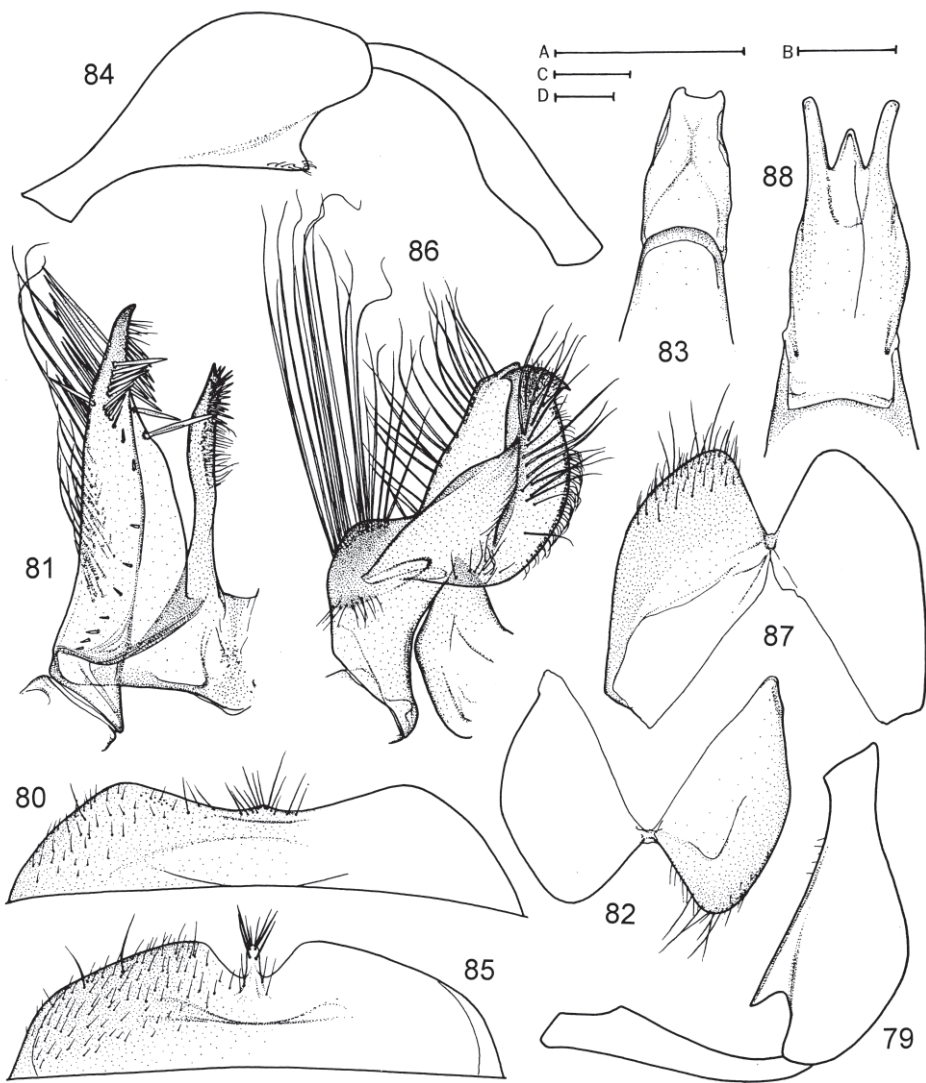
### *Anthelephila nigrorufa* sp. n.

(Figs 84–88)

TYPE MATERIAL EXAMINED. Holotype, male: “LAOS south., Champasak prov., Bolaven Plateau, 10–18.IV.1999, Route (No. 23) Pakse–Paksong, BAN ITOU env. (km.35), alt. 800m, N 15°10.4', E 106°05.8' (GPS), M. Strba leg.” (NMPC). Paratypes: 3 males, 2 females, same data as holotype (CKD); 1 male, same data as holotype, except: E. Jendek & O. Šauša lgt. (CKD).

DESCRIPTION (male). Head and pronotum rufous; elytra largely black with basal third rufous, apices somewhat paler and humeri sometimes slightly darkened; mouthparts, palpi, antennae and legs rufous, distal segments of antennae only slightly darkened.

