European Journal of Taxonomy 745: 1–69
https://doi.org/10.5852/ejt.2021.745.1311
ISSN 2118-9773
www.europeanjournaloftaxonomy.eu

Monograph

urn:lsid:zoobank.org:pub:6C85E664-6DE6-442A-9410-D94254E429F5

Review of the plant bug tribe Eccritotarsini (Hemiptera: Heteroptera: Miridae) of India and Sri Lanka with description of two new genera and six new species

H.M. YESHWANTH [1] & Fedor V. KONSTANTINOV [2,*]

[1] Department of Entomology, University of Agricultural Sciences (GKVK), Bangalore 560 065, India.
[2] Saint Petersburg State University, 7/9 Universitetskaya Emb., St. Petersburg 199034 Russia.
[2] Zoological Institute, Russian Academy of Sciences,
1 Universitetskaya Emb., St Petersburg 199034, Russia.

[1] Email: hmyeshwanth@gmail.com
[*] Corresponding author: f.konstantinov@spbu.ru

[1] urn:lsid:zoobank.org:author:3481CF9D-615D-41BF-BF0E-3FFF8205BEB0
[2] urn:lsid:zoobank.org:author:B5DF0683-A68F-4075-9B0C-171DFADD75E6

Abstract. The fauna of the bryocorine plant bug tribe Eccritotarsini from India and Sri Lanka is reviewed and updated. Ten genera and 20 species are reported from the region including two genera and six species described as new: *Harpedona vittlaensis* sp. nov., *Lopidolon dandeliensis* sp. nov., *Mertila rubrocephala* sp. nov., *Namyatovia* gen. nov. for *N. castlerockensis* gen. et sp. nov. (as the type species) and *N. sirsiensis* gen. et sp. nov., and *Stonedahlia* gen. nov. for *S. mishmiensis* gen. et sp. nov. The genus *Bromeliaemiris* Schumacher, 1919 is synonymized with *Lopidolon* Poppius, 1911. *Dioclerus lutheri* (Poppius, 1912) and *Ernestinus ramkeshariae* Yasunaga & Ishikawa, 2016 are reported from India for the first time. Differential diagnoses, keys, habitus photographs, illustrations of male genitalic structures, host and distributional information are provided for all genera and species.

Keywords. New records, new taxa, types, male genitalia, key.

Yeshwanth H.M. & Konstantinov F.V. 2021. Review of the plant bug tribe Eccritotarsini (Hemiptera: Heteroptera: Miridae) of India and Sri Lanka with description of two new genera and six new species. *European Journal of Taxonomy* 745: 1–69. https://doi.org/10.5852/ejt.2021.745.1311

Introduction

India is recognized as a megadiverse country harboring more than 65 000 described insect species (e.g., Venkataraman & Sivaperuman 2018), with many more awaiting description. This is particularly true for Miridae Hahn, 1831, the largest family of true bugs (Heteroptera Latreille, 1810), containing 11 300 species (Schuh & Weirauch 2020), more than 250 of which have been described within the last eight years (Cassis & Schuh 2012; Schuh & Weirauch 2020). This study focuses on the subfamily Bryocorinae Baerensprung, 1860 and represents part of a larger effort (Yeshwanth 2014, 2015; Yeshwanth & Chérot 2015, 2018, 2019) to document the hyper diverse plant bug family in the Indian subcontinent.

The Bryocorinae are a morphologically diverse group, encompassing more than 1000 species assigned to 200 genera, and showing higher species richness in tropical and subtropical areas. Despite recent taxonomic efforts (Yasunaga 2000; Hu & Zheng 2003; Yasunaga & Duwal 2007; Mu & Liu 2012; Konstantinov & Knyshov 2015; Henry & Howard 2016; Yasunaga & Ishikawa 2016; Namyatova & Cassis 2013, 2015, 2016a, 2016b; Cassis *et al*. 2016; Menard & Schwartz 2018; Henry & Menard 2020) many new taxa remain to be discovered in this large subfamily. Four tribes are currently recognized within the group, with Eccritotarsini Berg, 1883 being the largest and comprising almost two-thirds of total bryocorine genera (Namyatova *et al*. 2016). Although the vast majority of eccritotarsine species are restricted to the New World, available data indicate an Oriental origin of the clade (Konstantinov *et al*. 2018).

Surveys of eccritotarsines in India and Sri Lanka are basically limited to the works of Distant (1904b, 1911b) and Stonedahl (1988). The latter author provided an excellent treatment of six Oriental eccritotarsine genera and laid a solid ground for subsequent studies. In the present paper we summarize our knowledge of the tribe for India and Sri Lanka. Ten genera and 20 species are treated in detail, including two genera and six species described as new.

Material and Methods

Observations, measurements and digital images of habitus were made with a Leica M205C stereo microscope equipped with a DFC 425 camera. Drawings and images of male genitalia were taken using a Leica DM2000 microscope equipped with a camera lucida and a DFC 425 camera. Partially focused images of each specimen or structure were stacked using the Zerene Stacker T2018-07-19-1515 software (http://zerenesystems.com/). The terminology used for male genitalia follows Konstantinov (2003, 2019). All measurements (see Table 1) are given in millimetres.

Depositories of the specimens examined for this study are abbreviated in text as follows:

AMNH	=	American Museum of Natural History, New York, NY, USA
BPBM	=	Bishop Museum, Honolulu, HI, USA
FMNH	=	Finnish Museum of Natural History, Helsinki, Finland
HNHM	=	Hungarian Natural History Museum, Budapest, Hungary
NHM	=	Natural History Museum, London, United Kingdom
UASB	=	University of Agricultural Sciences, GKVK, Bangalore, India
USNM	=	National Museum of Natural History (Smithsonian Institution), Washington DC, USA
ZISP	=	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia

Holotypes of all species described in this paper are deposited in the University of Agricultural Sciences, Bangalore.

Results

Class Insecta Linnaeus, 1758
Order Hemiptera Linnaeus, 1758
Suborder Heteroptera Latreille, 1810
Infraorder Cimicomorpha Leston, Pendergrast & Southwood, 1954
Family Miridae Hahn, 1831
Subfamily Bryocorinae Baerensprung, 1860

Tribe **Eccritotarsini** Berg, 1883

Diagnosis

Recognized among Miridae by the presence of large, circular pulvilli broadly attached to the inner surface of the claw. Refer to Konstantinov *et al*. (2018) for detailed discussion of distinctive features.

Key to genera of the tribe Eccritotarsini of India and Sri Lanka

1. Cuneus reaching apex of hemelytral membrane (Figs 3D, 4A, 9G, I, 10). Vertex between eyes with a distinct transverse depression 2
– Cuneus terminating well anteriad of apex of membrane. Vertex without a transverse depression, sometimes with longitudinal, median sulcus 3

2. Dorsum brightly reddish orange (Figs 9G–H, 10). Larger, total length 4.9–5.4. Left wall of genital capsule with a spinelike process. Left paramere apically bifid ..... ***Thaumastomiris*** Kirkaldy, 1902
– Dorsum lemon yellow (Figs 3D–F, 4A–C). Smaller, total length 3.2–3.7. Genital capsule without spinelike processes. Left paramere gradually tapering apically (Figs 21E, 22B) ..... ***Namyatovia*** gen. nov.

3. Vertex distinctly carinate posteriorly. Pronotal collar narrow, posteriorly delimited with a deep suture. Costal margin of hemelytron basally serrated (Fig. 1) ..... ***Dioclerus*** Distant, 1910
– Vertex not carinate. Pronotal collar posteriorly delimited with a shallow sulcus. Costal margin of hemelytron smooth 4

4. Dorsum uniformly pale yellow. Body elongate, gracile, with long appendages. Eyes distinctly separated from anterior margin of pronotum (Figs 4D–F, 9A, C, E, 27C–D) 5
– Dorsum with variable color-pattern or uniformly dark brown, but never uniformly pale yellow. Body more robust, broadly oval to elongate-oval. Eyes in contact with or slightly separated from pronotum 6

5. Eyes large, distinctly stylate. Vertex with a shallow longitudinal sulcus along midline. Antennal segment I bottle shaped, with a narrowed basal one-fourth (Fig. 9A–E) ..... ***Prodromus*** Distant, 1904
– Eyes small, not stylate. Vertex without a sulcus. Antennal segment I uniformly slender, narrowed only at extreme base (Fig. 4D–F) ..... ***Stonedahlia*** gen. nov.

6. Calli anteromedially delimited with impressed line forming characteristic subtriangular region between collar and calli 7
– Anterior part of pronotum without clearly delimited subtriangular region between collar and calli 8

7. Dorsum pale brown to reddish yellow, with dark longitudinal interrupted stripes. Pronotal collar at least twice as wide as antennal segment II (Fig. 6D–I) ..... ***Lopidolon*** Poppius, 1911
– Dorsum bicolored; reddish anteriorly, bluish black to black posteriorly. Pronotal collar as wide as or narrower than diameter of antennal segment II (Figs 3A–B, 8A, D, G) ..... ***Mertila*** Distant, 1904

8. Coloration of dorsum uniform, dirty yellow to black, sometimes with paler embolium. Calli dorsally and laterally separated by deep impressed lines giving appearance of three distinct sections of pronotum (Figs 2C–D, 5J, L) ..... ***Harpedona*** Distant, 1904
– Coloration of dorsum contrasting, with clavus, transverse spot in medioapical part of corium, apex of cuneus, and cells uniformly brown to dark brown; remaining part of hemelytron and legs whitish-yellow. Calli distinct, but not separated by impressed lines (Figs 2A–B, 6A–B, 26B–C, F) 9

9. Pronotum uniformly black and coarsely punctured. Hemelytra with slightly convex costal margin (Fig. 2A–B) ..... ***Ernestinus*** Distant, 1911
– Pronotum behind calli with narrow, impunctate whitish carina along midline. Hemelytra slightly constricted on basal fourth, with concave costal margin (Fig. 6A) ..... ***Jessopocoris*** Carvalho, 1981

Dioclerus Distant, 1910
Figs 1, 5A–G, 11

Dioclerus Distant, 1910: 12 (original discription).
Serrofurius Poppius, 1912: 23–24 (syn. by Carvalho 1952: 55).

Dioclerus – Distant 1911b: 278–279, fig. 151 (description). — Stonedahl 1988: 7–16 (revision).

Type species

Dioclerus praefectus Distant, 1910 (by monotypy; Distant 1910).

Diagnosis

Easily recognized among other eccritotarsines by the distinctly punctate dorsum, posteriorly carinate vertex, well-delimited pronotal collar, basally serrate costal margin of hemelytron, broadly triangular scent-efferent system, twin-celled membrane, and relatively simple male genitalia with the right paramere being smaller than the left.

Host

Unknown. All specimens with known collection method were attracted at light.

Distribution

Sri Lanka, northeastern India, Thailand, and Malaysia.

Remarks

The genus belongs to a group of eleven genera, viz. *Campyloneura* Fieber, 1861, *Bunsua* Carvalho, 1951, *Bryocorellisca* Carvalho, 1981*, Carinimiris* Carvalho, 1981*, Crassiembolius* Carvalho, 1981, *Diocleroides* Stonedahl & Hernandez, 1996*, Dioclerus*, *Gunadhya* Distant, 1920, *Michailocoris* Štys, 1985, *Paramichailocoris* Yasunaga & Duwal, 2007, and *Sinevia* Kerzhner, 1988 that apparently form a sister clade to all remaining eccritotarsines (Konstantinov *et al*. 2018). In addition to the characters given in the diagnosis, these taxa have inflated and medially confluent calli, symmetrical parempodia and pulvilli devoid of pulvillar combs (Konstantinov & Zinovjeva 2016). The characteristic serration of costal margin at base of hemelytron is a unique feature of the genus. *Dioclerus* contains seven described species (Stonedahl 1988; Yasunaga & Ishikawa 2016) and three of them occur in India and Sri Lanka.

Key to species of the genus *Dioclerus* of India and Sri Lanka

1. Pronotum and clavus dark brown, corium dirty yellow with a large brown spot on medioapical area (Figs 1C, 5D) ..... ***D. lutheri*** (Poppius, 1912)
– Pronotum and clavus pale brown to golden yellow, corium uniformly yellow or with a small dark spot near claval apex (Figs 1A, D, 5A–B) 2

2. Antennal segment II subequal to posterior width of pronotum. India (West Bengal, Andaman and Nicobar Islands) ..... ***D. bengalicus*** Stonedahl, 1988
– Antennal segment II distinctly longer than posterior width of pronotum. Sri Lanka .... ***D. praefectus*** Distant, 1910

Dioclerus bengalicus Stonedahl, 1988
Figs 1A–B, 5A–C

Dioclerus bengalicus Stonedahl, 1988: 12, fig. 4.

Diagnosis

Recognized by the following characters: Dorsum pale golden brown, with a small diffuse brown spot on corium medioapically (Fig. 1A); antennal segments short, head twice as wide as length of segment I, segment II subequal to posterior width of pronotum; ninth abdominal segment ventrally with a pair of round black spots at sides (Figs 1B, 5B).

Material examined

Holotype

INDIA • ♀; West Bengal, Santiniketan; 18 Oct. 1837; T.C. Maa leg.; BPBM. [Physical specimen not seen; high quality images examined.]

Other material

INDIA • 1 ♀; Andaman and Nicobar Islands, north Andaman, Diglipur; 13°14′53.9″ N, 92°58′37.5″ E; 15 m a.s.l.; 21 Apr. 2014; H.M. Yeshwanth leg.; at light; UASB.

Distribution

Northeastern India and Andaman Islands (new record).

Remarks

The species was originally described and is still known from females only.

Dioclerus lutheri (Poppius, 1912)
Figs 1C, 5D–E, 11A–E

Serrofurius lutheri Poppius, 1912: 25.

Dioclerus lutheri – Carvalho 1957: 97. — Stonedahl 1988: 12, figs 4, 6.

Diagnosis

Recognized by the short antennal segments, with segment I 0.7× as long as head width, segment II roughly equal to basal width of pronotum, and by the dark pattern of dorsum, particularly dark brown pronotum, scutellum, and clavus, dirty yellow corium, narrowly darkened along claval suture and with large, dark brown, rectangular spot medioapically (Figs 1C, 5D).

Material examined

Holotype

SRI LANKA • ♂; Ceylon, Anuradhapura; 8.326° N, 80.397° E; 19–21 Dec. 1910; A Luther leg; AMNH_PBI 00338430; FMNH.

Other material

INDIA • 1 ♂; Tamil Nadu, Thandigudi; 10°18 N, 77°38 E; 1131 m a.s.l.; 19 May. 2010; E.D. Nayana leg.; at light; UASB.

Distribution

Southern India (new country record) and Sri Lanka.

Remarks

Males are currently unknown for three out of seven species of *Dioclerus,* including two species from the area under study. However, *D. lutheri* clearly differs from congeners with known male genitalia structure, viz. *D. thailandensis* Stonedahl, 1988, *D. malayensis* Stonedahl, 1988 (Fig. 11F–I) and *D. himalayanus* Yasunaga & Ishikawa, 2016 in having long, somewhat flattened and gradually tapering apical process of the right paramere and the endosoma heavily dentate along entire length (Fig. 11A–E).

Dioclerus praefectus Distant, 1910
Fig. 5F–G

Dioclerus praefectus Distant, 1910: 13 (original description).

Dioclerus praefectus – Distant 2010b: 279, fig. 151 (descr.). — Stonedahl,1988: 13–14 (redescr.).

Diagnosis

Similar to *D. lutheri* in coloration but differs from that species in having long antennal segments, particularly segment I 1.1× as long as head width, segment II 1.25× as long as basal width of pronotum.

Material examined

Lectotype

SRI LANKA • 1 specimen, sex unknown; Ceylon, Peradeniya; 7.263° N, 80.603° E; 497 m a.s.l.; 18 Dec.; Distant collection 1911-383; AMNH_PBI 00340384; NHM.

Distribution

Sri Lanka.

Remarks

This species is known only from the lectotype, which is in poor condition and missing the right antenna, metathorax, wings, all legs except left hind one, and abdomen.

Ernestinus Distant, 1911
Figs 2A–B, 5H–I, 12–13, 26

Ernestinus Distant, 1911a: 311.
Pycnofurius Poppius, 1912: 21–23 (syn. by Carvalho 1952: 55).

Ernestinus – Lin 2001a (review of Taiwan fauna). — Yasunaga & Ishikawa 2016 (revision).

Type species

Ernestinus mimicus Distant, 1911 (by monotypy).

Diagnosis

Recognized by the following characters: coloration distinctly black and white, with head, pronotum, clavus, transverse spot on medioapical part of corium, apex of cuneus, and cells uniformly dark brown to black, remaining part of hemelytron and legs contrastingly whitish (Figs 2A–B, 26B–C, F);

antenna whitish with entirely or apically darkened segment II; pronotum densely and coarsely punctate, campaniform, distinctly raised posteriorly and covering entire mesoscutum and base of scutellum; calli located far from anterior margin of pronotum, delimited by shallow sulcus, medially separated by deep pit; genital capsule boat-shaped, without distinctive ornamentation (Figs 12A, 13A); aedeagus simple, tubular, usually C-shaped, with endosoma non-retractable, entirely expanded from phallotheca in repose, weakly sclerotized, and not clearly divided from phallotheca (Figs 12F, 13H).

Host

Adults and nymphs feed and aggregate on the abaxial surfaces of leaves of Araceae plants, mainly *Alocasia*, *Amorphophallus*, and *Colocasia* spp. Yasunaga & Ishikawa (2016) provided a uniquely detailed account of the natural history of the genus and each included species.

Distribution

Widely distributed in the Oriental Region and spanning north to Nepal, Taiwan and southwestern Japan.

Remarks

Based on external morphology and the male genitalia, Stonedahl (1988: 43) outlined a group of six related genera including *Ernestinus*, Distant, 1911, *Eofurius* Poppius, 1915, *Microbryocoris* Poppius, 1914, *Myiocapsus* Poppius, 1914, *Palaeofurius* Poppius, 1912, and *Stylopomiris* Stonedahl, 1986. Of these, *Microbryocoris*, *Myiocapsus*, and *Stylopomiris* readily differ from *Ernestinus* in several autapomorphic traits (see Stonedahl 1986, 1988 for details). *Eofurius*, a monotypic genus known from a single male collected in Philippines (Poppius 1915), has not been studied since the original description but differs from *Ernestinus* spp. in the small size and substantially produced clypeus. *Palaeofurius* contains three species from Papua New Guinea and appears to be most closely related to *Ernestinus* due to the same pattern of coloration, structure of pronotum, parameres, and characteristic aedeagus (see Carvalho 1981). Yasunaga & Ishikawa (2016) correctly pointed out that this taxon might be a synonym of *Ernestinus* but refrained from formal action due to the lack of material.

Species of *Ernestinus* share a number of common features in the structure of head, pronotum and especially male genitalia with those of *Ambunticoris* Carvalho, 1981, a genus containing three species from New Guinea and Sulawesi (Konstantinov & Zinovjeva 2006). However, it clearly differs from that genus and other Oriental eccritotarsines in the color pattern and many additional traits documented by Yasunaga & Ishikawa (2016). *Ernestinus brevis* Lin, 2001 described from Taiwan (Lin 2001a) is an exception in having pale greenish pronotum, scutellum and hemelytron; its generic placement requires further verification (Yasunaga & Ishikawa 2016). The genus was originally described from Sri Lanka and currently includes 19 Southeast Asian species (Yasunaga & Ishikawa 2016). Examination of available material allowed us to note this genus from India for the first time.

Key to species of the genus *Ernestinus* of India and Sri Lanka

1. Antennal segment I dark brown with a dirty yellow base, segment II at least 1.3× as long as head width. Scutellum black (Fig 2A). Left paramere strongly swollen at middle, with apical process long, almost straight, abruptly bent at base. Right paramere flag-shaped, wide (Fig. 12) .... ***E. mimicus*** Distant, 1911
– Antennal segment I whitish yellow, segment II short, subequal to head width. Scutellum reddish orange medially (Fig. 2B). Left paramere thinner, gradually curved along entire length, apically tapering. Right paramere bulbous (Fig. 13) ..... ***E. ramkeshariae*** Yasunaga & Ishikawa, 2016

Ernestinus mimicus Distant, 1911
Figs 2A, 5H, 12, 26D–F

Ernestinus mimicus Distant, 1911: 311.

Ernestinus mimicus – Basnagala *et al.* 2002: 159 (indication). — Yasunaga & Ishikawa 2016: 32 (key).

Diagnosis

Recognized by the following characters: antenna dark brown except base of segment I, with relatively long segments II and III; scutellum uniformly black; transverse dark spot in medioapical part of corium roughly T-shaped, laterally reaching but not surpassing submarginal vein; cuneus whitish, with extreme apex slightly darkened, cells dark brown except narrow inner area adjoining to cuneus, remaining part of membrane without color pattern (Figs 2A, 5H); left paramere with distinctly swollen body, apical process abruptly bent at base, very slightly and gradually curved along entire length and terminating with a small hook; right paramere flag-shaped, forming roughly rectangular plate apically (Fig. 12).

Material examined

Syntypes

SRI LANKA • 1 ♂; Haragama; 7.233° N, 80.733° E; 584 m a.s.l.; May 1911; E. Ernest Green leg.; "*Ernestinus mimicus* Dist. Type"; AMNH_PBI 00085668, BMNH(E)1633157; NHM • 1 ♂; same collection data as for preceding; AMNH_PBI 00340371; NHM.

Other material

INDIA • 15 ♂♂, 8 ♀♀; Karnataka, Mudigere, Kottigehara; 13°12′ N, 75°50′ E; 1006 m a.s.l.; 16 Dec. 2013; H.M. Yeshwanth leg.; *Lagenandra* sp.; UASB.

Host

According to the original description (Distant 1911a), the type series was collected on aroid plants on a riverbank in Sri Lanka. Adults and larvae sampled for this study were found breeding on *Lagenandra* sp. (Araceae) (Fig. 26D–F).

Distribution

The species had been previously known only from Haragama, a type locality in the Central Province of Sri Lanka. Here we report it from the Karnataka state of India for the first time.

Ernestinus ramkeshariae Yasunaga & Ishikawa, 2016
Figs 2B, 13, 26A–C

Ernestinus ramkeshariae Yasunaga & Ishikawa, 2016: 36–38.

Diagnosis

Distinguished from congeners by the following combination of characters: antennal segment I and sometimes basal half of segment II yellowish white, remaining segments brown; antennal segment II short, subequal in length to segment III and head width; scutellum orange-yellow medially; transverse dark spot on medioapical part of corium roughly T-shaped, at sides always reaching submarginal vein (India) or costal margin (Nepal); apical ⅓ of cuneus dark brown; cells entirely dark brown but remaining part of membrane without color-pattern (Fig. 2B); left paramere question mark-shaped; right paramere bulbous, simple, with slight subapical constriction and small subapical outgrowth (Fig. 13).

Material examined

INDIA • 30 ♂♂, 25 ♀♀; Manipur, Imphal, Lamphelpat; 24.83° N, 93.93° E; 779 m a.s.l.; 20 Sep. 2013; H.M. Yeshwanth leg.; Ex: *Colocasia esculenta*; UASB • 6 ♂♂, 3 ♀♀; same collection data as for preceding; ZISP • 8 ♂♂, 10 ♀♀; Karnataka; Madikere, Galibeedu; 12°28.57′ N, 75°42.58′ E; 1047 m a.s.l.; 6 Jan. 2012; H.M. Yeshwanth leg.; Ex: *Colocasia* sp.; UASB • 14 ♂♂, 5 ♀♀; Karnataka, Mudigere; 13°7.190′ N, 75°37.670′ E; 913 m a.s.l.; 17 Dec. 2013; H.M. Yeshwanth leg; Ex: *Colocasia esculenta*; UASB.

Host

In India, nymphs and adults were found aggregating in large numbers on the under surfaces of leaves (Fig. 26A–C) and damaging the cultivated edible aroid *Colocasia esculenta* (L.) Schott (Araceae). Yasunaga & Ishikawa (2016) provided detailed observations on the biology of *E. ramkeshariae* in Nepal and reported *C. esculenta* as a host, suggesting it could become a pest given the severe damage observed in a vegetable garden in Kathmandu.

Distribution

Nepal, northeastern and southwestern India.

Remarks

This species was recently described from Nepal, where it was found in subtropical areas and urbanized zones of Katmandu (Yasunaga & Ishikawa 2016). The authors provided a detailed description and suggested that this species was introduced to northern Nepal as a pest of cultivated *Colocasia esculenta*. Here we report this species from northeastern (Manipur province) and southwestern (Karnataka province) India. Indian specimens differ slightly from Nepalese specimens in the color pattern, particularly in having pale labial segment I, uniformly whitish tibiae and slightly less pronounced transverse medioapical spot on the corium, which does not reach costal margin so that the adjoining part of embolium remains whitish yellow or only slightly infuscate. Specimens of *E. ramkeshariae* from Nepal have a brown labial segment I, red tinged tibia and a transverse spot on the corium that extends to the costal margin (Yasunaga & Ishikawa, 2016). Otherwise, Indian and Nepalese specimens show no other distinctions in coloration, measurements, and male and female genitalia.

Harpedona Distant, 1904
Figs 2C–D, 5J–M, 14–16, 25A, 27A–B

Harpedona Distant, 1904b: 418.

Harpedona – Stonedahl 1988: 16–32 (revision).

Type species

Harpedona marginata Distant, 1904 (by monotypy; Distant 1904b).

Diagnosis

Recognized by the following combination of characters: body narrow, parallel-sided, pronotum at base less than 1.5× as wide as head (Figs 2C–D, 5J–M); coloration of dorsum uniform, dirty yellow to black, sometimes with paler embolium, legs contrastingly whitish or reddish yellow, comparatively long and slender, apex of hind femur reaching or surpassing apex of abdomen; dorsum clothed with dense, short, adpressed, silvery simple setae; pronotal collar wide and large; calli medially confluent, dorsally and laterally separated by deep impressed lines giving appearance of three distinct sections of pronotum;

genital capsule highly modified, with large, lobate process on right margin, and usually with bulbous, twisted and spinelike outgrowths on dorsal margin (Figs 14A–C, 15A–B, 16A); parameres and aedeagus reduced, very small; left paramere with long and thin, twisted apical process (Figs 14D–E, 15C–D, 16B–C); right paramere simple, with tapering incurved apex (Figs 14F, 15E–F, 16D–E); aedeagus with entirely membranous phallotheca, simple membranous endosoma and sclerotized, spine-like apical part of ductus seminis (Figs 14G, 15G–H, 16F).

