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# Studies of the genus *Anthelephila* (Coleoptera: Anthicidae) 13. The species described by W. W. Saunders from India

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**Abstract.** *Anthelephila mutillaria* Saunders, 1834 and *A. ruficollis* Saunders, 1834 are redescribed. Seven new synonyms are proposed: *Anthelephila mutillaria* Saunders, 1834 = *Formicomus mutillarius tonkineus* Pic, 1899, syn. nov. = *F. mutillarius inapicalis* Pic, 1899, syn. nov. = *F. mutillarius innotatipennis* Pic, 1913, syn. nov. = *Hirticomus fascifer* Uhmann, 1983, syn. nov.; *Anthelephila ruficollis* Saunders, 1834 = *Anthelephilus inhumeralis* Pic, 1903, syn. nov. = *Formicomus ruficollis annamitus* Pic, 1903, syn. nov. = *Formicomus uncinatus* Desbrochers, 1875, syn. nov.

**Key words.** Coleoptera, Anthicidae, *Anthelephila*, new synonymy, Oriental Region, Palaearctic Region

## Introduction

In dealing with the habits of some Indian insects, Saunders (1834) described two anthicids, *Anthelephila mutillaria* Saunder, 1834 and *A. ruficollis* Saunders, 1834. Both species were described from an unstated number of specimens collected in April on the banks of the Hooghly River, a few miles south of Calcutta, and Saunders (1834) mentioned that they were 'running about the roots of grass among sand in abundance.'

Both *Anthelephila mutillaria* and *A. ruficollis* are conspicuous solitary species, inhabiting predominantly lowland habitats near rivers. They appear to be rather widespread and clearly variable in some external characters (colouration, shape of head, punctation). For each of these species I have failed to find any substantial intraspecific variation in male characters, even in specimens from far distant localities.

In the present paper, *Anthelephila mutillaria* and *A. ruficollis* are redescribed, and seven taxa are placed as junior synonyms, including the rather enigmatic *Formicomus uncinatus* Desbrochers, 1875 from Syria.

## Material and methods

Specimens were examined with a Leica MZ 9.5 stereomicroscope; morphological measurements were taken with an ocular graticule. Male genitalia were examined after being cleared in a hot 10% KOH solution. Photographs were taken with a Nikon Coolpix 4500 digital camera attached to a Leica MZ 9.5 trinocular microscope; images of the same specimen at different focal planes were combined with Helicon Focus 5.2 Pro and edited with Adobe Photoshop 9.0.2. software.

As there are no doubts about the identity of both redescribed species, their redescriptions are based on additional male specimens originating from regions close to the type localities, and compared with the type specimens.

Exact label data are quoted for the type specimens only. Separate labels are indicated by a double slash (//). Author's comments on the type material are found in square brackets. The following abbreviations are used in the text: [p] – printed; [h] – handwritten; env. – environs of; rec. – record from; lgt. – collected by; coll. – collection.

The following acronyms of collections are used (in round brackets):

BMNH The Natural History Museum, London, United Kingdom;
MNHN Museum National d'Histoire Naturelle, Paris, France;
NHMB Naturhistorisches Museum, Basel, Switzerland;
NKME Naturkundemuseum Erfurt, Erfurt, Germany;
NMPC National Museum, Prague, Czech Republic;
OXUM Hope Entomological Collections, Oxford, United Kingdom;
DCDC Donald S. Chandler collection, Durham, New Hampshire, U.S.A.;
ZKDC Zbyněk Kejval collection, Domažlice, Czech Republic;
ZSMC Zoologische Staatssammlung München, Germany.

## Systematics

### *Anthelephila mutillaria* Saunders, 1834

(Figs 1–7, 14–16)

*Anthelephila mutillaria* Saunders, 1834: 66, Pl. 7, Fig. 9: Chandler et al. (2008): 423 (catalogue, distribution).
*Formicomus mutillarius*: LaFerté-Sénectère (1849b): 3 (redescription, rec. Myanmar); Pic (1907): 339 (rec. Myanmar); Bonadona (1978): 72 (rec. Bangladesh).
*Formicomus mutillarius* var. *tonkineus* Pic, 1899a: 105, **syn. nov.**
*Formicomus mutillarius* var. *inapicalis* Pic, 1899a: 106, **syn. nov.**
*Formicomus mutillarius* var. *innotatipennis* Pic, 1913: 155, **syn. nov.**
*Hirticomus fascifer* Uhmann, 1983: 200, Fig. 33, **syn. nov.**
*Formicomus fascifer*: Telnov (1999a): 64, Figs 1–5 (new comb., redescription, rec. Vietnam).
*Anthelephila fascifer*: Telnov (2003): 293 (rec. Nepal).

**Type localities.** *Anthelephila mutillaria*: India, West Bengal, S of Calcutta, banks of Hooghly River. *Formicomus mutillarius tonkineus*: Northern Vietnam ('Tonkin'). *Formicomus mutillarius inapicalis*: 'India Orientalis' [probably southern Myanmar, Tanintharyi Region]. *Formicomus mutillarius innotatipennis*: 'Indes Orientales: ?Tenasserim' [probably southern Myanmar, Tanintharyi Region]. *Hirticomus fascifer*: Vietnam, 'River Chay' [probably in the Hà Giang Province].

**Type material.** *Anthelephila mutillaria*: Syntype: ♀, 'Anthel: mutillaria W.W.S. Bengal [h] // Coll.(1830-73) W W Saunders Wx coll. H. E. Cox. dd. 1916 Mrs Cox [p] // Syntype Anthelephila mutillaria Saunders, W. W., 1834 Trans Ent Soc. Lon. 1: 66, pl. 7 fig. 9 teste. D.J. Mann, viii.2003 [p] // TYPE COLE 2137 Anthelephila mutillaria Saunders, W. W., 1834 HOPE ENT COLL., OUMNH [p]' (OXUM).