Head 1.1 times as long as wide, somewhat prolonged posteriorly (posterior arch conical); tempora only slightly convex, nearly straightly narrowing posteriorly; temporal angles entirely obsolete; base nearly fluently passing into moderately long neck, boundary-line only moderately indicated. Eyes large and convex, protruding. Dorsal surface largely distinctly punctured, slightly corrugated mesally; punctures somewhat irregularly spaced, mostly umbiliform, becoming sparser in posterior half towards base; pale pubescence composed of shorter decumbent setae and few, distinctly longer, sparsely scattered erect setae. Antennae slightly exceeding elytral humeri, only slightly enlarged



Figs 79–88. 79–83. *Anthelephila picta* sp. n., male: 79 – front leg, 80 – sternite VII, 81 – prong of sternite VIII, 82 – tergite VIII, 83 – apical portion of tegmen of aedeagus. 84–88. *A. nigrorufa* sp. n., male: 84 – front leg, 85 – sternite VII, 86 – prong of sternite VIII, 87 – tergite VIII, 88 – apical portion of tegmen of aedeagus. Scale – 0.5 mm: A – 79, 84; 0.1 mm: B – 81, 86, C – 83, 88, D – 80, 82, 85, 87.

distally; antennomere I thick, 2.3 times as long as wide; the most elongate middle antennomeres 2.4 times as long as wide; antennomere X 1.6 times, antennomere XI 2.2 times as long as wide.

Pronotum 1.6 times as long as wide, much narrower than head including eyes, regularly rounded anteriorly, moderately impressed (constricted in dorsal view) laterally in posterior half, dorsal face convex in anterior half, flattened to slightly impressed at level of lateral constriction and then very slightly raised and sloping towards base. Dorsal surface distinctly punctured only medially, finely transversely corrugated before base; dorso-lateral and lateral sides in anterior half only very finely and sparsely punctured, smooth and glossy before latero-basal impression; bottom of latero-basal impression finely wrinkled and moderately vaulted area situated posteriorly to impression rugose and these paired rugosities pass into dorsal corrugation; anterior collar and antebasal sulcus distinctly developed; pubescence as on head.

Elytra 1.7 times as long as wide; humeri distinctly angulate, protruding; postscutellar impression entirely absent. Punctures distinct but much more widely spaced than on forebody, especially in basal third; setigerous punctures simple, interspaces inpunctate, smooth and glossy; pubescence in general longer than on forebody, composed of shorter decumbent setae and longer erect setae; setae in basal third seem to be rather uniformly long, suberect to erect.

Mesosternum with narrow, laterally well delimited medio-longitudinal bulge, moderately narrowing posteriad, ventral outline of bulge nearly straight in lateral view; metasternum with two small, paired, densely punctured and setose patches posteriorly and moderately impressed medio-longitudinally (inbetween patches).

Legs with femora distinctly clavate; front legs modified (Fig. 84); profemora with strong, dent-like process, finely setose on dorsal side and apically; protibia distinctly enlarged in distal half; all tarsi distinctly shorter than tibia, penultimate segment of all tarsi flattened distally, with terminal segment articulated on its dorsal side at about mid-length. Pubescence rather uniformly short, fine, appressed to subdecumbent, only moderately longer on metatibia; two terminal spines distinctly developed in all tibia.

Abdomen. Sternite VII (Fig. 85) with posterior margin rather narrowly and deeply emarginate apically, with short and narrow median process, bearing longer, stiff setae apically. Tergite VII with posterior margin, simply, somewhat widely rounded apically. Paired prongs of sternite VIII (Fig. 86) vaulted and with cluster of conspicuously long setae on each side latero-basally; distal portion of each prong branched out into two, dorsal and ventral, longitudinal plates, ventral plate simply shaped, long setose on lateral (outer) margin, dorsal lobe somewhat truncate and with lateral, oppositely pointing dents apically (axe-like), its dorsal side with numerous long setae. Tergite VIII (Fig. 87) composed of two, paired plates, narrowly connected medially and rounded apically. Distal portion of tegmen of aedeagus short, 0.6 times as long as basal piece, its apex trilobed (Fig. 88), with lateral lobes finger-like, distinctly longer than middle lobe.