Distribution

Known from Sri Lanka, southwestern and northern India to Fukien Prov. of China, Philippines, Indonesia, New Guinea, and the Solomon Islands (Stonedahl 1988).

Remarks

This genus was revised by Stonedahl (1988) and, with addition of the recently described *Harpedona stonedahli* Yasunaga & Ishikawa, 2016, it currently comprises 13 species. Only *Harpedona sanguinipes* Distant, 1909 was known from India prior to our study; the description of a new species from the Karnataka state of India is given below. *Harpedona marginata* Distant, 1904, the most frequently collected and widely distributed species of the genus was originally described from Sri Lanka and may likely be found in India with more sampling effort.

Key to species of the genus *Harpedona* of India and Sri Lanka

1. Pronotum dirty orange, with distinct punctures (Fig. 2D) .....***H. vittlaensis*** sp. nov.
– Pronotum dark brown, smooth or very faintly punctate (Figs 2C, 5J, L) 2

2. Frons in males with a distinct longitudinal sulcus (Fig. 5J). Labium at most reaching mesocoxa. Femora pale yellow. Phallotheca with a large sclerotized sac (Fig. 14G) ....***H. marginata*** Distant, 1904
– Frons without sulcus. Labium surpassing metacoxae. Femora with a distinct reddish tinge (Fig. 2C). Phallotheca membranous, without a sclerotized sac (Fig. 15G–H) .....***H. sanguinipes*** Distant, 1909

Harpedona marginata Distant, 1904
Figs 5J–K, 14

Harpedona marginata Distant, 1904b: 419.

Harpedona marginata – Carvalho 1981a: 69–133 (descr., figs, SEM) — Lin 2001b: 129 (descr., figs, SEM).

Diagnosis

Distinguished by the following combination of characters: dorsum impunctate, dark brown, hemelytron somewhat paler than head, pronotum and scutellum, sometimes with a pale brown embolium (Fig. 5J); legs whitish yellow, tibiae sometimes slightly darkened; head width across eyes 0.69–0.71, vertex width 0.35–0.38; frons in male with a distinct longitudinal sulcus; labium short, at most reaching middle coxa; dorsal wall of genital capsule with long, characteristically curved, acuminate process (Fig. 14A, C); left paramere twisted, with hook-like apex (Fig. 14D–E), right paramere flattened, apically twin-coned (Fig. 4F); phallotheca with large sclerotized sac-like outgrowth (Fig. 14G).

Material examined

Holotype

SRI LANKA • ♂; Ceylon; Green Coll.; 90–115; NHM.

Other material

SRI LANKA • 1 ♂; Central Prov., Road B294, 3 km S of Sigiriya; 7°58′36″ N, 80°47′20″ E; 600 ft a.s.l.; 9 Apr. 1999; T. J. Henry & A. Wijesekara leg.; USNM • 1 ♀; Central Prov., Peradeniya, University of Peradeniya; 7°15′15″ N, 80°36′07″ E; 1100 ft a.s.l.; 25 Mar. 1999; T.J. Henry, A. Wijesekara and C. Ariyadasa leg.; USNM • 1 ♀; Central Prov., Kandy, Royal Botanical Gardens; 7°16′20″ N, 80°36′00″ E; 1600 ft a.s.l.; 8 Apr. 1999; TJ. Henry and C. Ariyadasa leg.; USNM.

Host

Harpedona marginata is reported as a major pest of yam, *Dioscorea* sp. (Dioscoreaceae) in Sri Lanka (Distant 1904b) and Taiwan (Lin 2001b).

Distribution

The species is distributed from Sri Lanka in the west to Fujian province of China, Taiwan, Philippines, New Guinea, and the Solomon Islands in the east (Distant 1904b; Carvalho 1981a; Stonedahl 1988).

Harpedona sanguinipes Distant, 1909
Figs 2C, 5L–M, 15, 27A–B

Harpedona sanguinipes Distant, 1909: 441.

Harpedona sanguinipes – Distant 1911b: 229 (descr.). — Stonedahl 1988: 28 (redescr., figs 16, 24).

Diagnosis

Recognized by the following characters: dorsum impunctate, brown to dark brown, pronotum and scutellum darker than hemelytron; antennal segments, all femora and bases of tibiae with a distinct reddish tinge, remaining parts of legs yellow (Fig. 2C); head width across eyes 0.78, vertex width 0.46; frons without median sulcus in both sexes; labium surpassing hind coxa; genital capsule with a long, narrow, medially projecting process of right wall, prominent projection of left wall, and large, dorsally directed process of ventral wall (Fig. 15A–B); left paramere strongly twisted at middle, apical process with subapical prong and rounded apex (Fig. 15C–D); right paramere leaf-like (Fig. 15E–F); phallotheca entirely membranous, simple (Fig. 15G–H).

Material examined

Lectotype

INDIA • ♂; Darjeeling, Pussumbing; 4700 ft a.s.l.; Oct.–Dec. 1906; H.H. Mann leg.; [handwritten label:] "*Harpedona marginata* Dist., type"; NHM.

Other material

INDIA • 3 ♂♂; Meghalaya, Ri-Bhoi; 25°41′ N, 91°55′ E; 1031 m.a.s.l; 18 Oct 2019; D.M. Firake leg.; Ex: *Colocasia esculenta*; UASB.

Host

Many specimens sampled in Meghalaya were found breeding on *Colocasia* sp. (Araceae) (Fig. 27A–B).

Distribution

Northeastern India, West Bengal and Meghalaya states.

Harpedona vittlaensis sp. nov.
urn:lsid:zoobank.org:act:DABBC105-68F2-46CC-8DB0-E1E95ED33118
Figs 2D, 16, 25A

Diagnosis

Easily recognized from all congeners by the following characters: dorsum dirty pale brown, with an orange brown head and pronotal collar, and dark brown scutellum (Fig. 2D); pronotum heavily punctate, distinctly transverse, about 1.7× as wide as long, with an indistinct impressed line behind calli; labium long, reaching at least IV abdominal segment, apex of segment III surpassing hind coxa; genital capsule without spinelike processes and complex sclerotization on dorsal wall, with large, lobate ventral process (Fig. 16A).

Etymology

Named after the type locality, Vittla, India.

Type material

Holotype

INDIA • ♂; Karnataka, Dakshina Kannada, Vittla; 20°45.814′ N, 75°06.095′ E; 60 m a.s.l.; 28 Nov. 2011; H.M. Yeshwanth leg.; at light; UASB.

Paratypes

INDIA • 1 ♀; same collection data as for holotype; UASB • 1 ♀; same collection data as for holotype; ZISP.

Description

Male

Coloration. Dirty pale brown (Fig. 2D). Head orange brown, with a transverse diffuse brown band on vertex and dark brown apex of clypeus; eye black; antennal segment I with pale chestnut base and darkened apex, segments II–IV dark brown; labium pale brown with darkened apex of segment IV; pronotum pale brown, with a yellow brown pronotal collar and slightly darkened calli; scutellum dark brown; thoracic pleurites dark brown, posterior margin of mesopleuron with yellowish edging; hemelytron uniformly pale brown, membrane semitransparent, fuscous; legs uniformly pale brown, tibiae with an indistinct reddish tinge; abdomen brown.

Surface and vestiture. Dorsum shining, head and pronotal collar smooth, shining, calli rugose, disc of pronotum with dense deep punctures, scutellum, hemelytron, thoracic venter, and abdomen weakly rugose; entire dorsum clothed with short, dense, adpressed, silvery yellow simple setae; thoracic venter, abdomen and legs with similar but somewhat longer, semierect setae.

Structure. Body elongate-oval, 2.9× as long as basal width of pronotum, total length 3.1. Head: transverse, moderately produced anteriad of eyes in dorsal view, somewhat wider than high in frontal view; frons weakly convex, without longitudinal sulcus, epistomal suture slightly depressed; eyes sessile, relatively small, oval, about half height of head in lateral view, posterior margin almost contiguous with pronotal collar; vertex convex, twice as wide as dorsal width of one eye; antennal fossa located just above ventral margin of eye, at small distance from inferior margin of eye; antennal segment I short, tubular, narrowed at base, subequal to width of vertex, segment II subequal to head width, segments III and IV filiform, subequal in length; labium long, reaching abdominal segment 4 or 5. Thorax: pronotum 1.7× as wide as long, with a prominent, medially concave collar posteriorly

delimited by a deep impressed line; calli raised, contiguous and reaching lateral margins of pronotum, with a deep pit in between, posteriorly delimited by a weak punctate line distinctly constricted at sides; disc weakly convex; lateral margins of pronotum sinuate, posterior margin nearly straight; mesoscutum almost entirely covered by pronotum; scutellum broadly triangular, slightly raised and anteromedially excavated; peritreme of metathoracic scent-gland lanceolate, extended posteriorly along ventral margin of metapleuron; evaporative area reduced to a narrow falciform area along dorsal margin of peritreme and devoid of characteristic mushroom bodies (Fig. 25A). Hemelytron: semitransparent, corium with almost straight lateral margin, R+M vein well developed, reaching apex of corium, medial fracture distinct, reaching medioapical area of corium; cuneus narrow, twice as long as wide at base; membrane with single angulate cell slightly surpassing apex of cuneus. Legs: all femora relatively long, cylindrical; tibiae straight, subequal to length of respective femur; tarsi three-segmented, with distinctly swollen segment III; claw bent close to apex, inner surface of claw with large semicircular pulvillus equipped with pulvillar combs.

Genitalia. Genital capsule with large, roughly rectangular right lateral process and contrastingly long, tongue-shaped and posteriorly oriented ventral process exceeding length of genital capsule (Fig. 16A); aedeagus small, with entirely membranous phallotheca, simple sac-like endosoma and spine-like ductus seminis sclerotized along almost entire length except base (Fig. 16F); parameres larger and more robust than in other congeners, left paramere with strongly upturned and hooked apex (Fig. 16B–C), right paramere subquadrate, with short and strongly curved apical process (Fig. 16D–E).

Female

Similar to male.

Host

Unknown.

Distribution

Southwestern India (Karnataka).

Remarks

This new species differs from all congeners by several unique features, including a comparatively wide pronotum with an indistinct line delimiting the calli posteriorly and a heavily punctate disc, the exceptionally long labium reaching at least the fourth abdominal sternite, and the pale brown coloration of dorsum. Many *Harpedona* spp. have two-celled membrane with a small, narrow secondary cell near inner margin of the cuneus, but this secondary cell is missing in *H. vittlaensis* sp. nov. Additionally, the genital capsule of this new species is relatively simple and devoid of complex bulbous and spine-like processes on the dorsal wall, which are typical for most species of the genus. However, *H. vittlaensis* sp. nov. shares all essential features of the genus mentioned in the diagnosis viz., body shape and proportions, the structure of pronotal collar and calli, the constriction of pronotum behind calli, the presence of a large, lobate process on the right wall of the genital capsule, the characteristically simple aedeagus, and the shape of both parameres.

Jessopocoris Carvalho, 1981
Fig. 6A–C

Jessopocoris Carvalho, 1981b: 480.

Jessopocoris – Mu & Liu 2012: 47 (redescr., figs 1–16).

Type species

Jessopocoris scutellatus Carvalho, 1981 (by monotypy).

Diagnosis

The genus may be distinguished by the following characters: antennal segment I bottle-shaped, with a distinctly narrowed basal part, somewhat longer than vertex width; head, pronotum and scutellum with dense coarse punctures; pronotum with collar flat and not delimited posteriorly, calli notably expanded, with posterior depression, disc strongly raised, covering mesonotum, basal half of scutellum and bases of hemelytra; disc of pronotum with narrow, impunctate, whitish carina along midline; legs long and thin, with all femora somewhat swollen apically; hemelytra slightly constricted on basal fourth, with costal margin sinuate, concave on basal half and nearly straight apically (Fig. 6A–B).

Remarks

Carvalho (1981b) described a single female from Ranikhet, northern India, as a new species and new monotypic genus *Jessopocoris scutellatus*. He noted that the new genus differs from all other genera by the shape of pronotum, strongly expanded posteriorly and covering a substantial part of scutellum. Subsequently, Mu & Liu (2012) described two more species of the genus from Guangxi and Yunnan provinces of China. According to the original description, both Chinese species of *Jessopocoris* have a boat-shaped, non-modified genital capsule, a large, L-shaped left paramere located in an entirely closed paramere socket and apparently absent right paramere. The only Indian species of the genus, *J. scutellatus*, is still known only from the female holotype.

Jessopocoris is superficially similar to *Ernestinus* spp. due to the body proportions, raised and punctate pronotal disc and uniformly brown to dark brown coloration on the clavus, transverse spot on the medioapical part of corium, apex of cuneus and cells contrasting with the whitish-yellow remaining part of hemelytron and legs. However, it clearly differs from that genus in all other characters mentioned in the diagnosis.

Jessopocoris scutellatus Carvalho, 1981
Fig. 6A–C

Jessopocoris scutellatus Carvalho, 1981b: 481.

Diagnosis

Although all three species of the genus are quite similar in structure, main body proportions and coloration, *Jessopocoris scutellatus* Carvalho, 1981 can be easily distinguished from *J. aterovittatus* Mu & Liu, 2012 and *J. yunnananus* Mu & Liu, 2012 by the uniformly whitish-yellow antennal segment II, pale brown head and calli, and exceptionally long segment IV, which is twice as long as segment III and about 1.6× as long as segment II.

Material examined

Holotype

INDIA • ♀; Uttarakhand, Ranikhet, Kumaon; 29.639° N, 79.433° E; no date provided; H.G.C. leg.; AMNH_PBI 00340984, BMNH(E) 1633131; NHM.

Host

Unknown.

Distribution

Known only from the type locality, Ranikhet, Uttarakhand state of India.

Lopidolon Poppius, 1911
Figs 6D–J, 7, 17–18, 25B, 27E

Lopidolon Poppius, 1911: 6.
Bromeliaemiris Schumacher, 1919: 223, **syn. nov.**
Mertilanidea Ghauri, 1975: 614–615 (syn. with *Bromeliaemiris* by Carvalho 1981b: 54).

Type species

Lopidolon sordidus Poppius, 1911 (by monotypy).

Diagnosis

Recognized by the following characters: Antenna short, with segment I distinctly shorter than vertex width, segment II 1.0–1.3× as long as head width, segment III distinctly shorter than head width, segment IV shorter than segment I; body clothed with dense, long and thin, erect to semierect simple setae; dorsum with shallow punctures, pale brown to reddish yellow coloration with dark longitudinal interrupted stripes; eyes sessile, somewhat removed from anterior margin of pronotum by characteristically well-developed postocular region of vertex (Figs 6D–J, 7); labium reaching hind coxa; pronotal collar wide, slightly narrowing towards midline; calli almost confluent, separated by a small deep pit; pronotal collar and calli separated by impressed lines forming characteristic subtriangular region in between; posterior margin of pronotum sinuate, mesonotum broadly exposed; membrane two-celled, with larger cell angulate, extending far beyond apex of cuneus and smaller cell narrow, located along inner margin of cuneus; genital capsule highly modified, with large, lobate posterior process and usually with additional lateral outgrowths (Figs 17C–D, 18A–B); parameres and aedeagus reduced, very small (Fig. 18C–E); aedeagus with entirely membranous phallotheca, simple membranous endosoma and a sclerotized, spine-like apical part of the ductus seminis (Fig. 18F).

Host

Herein the genus *Lopidolon* is redefined to include *Bromeliaemiris* spp. Host information is available for half of the 14 congeners and supports a host association with orchids. Ghauri (1975) indicated *Vanilla* sp. (Orchidaceae) as a host in the original description of *L. fasciatus*. Hsiao (1944) described several species shipped to the USA in cargo on various orchids, particularly on *Phalaenopsis grandiflora* Lindl. (*L. viridipictus* (Hsiao, 1944), shipped to San Francisco from Philippines), *Phalaenopsis schilleriana* Rchb.f., *Phalaenopsis sanderiana* Rchb.f. (*L. marginatus (*Hsiao, 1944), shipped to Hawaii from Philippines), *Phalaenopsis amabilis* (L.) Blume, *Dendrobium superbum* Rchb.f. (*L. dissimilis* (Hsiao, 1944), shipped to Hawaii from Philippines), *Dendrobium superbiens* Rchb.f. (*L. puncticollis* (Hsiao, 1944), shipped to Hawaii from Australia), unidentified orchids (*L. nigritus* (Hsiao, 1944), shipped to San Francisco from Borneo). Schumacher (1919) indicated "various bromeliads" as a host for *L. bicolor*

Schumacher, 1919, the type species of *Bromeliaemiris*, but Bromeliaceae are not native to the Oriental Region. Two specimens of *L. dandeliensis* sp. nov. from Nandhi hills were collected on *Diplocentrum recurvum* Lindl. (Orchidaceae) (Fig. 27E).

Distribution

India, Sri Lanka, Burma, Philippines, Borneo, New Guinea, and Australia (Hsiao 1944; Carvalho 1981a).

Remarks

The genus *Lopidolon* was originally described to accommodate *L. sordidus* Poppius, 1911 known from a single female collected from Pattipola, Sri Lanka (Poppius 1911). *Lopidolon pallescens*, also known from a single female, was described a year later from Pulney, Tamil Nadu province of India (Poppius 1912). No information on the genus has been published since then. In the current work, we add a new species, *Lopidolon dandeliensis* sp. nov., based on specimens collected from Karnataka province, India.

The genus *Bromeliaemiris* Schumacher, 1919 is known from Mayanmar, Java, Borneo, Philippines, New Guinea, and Australia and currently contains 11 species (Hsiao 1944; Carvalho 1981a). Hsiao (1944) noted that *Bromeliaemiris* might be a synonym of *Lopidolon* but refrained from formal synonymy due to lack of material.

Stonedahl (1988) did not specifically addressed the genera *Bromeliaemiris* and *Lopidolon* but outlined the putatively monophyletic group of six Oriental genera, viz. *Anthropophagiotes* Kirkaldy, 1908, *Bromeliaemiris*, *Harpedona*, *Lopidolon*, *Mertila* Distant, 1904, and *Notidius* Hsiao, 1944. According to Stonedahl, the defining characters of this group include the relatively long labium always reaching mesocoxae, the characteristic area with faint trichia at base of antennal segment II, the weakly inflated peritreme, the two-celled hemelytral membrane with narrow smaller cell stretching along inner margin of cuneus, and the greatly reduced parameres and aedeagus. Members of this group also have distinct calli, with an anteriorly and posteriorly delimited area with deep depression, which usually gives an impression of a second pronotal collar (Figs 6D, 7F).

Our observations coincide with those of Hsiao (1944) and Stonedahl (1988). Both *Lopidolon* and *Bromeliaemiris* share all characters indicated by Stonedahl (1988) for the *Harpedona*-group. They also show no distinctions in size, body proportion, vestiture, color pattern, and characteristic structure of the antenna, head, pronotum, and hemelytron (Figs 6D–I, 7). Therefore, we synonymize *Bromeliaemiris* Schumacher, 1919 with *Lopidolon* Poppius, 1911, resulting in the following 11 new combinations: *Lopidolon bicolor* (Schumacher, 1919), *L. dissimilis* (Hsiao, 1944) (Fig. 7A–B), *L. fasciatus* (Ghauri, 1975), *L. gressiti* (Carvalho, 1981), *L. marginatus* (Hsiao, 1944) (Fig. 7C–D), *L. morobensis* (Carvalho, 1981), *L. nigripictus* (Hsiao, 1944) (Fig. 7F), *L. nigritus* (Hsiao, 1944), *L. puncticollis* (Hsiao, 1944) (Fig. 7E), *L. rubrinus* (Carvalho, 1981), and *L. viridipictus* (Hsiao, 1944) (Fig. 7G).

Within the *Harpedona*-group, *Lopidolon* is most similar to *Mertila*. *Anthropophagiotes*, a monotypic genus described from a single female from Fiji, clearly differs from other *Harpedona*-group genera in the distinctly protruding head, strongly dilated antennal segment II, and shape of the pronotum. The monotypic genus *Notidius*, also described and still known from a single female collected in Borneo, differs in having a large and strongly declivent head, oval body with a gradually convex costal margin of hemelytron, cuneus only slightly longer than wide, and dark castaneous coloration. *Harpedona* may be easily distinguished by the narrow body with basal width of pronotum not exceeding 1.5× of the head width and the distinct constriction at the sides of pronotum just behind the calli.

Representatives of the genus *Mertila* (Fig. 8) differ from those of *Lopidolon* by the head shape with a weakly convex, slightly protruding frons and large eyes without a postocular region, by the narrow pronotal collar, the comparatively short vestiture, and the characteristically reddish and bluish coloration.

Key to species of the genus *Lopidolon* of India and Sri Lanka

1. Clypeus dark brown; frons, mandibular and maxillary plates darkened. Pronotum dorsally with two wide, uninterrupted dark brown longitudinal stripes (Fig. 6G–I). Posterior angles of pronotum reddish. Sri Lanka ..... ***L. sordidus*** Poppius, 1911
– Head pale brown to reddish-yellow, without a dark pattern or with dark macula along midline on frons. Pronotum dorsally with four dark longitudinal stripes – two at sides of collar and calli and two on disc along midline. Posterior angles of pronotum also darkened. Southwestern India 2

2. Dorsum pale brown with diffuse brown spots and stripes on pronotum and hemelytra (Fig. 6D–E). Antennal segment II brown with middle pale brown. Tibiae pale brown, somewhat darkened at middle ..... ***L. pallescens*** Poppius, 1912
– Dorsum yellow to orange yellow, with large contrasting black spots and stripes (Fig. 2E–F). Antennal segment II and tibiae uniformly dark brown, tibiae sometimes dirty yellow at middle ..... ***L. dandeliensis*** sp. nov.

Lopidolon dandeliensis sp. nov.
urn:lsid:zoobank.org:act:4A2EE39E-5C7F-4118-8BC5-1E677F85261F
Figs 2E–F, 17–18, 27E

Diagnosis

Recognized by the yellow or orange-yellow ground color with contrasting dark pattern, specifically distinguished by the uniformly black antennal segments I and II, dark brown tibiae, presence of black longitudinal stripes at sides of anterior part of pronotum, and the two more stripes close to midline on posterior part and the almost entirely black hemelytron with the apex of clavus, the basal half of cuneus, and the base and extreme apex of endocorium yellow (Fig. 2E–F).

Etymology

The name of the new species is derived from the type locality, Dandeli city.

Type material

Holotype

INDIA • ♂; Karnataka, Dakshina Kannada, Dandeli; 15.236° N, 74.616° E; H.M. Yeshwanth leg.; 10 Nov. 2012; at light; UASB.

Paratypes

INDIA: • 3 ♂♂; same collection data as holotype; UASB • 2 ♀♀; Karnataka, Chickballapur, Nandi Hills; 13°22.320′ N, 77°741.108′ E; 1443 m a.s.l.; 29 Aug. 2019; H.M. Yeshwanth leg.; Ex: *Diplocentrum recurvum*; UASB.

Description

Male

Coloration. Yellow to orange yellow, with contrasting black pattern (Fig. 2E). Head: yellow to orange-yellow, with postocular region of vertex black and sometimes with a narrow brown mark on frons along

midline; eye silvery with black band along inner margin in frontal view; antennal segments I and II black, remaining segments brown; labium brown. Thorax: pronotal collar and calli with longitudinal black stripes laterally, disc of pronotum with two black stripes close to midline and darkened posterior angles; thoracic venter pale brown, propleura with similar black longitudinal stripe; exposed part of mesoscutum and scutellum yellow to orange-yellow, with lateral black patches at base. Hemelytron: clavus black, with V-shaped yellow region apically; corium yellow to orange yellow, with entirely black exocorium and with three large, almost confluent, longitudinal black patches separated by branches of R+M vein and occupying most of endocorium except base and extreme apex; cuneus yellow to orange yellow with black apical half. Legs: coxae pale brown to pale yellow; femora yellow with darkened apices and a diffuse dark brown ring on apical third; tibiae brown to dark brown, pale yellow medially. Abdomen: yellow to orange yellow, with lateral black patches.

Surface and vestiture. Dorsum finely punctate; head, pronotum and hemelytra weakly rugose, with yellow, long, erect simple setae, antenna and legs with setae somewhat longer than elsewhere.

Structure. Body elongate-oval, total length 2.5× as long as basal width of pronotum. Head: transverse, with distinctly convex and anteriorly projecting frons; eye sessile, large, occupying half of head height in lateral view, not in contact with anterior margin of pronotum due to well-developed postocular region of vertex; vertex slightly convex; antennal fossa, prominent, round, narrowly separated from eye, located near ventral eye margin; antennal segment I short, subequal to vertex width, tubular and narrowing at base; segment II 1.2× as long as head width, about half as thin as segment I, slightly dilate apically; segments III and IV short, filiform, subequal in length; labium long, reaching abdominal sternite III. Thorax: pronotum 1.6× as wide as long, with collar concave, distinctly wider than diameter of antennal segment I, slightly narrowing towards midline, posteriorly well delimited by an impressed line; calli raised, anteriorly and posteriorly delimited by impressed lines; disc of pronotum slightly raised, trapeziform, with strongly sinuate posterior margin; mesoscutum largely exposed; scutellum slightly longer than exposed part of mesocutum, slightly raised; metathoracic scent gland efferent system reduced, with narrow opening and peritreme (Fig. 25B). Hemelytron: costal margin slightly concave, hemelytron broadest at level with apex of clavus; slightly above cuneus, cuneus about 1.5× as long as wide, with distinct cuneal fracture; primary cell of membrane large, far exceeding apex of cuneus, secondary cell narrow.

Genitalia. Genital capsule short and wide, with a large, posteriorly directed aperture (Figs 17, 18A–B); dorsal margin with very large, spoon-shaped lobe more than twice as long as genital capsule and equipped with groove running towards apex; lateral margins of genital capsule with large, slightly asymmetrical lobes resembling parameres; aedeagus and parameres strongly reduced, parameres almost equal in length, located close to each other on ventral margin of capsule; left paramere as in Fig. 18C–D, right paramere as in Fig. 18E. aedeagus with entirely membranous phallotheca, simple membranous endosoma, and ductus seminis with membranous basal part and sclerotized, spine-like apical part (Fig. 18F).