*Formicomus mutillarius* var. *innotatipennis:* Syntype: ♀, 'Museum Prag, Hinter-Jndien, Tenasserim ? [sic!; p] // Coll. Helfer [p] // type [h] // TYPE [p, red label] // [female symbol]' (coll. Pic, MNHN).

*Formicomus mutillarius* var. *tonkineus:* Syntype: ♀, bearing red, printed 'TYPE' label (coll. Pic, MNHN).

**Additional material. BANGLADESH: Rangpur Division:** 1 ♂, Dinajpur, x.1969, Barbe lgt. (MNHN, coll. Bonadona). **CHINA: Yunnan:** 1 ♂ 6 ♀♀, 5 km NE Yuanxian, 24°27′45.1″N 100°10′37.8″E, 1053 m, sandy river bank, flood debris, 12.ix.2009, D. W. Wrase lgt. (ZKDC). **INDIA: Andhra Pradesh:** 2 ♂♂ 3 ♀♀, 35 km SE of Rajahmundry, Kottipale, bank of Godavari River, 23.–24.ii.1994, Z. Kejval lgt. (ZKDC). **Assam:** 1 ♀, Haflong Hills, 18.–25.v.1991, S. Jakl lgt. (ZKDC). **Orissa:** 3 ♂♂ 5 ♀♀, 30 km NE of Balasore, Jaleswar env., bank of river, 13.ii.1994, Z. Kejval lgt. (ZKDC). **Uttarakhand:** 1 ♂, Rishikesh, 450 m, viii.1988, Werner lgt. (ZKDC). **LAOS:** 1 ♀, Vientiane city, 17°57′N 102°36′E, shore of Mekong, 160 m, 4.v.2009, M. Geiser lgt. (NHMB). **MYANMAR:** 2 ♀♀, 'Ind. or. // Helfer [lgt.]' (NMPC). **Bago Region**: 1 ♂, Toungoo, 29.–31.v.2003, M. Klícha lgt. (ZKDC).**Yangon Region:** 1 ♂ 2 ♀♀, Hlegu-Goygon, iv.1997, M. Klícha lgt. (ZKDC). **NEPAL: Bheri Zone:** 1 ♀, ca. 10 km E of Nepalganj, banks of Rapti River, 28°03′43″N 81°43′14″E, 120 m, 12.vi.2009, A. Kopetz lgt. (ZKDC). **Janakpur Zone:** 1 ♀, Tamba-Koshi-Khola, SE Charikot, 900–1200 m, 5.–10.vi.1987, C. Holzschuh lgt. (ZKDC); 1 ♀, Pokhara, 3.vi.1992, I. Jeniš lgt. (ZKDC); 1 ♂ 3 ♀♀, Annapurna Pokhara, Phewa river + lake, 800–850 m, 14.–15. ix.2003, J. Schmidt lgt. (NKME). **Narayani Zone:** 3 ♂♂, Sauraha-Thati-Bagh Mara, 17.–21.v.1996, P. Čechovský lgt. (ZKDC); 1 ♂, Sauraha-Thati-Bagh Mara, Chitwan National Park, 200–500 m, 2.–3.v.2000, J. & J. Dalihod lgt. (ZKDC); 2 ♀♀, same locality, 4.–6.vi.1999, P. Kresl lgt. (ZKDC); 1 ♂, Sauraha, Chitwan Nat. Park, at light, 3.–6.vi.1983 [no collector] (BMNH). **Rapti Zone:** 1 ♀, 2 km S of Lamahi, Rapati River, 27°50′07″N 82°32′23″E, riverbank + fields, 13.vii.2001, A. Kopetz lgt. (NKME). **PAKISTAN: Khyber Pakhtunkhwa Province**: 1 ♂, 80 km E of Peshavar, Indus River valley, viii.2005 [no collector] (ZKDC). **THAILAND: Mae Hong Son Province:** 9 ♂♂ 10 ♀♀, Soppong env., 600 m, 28.v.–2.vi.1999, M. Říha lgt. (ZKDC). **VIETNAM: Ha Noi Province:** 1 ♂ 3 ♀♀, Hanoi, 15.iv.1918, Jeanvoine [lgt.] (MNHN).

**Redescription** (male, Kottipale, ZKDC). Body length 5.2 mm. Head black, pronotum dark reddish to red, elytra largely black with reddish basal third; legs black, basal portion of femora reddish, antennae black, basal antennomeres with reddish tinge.

Head 1.1 times as long as wide, including eyes; base rather widely rounded, its outline moderately convex medially in dorsal view, tempora moderately narrowing posteriorly, posterior temporal angles rounded but distinct. Eyes medium-sized, strongly convex. Surface distinctly and rather evenly punctured dorsally; punctures conspicuously large, shallow, mostly rounded and narrowly spaced, at places (postero-laterally) contiguous, angular and forming cell-like sculpture. Setation conspicuous, with shorter, suberect and numerous longer erect bristly setae. Antennae moderately long, at most slightly enlarged in distal third; antennomere X 2.1 times, XI 2.9 times as long as wide.

Pronotum robust, 1.3 times as long as wide, moderately narrower than head including eyes, somewhat unevenly rounded anteriorly, only moderately impressed laterally in posterior half; pronotal disc evenly shaped, its outline rather evenly convex in lateral view. Surface very distinctly punctate, including lateral sides (finer and sparser only near procoxal cavities); punctures on pronotal disc somewhat smaller and mostly distinctly sparser than those on head, somewhat unevenly spaced; latero-basal impressions unwrinkled. Setation as on head, with numerous long bristly tactile setae.