SEXUAL DIMORPHISM. Female externally identical with male, but differs as follows: medio-longitudinal bulge of mesosternum wider, with rounded lateral sides, its ventral outline moderately convex in lateral view; front legs simple; both sternite and tergite VII simply shaped, moderately tapering apically; abdominal segment VIII inconspicuous, less sclerotized.

LENGTH. 4.1–4.6 mm.

DIFFERENTIAL DIAGNOSIS. *Anthelephila nigrorufa* sp. n. differs from majority of species by head prolonged posteriorly and nearly fluently passing into neck, dorsal face of pronotum slightly impressed at constricted portion (outline not convex over the whole length); elytra distinctly bicoloured, simply sparsely punctured and setose. Among the species of similar external appearance, it can be easily distinguished by the male characters.

ETYMOLOGY. From latin niger (black) and rufus (rufous), referring to the two prevailing body colours.

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## REFERENCES

- BONADONA P. 1986: Anthicidae (Coleoptera) de Sri Lanka. *Entomol. Scand. Suppl.* **30**: 55–75.
- FAIRMAIRE L. 1896: Hétéromères de l'Inde recueillis par M. Andrewes. *Ann. Soc. Entomol. Belg.* **40**: 6–62.
- GAEDIKE H. 1986: Katalog der in den Sammlungen der Abteilung Taxonomie der Insekten des Institutes für Pflanzenforschung, Bereich Eberswalde (Ehemals Deutsches Entomologisches Institut) aufbewahrten Typen – XXIV. *Beitr. Entomol.* **36**: 321–429.
- HEBERDEY R. F. 1934: Entomological investigations on the spike disease of sandal (23) Anthicidae (Col.). *Indian For. Rec.* **20**(6): 1–14.
- KEJVAL Z. 1999: Revisional notes on Oriental Formicomus LaFerté-Sénéctère, 1848 (Insecta: Coleoptera: Anthicidae). *Ann. Naturhistor. Mus. Wien B* **101**: 309–347.
- KEJVAL Z. 2000: Revisional notes on Oriental Formicomus LaFerté-Sénéctère (Coleoptera, Anthicidae) 2. Himalayan species related to *F. lagenicollis* Fairmaire, 1894. *Acta Mus. Morav., Sci. Biol.* **85**: 73–111.
- KOCH C. von 1937: Catalogo ragionato degli Anthicidi libici (Col.) *Boll. Soc. Veneziana Stor. Natur.* **1**: 185–196.
- KREKICH-STRASSOLDO H. von 1914a: Neue Anthiciden. *Verh. Zool.-Bot. Ges. Wien* **64**: 108–114.
- KREKICH-STRASSOLDO H. von 1914b: Beiträge zur Kenntnis der Anthiciden. *Verh. Zool.-Bot. Ges. Wien* **64**: 215–229.
- KREKICH-STRASSOLDO H. von 1919: Beiträge zur Kenntnis der Anthiciden und Hylophiliden (Col.). *Entomol. Mitt.* **8**: 166–175.
- KREKICH-STRASSOLDO H. von 1925: Anthicidae of the Philippines I. *Philip. J. Sci.* **27**: 515–535.
- KREKICH-STRASSOLDO H. von 1928: Beiträge zur Kenntnis indischer Anthiciden. *Arch. Naturgesch.* **92**(5) (1926): 67–105.
- KREKICH-STRASSOLDO H. von 1931: Beiträge zur Kenntnis indischer Anthiciden II. *Folia Zool. Hydrobiol.* **3**: 1–41.
- LA FERTÉ-SÉNÉCTÈRE M. F. de 1849: Formicomus. In: GUÉRIN-MÉNEVILLE F.-E. (ed.): *Species et iconographie générique des Animaux Articulés ou représentation des genres, avec leur description et celle de toutes les espèces de cette grande division du règne animal. Première Partie: Insectes Coléoptères, Livraison 7*, No. 25. Paris: Fain et Thunot, 25 pp.
- PIC M. 1896: Anthicide nouveau recueilli au Cambodge et offert au Muséum par M. Pavie. *Bull. Mus. Paris* **2**: 250.
- PIC M. 1897: Notes diverses sur les Anthicides, 2. Description d'un Formicomus de Birmanie. *Misc. Entomol.* **5**: 75–77.
- PIC M. 1899: Descriptions d'Anthicidae exotiques. *Revue Fr. Entomol.* **18**: 105–106.
- PIC M. 1903a: Anthicides de Manille. *Ann. Soc. Entomol. Fr.* **71** (1902): 643–648.
- PIC M. 1903b: Voyage de M. Maurice Maindron dans l'Inde méridionale (Mai a Novembre 1901) 3<sup>e</sup> Mémoire. Anthicides. *Ann. Soc. Entomol. Fr.* **72**: 348–352.
- PIC M. 1907: Macratia et Anthicidae recueillis par feu L. Fea en Birmanie et regions avoisinantes. *Ann. Mus. Civ. Stor. Natur. Genova* **3**: 339–342.
- PIC M. 1912: Descriptions d'espèces et variétés appartenant à diverses familles. *Mélanges Exot. Entomol.* **2**: 2–11.
- PIC M. 1913a: Nouveaux Anthicides exotiques. *L'Échange* **29**: 155–158.
- PIC M. 1913b: Descriptions de 29 Espèces et de plusieurs variétés. *Mélanges Exot. Entomol.* **5**: 7–20.
- PIC M. 1914: Descriptions abrégés de Malacodermes et Hétéromères. *Mélanges Exot. Entomol.* **11**: 8–20.
- PIC M. 1922: Nouveautés diverses. *Mélanges Exot. Entomol.* **36**: 1–32.
- PIC M. 1929: Nouveautés diverses. *Mélanges Exot. Entomol.* **53**: 1–36.
- PIC M. 1956: Nouveaux Coléoptères de diverses familles. *Ann. Histor.-Natur. Mus. Hung.* **7**: 71–92.
- TELNOV D. 1998: Anthicidae (Coleoptera) der Sammlung Sergej Kurbatov, mit Beschreibung von sechs neuen Arten aus der Orientalis. *Bull. Annl. Soc. Roy. Belge Entomol.* **134**: 81–100.
- TELNOV D. 1999: Weitere Anthicidae verschiedener Regionen aus dem Zoologischen Museum Kopenhagen (Insecta Coleoptera). *Bull. Soc. Roy. Belge Entomol.* **103**: 72–81.
- UHMANN G. 1978: Ein neuer Formicomus aus China (Coleopt., Anthicidae) 2. Beitrag zur Kenntnis der Anthicidae. *Entomol. Bl.* **74**: 81–83.
- UHMANN G. 1983: Anthiciden der orientalischen Region (Coleoptera, Anthicidae). *Annl. Histor.-Natur. Mus. Natl. Hung.* **75**: 185–206.