Female

Similar to male but slightly smaller. Coloration as in male but vertex with a longitudinal pale brown marking and eye entirely silver, without any black markings.

Host

Diplocentrum recurvum Lindl. (Orchidaceae) (Fig. 27E).

Distribution

Southwestern India (Karnataka state).

Remarks

The new species is most similar to *L. pallescens* Poppius, 1912 in size, body proportions, vestiture, and general color-pattern but it differs from *L. dandeliensis* sp. nov. in the pale-brown ground color, the diffuse, weakly expressed dark markings on the dorsum, and the coloration of antennal segment II and tibiae. *Lopidolon sordidus* is similar to the new species in the contrasting black and orange coloration but differs from it in the largely darkened head, uniformly dark brown antennal segments I–II, reddish-brown tibiae, presence of a pair of uninterrupted black stripes on pronotum running from collar to posterior margin of disc, and longer vestiture.

Lopidolon pallescens Poppius, 1912
Fig. 6D–F

Lopidolon pallescens Poppius, 1912: 14–15.

Diagnosis

Recognized by the following combination of characters: dorsum pale brown, with diffuse dark markings; head uniformly pale brown; antennal segment I brown, half as long as vertex width, segment II brown with pale brown middle third, 1.1× as long as head width; pronotal collar and calli with longitudinal brown stripes at sides, disc of pronotum with two brown stripes close to midline and darkened posterior angles (Fig. 6D), propleura with similar brown longitudinal stripe; clavus brown with pale brown apical third; exocorium pale brown, apically darkened; endocorium on apical two thirds with three large brown patches separated by branches of R+M vein; tibia pale brown, darkened at middle.

Material examined

Holotype

INDIA • ♀; "Inde Merid.", Pulney; 10.198° N, 77.501° E; 1898; Noualhier coll.; "*Lopidolon pallescens* sp. nov., B. Poppius det."; FMNH (currently retained at AMNH). [Physical specimen not seen; high quality pictures examined.]

Distribution

Known only from the type locality, Pulney Hills, Tamil Nadu province of India.

Remarks

The holotype of this species is faded in color and dark stripes on dorsum are hardly visible (Fig. 6D–E). The diagnosis is based on examination of pictures of the holotype in combination with the original description (Poppius 1912). Refer to Remarks section of *L. dandeliensis* sp. nov. for discussion of distinctions between *Lopidolon* spp.

Lopidolon sordidus Poppius, 1911
Fig. 6G–J

Lopidolon sordidus Poppius, 1911: 7.

Diagnosis

Distinguished by the following characters: coloration contrastingly orange and brown; head with largely darkened frons and black clypeus; antennal segment I black, 0.7× as long as vertex width; segment II black, slightly longer than head width; pronotum with two wide, longitudinal, dark brown stripes running from collar to posterior margin of disc, remainder of pronotum including posterior angles orange

(Fig. 6G); propleura with a brown longitudinal stripe (Fig. 6I); clavus and endocorium almost entirely dark brown with orange bases, exocorium orange, apically darkened; tibiae uniformly orange-brown.

Material examined

Holotype

SRI LANKA • ♀; Ceylon; 1902; L. Biro leg.; HNHM. [Physical specimen not seen; high quality pictures examined.]

Distribution

Central Sri Lanka. According to the original description (Poppius 1911), the holotype specimen was collected in Pattipola at an altitude of 2000 m, on February 22, 1902.

Remarks

Refer to Remarks section of *L. dandeliensis* sp. nov. for discussion on distinctions between *Lopidolon* spp.

Mertila Distant, 1904
Figs 3A–C, 8, 19–20

Mertila Distant, 1904a: 113

Mertila – Stonedahl 1988: 32–40 (revision).

Type species

Mertila malayensis Distant, 1904a (designated by Distant 1904b: 472).

Diagnosis

Recognized by the following combination of characters: antennae short, segment I thin, slightly shorter than vertex width, segment II shorter than or subequal to head width; dorsum shiny, with dense, whitish, erect simple setae; head reddish, pronotum, scutellum, and base of hemelytron reddish or bluish black to black, apical part of hemelytron bluish black to black (Figs 3A–B, 8A, D, G); disc of pronotum with faint punctures, hemelytron smooth or faintly wrinkled; head broad, with weakly convex frons, broadly depressed lateral margin bordering eye, and indistinct postocular lobe; eyes large, projecting laterally beyond anterolateral angles of pronotum; labium reaching hind coxa; pronotal collar narrow, equals in length to diameter of antennal segment I; calli weakly raised, separated by shallow impressed lines; anterior part of pronotum with shallow subtriangular area between lines delimiting pronotal collar and calli; posterior margin of pronotum slightly convex, moderately exposing mesonotum; membrane two-celled, with large, angulate and distinctly concave larger cell; genital capsule highly modified, short, with posteriorly directed wide aperture, lateral and dorsal margins of capsule with complex posterior processes (Figs 3C, 8C, F, H, 19); parameres and aedeagus reduced, very small; aedeagus with entirely membranous phallotheca, simple membranous endosoma and sclerotized, spine-like apical part of ductus seminis (Fig. 20A–E).

Host

Host data are available for *Mertila malayensis* based on US port interceptions from Java, Philippines and Singapore (Stonedahl 1988). Similarly to several *Lopidolon* spp., this species was taken from *Phalaenopsis amabilis* (L.) Blume, *Renanthera storiei* Rchb.f., and *Vanda* sp. (Orhidaceae). A single

female of *M. bhamo* Stonedahl, 1988 intercepted from India was also taken on *Vanda* sp. (Stonedahl 1988).

Distribution

India, Burma, Malaysia, Philippines, and Indonesia (Stonedahl 1988).

Remarks

Prior to this study, the genus comprised four species, *M. sabah* Stonedahl, 1988*, M. sarawak* Stonedahl, 1988 (Malaysia), *M. malayensis* (Malaysia, Philippines, Indonesia), and *M. bhamo* (Burma). Stonedahl (1988) also recorded the last species from India based on a single female without locality data from the US port interception material. Description of one new *Mertila* species from India is given below.

Species of *Mertila* may be recognized among other eccritotarsines by the bicolored, bright reddish and bluish black dorsum, shape of transverse head, structure of the anterior part of the pronotum and the male genitalia. Refer to discussion of *Lopidolon* for details.

Key to species of the genus *Mertila* of India

1. Head dark reddish; pronotum, scutellum and hemelytron uniformly black (Fig. 3A–B). Tibiae reddish; antennal segment II reddish with darkened apex. Male genitalia as in Figs 19–20 ..... ***M. rubrocephala*** sp. nov.
– Head, pronotum, scutellum, and base of hemelytron bright reddish, apical two thirds of hemelytron metallic bluish black (Fig. 8A). Tibiae and antennal segment II dark brown. Male genitalia as in Fig. 8C .....***M. bhamo*** Stonedahl, 1988

Mertila bhamo Stonedahl, 1988
Fig. 8A–C

Mertila bhamo Stonedahl, 1988: 37.

Diagnosis

Recognized by the following characters: Total length 5.5–6.3; antennal segment II dark brown, subequal to head width; anterior part of body broadly reddish, head, pronotum and scutellum bright reddish, base of hemelytron reddish at level with apex of scutellum, remainder bluish black (Fig. 8A); tibiae brown; genital capsule dorsally with two strongly twisted, tapering, hollow tubular processes (Fig. 8C).

Material examined

Holotype

BURMA • ♂; Bhamo; 24.244° N, 97.232° E; Aug. 1885; Fea leg.; NHM.

Other material

INDIA • 1 ♀; port interception without locality data; 22 Jul. 1939; Ex. *Vanda* sp.; USNM.

Distribution

Burma. Record from India needs confirmation.

Mertila rubrocephala sp. nov.
urn:lsid:zoobank.org:act:58C96AB0-D734-40BE-BDA1-AA987486F1BA
Figs 3A–C, 19–20, 25C

Diagnosis

Easily recognized from all congeners by the uniformly black pronotum, scutellum and entire hemelytron with only head dark reddish (Fig. 3A–B) and the structure of male genitalia devoid of two strongly twisted and tapering, hollow tubular processes of the dorsal wall of genital capsule (Fig. 19).

Etymology

The species epithet refers to the distinctive red head of the new species.

Type material

Holotype

INDIA • ♂; Karnataka, Dakshina Kannada, Vittla; 20°45.814′ N, 75°06.095′ E; 60 m a.s.l.; 30 Sep. 2011; H.M. Yeshwanth leg.; at light; UASB.

Paratypes

INDIA • 2 ♂♂; same collection data as for holotype; UASB.

Description

Male

Coloration. Black; head dark reddish, antennal segment I and labium reddish, antennal segment II reddish with apex brown; legs reddish with darkened tarsi; pronotum, scutellum and hemelytron black; membrane dark brown; body ventrally dark brown or black with genital capsule brown ventrally (Fig. 3A–C).

Surface and Vestiture. Head, pronotum and hemelytron with short, dense, whitish, erect simple setae, antenna and legs with brown simple setae; pronotum weakly punctate, hemelytron finely rugose.

Structure. Body oval, total length 5.2, twice as long as basal width of pronotum. Head: transverse, moderately produced anterior to eyes, slopping; eye large, occupying half the head height in lateral view and projecting laterally beyond anterior margin of pronotum; vertex 1.7× as wide as dorsal width of one eye, almost flat, postocular lobe not developed; antennal fossa large, located close to inferior margin of eye; antennal segment I tubular, basally narrow, subequal to vertex width, segment II shorter than head width; labium long, stout, reaching abdominal segment III. Thorax: pronotum 1.6× as wide as long, trapeziform, with weakly concave lateral margin and broadly convex posterior margin; mesoscutum narrowly exposed; scutellum broadly triangular, slightly raised; metathoracic scent-gland efferent system reduced, peritreme tongue shaped, of typical eccritotarsine structure (Fig. 25C). Hemelytron: costal margin slightly convex; cuneus broadly triangular, length subequal to basal width; large cell of membrane concave, apically angulate, well surpassing apex of cuneus, secondary cell small. Legs: femora comparatively short, moderately flattened; tibiae subequal in length to respective femora; tarsal segment I short, segments II and III subequal in length.

Genitalia. Genital capsule (Fig. 19) wide and short, with wide, posteriorly directed, V-shaped aperture, produced into three very large processes; lateral processes somewhat resembling parameres, distinctly longer than genital capsule; left lateral process elongate, rectangular with long and flattened spine-like apex; right lateral process longer than left one, gradually curved towards midline, broadly rounded apically; dorsal wall of genital capsule produced into median process, flattened oblong structure broadly rounded apically; parameres and aedeagus greatly reduced, located close to each other at ventralmost

point of aperture of genital capsule; aedeagus typical of *Harpedona*-group; phallotheca with slightly sclerotized dorsal wall, membranous elsewhere, endosoma simple, sac-like, without sclerotization; ductus seminis with sclerotized base followed by short membranous segment and strongly sclerotized, spine-like apical half (Fig. 20E); left paramere hooked, strongly twisted (Fig. 20A–B); right paramere spoon-shaped, with short upturned apical process (Fig. 20C–D).

Female

Unknown.

Host

Unknown. All specimens were attracted to light.

Distribution

Karnataka State of India.

Namyatovia gen. nov.

urn:lsid:zoobank.org:act:E6601571-0919-446A-BE3B-93A4DF01048B

Figs 3D–F, 4A–C, 21–22, 25E

Type species

Namyatovia castlerockensis gen. et sp. nov.

Diagnosis

Recognized by the following characters: dorsum lemon yellow with limited fuscous markings (Figs 3D–F, 4A–C); head transverse, with distinct transverse depression on vertex and convex frons anteriorly protruding one-half of eye length; labium reaching middle coxa; pronotum heavily punctate, with flat pronotal collar posteriorly delimited by weak depression; calli reaching medial margins of pronotum, medially separated by small deep pit; cuneus long, falciform, reaching apex of single-celled membrane; genital capsule distinctly wider than long, with large aperture (Figs 21A–B, 22A); left paramere L-shaped, somewhat smaller than right one, with simple, gradually tapering apical process (Figs 21E, 22B); aedeagus tubular, long and thin, C-shaped, evenly sclerotized except membranous apical portion (Figs 21F, 22D).

Etymology

The new genus is named after Anna A. Namyatova in recognition of her important contributions to bryocorine taxonomy. The gender is feminine.

Description

Male

Coloration. Dorsum lemon yellow to dirty yellow (Figs 3D–E, 4A–B); antenna entirely or basally dark brown; head and pronotum dark yellow, somewhat darker than hemelytron, scutellum apically or entirely darkened; hemelytron lemon yellow, with narrowly darkened claval commissure and costal margin, sometimes darkened at base and with diffuse brown spot in medioapical area of corium; membrane semitransparent, with brown vein; legs lemon yellow; thorax ventrally yellow, with brown pleurites Figs 3F, 4C), abdominal venter yellow with lateral pleural region pale brown.

Surface and vestiture. Dorsum shining, head and calli smooth, pronotal collar and disc behind calli with dense deep punctures, hemelytron rugose, weakly punctate; body clothed with dense, short, adpressed, yellowish simple setae.

Structure. Elongate-oval, total length 3.2–3.7. Head: distinctly transverse in dorsal view, frons convex, extending anteriorly about half-length of eye; vertex with deep transverse depression posteriorly between eyes; eye large, projecting posteriorly almost to level of posterior margin of pronotal collar, occupying half-length of head in lateral view; antennal fossa large, located at level of middle eye height, narrowly removed from eye margin; antennal segment I cylindrical, basally narrow, slightly longer than width of vertex, segment II subequal to head width, segments III and IV subequal in length, slightly thinner than segment II; labium short and stout, reaching mesocoxa. Thorax: pronotum trapeziform, strongly narrowed anteriorly, lateral margins concave, posterior margin broadly rounded laterally and weakly concave medially; pronotal collar flat, distinctly broader than diameter of antennal segment I, posteriorly delimited by weak depression; calli large, weakly raised, extending to lateral margins of pronotum, medially separated by small deep pit; mesoscutum moderately exposed; scutellum broadly triangular, with somewhat extended apex and shallow medial depression; scent efferent system with well-developed, lanceolate peritreme extending along ventral margin of metapleuron and reduced, narrow evaporatory area dorsal to peritreme (Fig. 25E–F). Hemelytron: broadly rounded laterally, widest at level of claval apex; embolium well delimited, of same width along almost entire length; cuneus long, falciform, reaching apex of single-celled membrane; cuneal incisure shallow; membrane from base to apex subequal in length to distance between wing base and base of membrane; cell of membrane large, with almost straight vein apically curving towards cuneus and terminating close to apex of cuneus. Legs. elongate, all femora cylindrical, slightly flattened dorsoventrally, tibia cylindrical, hind leg more elongate; tarsus three-segmented, apically dilated, with long guard setae, all segments subequal in length; claw bent close to apex, with large semicircular pulvillus equipped with pulvillar comb on inner surface.

Genitalia. Genital capsule broad, subquadrate to trapeziform, almost twice as wide as long, with large aperture and moderately to strongly excavate right lateral wall (Figs 21A–B, 22A); paramere sockets uneven, supragenital bridge absent; Left paramere somewhat smaller than right one, hook-shaped, with slightly dilated body and simple, gradually tapering apical process (Figs 21E, 22B); right paramere variable, simple scythe-shaped (Fig. 22C) or flattened, with strongly expanded, semicircular body (Fig. 21C–D); aedeagus tubular, long and thin, C-shaped, evenly sclerotized except membranous apical portion; endosoma not clearly separated from phallotheca, non-retractable, entirely expanded from phallotheca in repose; apical portion of aedeagus takes form of single narrow sac, entirely membranous in *N. castlerockensis* gen. et sp. nov. (Fig. 21F) and apically sclerotized in *N. sirsiensis* gen. et sp. nov. (Fig. 22D). Base of aedeagus in the latter species dorsally equipped with characteristically large, narrow, hook-shaped, sclerotized, apically flattened and serrated outgrowth.

Host

Unknown; all specimens were collected at light.

Distribution

Southwestern India, Karnataka state.

Remarks

The new genus is most closely related to *Thaumastomiris* Kirkaldy, 1902 and *Taricoris* Carvalho, 1981, based on the following common characters: vertex with transverse depression between eyes; body wide, with broadly arcuate costal margin; cuneus long, narrow, falciform, almost reaching apex of

membrane; aedeagus C-shaped, narrowly tubular, evenly sclerotized, with one or several membranous lobes apically. The genus *Thaumastomiris* (Figs 9G–H, 10) currently contains seven species distributed from northern India and Sri Lanka to New Guinea whereas *Taricoris* was described by Carvalho (1981) to accommodate two species from Papua New Guinea. Stonedahl (1988) considered a sister group relationship between these two genera based on the bifurcate apex of the left paramere and the presence of a spine-like sclerotized subapical process of the aedeagus. He also suggested that *Thaumastomiris dissimilis* (Philippines, Fig. 9I–J) may in fact belong to the genus *Taricoris*.

Namyatovia gen. nov. clearly differs from *Thaumastomiris* in the lemon-yellow general coloration, the shorter labium reaching mesocoxa, the absence of spinelike processes on the genital capsule, and the shape of both parameres and aedeagus. *Thaumastomiris* spp. have brightly reddish coloration of dorsum (Fig. 10) and robust labium reaching or surpassing hind coxa, with segment II somewhat longer than segments III and IV combined. *Thaumastomiris* is further characterized by the presence of two or single spines on left distal margin of the genital capsule, the almost straight right paramere, and the apically bifurcate apex of the left paramere (Stonedahl 1988: figs 96–100).

Taricoris can be separated from the new genus by the conspicuous dark pattern on hemelytron (Carvalho 1981a: figs 187–188, 193), the bifurcate apex of the left paramere (Carvalho 1981a: figs 190, 196), and the shape of aedeagus, particularly the presence of several membranous apical lobes (Carvalho 1981a: figs 189, 194).

Key to species of genus *Namyatovia* gen. nov.

1. Antennal segment II dark brown to reddish brown. Corium uniformly lemon yellow, without a brown spot behind apex of clavus (Fig. 3D). Right paramere flattened, with expanded semicircular body (Fig. 21C–D). Base of aedeagus with characteristically large, apically serrate, hook-shaped sclerotized outgrowth on dorsal wall (Fig. 21F) .....***N. castlerockensis*** gen. et sp. nov.
– Antennal segment II with a dark brown base and yellow apical two-thirds. Corium with a diffuse pale brown spot behind apex of clavus (Fig. 4A). Right paramere scythe-shaped (Fig. 22C). Aedeagus without sclerotized outgrowth at base (Fig. 22D) ..... ***N. sirsiensis*** gen. et sp. nov.

Namyatovia castlerockensis gen. et sp. nov.
urn:lsid:zoobank.org:act:C1B27D3C-BCD9-4376-A9B4-2C6623D7F2E6
Figs 3D–F, 21, 25E

Diagnosis

Recognized by the following characters: total body length 3.2–3.7; corium uniformly yellow, without dark pattern (Fig. 3D); antenna uniformly dark brown, usually with reddish tinge; right lateral wall of genital capsule deeply excavated, with large, apically rounded sclerotized outgrowth (Fig. 21A–B); right paramere flattened, with broadly semicircular dorsal expansion (Fig. 21C–D); base of aedeagus with large, characteristic, uniformly sclerotized outgrowth; apex of aedeagus with small, entirely membranous lobe (Fig 21F).

Etymology

Named after the type locality, Castle Rock, a village in the Western Ghats Mts, Karnataka.

Type material

Holotype

INDIA • ♂; Karnataka, Belgaum, Castle Rock; 15°25.293′ N, 76°19.734′ E; 569 m a.s.l.; 26 Oct. 2011; H.M. Yeshwanth leg.; at light; UASB.

Paratypes

INDIA • 2 ♂♂; same collection data as for holotype; UASB • 1 ♂; Karnataka, Shivamogga, Nagavalli; 13.218° N, 77.054° E; 6 Sep. 2015; H.M. Yeshwanth leg.; at light; UASB.

Description

Male

Coloration. Dorsum pale lemon yellow to pale brown (Fig. 3D–E); head pale yellow, antennal segments dark brown to reddish brown; pronotum yellow, sometimes with pale brown anterior angles; pro-, meso- and metathorax laterally brown, ventrally pale brown or yellow; scutellum pale brown to dark brown; hemelytron uniformly lemon yellow, with narrowly brown or black costal margin and claval commissure; legs uniformly yellow; abdomen yellow ventrally, pale brown at sides.

Structure. Total length 3.2–3.5; body 3.5–3.7× as long as basal width of pronotum; head transverse, vertex 1.8–2.0× as wide as dorsal width of one eye, 0.8–0.9× as wide as length of antennal segment I; segment II 0.8–0.9× as long as head width, 0.6× as long as basal width of pronotum; pronotum 1.8–1.9× as wide as long.

Genitalia. Genital capsule (Fig. 21A–B) subquadrate, short and broad, about 1.5× as wide as long, with large aperture; right lateral wall of capsule deeply excavated, with prominent, apically rounded process. Left paramere (Fig. 21E) scythe-shaped, with slightly and uniformly swollen body and gradually tapering, apically upturned apical process. Right paramere (Fig. 21C–D) somewhat larger than left one, broad, lamellate, with strongly expanded, semicircular body. Aedeagus (Fig. 21F) tubular, C-shaped, very thin and evenly sclerotized, with small, entirely membranous apical lobe; Dorsal wall of aedeagus at base with large, hook-shaped sclerotized outgrowth, apically flattened and serrated.

Female

Unknown.

Host

Unknown. All specimens were attracted to light.

Distribution

Southwestern India, Karnataka state.

Remarks

The new species is easily distinguished from *N. sirsiensis* gen. et sp. nov. by its more uniform dorsal coloration and striking features of the male genitalia. A peculiar sclerotized outgrowth originating from the extreme base of the aedeagus seems to be a unique feature within eccritotarsines.

Namyatovia sirsiensis gen. et sp. nov.
urn:lsid:zoobank.org:act:F66665F1-8FDC-4A1C-80FA-AC2E456419C9
Figs 4A–C, 22, 25F

Diagnosis

Recognized by the following characters: body length 3.3–3.4; corium with diffuse oval pale brown spot behind apex of clavus (Fig. 4A); antennal segment II darkened at base, yellow on apical two-thirds; genital capsule without ornamentation, spines or processes (Fig. 22A); right paramere scythe-shaped (Fig. 22C); basal part of aedeagus evenly sclerotized, tubular, without additional processes; apical part of aedeagus forming a single, narrow membranous lobe terminating with claw-shaped sclerite (Fig. 22D).

Etymology

Named after the type locality, Sirsi village.

Type material

Holotype

INDIA • ♂; Karnataka, Sirsi; 14°44.023′ N, 74°46.711′ E; 506 m a.s.l.; 25 May 2010; H.M. Yeshwanth leg.; at light; UASB.

Paratypes

INDIA • 2 ♂♂; same collection data as for holotype; UASB • 4 ♂♂; Karnataka, Mudigere; 13°7.190′ N, 75°37.670′ E; 913 m a.s.l.; 29 Aug. 2018; H.M. Yeshwant leg.; at light; UASB.

Description

Male

Coloration. Pale lemon yellow to pale brown (Fig. 4A–C); head yellow, antennal segment I brown, segment II brown in basal third, yellow apically, segment III pale yellow, segment IV pale brown; pronotum yellow dorsally, laterally brown to reddish brown; meso- and metathorax laterally brown, ventrally pale yellow; scutellum pale brown to dark brown; hemelytron lemon yellow, with narrowly brown or black costal margin and claval commissure, sometimes base of hemelytron also darkened, corium with pale brown diffuse medial spot behind apex of clavus; legs pale yellow.

Structure. Total length 3.3–3.6; body 3.3–3.4× as long as basal width of pronotum; vertex 2.1–2.2× as wide as dorsal width of one eye, 0.8–0.9× as wide as length of antennal segment I; antennal segment II 0.6–0.7× as long as basal width of pronotum, 0.9× as long as width of head; pronotum 1.9–2.0× as wide as long.

Genitalia. Genital capsule roughly trapeziform, short and broad, about twice as wide as long, without spines or processes (Fig. 22A); aperture of genital capsule large, right lateral wall somewhat excavated. Left paramere L-shaped, with slightly swollen body and almost straight apical process (Fig. 22B). Right paramere slightly larger than left one, scythe-shaped, gradually curved along entire length (Fig. 22C). Aedeagus elongate, tubular, with C-shaped, evenly sclerotized basal part followed by long, narrow, membranous lobe and terminating with acute claw-shaped sclerite (Fig. 22D).

Female

Unknown.

Host

Unknown. All specimens were attracted to light.

Distribution

Southwestern India, Karnataka state.

Prodromus Distant, 1904
Figs 9A–F, 27C

Prodromus Distant, 1904b: 436.

Prodromus – Stonedahl 1988: 53–89 (revision).

Type species

Prodromus subflavus Distant, 1904 (original designation).

Diagnosis

Recognized by the following combination of characters: body elongate, gracile, with long appendages (Figs 9A, C, E, 27C); head vertical, strongly protruded ventrally; eyes more or less pedunculate, distinctly separated from anterior margin of pronotum; vertex with shallow longitudinal sulcus along midline; antennal segment I bottle-shaped, with narrowed basal one-fourth; pronotum punctate, campaniform, with narrow anteriorly and distinctly expanded behind calli; pronotal collar wide, flat, posteriorly not delimited by impressed line; hemelytron translucent, long, with slightly or strongly convex costal margin, apex of abdomen reaching or barely surpassing only apex of clavus; cuneus elongate, falciform, 3–4× as long as broad at base; left paramere falciform, with elongate, gradually tapering apical process; aedeagus tubular, C-shaped, sclerotized throughout except membranous lobe at apex.