Mesoventrite with moderately convex, laterally sharply delimited median bulge; metaventrite simple.

Elytra 1.8 times as long as wide, conjointly rounded apically; humeri moderately protruding, omoplates and postbasal impression slightly indicated. Surface distinctly punctate; basal half punctures much smaller and largely sparser than those of head and pronotal disc,

dot-like, somewhat unevenly spaced, slightly sparser in basal third, with 2–3 small paired patches of dense punctures near borderline of reddish basal and black middle third. Setation conspicuous, dense and coarse, mostly suberect, with numerous longer erect setae; setae mostly dark coloured, blackish, with contrastingly whitish setae scattered latero-basally, especially on humeri, and forming two transverse bands, anterior band narrow and somewhat uneven (nearly subdecumbent setae originating from patches of dense punctures), posterior band much wider and sparser, situated in apical third.

Legs rather robust, conspicuously setose, with numerous long erect setae (especially on tibiae); profemora nearly simple, with slight edge on inner side; protibiae enlarged at mid-length and with smooth, moderately projecting lobe in distal half (Fig. 1); penultimate tarsomere widened / flattened distally, with terminal tarsomere dorsally articulated in all tarsi.

Abdominal characters as in Figs 2–7; sternum VIII shallowly impressed medially, its median process simple, curved, projecting from dorsal side close before margin of sternum; tergum VII with conspicuous apical notch; prongs of sternite VIII somewhat laterally flattened, each with two lobes dorsally near base, small ventral process, and two lobules on inner side of apical widened portion, margins of prongs medially with dense short, stiff setation; paired sclerites of tergite VIII with narrow median connection; aedeagus with apical portion of tegmen 0.4 times as long as basal piece.

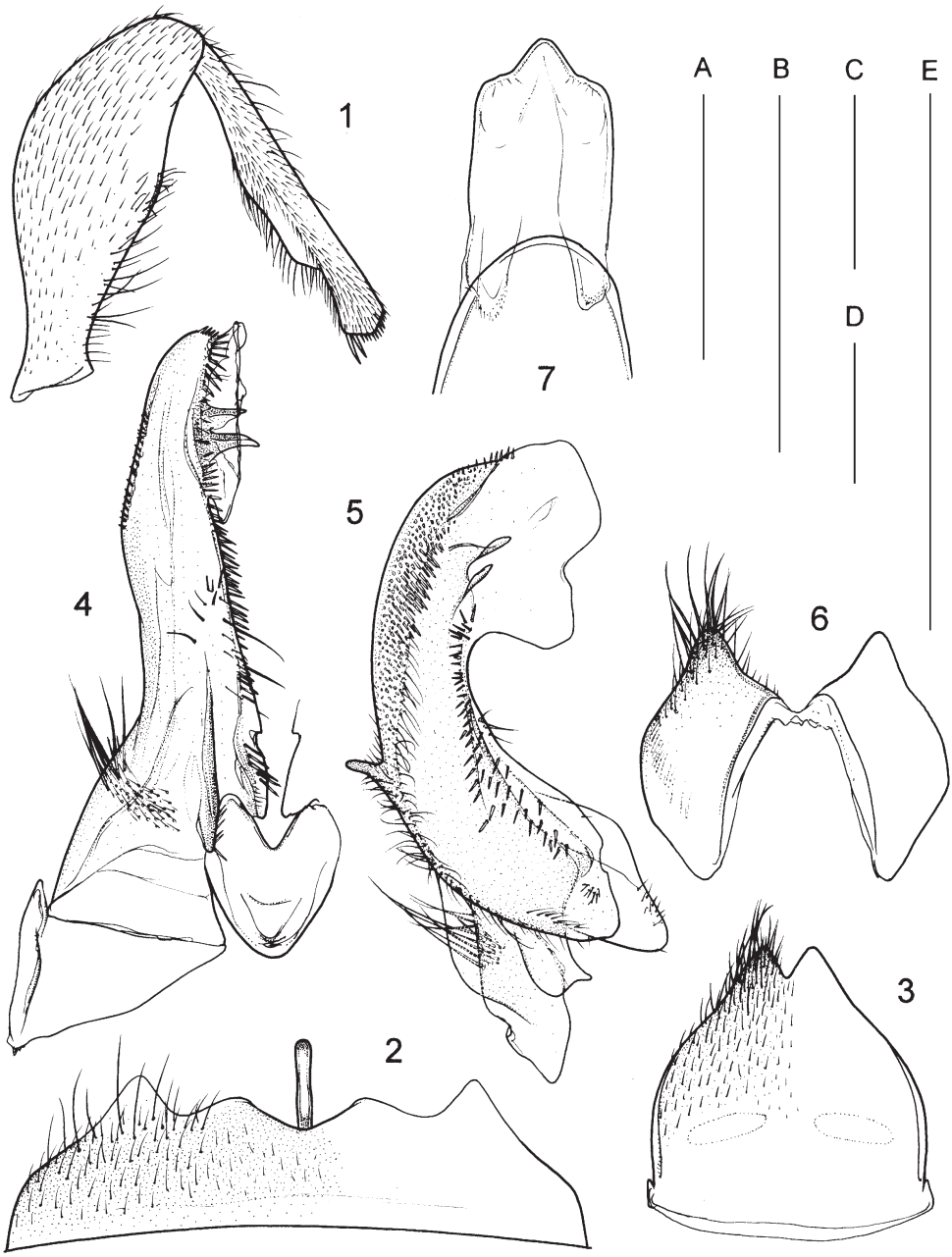
**Variation.** Body length 3.7–5.2 mm. Most specimens from Nepal, Vietnam and Yunnan with both, basal and apical, thirds of the elytra reddish (typical form, Fig. 14); most specimens from Myanmar and Thailand (Soppong) with elytra largely or entirely black (Fig. 15); a specimen from Yunnan generally dark coloured, including brown black pronotum (Fig. 16). Base of the head in specimens from the Southeast Asia nearly evenly rounded, with indistinct posterior temporal angles and eyes somewhat less convex. The ventral process of prongs in males always well- developed, but less protruding in the specimen from Vietnam.