- UHMANN G. 1985: Anthicidae (Coleoptera) from the Institute of Zoology, Warsaw. Seventeenth contribution to the knowledge of Anthicidae. *Annl. Zool.* **39**: 119–129.
- UHMANN G. 1986: Anthicidae aus Nepal, II. *Senckenbergiana Biol.* **66**: 305–310.
- UHMANN G. 1987: Anthiciden der orientalischen Region aus dem Museum in Genf (Coleoptera, Anthicidae) 21. Beitrag zur Kenntnis der Anthicidae. *Rev. Suisse Zool.* **94**: 687–701.
- UHMANN G. 1988: Die Anthicidae der Sammlung Johann Klapperich (Coleoptera). *Bonn. Zool. Beitr.* **39**: 395–407.
- UHMANN G. 1990a: Anthicidae aus Nepal III (Coleoptera). *Entomofauna, Ztschr. Entomol.* **11**: 333–347.
- UHMANN G. 1990b: Weitere Anthiciden verschiedener Regionen aus dem Museum in Genf (Coleoptera, Anthicidae) 30. Beitrag zur Kenntnis der Anthicidae. *Rev. Suisse Zool.* **97**: 139–151.
- UHMANN G. 1994: Südostasiatische Anthiciden aus dem Naturhistorischen Museum in Genf, 4 (Coleoptera, Anthicidae). *Rev. Suisse Zool.* **101**: 655–676.
- UHMANN G. 1996a: Anthiciden aus dem Naturhistorischen Museum in Wien (Coleoptera, Anthicidae). *Entomol. Bl.* **92**: 19–36.
- UHMANN G. 1996b: Indo-australische Anthicidae (Coleoptera) aus dem Naturhistorischen Museum in Genf. *Rev. Suisse Zool.* **103**: 737–748.