Host

Two widely distributed Oriental species of the genus, *Podromus clypeatus* Distant, 1904 and *P. oculatus* (Poppius, 1912), are known to feed on young leaves of banana (*Musa sapientum* L., *Musa* sp., Musaceae) (Odhiambo 1962; Stonedahl 1988; Anitha & Rajamony 1991; Yasunaga & Ishikawa 2016). Two African species known from Ghana were collected on Marantaceae, viz. *Prodromus thaliae* China, 1944 on *Marantochloa purpurea* (Ridl.) Milne-Redh. and *Thalia geniculata* L., and *P. melanonotus* Carvalho, 1951 on unspecified Marantaceae (Odhiambo 1962; Stonedahl 1988). Host associations for other *Prodromus* species remain unknown.

Distribution

Widely distributed in the Indo-Pacific Region, spanning from tropical western Africa to the Philippines, New Guinea and the Solomon Islands (Stonedahl 1988).

Remarks

Prodromus is widely distributed in the Old World tropics and after the revision of Stonedahl (1988) includes 26 species. Of these, *P. clypeatus* and *P. subflavus* are known from Sri Lanka and the former species was also recorded from South India (Anitha & Rajamony 1991). The elongate body form, coloration, and vertical head with pedunculate eyes allow for easy discrimination of this genus from other Oriental eccritotarsines. *Prodromus* is most closely related to the exclusively African genus *Duducoris* Odhiambo, 1962 but differs from that genus in the shape of head and male genitalia structure (see Stonedahl 1988).

Key to species of the genus *Prodromus* of India and Sri Lanka

1. Cell of membrane not surpassing apex of cuneus, with vein weakly curved distally. Sclerotized part of aedeagus with a long row of spinules apically (Stonedahl 1988: fig. 74f); membranous part without spinules .....***P. clypeatus*** Distant, 1904
— Cell of membrane apically broadly rectangular, slightly surpassing or at least reaching apex of cuneus; membranal vein strongly curved distally. Sclerotized part of aedeagus without a row of spinules but basal third of membranous part densely covered with numerous spinules (Stonedahl 1988: fig. 87c) ..... ***P. subflavus*** Distant, 1904

Prodromus clypeatus Distant, 1904
Figs 9A–B, 27C

Prodromus clypeatus Distant, 1904b: 437.
Prodromus cuneatus Distant, 1909: 453.

Prodromus clypeatus – Stonedahl 1988: 70–72 (redescr.). — Yasunaga & Ishikawa 2016: 30 (biology). — Anitha & Rajamony 1991: 439 (new record for S India).
Prodromus cuneatus – Stonedahl 1988: 70 (syn. with *P. clypeatus*).

Diagnosis

Recognized by the following combination of characters: body pale yellow, usually with brown to pale brown scutellum; eyes distinctly elevated, slightly less than anterior half of eye raised above vertex in frontal view; frons and clypeus weakly convex, with weak depression in between; antennal segment II 2.2–2.4× as long as first, narrowly reddish apically, rarely entire segment with reddish tinge; apex of cuneus well surpassing apex of cell (Fig. 9A), membranal vein weakly and gradually curved apically; sclerotized portion of aedeagus with long, curved subapical row of spicules, apical membranous lobe without any sclerotization.

Material examined

Lectotype
MYANMAR • ♀; Myitta, Tenasserim Valley; 14.1667° N, 98.5167° E; 183 m a.s.l.; Doherty leg.; NHM.

Paralectotype
MYANMAR • 1 ♀; same collection data as for lectotype; NHM.

Other material
SRI LANKA • 1 ♂, lectotype of *Prodromus cuneatus*; Peradeniya; 7.263° N, 80.603° E; 497 m a.s.l.; May 1909; E.E. Green leg.; AMNH_PBI 00340350; NHM • 1 specimen, sex unknown, paralectotype of *Prodromus cuneatus*; same collection data as for lectotype; AMNH_PBI 00340353; NHM.

INDIA • 14 ♂♂, 6 ♀♀; Karnataka, Yellapura, Idagundi; 14°55.064′ N, 64°37.801′ E; 446 m a.s.l.; 6 Dec. 2011; H.M. Yeshwanth leg; Ex: banana.; UASB • 1 ♂, 1 ♀; same collection data as for preceding; ZISP • 2 ♂♂, 2 ♀♀; Uttara Kannada, Dandeli; 13°.13′ N, 77°.63′ E; 906 m a.s.l; 10 Nov. 2012; A.R.V. Kumar leg.; UASB • 3 ♂♂; Tirthahalli, Hulgar; 13.7° N, 75.23° E; A.R.V. Kumar. Leg.; UASB • 5 ♂♂, 1 ♂; Sirsi; 14°44.023′ N, 74°46.711′ E; 506 m a.s.l; 25 May 2010; H.M. Yeshwanth leg.; UASB • 3 ♂♂, 1 ♀; Bangalore, Hessaraghatta; 13°8.294′ N, 77°28.53′ E; 890 m a.s.l.; 5 Jan. 2014; H.M. Yeshwanth leg; UASB • 1 ♂; Tamil Nadu, Coimbatore; 11°01′83″ N, 76°97′25″ E; 463 m a.s.l; 9 Jun. 2015; H.M. Yeshwanth leg.; UASB • 2 ♂♂, 1 ♀; Kerala, Peechi; 10.032° N, 76.021° E; 82m a.s.l., 21 Sep. 2008; S. Murthy leg. UASB • 3 ♂♂; Meghalaya, Ri-Bhoi; 25°41′ N, 91°55′ E; 1031 m a.s.l; 6 Jun. 2019; H.M. Yeshwanth leg.; Ex: banana; UASB.

Distribution

Widely distributed in India and now documented from Kerala (Anitha & Rajamony 1991), Karnataka, Tamil Nadu, and Megahalaya states. Also known from Sri Lanka, Burma, Thailand, Vietnam, southern China, Taiwan, Malaysia, Java, and Ambon (Stonedahl 1988).

Remarks

This widely distributed species is best distinguished from *P. subflavus* by the shape of the membranal cell and structure of the aedeagus mentioned in the key. Additional features of *P. subflavus* that vary

from *P. clypeatus* include comparatively short antennal segment II which is about twice as long as segment I (2.2–2.4× *in P. clypeatus*), and broadly subtriangular concave posterior margin of pronotum (broadly concave, without weakly angulate midpoint in *P. clypeatus*). According to Stonedahl (1988), *P. clypeatus* further differs in having weakly elevated eyes and labium reaching only middle of mesosternum. However, the eyes in all studied specimens including the holotype are distinctly elevated, with slightly less than anterior half of eye raised above vertex in frontal view, while labium is reaching or almost reaching middle coxa.

Prodromus subflavus Distant, 1904
Fig. 9C–D

Prodromus subflavus Distant, 1904b: 437.

Prodromus subflavus – Odhiambo 1962: 253–254 (redescr.). — Stonedahl 1988: 84–85 (redescr.).

Diagnosis

Recognized by the following combination of characters: body uniformly pale yellow; eyes distinctly elevated; frons flat in lateral view, clypeus weakly convex, epistomal suture weakly depressed; antennal segment II twice as long as first, with base and apical one-fourth reddish (Fig. 9C); cell of membrane broadly rectangular apically, slightly surpassing apex of cuneus; sclerotized part of aedeagus without subapical row of spinules, basal third of apical membranous lobe densely covered with numerous spinules.

Material examined

Lectotype
SRI LANKA • ♂; Peradeniya; 7.263° N, 80.603° E, 497 m a.s.l.; Dec. 1901; Distant leg.; AMNH_PBI 00340343; NHM.

Distribution

Sri Lanka, Central Highlands region of Vietnam.

Remarks

Refer to the Remarks section of *P. clypeatus* for discussion of distinctive features.

Stonedahlia gen. nov.
urn:lsid:zoobank.org:act:98840AE6-FFED-494B-A796-7845DE858B32
Figs 4D–F, 23–24, 25D, 27D

Type species

Stonedahlia mishmiensis gen. et sp. nov. (by monotypy).

Diagnosis

Recognized by the following combination of characters: Total length 4.4–4.7; coloration uniformly pale yellow to pale brownish yellow, only apices of tarsi, labium, and sometimes antennal segments II–IV darkened (Fig. 4D); body long and gracile, parallel-sided, 3.7–4.0× as long as basal width of pronotum; head vertical, strongly produced ventrally but not produced anteriad of antennal fossae in dorsal view; antennal segment I subequal to head width; eyes small, not in contact with pronotum, vertex about 3× as wide as eye (Fig. 4E); pronotum heavily punctate, with wide and flat pronotal collar, weakly

raised calli and distinctly expanded disc; hemelytron translucent, long, apex of abdomen not reaching or barely surpassing cuneal fracture (Fig. 4F); cuneus elongate, 2.5–3.0× as along as broad; single cell of membrane forming almost right angle and reaching apex of cuneus; legs elongate; genital capsule boat-shaped, with spinelike subapical process on left side of aperture (Fig. 23); left paramere hook-shaped (Fig. 24E–F); aedeagus tubular, C-shaped, sclerotized throughout except at apex (Fig. 24G); endosoma not clearly separated from phallotheca, non-retractable, entirely expanded from phallotheca in repose; apex of aedeagus membranous, with anchor-shaped apex formed by three oppositely directed processes.

Etymology

The genus is named after Gary M. Stonedahl in recognition of his outstanding contribution to plant bug taxonomy and particularly his seminal studies of eccritotarsines. The gender is feminine.

Description

Coloration. Pale yellow, with darkened apices of labium, antennal segments II–IV, and tarsi (Fig. 4D–F).

Surface and Vestiture. Head smooth, moderately shining, pronotal collar and calli weakly punctate, disc of pronotum coarsely punctate, scutellum smooth, hemelytron weakly rugose, shining; dorsum clothed with dense, adpressed to semierect, comparatively short, whitish simple setae, appendages, thoracic venter and abdomen with longer simple setae, erect to semierect on femora, adpressed elsewhere.

Structure. Body elongate, parallel sided, 3.7–4.0× as long as basal width of pronotum. Head: vertical, strongly produced ventrally below eyes; in dorsal view transverse, not produced anteriad of antennal fossae, with small sessile eyes separated from pronotum by distance almost equal to eye length; vertex broad, 3.0–3.2× as wide as dorsal width of one eye, with shallow transverse depression; eye occupying about one-third of head height in lateral view; frons weakly convex, vertical, clypeus not prominent oriented ventroposteriorly; mandibular and maxillary plates comparatively large, subquadrate; antennal fossa located close to inferior eye margin at mid-height of eye in frontal view; antennal segment I tubular, about twice diameter of segment II, slightly longer than head width, segment II 1.9–2.0× as long as head width, 1.0–1.1× as long as pronotum width; segments II and III filiform, subequal in length and slightly shorter than segment II; labium reaching mesocoxa, with segment I long, reaching procoxa, length of segment II subequal to segment I, segments III and IV combined subequal in length to segment II. Thorax: pronotum 1.4–1.5× as wide as long, campaniform; pronotal collar wide and flat, more than twice as wide as diameter of antennal segment I, not delimited by impressed line posteriorly; calli weakly raised and poorly demarcated, reaching lateral margins of pronotum, separated by small deep pit; disc of pronotum behind calli noticeably widened, trapeziform, raised, with slightly convex lateral margins, rounded posterior angles and somewhat concave medially posterior margin; mesoscutum almost entirely covered with pronotum, separated from scutellum by distinct recession; scutellum slightly raised above hemelytron; metathoracic scent efferent system typical for eccritotarsines (Fig. 25D). Hemelytron: translucent, long, with nearly straight costal margin, distance between base of hemelytron and apex of clavus subequal to distance between apex of clavus and cuneal fracture, apex of abdomen not reaching or barely surpassing cuneal fracture; embolium inflated; cuneus elongate, 2.5–3.0× as along as broad, cuneal fracture obsolete; single cell of membrane forming almost right angle and reaching apex of cuneus. Legs: elongate, slender, hind femur surpassing apex of abdomen, tibiae cylindrical, slightly dilated apically; tarsi 2-segmented with apical segment elongate, slightly swollen; pretarsus typical eccritotarsine.

Genitalia. Genital capsule boat-shaped, slightly compressed laterally, dorsolateral wall of capsule protruded into large subapical fold and equipped with spinelike subapical process at base of fold (Fig. 23); right paramere slightly larger than left one, L-shaped, apical process prominent, straight, with

abruptly curved apex and long subapical spine (Fig. 24A–D); left paramere hook-shaped (Fig. 24E–F); aedeagus tubular, C-shaped, sclerotized throughout except at apex, with subapically serrate dorsal wall; endosoma not clearly separated from phallotheca, non-retractable, entirely expanded from phallotheca in repose (Fig. 24G); apex of aedeagus weakly sclerotized, anchor-shaped, with three oppositely directed, gradually curved, weakly sclerotized processes, dorsal and ventral processes simple, lateral process apically sclerotized, twin-coned.

Female

Structure, Surface and Vestiture. As in male.

Genitalia. Not examined.

Host

Similarly to *Ernestinus* spp., specimens of this monotypic genus were found in large groups breeding on under surfaces of *Colocasia* (Araceae) leaves (Fig. 27D).

Remarks

The new genus undoubtedly belongs to a group of six genera outlined by Stonedahl (1988) and related to *Ernestinus* (see relevant Remarks section for additional details). Within this group, *Stonedahlia* gen. nov. appears to be most closely related to *Myiocapsus* Poppius, 1914. Both genera may be easily distinguished from *Eofurius*, *Ernestinus*, *Microbryocoris*, *Palaeofurius*, and *Stylopomiris* by the ventrally produced head with vertical frons, pale yellow coloration, and genital capsule with spinelike process on the left wall. *Myiocapsus* spp. differ from *Stonedahlia* gen. nov. in having distinctly larger eyes contacting anterior margin of pronotum and projecting laterally beyond anterolateral angles of pronotum, and male genitalia structure, particularly the simple, straight, gradually tapering right paramere (Stonedahl 1988: figs 49e, 50e, 51g), and the apex of aedeagus with small membranous lobes and one or two sclerotized appendages (Stonedahl 1988: figs 49g, 50g, 51d).

Based on gracile body, ventrally produced head, slender legs, and pale yellow coloration, the new genus is superficially similar to *Prodromus* Distant, 1904 (compare Fig. 27C–D) but the distinctly stylate eyes, longitudinal sulcus on vertex, strongly narrowed basal part of antennal segment I, sickle-shaped left paramere, entirely sclerotized aedeagus, and other characters of the latter genus suggest that the two taxa are only distantly related.

Stonedahlia mishmiensis gen. et sp. nov.
urn:lsid:zoobank.org:act:5D95FA54-49C6-4609-A61F-A5A20F64CB93
Figs 4D–F, 23–24, 25D, 27D

Diagnosis

See generic diagnosis.

Etymology

The name of the new species is derived from the type locality, Mishmi hills.

Type material

Holotype

INDIA • ♂; Arunachal Pradesh, Myodia; 28°16′47.4″ N, 095°54′44.9″ E; 2463 m a.s.l.; 11 Sep. 2014; H.M. Yeshwanth leg.; Ex: *Colocasia* sp. (Araceae); UASB.

Paratypes

INDIA • 10 ♂♂, 10 ♀♀; same collection data as for holotype; UASB; • 2 ♂♂, 2 ♀♀; same collection data as for holotype; ZISP.

Description

Male

Coloration. Pale yellow to pale brownish yellow (Fig. 4D–F). Dorsum pale yellow, sometimes scutellum and claval commissure brown yellow; eye dark reddish-brown; antennal segment I with diffuse brown longitudinal stripe laterally and reddish tinge apically, segment II with dark reddish-brown apex, segments, III and IV brown with paler bases; labium pale yellow with darkened apex of segment IV; thoracic pleurites and abdomen pale yellow; legs pale yellow with brown apical part of tarsal segment III.

Structure. Total length 4.4–4.6; body 4.0–4.1× as long as basal width of pronotum. vertex 2.9–3.0× as wide as dorsal width of one eye, 0.6–0.7× as wide as length of antennal segment I; antennal segment II 1.0–1.1× as long as basal width of pronotum, 1.8–1.9× as long as width of head; pronotum 1.5× as wide as long.

Female

Coloration. As in male.

Structure. Total length 4.4–4.7; body 3.7–3.8× as long as basal width of pronotum. vertex 2.8–2.9× as wide as dorsal width of one eye, 0.5–0.6× as wide as length of antennal segment I; antennal segment II subequal to basal width of pronotum, 1.9× as long as width of head; pronotum 1.4–1.5× as wide as long.

Host

Colocasia sp. (Araceae).

Distribution

Arunachal Pradesh state of India.

Thaumastomiris Kirkaldy, 1902

Figs 9G–J, 10

Thaumastomiris Kirkaldy, 1902: 56.

Thaumastomiris – Stonedahl 1988: 89–97 (revision).

Type species

Thaumastomiris sanguinalis Kirkaldy, 1902 (by monotypy).

Diagnosis

Distinguished by the following characters: Body elongate-oval, brightly reddish orange (Fig. 10); head transverse, produced ventrally, with sessile eyes, wide vertex, and vertical, weakly convex frons; vertex with distinct transverse depression from one eye to another; labium robust, long, reaching hind coxa; pronotum with dense shallow punctures; hemelytron with broadly arcuate costal margin and long, apically falciform cuneus reaching apex of membrane; vein of single membranal cell apically weakly convex to almost straight; genital capsule boat-shaped, with spinelike subapical process on left wall (Stonedahl 1988: figs 95a, 96a, 97a, 98a); left paramere U-shaped, with bifid apex (Stonedahl 1988: figs

95b–c, 96b–c, 97b–c, 98b–c); aedeagus tubular, with endosoma non-retractable, entirely expanded from phallotheca in repose; basal part of aedeagus sclerotized, with large subapical spinelike process; apical part of aedeagus membranous, with several elongate lobes (Stonedahl 1988: figs 95e, 96e, 97e, 98e).

Host

Thaumastomiris philippinensis Hsiao, 1944 and *T. discoidalis* Poppius, 1912 were collected from *Pandanus* sp. (Pandanaceae) (Carvalho 1981a; Stonedahl 1988) and the latter species was also recorded from *Zingiber* sp. (Zingiberaceae) (Poppius 1912). The crinium lily *Crinum asiaticum* Blanco (Amaryllidaceae) was mentioned as a host for *T. sanguinalis* Kirkaldy, 1902 in the original description (Kirkaldy 1902).

Distribution

From Sri Lanka, southwestern and northern India in the west to Philippines, Lombok and New Guinea in the east (Stonedahl 1988).

Remarks

This genus comprises six species ranging from northern India and Sri Lanka to New Guinea and recognized among other eccritotarsines by the reddish orange coloration, distinct transverse depression on vertex, characteristically long, curved cuneus, and bifurcate apex of the left paramere. *Thaumastomiris dissimilis* (Fig. 9I–J), one more species of this genus described by Hsiao (1944) from the Philippines, was considered not congeneric with the type species and was excluded from *Thaumastomiris* (Stonedahl 1988). Stonedahl also suggested that *Th. dissimilis* may in fact belong to the genus *Taricoris* but refrained from establishing a new combination before examination of the type species, *Taricoris wauensis* Carvalho, 1981. Only two species are currently known from the studied area, viz. *Th. piceatus* Distant, 1911 (Northern India) and *Th. sanguinalis* (Sri Lanka).

Key to species of genus *Thaumastomiris* Kirkaldy, 1902 of India and Sri Lanka

1. Medioapical part of corium and apical part of clavus with a diffuse brown spot. (Fig. 10C, E). Two spines on left margin of genital capsule contrastingly long (Stonedahl 1988: fig. 99) ..... ***Th. piceatus*** Distant, 1911
— Dorsum uniformly bright reddish, without a medioapical spot (Fig. 10G). Spines on left margin of genital capsule distinctly shorter (Stonedahl 1988: fig. 100a) ..... ***Th. sanguinalis*** Kirkaldy, 1902

Thaumastomiris piceatus Distant, 1911
Fig. 10C–F

Thaumastomiris piceatus Distant, 1911b: 277.

Thaumastomiris piceatus – Stonedahl 1988: 96 (figs 93, 99, redescr.).

Diagnosis

Recognized by the following characters: total length 5.1–5.4; dorsum reddish with large diffuse brown spot on apical half of clavus and medioapical area of corium; left wall of genital capsule with two very long and thin subapical spines (Stonedahl 1988: fig. 99a); aedeagus with single-coned, spinelike subapical sclerotized process (Stonedahl 1988: fig. 99e).

Material examined

Lectotype

INDIA • ♂; Ganges delta, Sorabkatti; 14 Dec. 1909; Jenkins leg.; at light; NHM.

Paralectotype

INDIA • 1 ♂; Ganges delta, Khulna distr., Gurhhalee, 8 Dec. 1909; Jenkins leg.; at light; NHM.

Other material

BURMA • 1 ♀; Rangoon; Mar. 1927; E.J. Meggitt leg.; USNM.

Distribution

Burma, Pakistan, and northern India (Stonedahl 1988).

Remarks

Phylogenetic analysis of the genus (Stonedahl 1988) resolved this species as a sister taxon to *Th. sanguinalis*, which differs from *Th. piceatus* in having uniformly reddish dorsum, short subapical spines on the left wall of genital capsule (Stonedahl 1988: fig. 100a), and twin-coned sclerotized process of the aedeagus (Stonedahl 1988: fig. 100e). *Thaumastomiris piceatus* is similar to *Th. discoidalis* (New Guinea) in the body size and coloration, particularly in the presence of brown medial spot on hemelytron, but the latter species may be distinguished by the antennal segment II longer than width of head and the presence of single spine on the left wall of the genital capsule.

Thaumastomiris sanguinalis Kirkaldy, 1902
Fig. 10G–H

Thaumastomiris sanguinalis Kirkaldy, 1902: 57.

Thaumastomiris sanguinalis – Distant 1904b: 473, fig. 305 (redescr.) — Stonedahl 1988: 96 (figs 93, 100, redescr.).

Diagnosis

Distinguished by the following characters: total length 4.8–5.4; dorsum uniformly bright reddish; left wall of genital capsule with two short subapical spines (Stonedahl 1988: fig. 100a); aedeagus with twin-coned subapical sclerotized process (Stonedahl 1988: fig. 100e).

Material examined

Paralectotype

SRI LANKA • 1 ♀; Ceylon; [handwritten:] "*Thaumastomiris sanguinalis* K. cotype", "Mus. Zool. H:fors Spec. typ. No 9852 *Thaumastomiris sanguinalis* Kir."; AMNH_PBI 00338732; FMNH.

Other material

SRI LANKA • 2 ♀♀; Ceylon, Peradeniya; 7.263° N, 80.603° E; 497 m a.s.l.; May 1911; NHM • 1 ♂, 2 ♀♀; Ceylon, Peradeniya; 7.263° N, 80.603° E; 497 m a.s.l.; Jan. 1900; "Mus. Zool. H:fors Spec. typ. No 9851 *Thaumastomiris sanguinalis* Kir."; AMNH_PBI 00338733; FMNH • 2 ♂♂, 2 ♀♀; Haragama; 7.233° N, 80.733° E; 584 m a.s.l.; May 1911; NHM • 1 ♂, 2 ♀♀; Ceylon; USNM.

Host

Kirkaldy (1902) reported *Crinum asiaticum* (Amaryllidaceae) as a host in the original description.

Distribution

Sri Lanka.

Remarks

Refer to the Remarks section of *T. piceatus* for the discussion of distinctive features. Stonedahl (1988) designated the male as the lectotype of *T. sanguinalis* from the collection of the Hungarian Natural History Museum and mentioned that the paralectotype female is apparently deposited in the same collection but that he hadn't seen the specimen. We found this paralectotype in the collection of the Finnish Museum of Natural History together with three specimens from the same series most probably not seen by Kirkaldy but labelled as types (see material examined).

Discussion

The plant bug tribe Eccritotarsini is peculiar in several respects. Species of this tribe exhibit fascinating structural diversity not only in general appearance, but also in characters which are uniform across other tribes of plant bugs, e.g., the pronotal collar and male genitalia. This group is extremely species-rich and currently comprises slightly less than 700 species from 119 genera, which forms almost 60% of species and about two-thirds of genera of the subfamily Bryocorinae. Eccritotarsines differ from all other tribes of the subfamily in terms of distributional patterns and are especially diverse in the New World, which harbors 85% of known species (Konstantinov *et al.* 2018).

Poorly documented diversity of eccritotarsines coupled with their rarity in collections hinders the advancement of further studies. Seven genera and 40 species of this tribe have been described as new to science within the last decade (Hernández & Henry 2010; Cassis *et al*. 2016; Henry & Howard 2016; Konstantinov & Zinovjeva 2016; Yasunaga & Ishikawa 2016; Chérot *et al*. 2017; Menard & Schwartz 2018; Henry & Menard 2020). Of these, 20 species were described from the New World, 17 from the Oriental Region and three from Australia, which further demonstrate the taxonomic impediment globally and especially in the Oriental countries. Based on the new material we describe two new genera and six new species from India. However, denser sampling in many areas and habitats is still needed for a more robust taxonomic exploration of eccritotarsines and we expect more taxa of this group in India and Sri Lanka to be discovered in the future.

Acknowledgments

We are grateful to James Boone (BPBM), Mária Tóth (HNHM), Ruth Salas (AMNH), and Anders Albrecht (FMNH) for the excellent photographs of type specimens deposited under their curation. Mick Webb (NHM), Thomas Henry (USNM), and Heidi Viljanen (FMNH) provided access to collections and supportive environment during visits of these museums. We are also thankful to Professor C.A. Viraktamath (UASB, GKVK) for his support, to Dr. J. Poorani for the field images of *Harpedona sanguinipes* and to Dr. D.M. Firake for providing specimens of *H. sanguinipes* in this study. Comments by Thomas Henry (USNM) and an anonymous reviewer have contributed greatly to this paper. Funding for this study to FK was provided by the Russian Foundation for Basic Research (grant 19–04–00662). The Heteroptera collection of the Zoological Institute, Russian Academy of Sciences also used in this study is financially supported by the state research project AAAA–A19–119020690101–6. HMY was supported by Ernst Mayr Travel Grant (MCZ, Harvard University, Cambridge, Massachusetts, UAS) to visit NHM in 2016.