Female sternum VII simple, moderately produced postero-medially and rounded apically; female tergum VII nearly triangular, rounded apically.

**Differential diagnosis.** *Anthelephila mutillaria* is a very conspicuous, robust species, which can be easily recognized by the following combination of external characters: head and pronotum very coarsely punctate, body setation conspicuous, long and erect (including legs), elytra with setose bands. It differs clearly from all Oriental species in the morphology of male sternite VIII.

**Distribution.** Bangladesh, China (Yunnan), India (Andhra Pradesh, Assam, Orissa, Uttarakhand, West Bengal), Laos, Myanmar, Nepal, Pakistan, Thailand, Vietnam. New species to Pakistan.

**Remarks.** *Anthelephila mutillaria* varies considerably in colouration and thus Pic (1899a, 1913a) described: var. *tonkineus* from northern Vietnam (body entirely dark, including pronotum), var. *inapicalis* from Myanmar (elytra black, with reddish basal third / fourth, pronotum reddish), and var. *innotatipennis* from Myanmar (elytra entirely black, pronotum reddish). In the case of the variety *inapicalis*, Pic (1899a) just named 'var. β' of *Formicomus mutillarius* that had been decribed by LaFerté (1849b). Its type material is thus of the same origin as that of var. *innotatipennis* – probably southern Myanmar, Tanintharyi Region (formerly Tenasserim), from the collection of J. V. Helfer.




Figs 1–7. *Anthelephila mutillaria* Saunders, 1834 (Kottipale, male): 1 – profemur and protibia; 2 – sternum VII; 3 – tergum VII; 4 – sternite VIII (half) in dorsal view; 5 – prong of sternite VIII in lateral view; 6 – tergite VIII; 7 – apical portion of aedeagus. Scales (0.5 mm): A – Fig. 2; B – Figs 4, 5; C – Figs 1, 6; D – Fig. 3; E – Fig. 7.

Although darker specimens of *A. mutillaria* are known only from the southern part of its range, they do not seem to be confined to any particular geographical region and may occur together with typically coloured specimens (series from Soppong and Yuanxian). The newly proposed synonymy is based mainly on the examination of male characters that were found rather stable (including setation and the finer structures of sternite VIII) within the examined material.

Uhmann (1983) described *Hirticomus fascifer* from a single female specimen collected in northern Vietnam ('River Chay' probably Hà Giang Province). Telnov (1999) examined the holotype, proposed the new combination and provided a redescription as *Formicomus fascifer*, based on an additional male specimen from Hanoi. The male characters presented by Telnov (1999) fully agree with those of *A. mutillaria*. The newly proposed synonymy is further confirmed by examination of another male specimen from Vietnam (listed above).

### *Anthelephila ruficollis* Saunders, 1834

(Figs 8–11, 17)

*Anthelephila ruficollis* Saunders, 1834: 65, Pl. 7, Fig. 8; Sakai (1989): 412 (catalogue); Lafer (1996): 37 (male characters, key, rec. Japan, Vietnam); Telnov (2001): 184 (rec. Indonesia); Chandler et al. (2008): 423 (catalogue, distribution).

*Anthelephilus ruficollis*: LaFerté-Sénectère (1849a): 3 (redescription, rec. Myanmar); Uhmann (1983): 194 (rec. Vietnam, Laos, India), Uhmann (1985): 125 (rec. Vietnam), Uhmann (1994a): 670 (rec. Thailand, Vietnam), Uhmann (1994b): 409 (rec. Malaysia), Uhmann (1996): 27 (rec. Malaysia, Thailand); Telnov (1997): 63 (distribution, rec. Vietnam), Telnov (1998a): 87 (distribution, rec. Vietnam), Telnov (1998b): 90 (rec. Indonesia), Telnov (1999b): 76 (rec. Thailand); Uhmann (2000): 157 (rec. Malaysia); Kejval (2003): 382 (note).

*Antelophilus ruficollis* (incorrect subsequent spelling): Pic (1899b): 758 (rec. Indonesia).

*Formicomus ruficollis*: Pic (1907): 339 (rec. Myanmar); Bonadona (1978): 72 (rec. Bangladesh).

*Formicomus ruficollis* var. *annamitus* Pic, 1903a: 56, **syn. nov.**

*Formicomus uncinatus* Desbrochers, 1875: 42; Desbrochers des Loges (1881): 152 (note on identity); Pic (1895): 19 (note on identity, rec. Syria); Pic (1898): 20 (note); Uhmann et al. (2005): 11 (note); **syn. nov.**

*Anthelephila uncinata*: Chandler et al. (2008): 424 (catalogue, distribution).

*Formicomus* (*Anthelephilus*) *inhumeralis* Pic, 1903b: 644, **syn. nov.**

*Anthelephilus inhumeralis*: Krekich-Strassoldo (1929): 475 (rec. Philippines); Uhmann (1985): 127 (rec. Indonesia), Uhmann (1990): 583 (rec. Indonesia), Uhmann (1996): 27 (rec. Indonesia).

*Anthelephilus cyanochrous* Nomura, 1962: 2, Pl. 1, Figs 3–5. Nomura (1970): 104 (as synonym of *A. ruficollis*).

**Type localities.** *Anthelephila ruficollis*: India, West Bengal, S of Calcutta, banks of Hooghly River. *Anthelephilus cyanochrous*: Japan, Ryukyu Islands. *Formicomus* (*Anthelephilus*) *inhumeralis*: Philippines, Manila. *F. ruficollis* var. *annamitus*: Central Vietnam, Phuc-Son. *F. uncinatus*: Syria.

**Type material.** *Anthelephila ruficollis*: Syntype: ♂, 'W [h] // W. S Saunders East Ind [h; somewhat illegible] // Putative syntype Anthelephila ruficollis Saunders, W. W., 1834 Trans Ent Soc. Lon. 1: 65, pl. 7 fig. 8 Removed to type coll. Teste D.J. Mann, viii.2003 [p] // TYPE COLE 2138 Anthelephila ruficollis Saunders, W. W., 1834 HOPE ENT COLL., OUMNH [p]' (OXUM).

*Formicomus ruficollis* var. *annamitus*: Syntypes: 1 ♀, 'Annam Phuc-Son Nov. Dez. H. Fruhstorfer [p; black frame] // type [h; yellowish label] // TYPE [p; red label] // v. annamitus Pic [h]' (MNHN); 2 ♂♂ 2 ♀♀, bearing only identical 1st label (MNHN).

*Formicomus inhumeralis*: Syntypes: 1 ♂, 'Manille Baer [p] // type [h; yellowish label] // TYPE [p; red label] // inhumeralis Pic [h]' (MNHN); 1 ♂, 'Manile' [h; partly illegible] (MNHN); 1 ♂ 1 ♀, 'Manile [h] // inhumeralis [h]' (MNHN).

**Additional material. AFGHANISTAN: Kunduz Province:** 1 ♀, Kunduz, 7.vii.1964, Nurolhak [lgt.] (NMPC). **BANGLADESH: Dhaka Division:** 1 ♂ 3 ♀♀, Dhaka, 8.v.–18.ix.1945 [different dates], D. Leston lgt. (BMNH);