References

Anitha N. & Rajamony L. 1991. Occurrence of *Prodromus clypeatus* Distant (Heteroptera: Miridae) on banana (*Musa* sp) in India: A new record. *Tropical pest management* 37 (4): 439. https://doi.org/10.1080/09670879109371632

Basnagala S., Wijesekara, G.A.W. & Wijayagunasekara H.N.P. 2002. Review of the subfamily Bryocorinae (Heteroptera: Miridae) of Sri Lanka. *Tropical Agricultural Research* 14: 154–164.

Carvalho J.C.M. 1952. On the major mlassification of the Miridae (Hemiptera) (with keys to subfamilies and tribes and a catalogue of the world genera). *Anais da Academia Brasileira de Ciências* 24 (1): 31–110.

Carvalho J.C.M. 1957. A catalogue of the Miridae of the world. Part I. *Arquivos do Museu Nacional, Rio de Janeiro* 44: 1–158.

Carvalho J.C.M. 1981a. The Bryocorinae of Papua New Guinea (Hemiptera, Miridae). *Arquivos do Museu Nacional, Rio de Janeiro* 56: 35–89.

Carvalho J.C.M. 1981b. On three new genera and four new species of Miridae from India and Oceania (Hemiptera). *Revista Brasileira de Biologia* 41: 479–484.

Cassis G., Cheng M. & Tatarnic N. 2016. Flattened plant bugs of the *Pandanus*-inhabiting genus *Frontimiris* (Heteroptera: Miridae) and *Pandanus spiralis*-heteropteran associations in the East Kimberley. *Austral Entomology* 55 (4): 371–382. https://doi.org/10.1111/aen.12199

Cassis G. & Schuh R.T. 2012. Systematics, biodiversity, biogeography, and host associations of the Miridae (Insecta: Hemiptera: Heteroptera: Cimicomorpha). *Annual Review of Entomology* 57: 377–404. https://doi.org/10.1146/annurev-ento-121510-133533

Chérot F., Gorczyca J., Schwartz M.D., Demol T., Telnov D., Barclay M.V.L. & Pauwels O.S.G. 2017. The Bryocorinae, Cylapinae, Deraeocorinae and Mirinae (Insecta: Heteroptera: Miridae) from Baiteta Forest, Papua New Guinea, with a discussion of their feeding habits and a list of species of the country. *In*: Telnov D. (ed.) *Biodiversity, Biogeography and Nature Conservation in Wallacea and New Guinea* Vol. 3: 55–139. The Entomological Society of Latvia, Riga. https://doi.org/10.5962/bhl.title.150137

Distant W.L. 1904a. XI. Rhynchotal Notes. XX. Heteroptera. Fam. Capsidae (Part I). *Annals and Magazine of Natural History* (7) 13: 103–114. https://doi.org/10.1080/00222930408562444

Distant W.L. 1904b. Rhynchota. Vol. 2. *In*: Blanford W.T. (ed.) *The Fauna of British India, including Ceylon and Burma*. Taylor & Francis, London. Available from: https://www.biodiversitylibrary.org/page/12704190

Distant W.L. 1909. Descriptions of Oriental Capsidae. *Annals and Magazine of Natural History* 8 (4): 440–454. https://doi.org/10.1080/00222930908692696

Distant W.L. 1910. Descriptions of Oriental Capsidae. *Annals and Magazine of Natural History* 8 (5): 10–22. https://doi.org/10.1080/00222931008692721

Distant W.L. 1911a. Rhynchota Indica (Heteroptera). *Entomologist* 44: 309–312. https://doi.org/10.5962/bhl.part.22056

Distant W.L. 1911b. Rhynchota. Vol. 5. (Heteroptera: Appendix). *In*: Shipley A.E. (ed.) *The fauna of British India, including Ceylon and Burma*. Taylor & Francis, London (2010). Available from: https://www.biodiversitylibrary.org/page/9822468

Ghauri M.S.K. 1975. Anomalous Miridae (Heteroptera) from Australasia. *Journal of Natural History* 9: 611–618. https://doi.org/10.1080/00222937500770501

Henry T.J. & Howard S.Z. 2016. Revision of the Neotropical plant bug genus *Sinervus* Stål (Heteroptera: Miridae: Bryocorinae: Eccritotarsini), with the description of four new species and a closely related new genus. *Proceedings of the Entomological Society of Washington* 118 (4): 533–554. https://doi.org/10.4289/0013-8797.118.4.533

Henry T.J. & Menard K.L. 2020. Revision and phylogeny of the eccritotarsine plant bug genus *Caulotops* Bergroth, with descriptions of four new genera and 14 new species (Hemiptera: Heteroptera: Miridae: Bryocorinae) associated with *Agave* (Agavoideae: Asparagaceae) and related plant genera. *Zootaxa* 4772 (2): 201–252. https://doi.org/10.11646/zootaxa.4772.2.1

Hernández L.M. & Henry T.J. 2010. *The Plant Bugs, or Miridae (Hemiptera: Heteroptera), of Cuba*. Pensoft, Sofia.

Hsiao T.-Y. 1944. New genera and species of Oriental and Australian plant bugs in the United States National Museum. *Proceedings of the United States National Museum* 95: 369–396. https://doi.org/10.5479/si.00963801.95-3182.369

Hu Q. & Zheng L-Y. 2003. A study on the Chinese species of *Monalocoris* Dahlbom and tribe Eccritotarsini Berg (Hemiptera, Miridae, Bryocorinae). *Acta Zootaxonomica Sinica* 28: 116–125. [in Chinese, English summary]

Kirkaldy G.W. 1902. Memoirs on Oriental Rhynchota. *Journal of the Bombay Natural History Society* 14: 47–58. Available from https://www.biodiversitylibrary.org/part/69049.

Konstantinov F.V. 2003. Male genitalia in Miridae (Heteroptera) and their significance for suprageneric classification of the family. Part I: general review, Isometopinae and Psallopinae. *Belgian Journal of Entomology* 5: 3–36.

Konstantinov F.V. 2019. Revision of *Agraptocoris* Reuter (Heteroptera: Miridae: Phylinae), with description of five new species and a review of aedeagal terminology. *Arthropod Systematics & Phylogeny* 77 (1): 89–126. https://doi.org/10.26049/ASP77-1-2019-05

Konstantinov F.V. & Knyshov A.A. 2015. The tribe Bryocorini (Insecta: Heteroptera: Miridae: Bryocorinae): phylogeny, description of a new genus, and adaptive radiation on ferns. *Zoological Journal of the Linnean Society* 175 (3): 441–472. https://doi.org/10.1111/zoj.12283

Konstantinov F.V. & Zinovjeva A.N. 2016. A new species of *Ambunticoris* from Sulawesi (Hemiptera: Heteroptera: Miridae). *Acta Entomologica Musei Nationalis Pragae* 5 (1): 51–59.

Konstantinov F.V., Namyatova A.A. & Cassis G. 2018. A synopsis of the bryocorine tribes (Heteroptera: Miridae: Bryocorinae): key, diagnoses, hosts and distributional patterns. *Invertebrate Systematics* 32 (4): 866–891. https://doi.org/10.1071/IS17087

Lin C.-S. 2001a. Genus *Ernestinus* Distant (Hemiptera: Miridae) of Taiwan. *Formosan Entomologist* 21: 29–35.

Lin C.-S. 2001b. *Harpedona marginata* Distant (Hemiptera: Miridae), a new pest of *Dioscorea* in Taiwan. *Plant Protection Bulletin (Taipei)* 43 (2): 129–132.

Menard K.L. & Schwartz M.D. 2018. A description of a new genus and new species of sotol-feeding Eccritotarsini (Hemiptera: Heteroptera: Miridae: Bryocorinae) from Durango, Mexico. *Zootaxa* 4514 (2): 283–292. https://doi.org/10.11646/zootaxa.4514.2.11

Mu Y.-R. & Liu G.-Q. 2012. New records of the genus *Jessopocoris* Carvalho, 1981 (Hemiptera: Miridae: Bryocorinae), with descriptions of two new species found in China. *Zootaxa* 3573 (1): 47–54. https://doi.org/10.11646/zootaxa.3573.1.5

Namyatova A.A. & Cassis G. 2013. Systematics, phylogeny and host associations of the Australian endemic monaloniine genus *Rayieria* Odhiambo (Insecta: Heteroptera: Miridae: Bryocorinae). *Invertebrate Systematics* 27 (6): 689–726. https://doi.org/10.1071/IS13034

Namyatova A.A. & Cassis G. 2015. Revision of the Australian endemic plant bug genus *Volkelius* Distant, 1904 (Insecta: Heteroptera: Miridae: Bryocorinae). *Austral Entomology* 54 (2): 180–190. https://doi.org/10.1111/aen.12106

Namyatova A.A. & Cassis G. 2016a. Systematic revision and phylogeny of the plant bug tribe Monaloniini (Insecta: Heteroptera: Miridae: Bryocorinae) of the world. *Zoological Journal of the Linnean Society* 176 (1): 36–136. https://doi.org/10.1111/zoj.12311

Namyatova A.A. & Cassis G. 2016b. Revision and phylogeny of the fern-inhabiting genus *Felisacus* Distant (Insecta: Heteroptera: Miridae: Bryocorinae). *Bulletin of the American Museum of Natural History* 2016 (403): 1–168. https://doi.org/10.1206/0003-0090-403.1.1

Namyatova A.A., Konstantinov F.V. & Cassis G. 2016. Phylogeny and systematics of the subfamily Bryocorinae based on morphology with emphasis on the tribe Dicyphini sensu Schuh. *Systematic Entomology* 41 (1): 3–40. https://doi.org/10.1111/syen.12140

Odhiambo T.R. 1962. Review of some of the genera of the subfamily Bryocorinae (Hemiptera: Miridae). *British Museum* (*Natural History*) 11: 245–331.

Poppius B. 1911. Beiträge zur Kenntnis der Miriden-Fauna von Ceylon. *Öfversigt af Finska Vetenskapssocietetens Förhandlingar* 53A (2): 1–36.

Poppius B. 1912. Zur Kenntnis der indo-australischen Bryocorinen. *Öfversigt af Finska Vetenskapssocietetens Förhandlingar* 54A (30): 1–27.

Poppius B. 1915. Neue orientalische Bryocorinen. *Philippine Journal of Science* 10: 75–88.

Schuh R.T. &Weirauch C. 2020. *True bugs of the world (Hemiptera: Heteroptera): Classification and Natural History*. *Second edition*. Monograph series vol. 8, Siri Scientific Press, Rochdale.

Schumacher F. 1919. Einige schädliche Heteropteren von der Insel Java. *Zeitschrift für wissenschaftliche Insektenbiologie* 14: 221–224.

Stonedahl G.M. 1986. *Stylopomiris*, a new genus and three species of Eccritotarsini (Heteroptera: Miridae: Bryocorinae) from Viet Nam and Malaya. *Journal of the New York Entomological Society* 94: 226–234.

Stonedahl G.M. 1988. Revisions of *Dioclerus*, *Harpedona*, *Mertila*, *Myiocapsus*, *Prodromus* and *Thaumastomiris* (Heteroptera: Miridae, Bryocorinae: Eccritotarsini). *Bulletin of the American Museum of Natural History* 187: 1–99.

Venkataraman K. & Sivaperuman C. 2018. Biodiversity hotspots in India. *In:* Sivaperuman C. & Venkataraman K. (eds) *Indian Hotspots:*1–27 Springer, Singapore. https://doi.org/10.1007/978-981-10-6605-4_1

Yasunaga T. 2000. An annotated list and descriptions of new taxa of the plant bug subfamily Bryocorinae in Japan (Heteroptera: Miridae). *Biogeography* 2: 93–102.

Yasunaga T. & Duwal R.K. 2007. A new species of the eccritotarisine genus *Michailocoris* Štys (Heteroptera, Miridae, Bryocorinae) from Nepal, with descriptions of a related new genus and species. *Biogeography* 9: 67–70.

Yasunaga Y. & Ishikawa T. 2016. Twelve new species of the Asian plant bug genus *Ernestinus* Distant (Heteroptera: Miridae: Bryocorinae: Eccritotarsini), with emphasis on unique biology and descriptions of three additional new eccritotarsine species. *Insect Systematics & Evolution* 47 (5): 411–469. https://doi.org/10.1163/1876312X-47052149

Yeshwanth H.M. 2014. Five new species of *Hypseloecus* Reuter (Hemiptera: Miridae) on hemiparasitic Santalales from India. *Zootaxa* 3878 (1): 75–88. https://doi.org/10.11646/zootaxa.3878.1.6

Yeshwanth H.M. 2015. Two new species of the genus *Ectmetopterus* (Hemiptera: Miridae: Orthotylinae) feeding on grass in India. *Zootaxa* 3904 (4): 581–588. https://doi.org/10.11646/zootaxa.3904.4.7

Yeshwanth H.M. & Chérot F. 2015. A new species of the genus *Sulawesifulvius* Gorczyca, Chérot, & Štys, 2004 (Insecta, Heteroptera, Miridae, Cylapinae) from India. *ZooKeys* (475): 89–95. https://doi.org/10.3897/zookeys.475.8349

Yeshwanth H.M. & Chérot F. 2018. The Indian Hyalopeplini (Insecta, Heteroptera, Miridae, Mirinae): a preliminary review. *Zootaxa* 4378 (3): 301–322. https://doi.org/10.11646/zootaxa.4378.3.1

Yeshwanth H.M. & Chérot F. 2019. The Indian Mecistoscelini (Insecta, Heteroptera, Miridae, Mirinae): a preliminary review. *Zootaxa* 4711 (1): 157–174. https://doi.org/10.11646/zootaxa.4711.1.6

Manuscript received: 22 June 2020
Manuscript accepted: 8 December 2020
Published on: 14 April 2021
Topic editor: Nesrine Akkari
Desk editor: Jeroen Venderickx

Table 1 (continued on next page). Measurements (mm) of eccritotarsine specimens examined for this study. Abbreviations: Clyp/Cun = distance between apex of clypeus and apex of cuneus in dorsal view; InterOcDi = width of vertex between inner margins of eyes in dorsal view.

Specimens		Length											Width				
		Body	Clyp/ Cun.	Head	Pron.	Scut.	Cun.	Antennal segments I	II	III	IV	Labium	Head	Pron.	Scut.	InterOcDi	Body
***Dioclerus bengalicus* Stonedahl, 1988**																	
♀, N=1		3.46	2.55	0.25	0.66	0.38	0.41	0.56	1.11	0.47	0.44	0.80	0.80	1.15	0.52	0.38	1.48
***Dioclerus lutheri* Poppius, 1912**																	
♂, N=1		3.42	2.63	0.25	0.74	0.40	0.39	0.62	1.09	0.45	0.63	0.91	0.88	1.19	0.60	0.44	1.42
***Ernestinus ramkeshariae* Yasunaga & Ishikawa, 2016**																	
♂, N=3	Max	3.25	2.28	0.19	0.80	0.34	0.54	0.36	0.63	0.64	0.64	0.78	0.59	1.23	0.43	0.34	1.26
	Min	3.10	2.14	0.17	0.74	0.28	0.52	0.35	0.56	0.59	0.56	0.74	0.56	1.01	0.37	0.31	1.14
	Mean	3.17	2.21	0.18	0.78	0.31	0.53	0.35	0.60	0.00	0.00	0.76	0.57	1.11	0.40	0.33	1.18
	SD	0.06	0.05	0.01	0.02	0.02	0.01	0.00	0.03	0.00	0.00	0.02	0.01	0.10	0.02	0.01	0.05
♀, N=3	Max	3.55	2.43	0.15	0.82	0.29	0.56	0.33	0.56	0.57	0.66	1.00	0.58	1.10	0.46	0.34	1.38
	Min	3.40	2.34	0.14	0.78	0.27	0.50	0.32	0.55	0.52	0.61	0.79	0.55	1.00	0.41	0.30	1.20
	Mean	3.47	2.39	0.15	0.79	0.28	0.52	0.32	0.55	0.56	0.63	0.90	0.56	1.03	0.43	0.32	1.29
	SD	0.06	0.04	0.00	0.02	0.01	0.03	0.01	0.00	0.02	0.02	0.08	0.01	0.05	0.02	0.02	0.07
***Ernestinus mimicus* Distant, 1911**																	
♂, N=3	Max	3.11	2.06	0.18	0.70	0.26	0.50	0.35	0.78	0.59	0.44	1.00	0.60	0.97	0.42	0.35	1.12
	Min	2.74	1.96	0.13	0.62	0.24	0.48	0.32	0.77	0.55	0.43	0.90	0.58	0.97	0.40	0.34	1.01
	Mean	2.87	2.00	0.15	0.66	0.25	0.49	0.33	0.77	0.57	0.44	0.96	0.59	0.97	0.40	0.35	1.06
	SD	0.14	0.04	0.02	0.04	0.01	0.01	0.01	0.00	0.01	0.01	0.04	0.01	0.00	0.01	0.00	0.05
♀, N=3	Max	3.43	2.96	0.18	0.72	0.31	0.54	0.36	0.72	0.51	0.49	1.05	0.64	1.07	0.49	0.38	1.30
	Min	3.28	2.31	0.17	0.69	0.30	0.50	0.32	0.67	0.47	0.43	1.00	0.60	1.01	0.45	0.36	1.16
	Mean	3.34	2.49	0.17	0.71	0.30	0.52	0.35	0.69	0.49	0.46	1.02	0.61	1.04	0.47	0.36	1.23
	SD	0.06	0.26	0.00	0.01	0.01	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.01	0.01	0.05
***Harpedona sanguinipes* Distant, 1909**																	
♂, N=3	Max	3.82	2.75	0.41	0.71	0.47	0.58	0.37	0.85	0.43	0.39	1.40	0.77	1.09	0.59	0.74	1.10
	Min	3.56	2.52	0.35	0.62	0.44	0.53	0.32	0.75	0.42	0.32	1.20	0.72	1.00	0.49	0.47	1.03
	Mean	3.67	2.64	0.39	0.68	0.45	0.55	0.35	0.81	0.00	0.00	1.30	0.75	1.06	0.53	0.56	1.06
	SD	0.13	0.12	0.03	0.05	0.02	0.02	0.02	0.05	0.00	0.00	0.10	0.03	0.05	0.05	0.15	0.04
♀, N=3	Max	3.80	2.76	0.42	0.74	0.56	0.60	0.34	0.74	0.55	0.60	1.60	0.80	1.20	0.68	0.51	1.10
	Min	3.43	2.69	0.32	0.66	0.48	0.51	0.32	0.71	0.51	0.54	1.50	0.66	1.10	0.61	0.47	1.02
	Mean	3.63	2.73	0.38	0.70	0.52	0.55	0.33	0.72	0.00	0.00	1.53	0.75	1.14	0.64	0.49	1.06
	SD	0.19	0.04	0.05	0.04	0.04	0.05	0.01	0.02	0.00	0.00	0.06	0.08	0.05	0.04	0.02	0.04
***Harpedona vittlaensis* sp. nov.**																	
♂, N=1		3.12	2.28	0.26	0.65	0.39	0.46	0.37	0.89			1.40	0.77	1.07	0.61	0.42	1.10
♀, N=1		3.21	2.28	0.25	0.62	0.35	0.45	0.34	0.68	0.46	0.39	1.23	0.74	1.10	0.50	0.40	1.11

Table 1 (continued). Measurements (mm).

Specimens		Length											Width				
		Body	Clyp./ Cun.	Head	Pron.	Scut.	Cun.	Antennal segments I	II	III	IV	Labium	Head	Pron.	Scut.	InterOcDi	Body
***Harpedona vittlaensis* sp. nov.**																	
♂, N=1		3.12	2.28	0.26	0.65	0.39	0.46	0.37	0.89			1.40	0.77	1.07	0.61	0.42	1.10
♀, N=1		3.21	2.28	0.25	0.62	0.35	0.45	0.34	0.68	0.46	0.39	1.23	0.74	1.10	0.50	0.40	1.11
***Lopidolon dandeliensis* sp. nov.**																	
♂, N=3	Max	5.28	3.88	0.49	1.04	0.90	0.96	0.58	1.39	0.58	0.24	2.27	1.16	1.83	1.43	0.55	2.32
	Min	4.91	3.57	0.42	0.95	0.82	0.93	0.50	1.32	0.48	0.24	2.12	1.09	1.83	1.38	0.52	2.19
	Mean	5.12	3.74	0.44	0.99	0.86	0.94	0.54	1.35	0.53	0.24	2.19	1.12	1.83	1.40	0.53	2.24
	SD	0.19	0.16	0.04	0.05	0.04	0.01	0.04	0.03	0.07	0.00	0.07	0.03	0.00	0.03	0.02	0.07
♀, N=2	Max	5.12	3.83	0.50	0.82	0.81	0.92	0.55	1.08	0.53	0.39	2.23	1.10	1.68	1.26	0.61	2.10
	Min	5.00	3.72	0.48	0.77	0.80	0.91	0.51	1.05	0.53	0.34	2.19	1.06	1.54	1.23	0.60	2.02
	Mean	5.06	3.78	0.49	0.79	0.81	0.92	0.53	1.06	0.00	0.00	2.21	1.08	1.61	1.25	0.60	2.06
	SD	0.08	0.08	0.01	0.04	0.01	0.01	0.03	0.03	0.00	0.00	0.03	0.03	0.10	0.02	0.01	0.06
***Mertila rubrocephala* sp nov.**																	
♂, N=3	Max	5.54	3.86	0.53	1.10	0.72	0.97	0.66	1.20	0.00	0.00	2.53	1.26	2.10	1.29	0.55	2.52
	Min	5.28	3.76	0.49	0.98	0.67	0.95	0.55	1.08	0.00	0.00	2.43	1.24	2.04	1.19	0.50	2.50
	Mean	5.39	3.80	0.51	1.04	0.69	0.96	0.63	1.13	0.00	0.00	2.47	1.25	2.08	1.26	0.53	2.51
	SD	0.12	0.05	0.02	0.05	0.02	0.01	0.06	0.05	0.00	0.00	0.05	0.01	0.03	0.04	0.02	0.01
***Namyatovia castlerockensis* sp. nov**																	
♂, N=3	Max	3.63	2.60	0.29	0.57	0.37	1.01	0.47	0.70	0.49	0.56	1.09	0.75	1.07	0.66	0.37	1.31
	Min	3.27	2.41	0.26	0.47	0.32	0.92	0.39	0.62	0.46	0.53	0.96	0.70	0.96	0.58	0.37	1.12
	Mean	3.42	2.49	0.28	0.52	0.35	0.97	0.42	0.66	0.47	0.55	1.01	0.72	1.01	0.60	0.37	1.23
	SD	0.19	0.10	0.01	0.05	0.03	0.05	0.05	0.04	0.01	0.02	0.07	0.03	0.06	0.05	0.00	0.10
***Namyatovia sirsiensis* sp. nov**																	
♂, N=3	Max	3.63	2.60	0.29	0.57	0.37	1.01	0.47	0.70	0.49	0.56	1.09	0.75	1.07	0.66	0.37	1.31
	Min	3.27	2.41	0.26	0.47	0.32	0.92	0.39	0.62	0.46	0.53	0.96	0.70	0.96	0.58	0.37	1.12
	Mean	3.42	2.49	0.28	0.52	0.35	0.97	0.42	0.66	0.47	0.55	1.01	0.72	1.01	0.60	0.37	1.23
	SD	0.19	0.10	0.01	0.05	0.03	0.05	0.05	0.04	0.01	0.02	0.07	0.03	0.06	0.05	0.00	0.10
***Stonedahlia mishmiensis* sp. nov.**																	
♂, N=3	Max	4.62	2.96	0.31	0.77	0.38	1.10	0.61	1.21	1.10	0.56	1.20	0.64	1.20	0.60	0.45	1.50
	Min	4.42	2.80	0.26	0.68	0.31	1.00	0.52	1.10	0.97	0.50	1.10	0.60	1.00	0.53	0.34	1.39
	Mean	4.50	2.88	0.29	0.73	0.36	1.06	0.56	1.16	1.01	0.52	1.16	0.62	1.10	0.55	0.37	1.44
	SD	0.07	0.07	0.02	0.04	0.03	0.04	0.04	0.05	0.05	0.03	0.04	0.02	0.08	0.03	0.05	0.04
♀, N=33	Max	4.73	3.14	0.32	0.87	0.39	1.15	0.65	1.24	1.13	0.63	1.23	0.65	1.24	0.60	0.39	1.59
	Min	4.43	3.00	0.29	0.78	0.35	1.00	0.60	1.16	0.95	0.50	1.12	0.60	1.16	0.45	0.36	1.51
	Mean	4.54	3.07	0.30	0.83	0.37	1.08	0.63	1.20	1.03	0.57	1.18	0.63	1.20	0.52	0.37	1.54
	SD	0.12	0.05	0.01	0.03	0.02	0.06	0.02	0.03	0.08	0.05	0.04	0.02	0.03	0.06	0.01	0.03

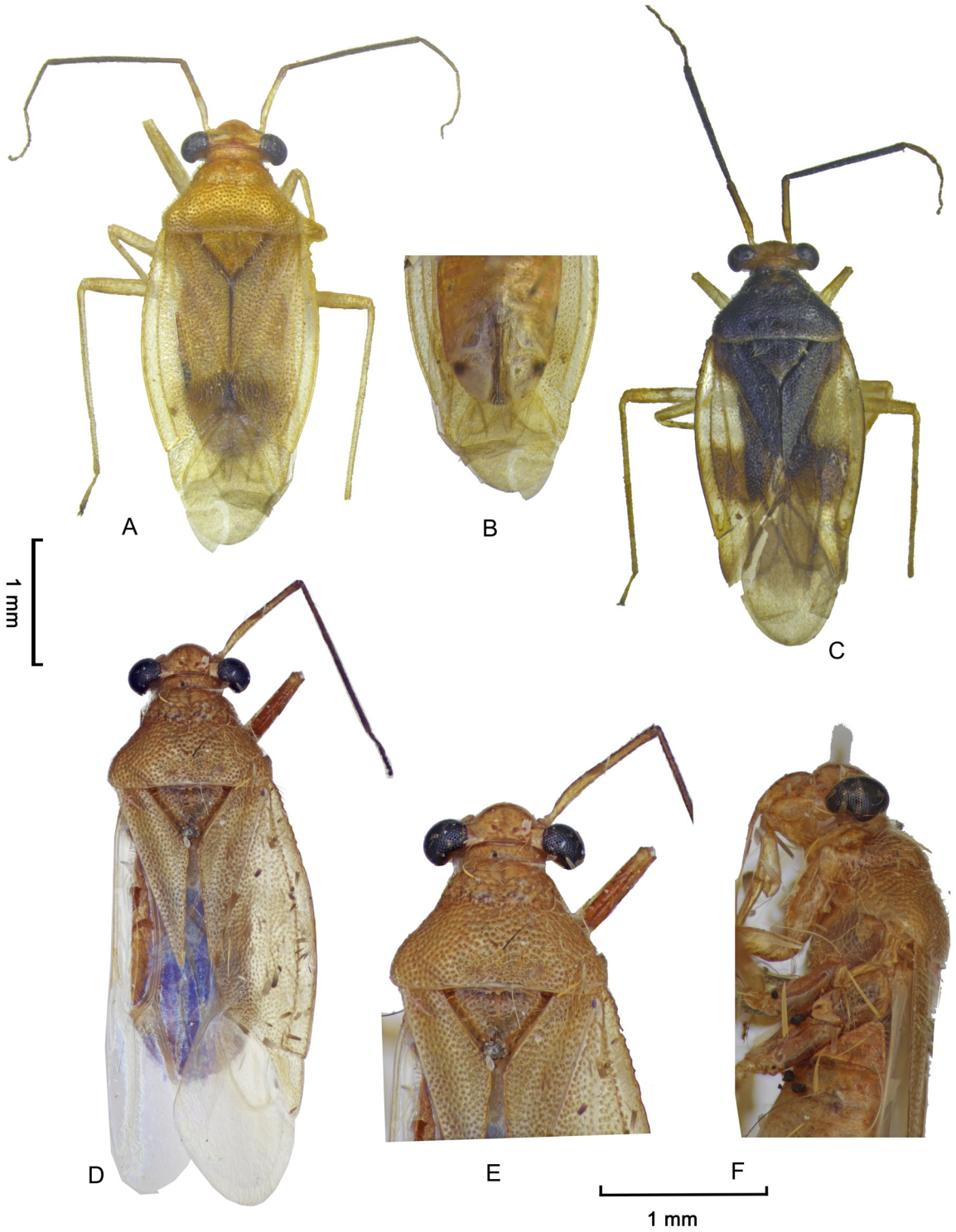

Fig. 1. Habitus of *Dioclerus* spp. **A–B**. *Dioclerus bengalicus* Stonedahl, 1988, ♀, UASB. **A**. Dorsal view. **B**. Abdomen in ventral view. **C**. *Dioclerus lutheri* Stonedahl, 1988, ♂, UASB, dorsal view. **D–F**. *Dioclerus malayensis* Stonedahl, 1988, ♀, paratype, AMNH_PBI 00340383, NHM. **D**. Dorsal view. **E**. Head and pronotum. **F**. Lateral view.