**Rangpur Division**: 1 ♂, Dhanjuri, near Dinajpur, vi.1963 [no collector] (MNHN, coll. Bonadona); **Rajshahi Division**: 1 ♂, Rajshahi, 6.iv.1993 [no collector] (BMNH); 1 ♂, Sripur, viii.–xii.1990 [no collector] (BMNH). **BHUTAN:** 1 ♂, Samchi, 300 m, 7.–11.v.1972 [no collector, Basel Museum expedition] (MNHN, coll. Bonadona); 1 ♂, Gayligphu, 21.viii.1989 [no collector] (BMNH). **CHINA: Macao**: 1 ♀, Macao, 1906, F. Muir lgt. (DCDC). **Guangdong**: 2 ♂♂ 1 ♀, Guangzhou [= Canton], 1.–30.x.1916, H. Weigold lgt. (ZKDC); 1 ♀, same locality, 3.x.1963 [no collector] (NMPC); 1 ♂, same locality, vi.1983, Bouček lgt. (BMNH). **INDIA:** 1 ♂, Andaman Island, 10 km of Port Blair, lowland forest, vi.1991, S. Jakl lgt. (ZKDC). **INDONESIA: Java:** 2 ♂♂, Batavia, viii.1947 and 1949, C. v. Nidek lgt. (ZKDC); 2 ♂♂ 1 ♀, Jakarta, 6.v.1959, B. Pisarski & J. Proszynski lgt. (ZKDC). **East Java Province:** 1 ♂, Sempolan, 400–500 m, i.1998, local collector (ZKDC). **Bali Province:** 1 ♂, Bali, Margarana, 15 km E of Gilimanuk, 23.ii.1994, Bolm lgt. (ZKDC). **Central Java Province:** 1 ♀, Pekalongan, iii.1907, F. Muir lgt. (DCDC). **East Nusa Tenggara Province:** 1 ♂, Sumba, Tarimbang env., 0–100 m, 2.–3.ii.2001, P. Votruba lgt. (ZKDC). **South Sulawesi Province:** 1 ♂, 20.–35 km NW of Palopo, 1000–1400 m, 4.–5.iv.1999, Bečvář & J. Zábranský lgt. (ZKDC). **South East Sulawesi Province:** 1 ♂, Buton Island, Wakarumba, 3.–7.ii.1994, M. Štrba & I. Jeniš lgt. (ZKDC). **West Nusa Tenggara Province:** 2 ♂♂, Lombok, Senaro, N slope of Rinjani, 1100 m, 2.–5.ii.1994, Bolm lgt. (ZKDC). **JAPAN:** 1 ♂, Okinawa, Shimabuku, 20.v.–1.vi.1945, C. T. Parsons & F. G. Werner lgt. (ZKDC); 3 ♂♂, Okinawa, Iwa, vii.–viii.1945, C. T. Parsons & F. G. Werner lgt. (ZKDC). **MALAYSIA: Johor:** 1 ♂, Batu Pahat, Baum [lgt., no date] (NMPC); 1 ♀, Lombong, 15 km N of Kota Tinggi, 27.–30.vii.1992, R. Schuh lgt. (ZKDC). **Kelantan:** 1 ♀, sawmill near Dabong, 05°18′20″N 101°59′30″E (WGS84), 23.vii.2001, R. Fouque & H. Bartlová lgt. (ZKDC); **Pahang:** 2 ♂♂ 1 ♀, Benom Mountains, 15 km E of Kampong Dong, 3°53′N 102°01′E, 700 m, 1.iv.1998, D. Hauck lgt. (ZKDC); 1 ♀, Banjaran Benom Mountains, 20 km S of Kampong Ulu Dong, 1500–1900 m, 17.–23.iv.1997, P. Čechovský lgt. (ZKDC); 1 ♂ 10 ♀♀, Tioman Island, Kampong Tekek – K. Juara, 2°48′N 104°11′E, 5–295 m, 7.–25.ii.2000, M. Štrba lgt. (ZKDC); 1 ♂ 2 ♀♀, same data, except: R. Hergovits lgt. (ZKDC); 1 ♂, Raub env., 23.–24.ii.1995, M. Štrba & R. Hergovits lgt. (ZKDC); **Sabah:** 1 ♀, Banjaran Crocker Mountains, Gunung Alab Peak, 1650–1800 m, 30.iv.–27.v.1996, M. Štrba & R. Hergovits lgt. (ZKDC). **MYANMAR: Tanintharyi Region**: 4 ♂♂ 8 ♀♀, 'MUSEUM PRAG HINTER-JNDIEN [sic!] Tenasserim // coll. Helfer // ruficollis det. v. Krekich' (NMPC); 2 ♂♂ 3 ♀♀, 'Ind. or. // Helfer [lgt.]' (NMPC). **Bago Region:** 1 ♂, Chanthakwin, ii.1997, M. Klícha lgt. (ZKDC). **Yangon Region:** 6 ♂♂ 4 ♀♀, Yangon [= Rangoon], 12.–18.i.1981, de Rougemont lgt. (MNHN, coll. Bonadona). **NEPAL: Koshi Zone:** 1 ♂, Morang Distr., Biratnagar, 140 m, 21.v.1980, C. Holzschuh lgt. (ZKDC). **PHILIPPINES:** 12 ♂♂ 3 ♀♀, Luzon, Los Baños, W. H. Weston lgt. (DCDC, ZKDC). **SYRIA:** 1 ♂ 1 ♀, 'Syria // coll. Lethierry // Formicomus uncinatus Dsbr.' (coll. Pic, MNHN). **THAILAND: Ayutthaya Province:** 5 ♀♀, Ayutthaya, 26.i.1995, A. Weigel lgt. (NKME). **Chonburi Province:** 8 ♂♂ 3 ♀♀, Pattaya, Jomtien, Pinnacle Resort & Club, KLS, 30.ix.1999, M. Hartmann lgt. (NKME). **Chumphon Province:** 1 ♂ 1 ♀, Pha To env., 9°48′N 98°47′E, 1.–12.iii.1996, P. Průdek lgt. (ZKDC); 3 ♂♂ 7 ♀♀, same locality, 1.–20.iii.1996, K. Majer lgt. (ZKDC); 39 ♂♂ 32 ♀♀, same locality, 1.–11.v.1998, P. Průdek & R. Šigut lgt. (ZKDC). **Mae Hong Son Province:** 5 ♂♂ 3 ♀♀, Ban Si Lang, 1200 m, 1.–8.v.1992, J. Horák lgt. (ZKDC). **Pattani Province:** 1 ♀, Sai Buri, 23.–28.iv.1993, J. Horák lgt. (ZKDC); 1 ♀, Gappoa Panat Nikhom, 3.xi.1981, G. A. Shook lgt. (ZKDC). **Ranong Province:** 7 ♂♂ 3 ♀♀, Ban Na env., 9°34′N 98°42′E, 22.–26.iii.1996, K. Majer lgt. (ZKDC). **Rayong Province:** 2 ♂♂ 1 ♀, 5 km W of Rayong Centre, 27.ix.1999, M. Hartmann lgt. (NKME); 2 ♀♀, Rayong Prov., Klaeng, 21.i.1995, A. Weigel lgt. (NKME). **Trat Province:** 1 ♂ 2 ♀♀, Ko Chang Island, 25.–31.v.2003, O. Šafránek lgt. (ZKDC). **Yala Province:** 3 ♂♂ 2 ♀♀, Betong, 23.–25.iv.1992, J. Horák lgt. (ZKDC); 2 ♂♂ 3 ♀♀, Betong, Guning Cang dun vill., 25.iii.–22.iv.1993, J. Horák lgt. (ZKDC). **VIETNAM: Da Nang Province:** 5 ♀♀, Da Nang, Red Beach, 2.–3.xi.1970, A. R. Gillogly lgt. (ZKDC, ZSMC). **Ha Noi Province:** 2 ♂♂ 2 ♀♀, Hanoi, 3.v.1966, R. Bielawski & B. Pisarski lgt. (ZKDC, ZSMC); 1 ♂ 1 ♀, Hanoi, Hotel Kim-lien, 1.–2.v.1966, G. Topál lgt. (ZKDC); 1 ♀, Mai lam, NE of Hanoi, 12.–14.iv.1966, G. Topál lgt. (ZKDC); 1 ♀, Phuc-Son [no date], Fruhstorfer lgt. (ZKDC). **Ha Nam Province:** 2 ♂♂ 2 ♀♀, Tuong linh, near Phu ly, 19.–23.v.1966, G. Topál lgt. (ZKDC, ZSMC). **Ha Tinh Province:** 2 ♂♂ 3 ♀♀, Ky Thuong, 18°01'N 106°08'E, 100 m, vii.1997, T. Ziegler lgt. (ZKDC, ZSMC).

**Redescription** (male, Biratnagar, ZKDC). Body length 4.2 mm. Head black, pronotum dark reddish, elytra black; antennae and legs black, base of femora reddish.

Head 1.2 times as long as wide, including eyes; base rather widely rounded, its outline moderately convex medially in dorsal view, tempora moderately narrowing posteriorly, posterior

temporal angles indistinct. Eyes small, moderately convex. Surface glossy, distinctly punctate dorsally; punctures mostly dense but well-spaced, distinctly sparser near base. Setation short, decumbent, with scattered long, erect tactile setae. Antennae moderately long, distinctly enlarged in distal third; antennomere X 1.5 times, XI 2.5 times as long as wide.