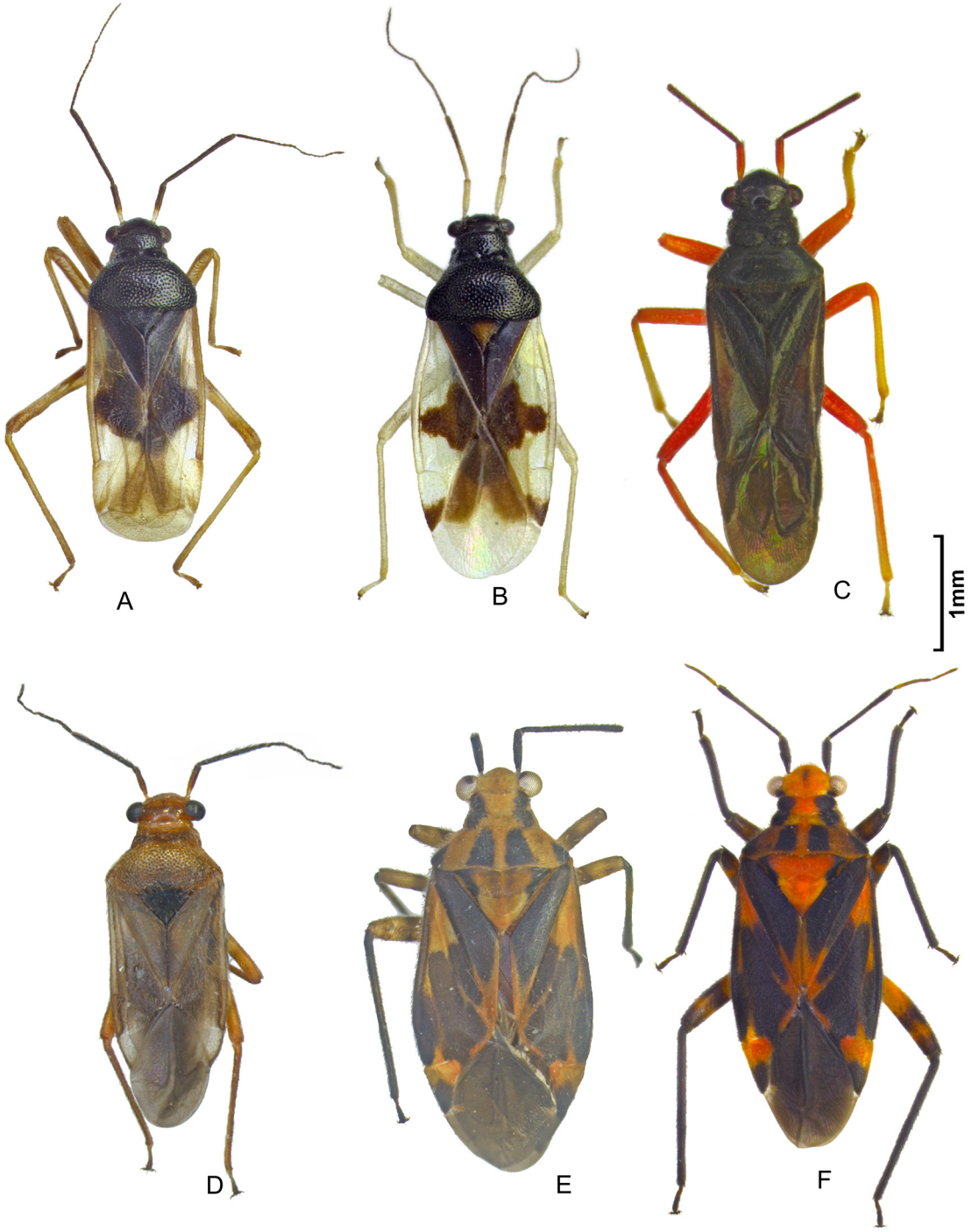

Fig. 2. Habitus of *Ernestinus*, *Harpedona* and *Lopidolon* spp. **A**. *Ernestinus mimicus* Distant, 1911, ♂, UASB. **B**. *Ernestinus ramkeshariae* Yasunaga & Ishikawa, 2016, ♂, UASB. **C**. *Harpedona sanguinipes* Distant, 1904, ♂, UASB. **D**. *Harpedona vittlaensis* sp. nov, ♀, UASB. **E–F**. *Lopidolon dandeliensis* sp. nov., UASB. **E**. ♂. **F**. ♀.

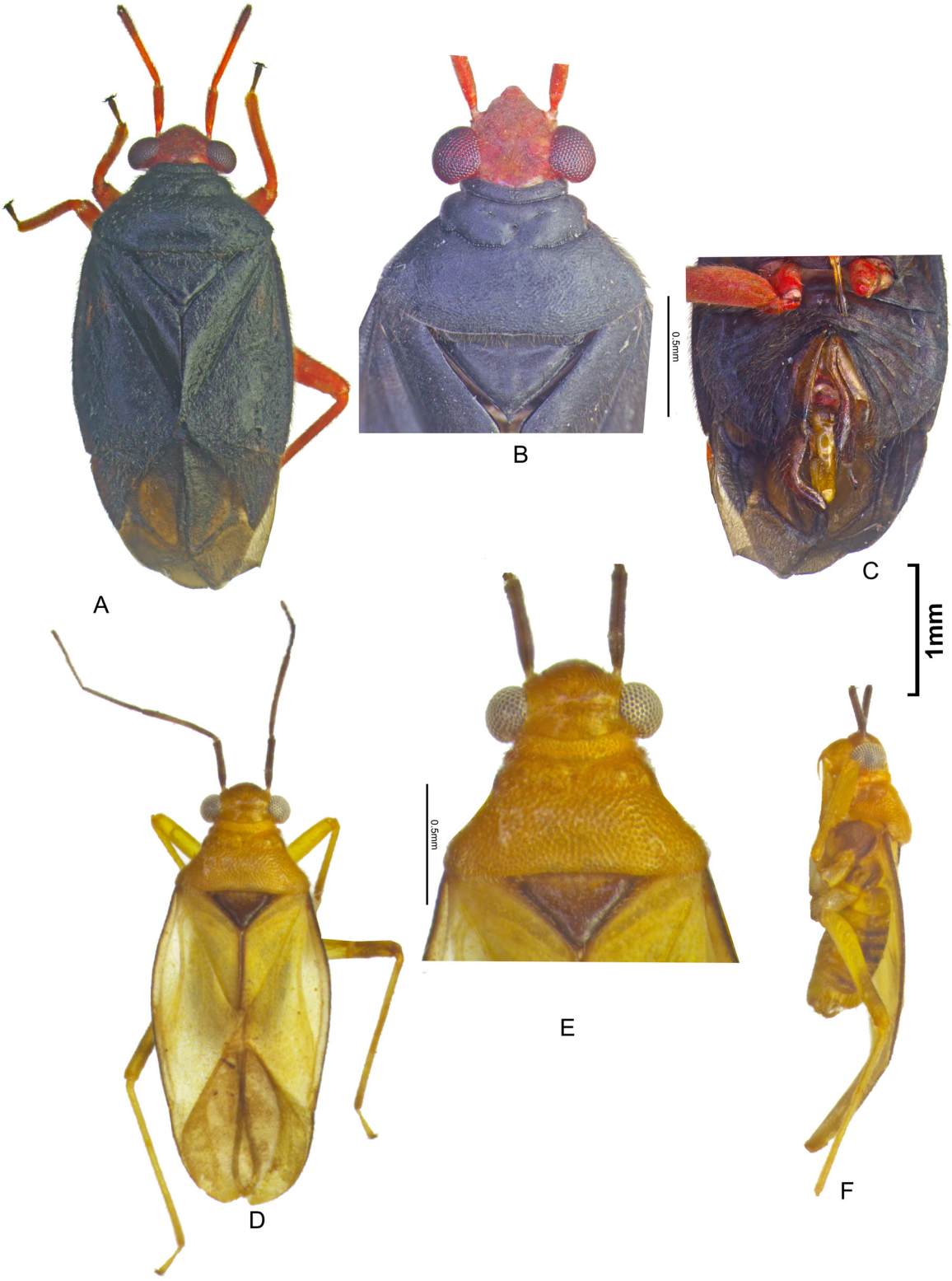

Fig. 3. Habitus of *Mertila* Distant, 1904 and *Namyatovia* gen. nov. spp. **A–C**. *Mertila rubrocephala* sp. nov., ♂, UASB. **A**. Dorsal view. **B**. Head and pronotum in dorsal view. **C**. Abdomen in ventral view. **D–F**. *Namyatovia castlerockensis* gen. et sp. nov., ♂, UASB. **D**. Dorsal view. **E**. Head and pronotum. **F**. Lateral view.

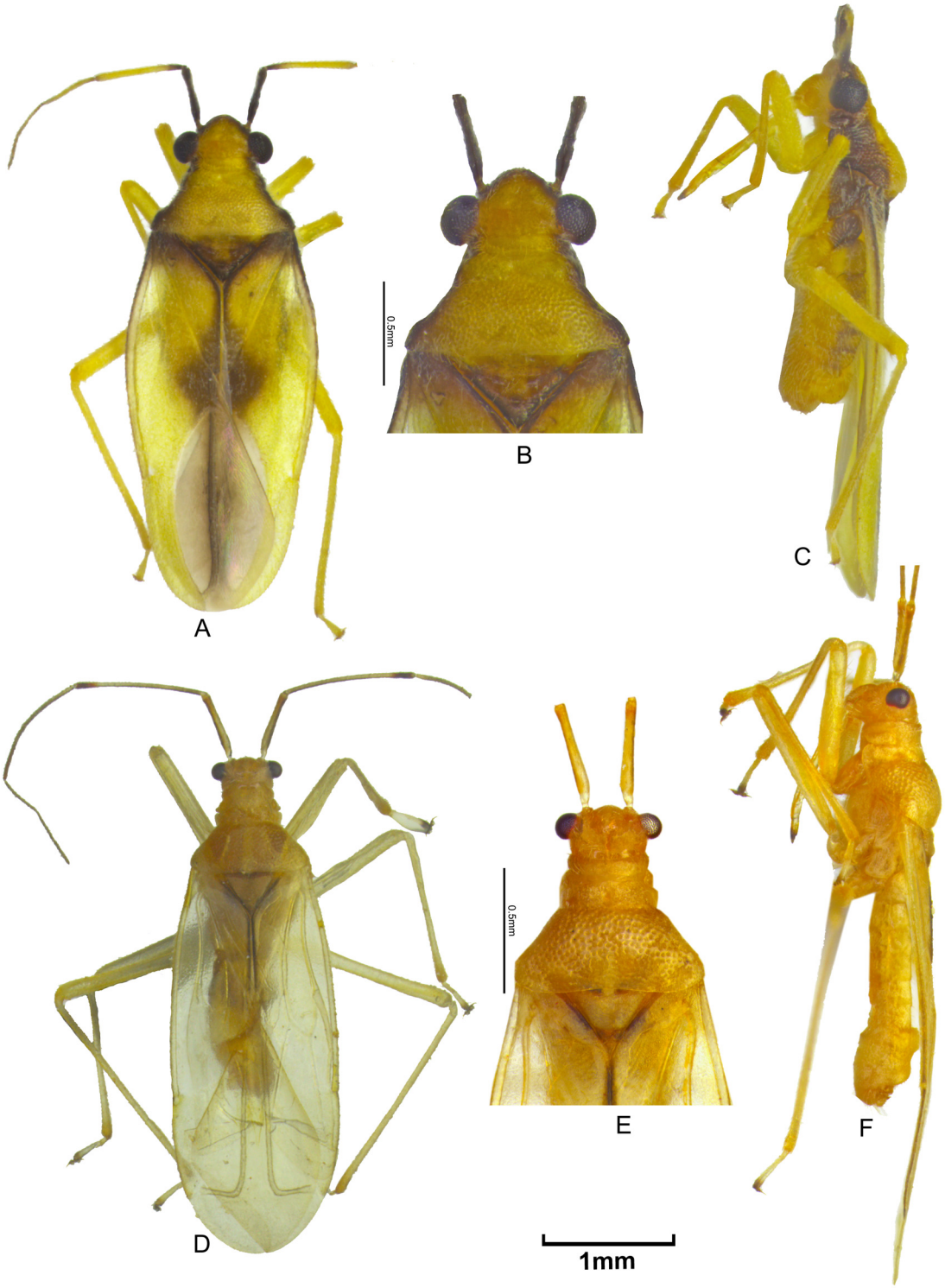

Fig. 4. Habitus of *Namyatovia* gen. nov. and *Stonedahlia* gen. nov. spp. **A–C**. *Namyatovia sirsiensis* gen. et sp. nov., ♂, UASB. **A**. Dorsal view. **B**. Head and pronotum. **C**. Lateral view. **D–F**. *Stonedahlia mishmiensis* gen. et sp. nov., ♂, UASB. **D**. Dorsal view. **E**. Head and pronotum. **F**. Lateral view.

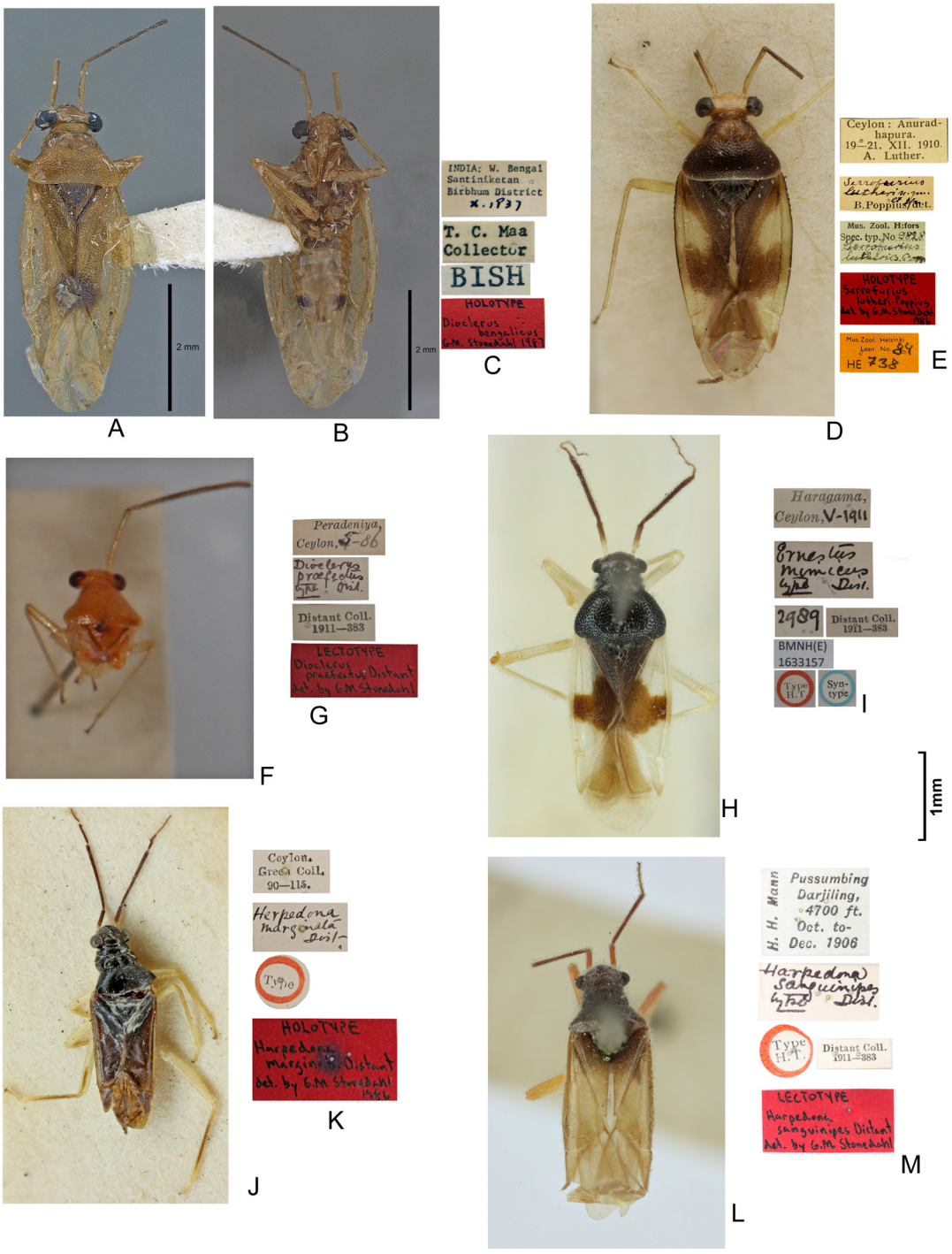

Fig. 5. Dorsal view and label data of type specimens. **A–C**. *Dioclerus bengalicus* Stonedahl, 1988, ♀, holotype, BPBM. **D–E**. *Dioclerus lutheri* Stonedahl, 1988, ♂, holotype, AMNH_PBI 00338430, FMNH. **F–G**. *Dioclerus praefectus* Distant,1910, lectotype, AMNH_PBI 00340384, NHM. **H–I**. *Ernestinus mimicus* Distant,1911, ♂, syntype, AMNH_PBI 00085668, BMNH(E) 1633157, NHM. **J–K**. *Harpedona marginata* Distant, 1904, ♂, holotype, NHM. **L–M**. *Harpedona sanguinipes* Distant, 1909, ♂, lectotype, NHM.

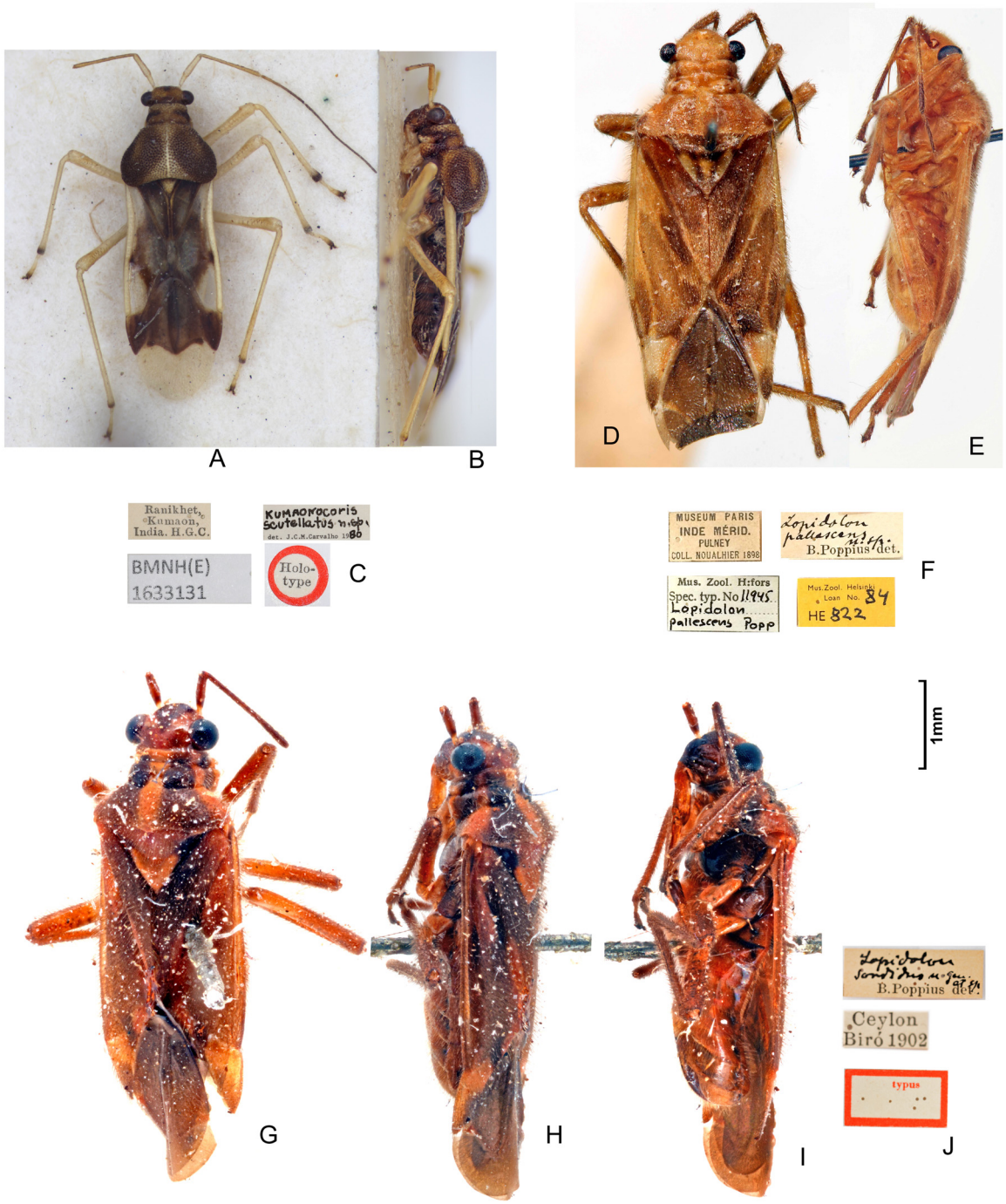

Fig. 6. Dorsal view and label data of type specimens. **A–C**. *Jessopocoris scutellatus* Carvalho, 1981, ♀, holotype, AMNH_PBI 00340984, BMNH(E) 1633131, NHM. **D–F**. *Lopidolon pallescens* Poppius, 1911, ♀, holotype, FMNH, currently retained at AMNH. **G–J**. *Loidolon sordidus* Poppius, 1911, ♀, holotype, HNHM.