Pronotum robust, 1.4 times as long as wide, slightly narrower than head including eyes, nearly evenly rounded anteriorly, distinctly impressed laterally in posterior half; pronotal disc evenly shaped, its outline nearly evenly convex in lateral view. Surface glossy, distinctly punctate; punctures unevenly spaced, pronotal disc somewhat sparsely punctured postero-medially (glossy, unwrinkled), and dorso-laterally in posterior half with paired longitudinal strip of fine wrinkles and dense punctures; lateral surface largely impunctate and glossy, including latero-basal impressions. Setation similar to that of head, subdecumbent, with scattered long tactile setae.

Meso- and metaventrite simple.

Elytra 1.7 times as long as wide, convex, subtruncate apically; humeri slightly marked, omoplates and postbasal impression absent. Surface distinctly and rather evenly punctate, glossy. Setation conspicuous, mostly decumbent to suberect, with numerous, moderately longer erect tactile setae.

Legs robust; profemora with strong lobe-like process; protibiae with distinct, blunt protrusion in distal half; penultimate tarsomere widened and flattened distally, with terminal tarsomere articulated dorsally in all tarsi.

Abdominal characters as in Figs 9–13; prongs of sternite VIII lobed dorso-medially at about mid-length and densely setose medially and ventrally; apical portion of tegmen 0.6 times as long as basal piece.

**Variation.** Body length 3.2–4.6 mm. Pronotum usually reddish (Fig. 17), sometimes more or less darkened anteriorly (SE Asia). Specimens from the Philippines and Indonesia are nearly entirely black. The base of the head more or less evenly rounded.

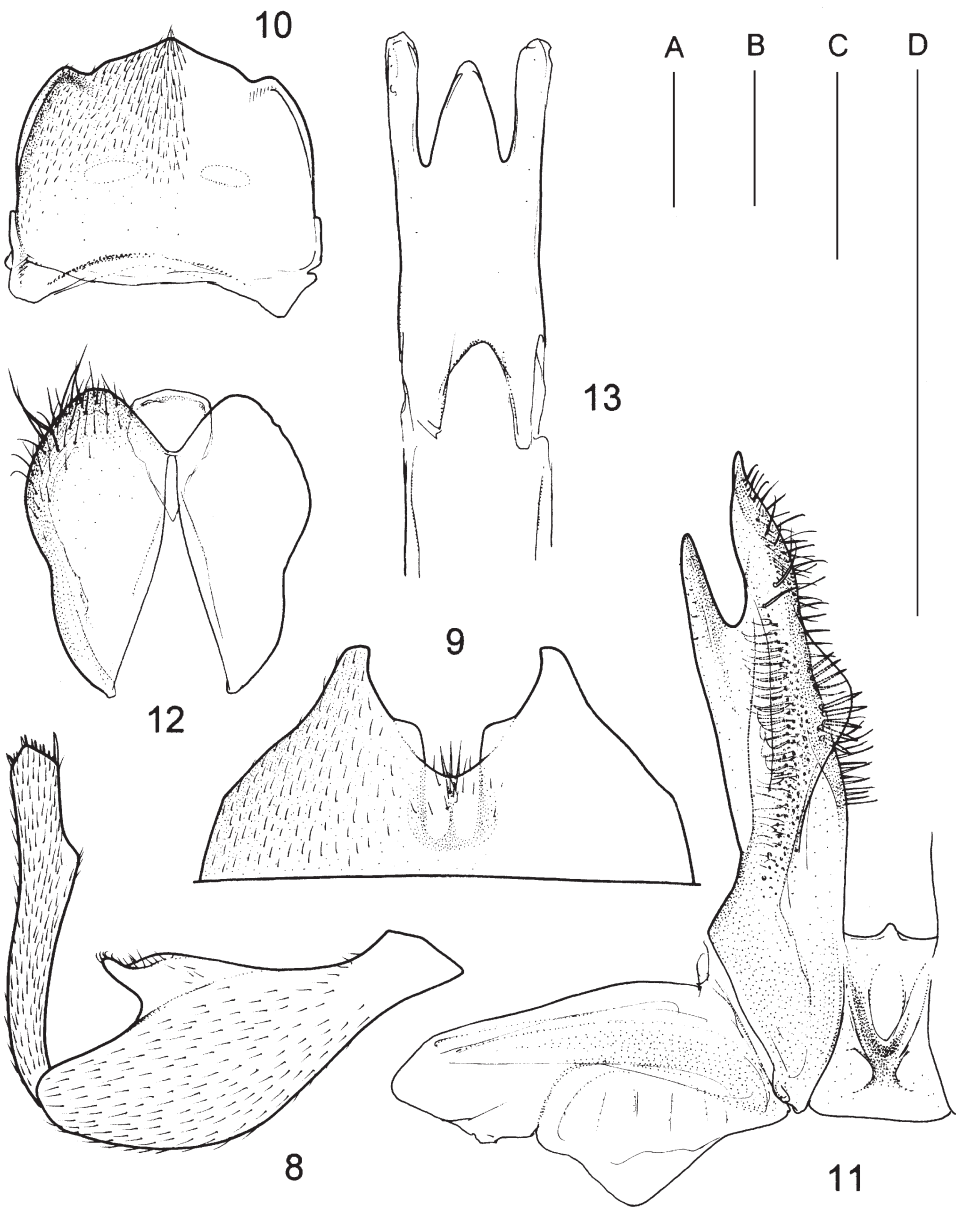
Female sternum VII simple, slightly produced postero-medially; female tergum VII subtriangular, rounded apically.