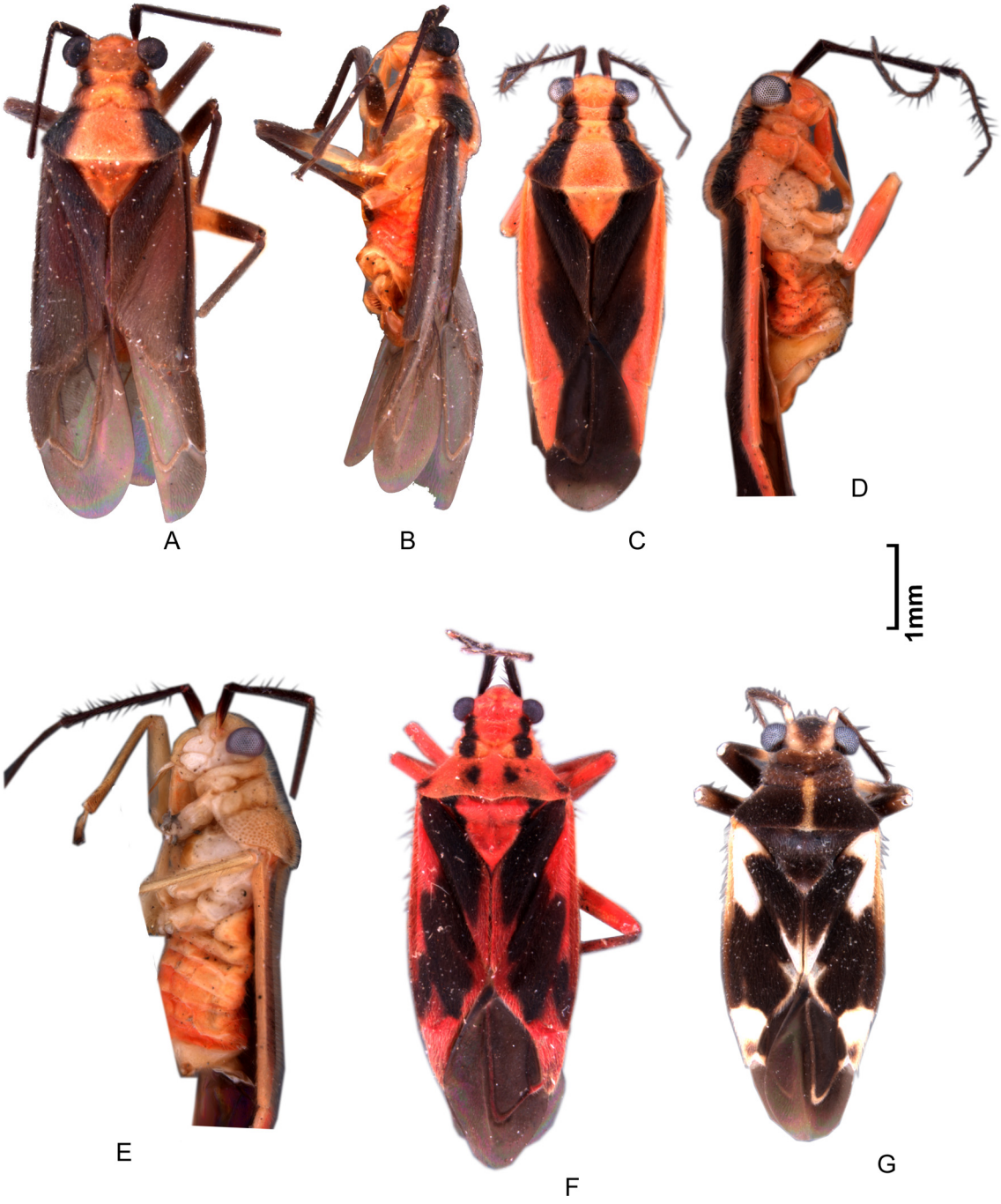

Fig. 7. Habitus of *Lopidolon* type specimens. **A–B**. *Lopidolon dissimilis* (Hsiao, 1944) comb. nov., ♂, holotype in dorsal and lateral view, USNM. **C–D**. *Lopidolon marginatus* (Hsiao, 1944) comb. nov., ♀, holotype in dorsal and lateral view, USNM. **E**. *Lopidolon puncticollis* (Hsiao, 1944) comb. nov., ♂, holotype in lateral view, USNM. **F**. *Lopidolon nigripictus* (Hsiao, 1944) comb. nov., ♀, holotype in dorsal view, USNM. **G**. *Lopidolon viridipictus* (Hsiao, 1944) comb. nov., ♂, holotype in dorsal view, USNM.

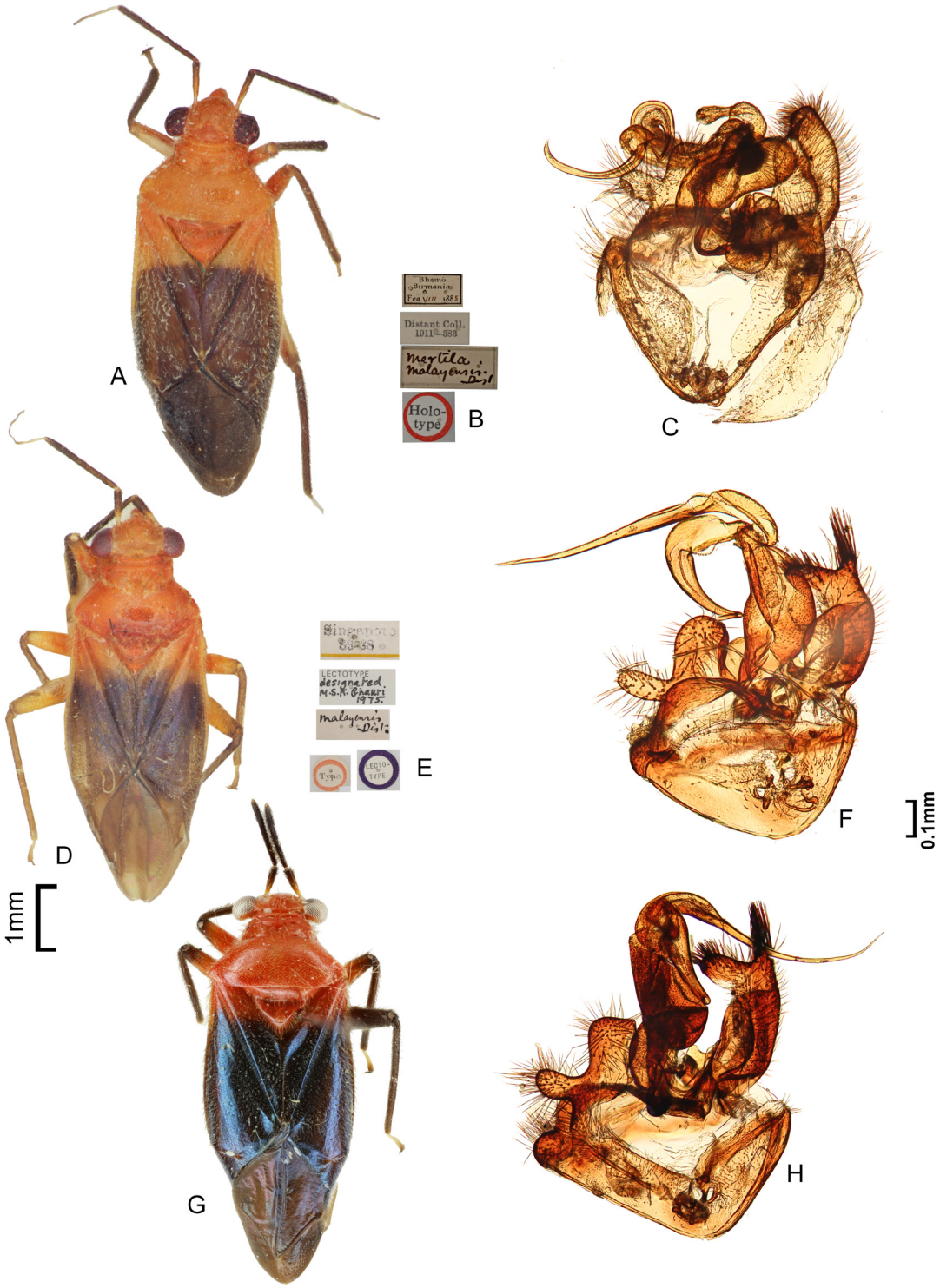

Fig. 8. Dorsal view, male genitalia and label data of type specimens for *Mertila* spp. **A–C**. *Mertila bhamo* Stonedahl, 1988, holotype, AMNH_PBI 00342529, NHM. **D–E**. *Mertila malayensis* Distant, 1904, ♂, lectotype, NHMUK010096278, NHM. **F**. *Mertila malayensis* Distant, 1904, paralectotype, AMNH_PBI 00342600, NHM. **G**. *Mertila sarawak* Stonedahl,1988, holotype, ♂, NHMUK010096279, NHM. **H**. *Mertila sarawak* Stonedahl, 1988, paratype, AMNH_PBI 00342601, NHM.

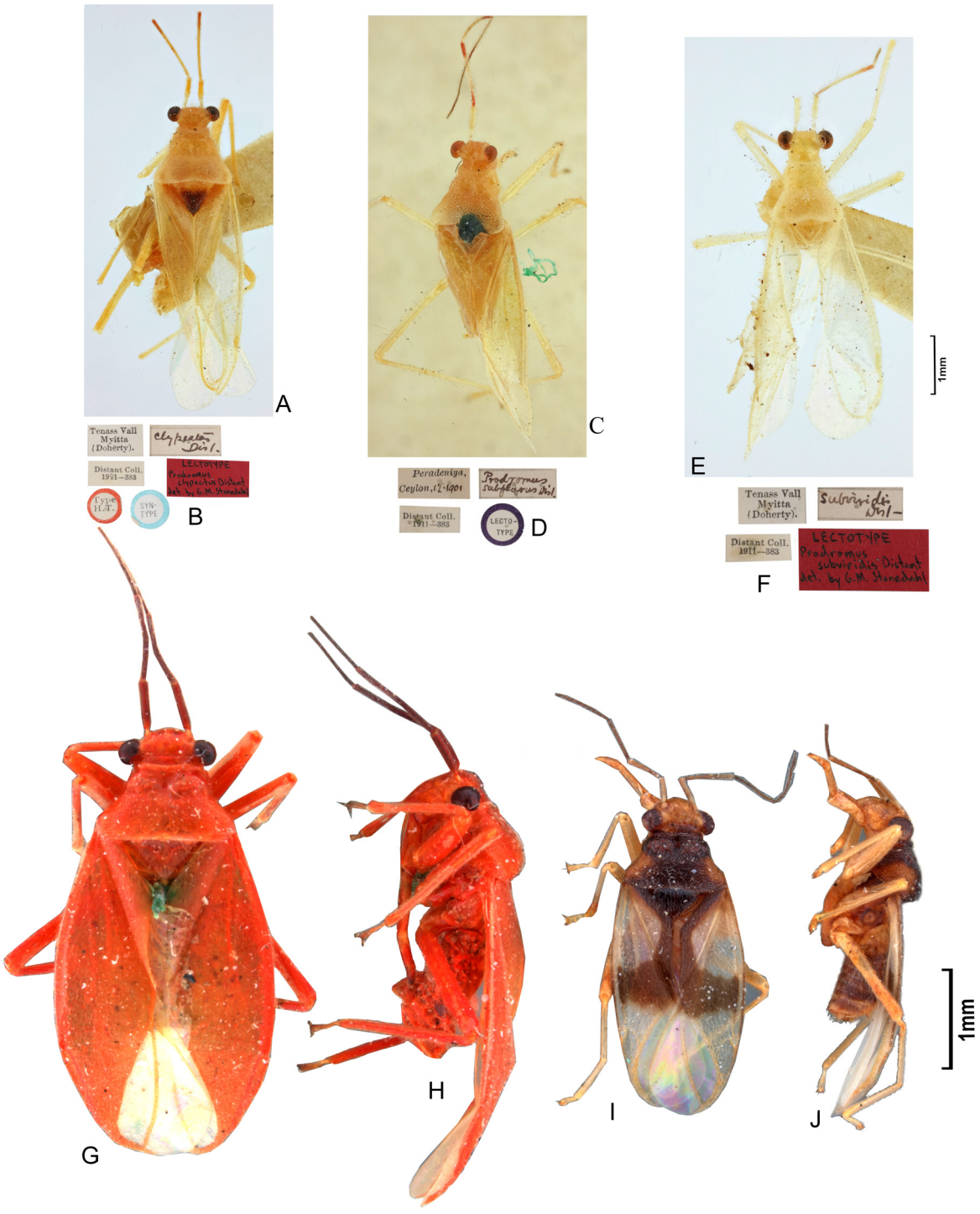

Fig. 9. Dorsal view and label data of type specimens. **A–B**. *Prodromus clypeatus* Distant, 1904, ♀, lectotype, AMNH_PBI 00340350, NHM. **C–D**. *Prodromus subflavus* Distant, 1904, ♂, lectotype, AMNH_PBI 00340343, NHM. **E–F**. *Prodromus subviridis* Distant, 1904, ♂, lectotype, AMNH_PBI 00340344, NHM. **G–H**. *Thaumastomiris cotabato* Stonedahl, 1988, ♂, holotype, USNM. **I–J**. *Thaumastomiris dissimilis* Hsiao 1944, ♂, holotype, USNM.

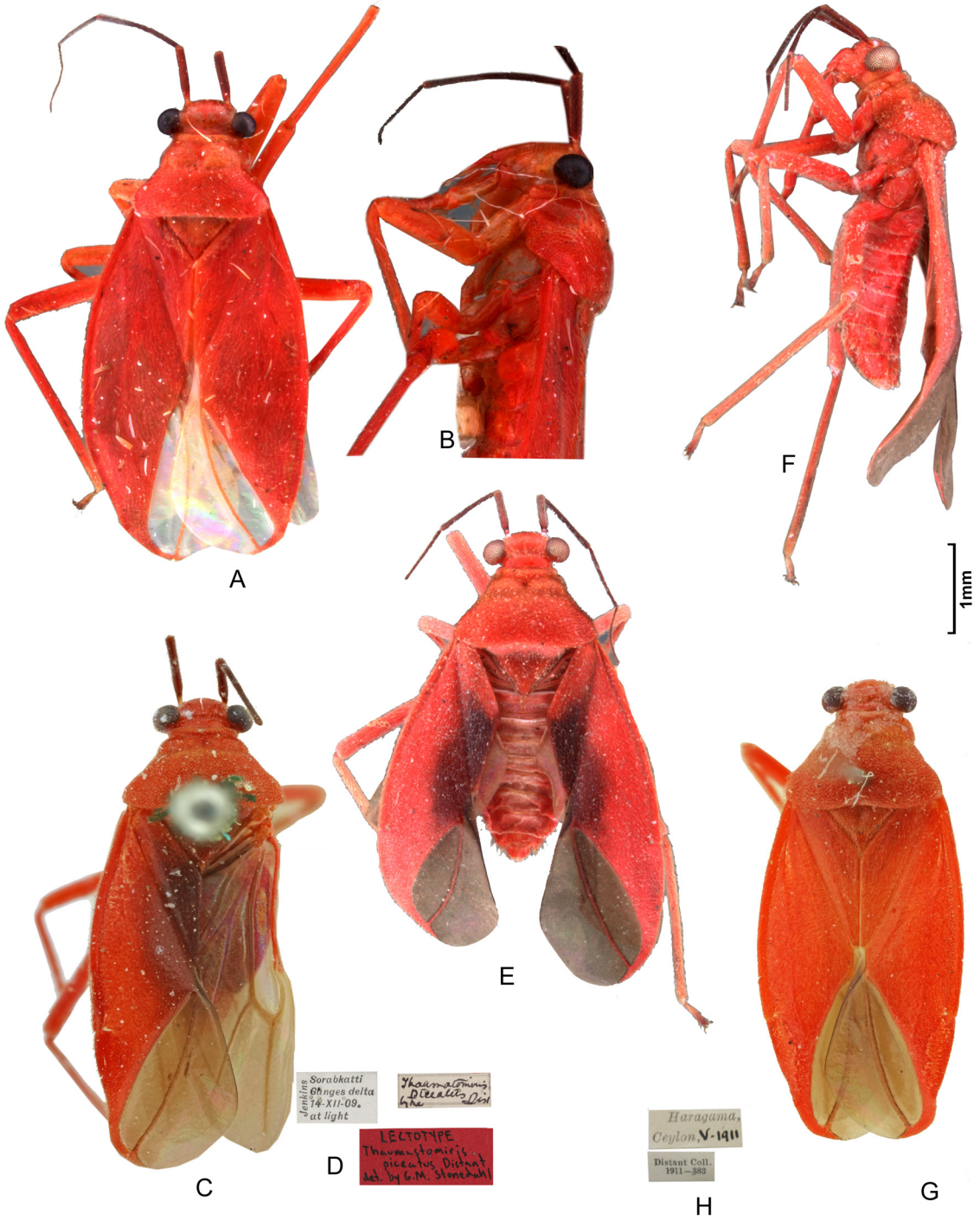

Fig. 10. Dorsal view and label data of *Thaumastomiris* spp. **A–B**. *Thaumastomiris philippinensis* Hsiao, 1944, ♀, holotype, USNM. **C–D**. *Thaumastomiris piceatus* Distant, 1911, ♂, lectotype, NHM. **E–F**. *Thaumastomiris piceatus* Distant, 1910, ♀, specimen from Burma, USNM. **G–H**. *Thaumastomiris sanguinalis* Kirkaldy, 1902, ♀, specimen from Sri Lanka, NHM.

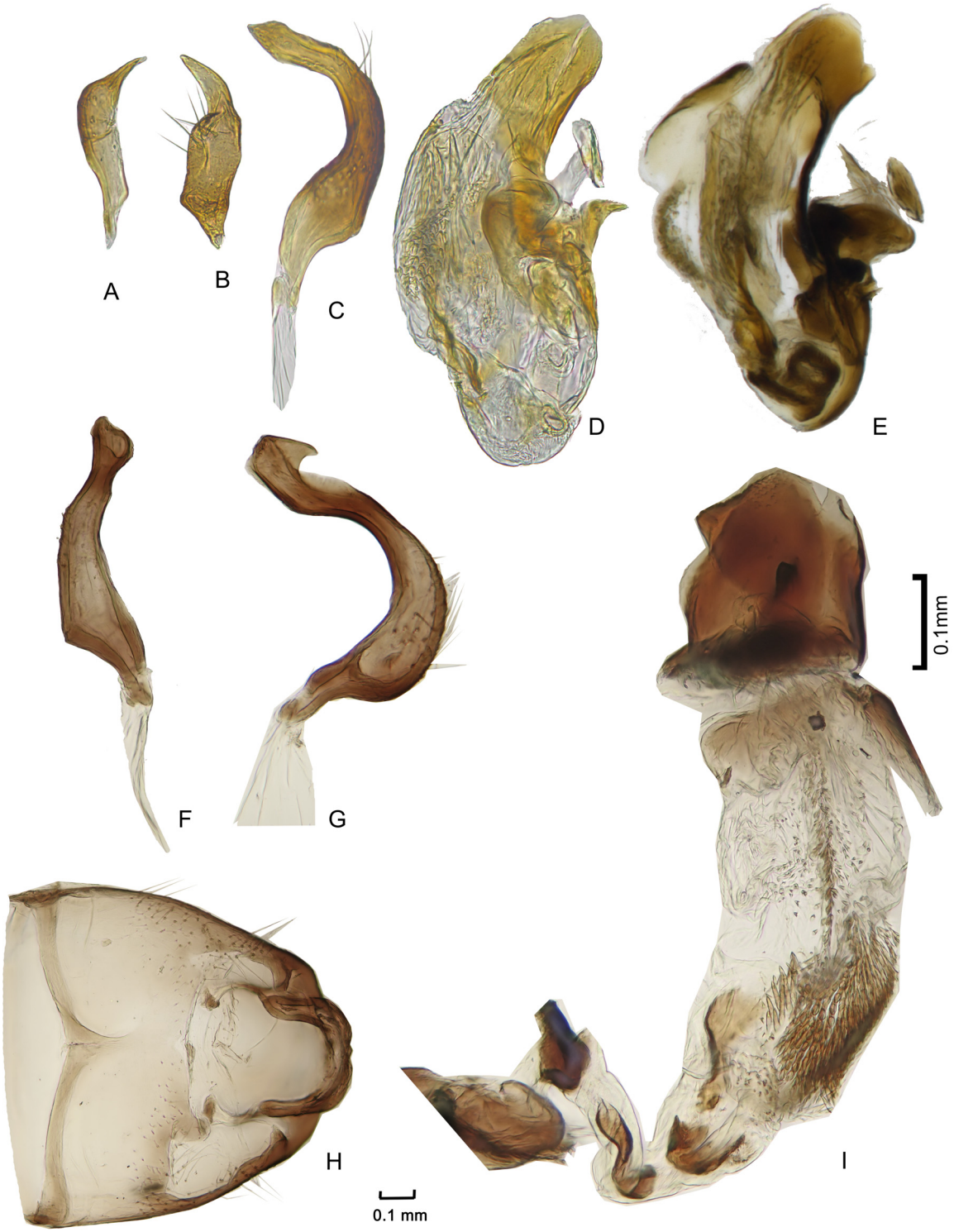

Fig. 11. Male genitalia of *Dioclerus* spp. **A–E**. *Dioclerus lutheri* Stonedahl, 1988, UASB. **A–B**. Right paramere in dorsal and lateral views **C**. Left paramere in dorsal view. **D**. Aedeagus of specimen from Tamil Nadu in lateral view. **E**. Aedeagus of the holotype in lateral view. **F–I**. *Dioclerus malayensis,* Stonedahl, 1988, holotype, AMNH_PBI 00340385, NHM. **F**. Right paramere in dorsal view. **G**. Left paramere in lateral view. **H**. Genital capsule in dorsal view. **I**. Aedeagus with basal part of phallotheca detached from the phalobase and expanded endosomal sac.

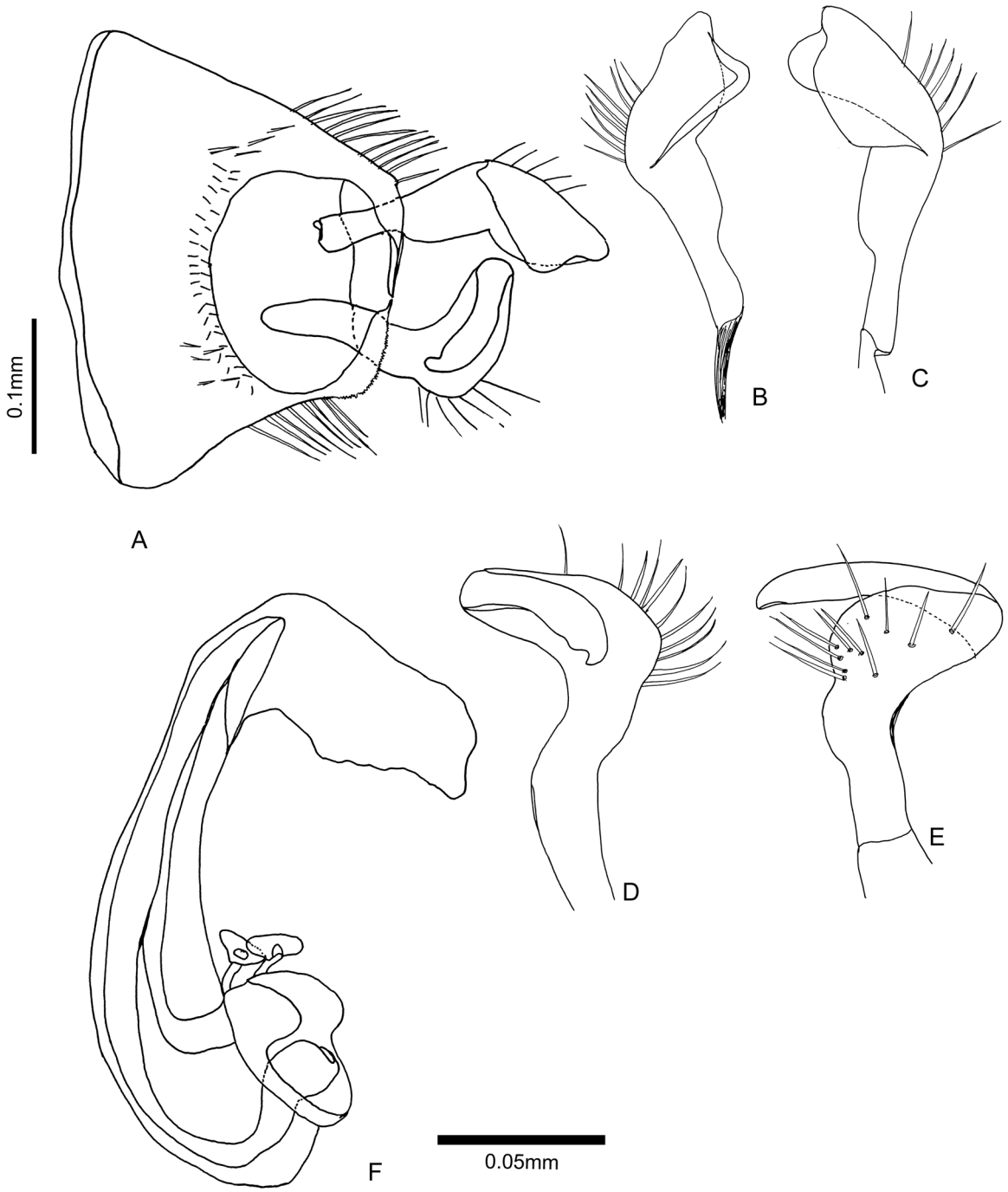

Fig. 12. Male genitalia of *Ernestinus mimicus* Distant, 1911, UASB. **A**. Genital capsule in dorsal view. **B–C**. Right paramere in dorsal view and ventral views. **D–E**. Left paramere in dorsal and lateral views. **F**. Aedeagus in lateral view.

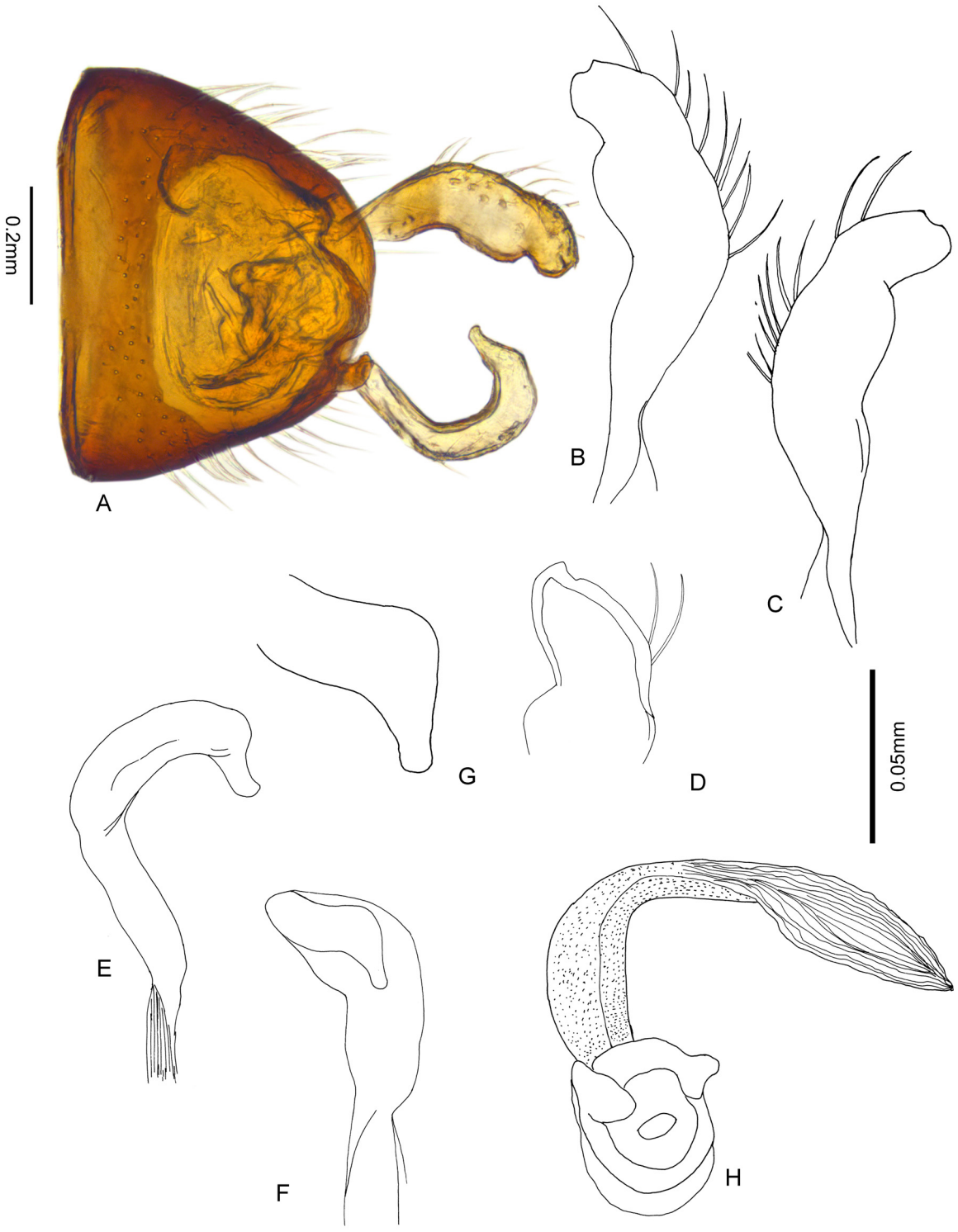

Fig. 13. Male genitalia of *Ernestinus ramkeshariae* Yasunaga & Ishikawa, 2016, UASB. **A**. Genital capsule in dorsal view. **B–D**. Right paramere. **B**. Dorsal view. **C**. Ventral view. **D**. Apex, magnified. **E–F**. Left paramere. **E**. Dorsal view. **F**. Lateral view. **G**. Apex, magnified. **H**. Aedeagus in dorsal view.