**Differential diagnosis.** *Anthelephila ruficollis* resembles *A. limaria* Kejval, 2006 from Nepal and Northern India in body form and colouration, but differs in lack of a distinct bluish reflection of the elytra, the semicircular to somewhat widely rounded head base, the simple mesoventrite (lacking any median edge and /or protrusion in both sexes), and the apically simply-rounded female tergum VII (strongly narrowed, with obtuse to slightly incised apex in *A. limaria*). Male characters of these two species are quite dissimilar.

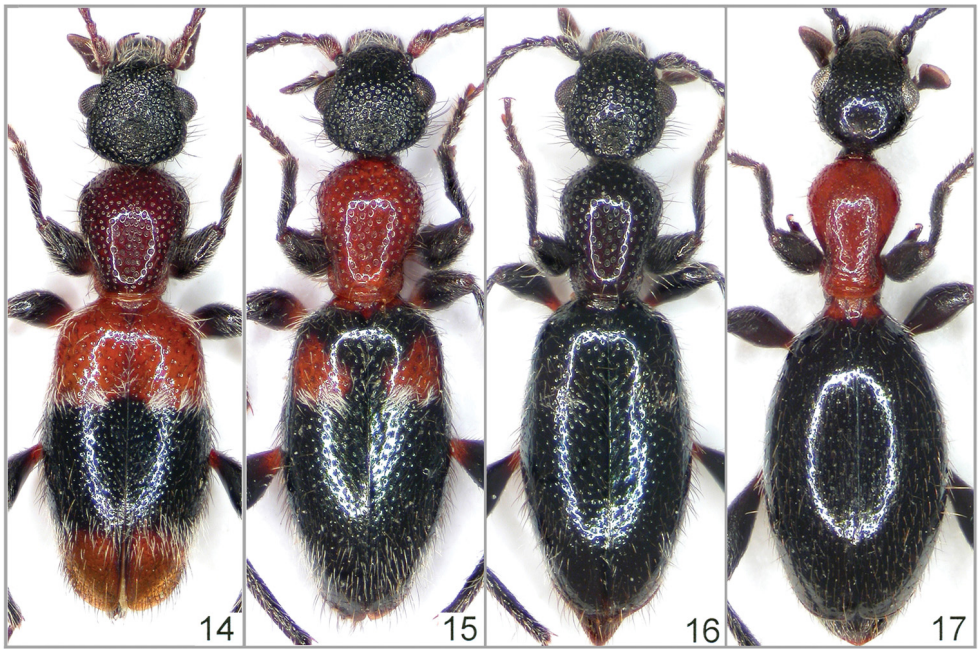
**Distribution.** Afghanistan, Bangladesh, Bhutan, China (SE provinces), India (West Bengal, Andaman Islands), Indonesia (Bali, Lombok, Java, Sumatra, Sumba, Sulawesi), Japan, Laos, Malaysia, Myanmar, Nepal, Philippines, Syria, Thailand, Vietnam.

**Remarks.** Pic (1903a,b) described *Formicomus ruficollis* var. *annamitus* from Vietnam and *Formicomus* (*Anthelephilus*) *inhumeralis* from the Philippines (Luzon). Having examined the relevant types and numerous additional specimens from SE Asia, including the Philippines and Indonesia, I failed to find any substantial differences in male characters from *Anthelephila ruficollis*. Consequently both taxa are regarded as junior synonyms of this species.

Desbrochers des Loges (1881) described *Formicomus uncinatus* from an unstated number of specimens originating from Syria. This species is known only from Syria (Pic 1895, 1898;




Figs 8–13. *Anthelephila ruficollis* Saunders, 1834 (Biratnagar, male): 8 – profemur and protibia; 9 – sternum VII; 10 – tergum VII; 11 – sternite VIII (half) in dorsal view; 12 – tergite VIII; 13 – apical portion of aedeagus. Scales (0.5 mm): A – Fig. 13; B – Fig. 11; C – Figs 8, 9, 12; D – Fig. 10.




Figs 14–17. Body in dorsal view. 14 – *Anthelephila mutillaria* Saunders, 1834 (male), Chitwan NP; 15 – same species (male), Soppong; 16 – same species (female), Yuanxian; 17 – *A. ruficollis* Saunders, 1834 (male), Betong.

Chandler et al. 2008), and its type material has never been examined. I failed to find any type specimens in MNHN and other major collections; nevertheless, the original description comprises several remarkable morphological characters revealing, in my opinion, its species identity: elytral humeri absent ('épaules nulles'), elytral apices truncate ('sommet des élytres largement trongué'), and male profemoral process robust and apically hooked ('une trés-grande dent terminée par un crochet'). Combination of these three characters is rarely present within the genus; however, they are all shared by *Anthelephila ruficollis*, including the very similar colouration. Moreover, the record of *F. uncinatus* from Syria by Pic (1895) was found to be based on specimens of *A. ruficollis*, therefore *F. uncinatus* is regarded as a junior synonym of the latter species.

As already stated by LaFerté-Sénectère (1849a), *Anthelephila bengalensis* (Wiedemann, 1823) is very probably conspecific with *A. ruficollis*. It was described from the same region, probably Bangladesh ('Bengalia'), and later recorded from Japan and Vietnam (Marseul 1876; Uhmann 1983, 1985; Chandler et al. 2008). At least some of the Uhmann's records of *A. bengalensis* from Vietnam (Uhmann 1983) surely belong to this species.

*Anthelephila ruficollis* appears to be common and widespread species. Based on label data, part of the examined specimens were collected on beaches, from a rat carcass, by sifting

litter, by treading mud next to water, or by means of attraction to cantharidin bait (Thailand, G. A. Shook lgt.).

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