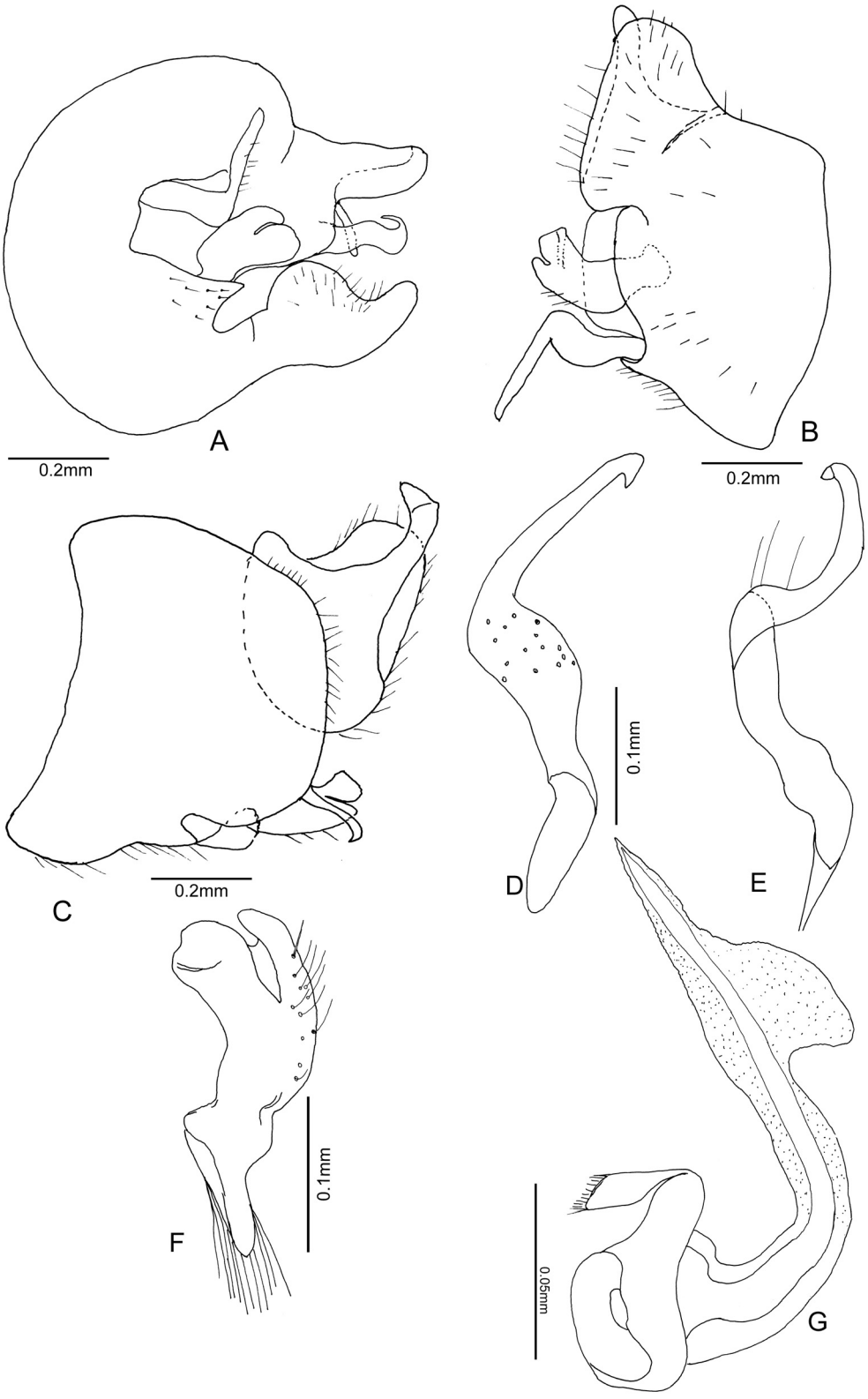

Fig. 14. Male genitalia of *Harpedona marginata* Distant, 1904, NHM. **A–C**. Genital capsule in ventral and lateral views. **D–E**. Right paramere in dorsal and lateral views. **F**. Right paramere in dorsal view. **G**. Aedeagus in lateral view.

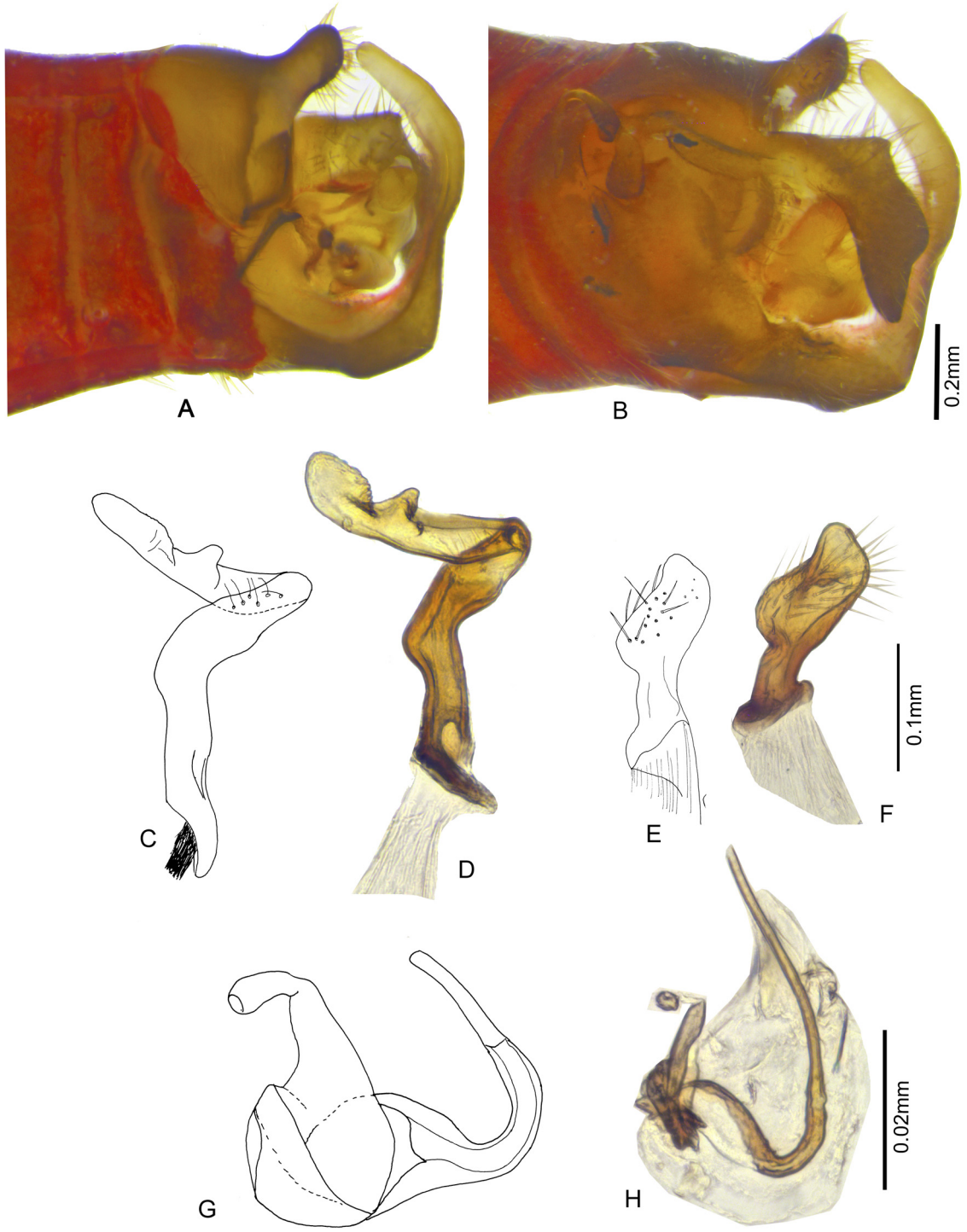

Fig. 15. Male genitalia of *Harpedona sanguinipes* Distant, 1904, UASB. **A–B**. Genital capsule in dorsal and ventral views. **C–D**. Left paramere in lateral view. **E–F**. Right paramere in dorsal view. **G–H**. Aedeagus in lateral view.

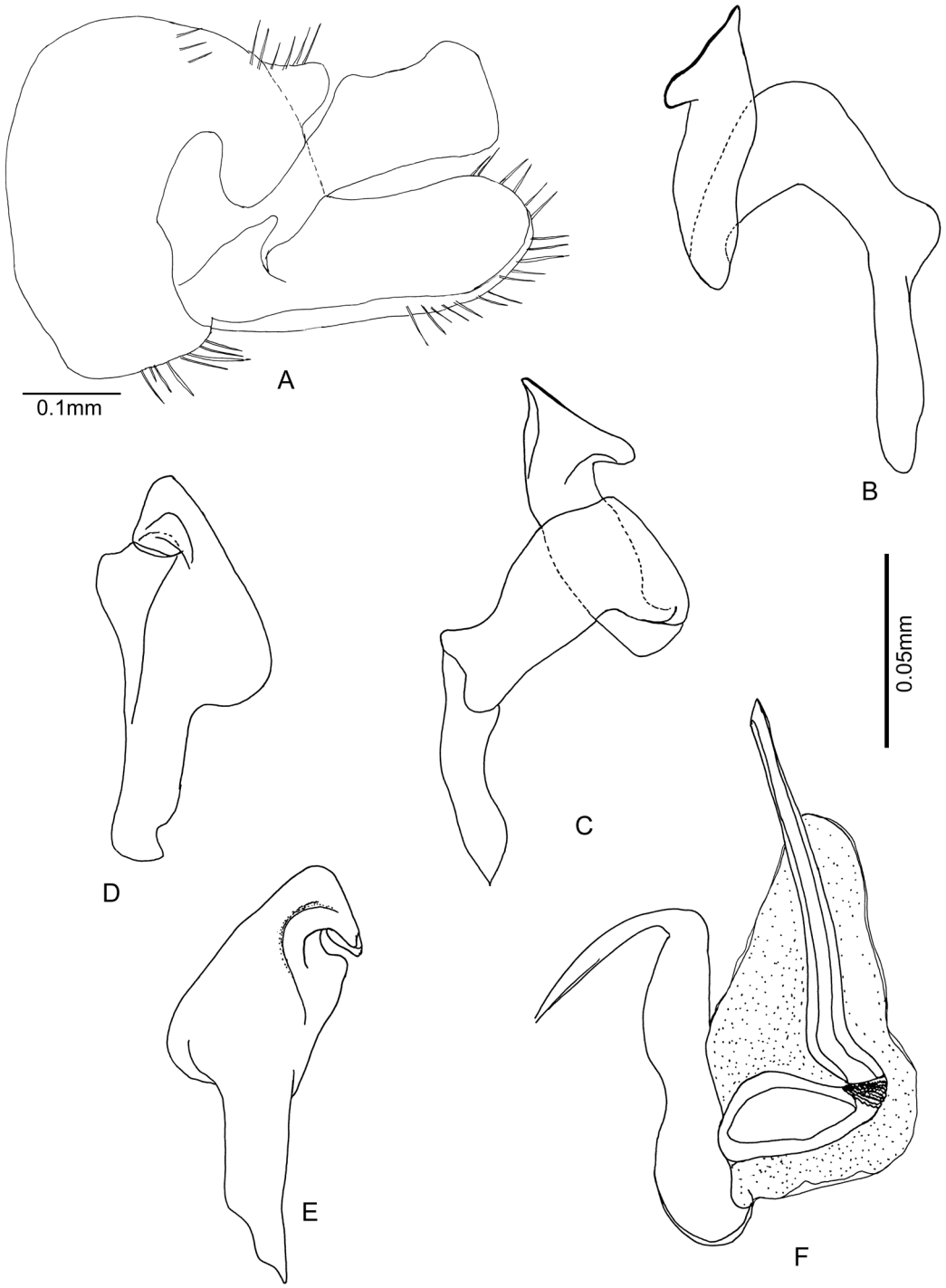

Fig. 16. Male genitalia of *Harpedona vittlaensis* sp. nov., holotype, UASB. **A**. Genital capsule in lateral view. **B–C**. Left paramere in dorsal and lateral views. **D–E**. Right paramere in dorsal and lateral views. **F**. Aedeagus in lateral view.

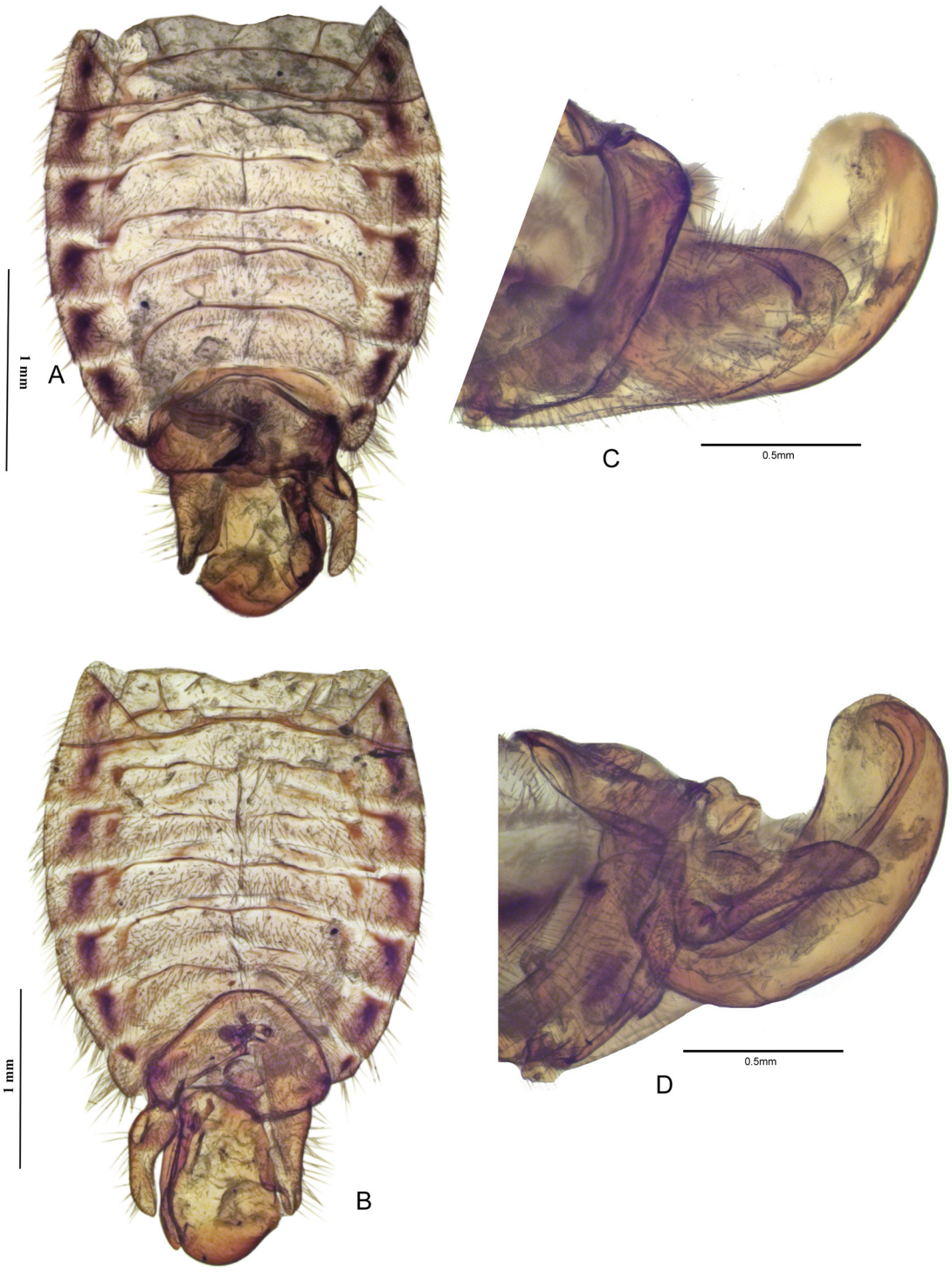

Fig. 17. Abdomen of *Lopidolon dandeliensis* sp. nov., ♂, holotype, UASB. **A–B**. Abdomen in dorsal and ventral views. **C**. Apex of abdomen in left lateral view. **D**. Apex of abdomen in right lateral view.

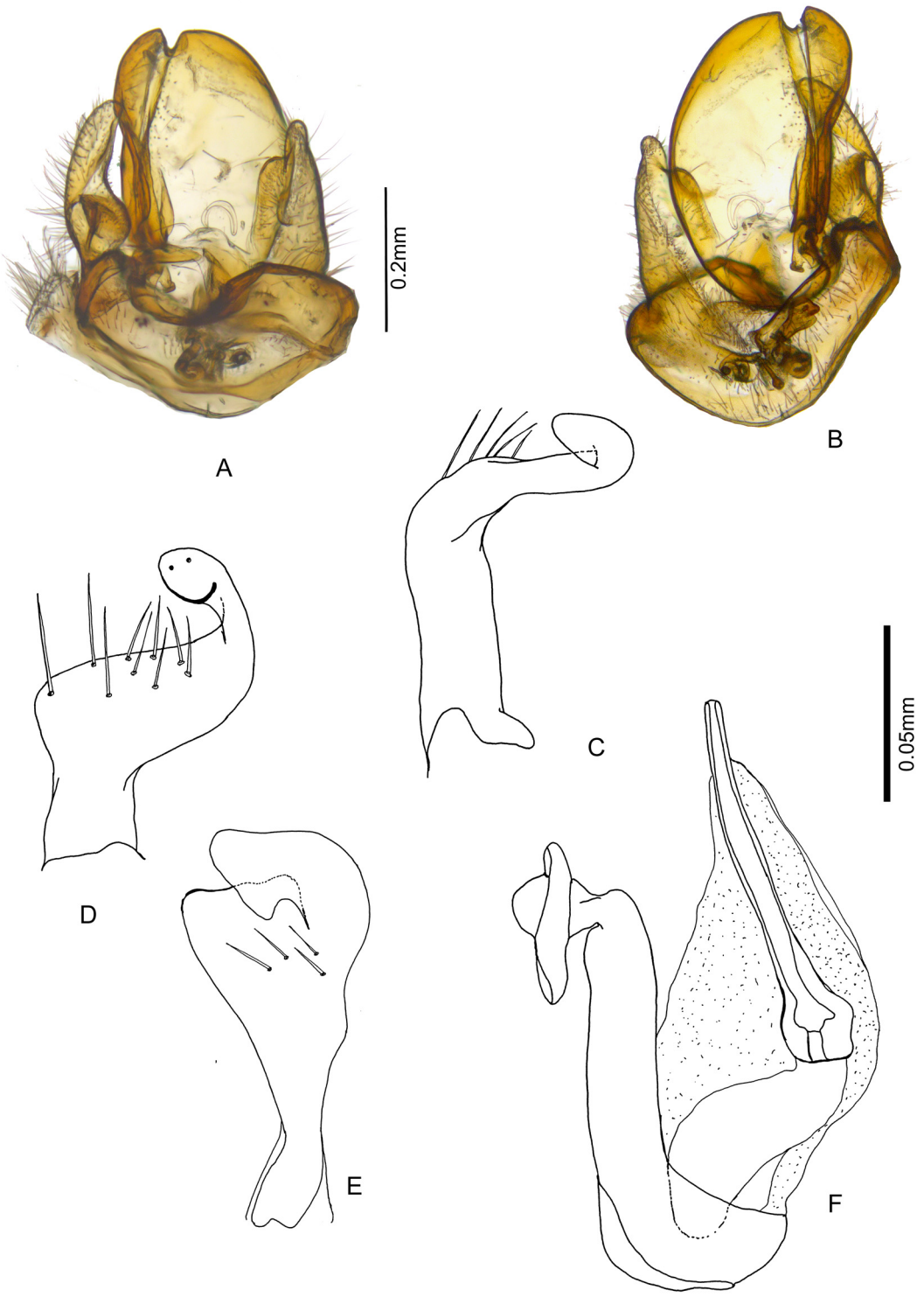

Fig. 18. Male genitalia of *Lopidolon dandeliensis* sp. nov., ♂, holotype, UASB. **A–B**. Genital capsule in dorsal and ventral views. **C–D**. Left paramere in lateral and dorsal views. **E**. Right paramere in dorsal view. **F**. Aedeagus in lateral view.

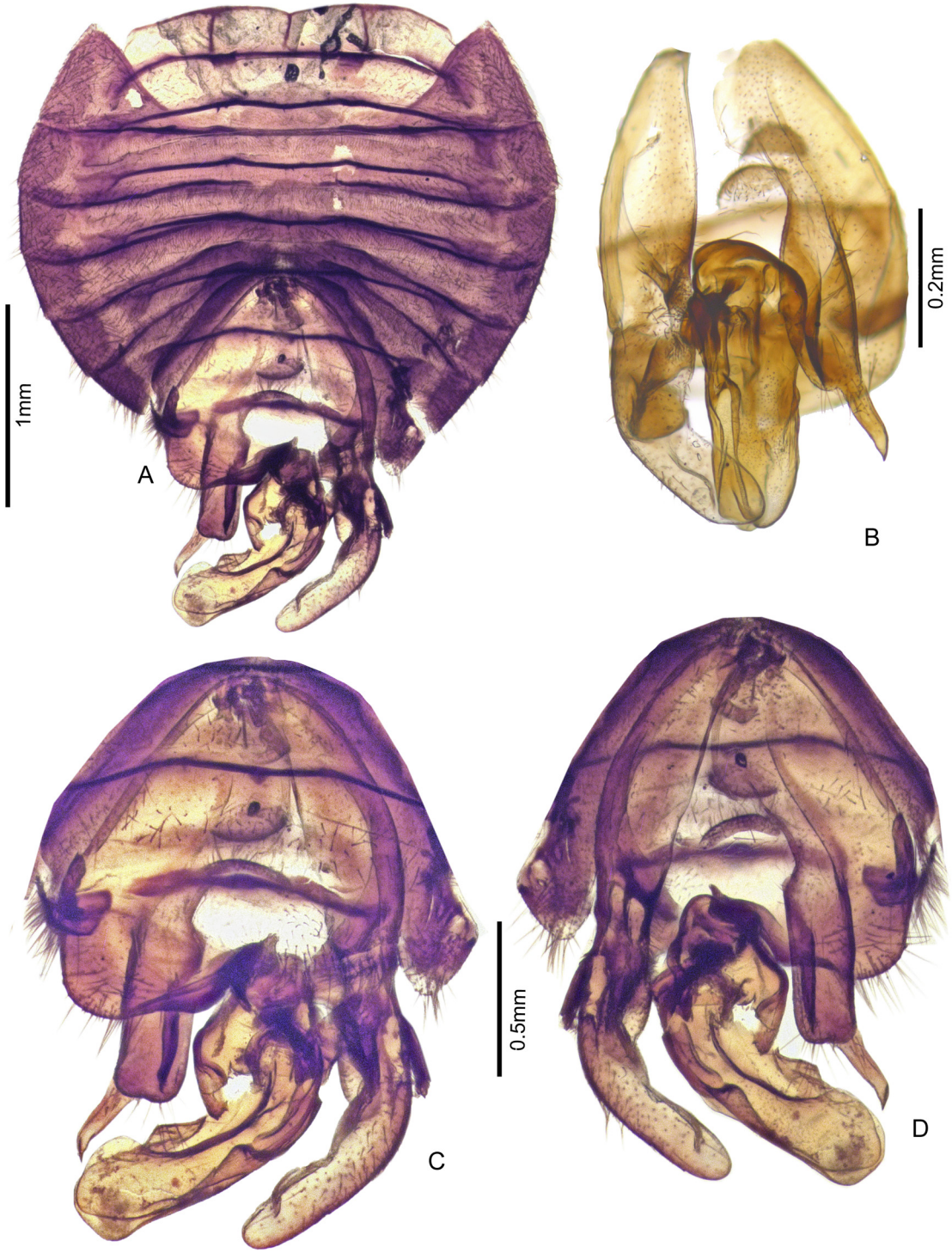

Fig. 19. Abdomen of *Mertila rubrocephala* sp. nov.,♂, holotype, UASB. **A**. Abdomen in dorsal view. **B**. Genital capsule in ventral view. **C–D**. Apex of abdomen in dorsal and ventral views.

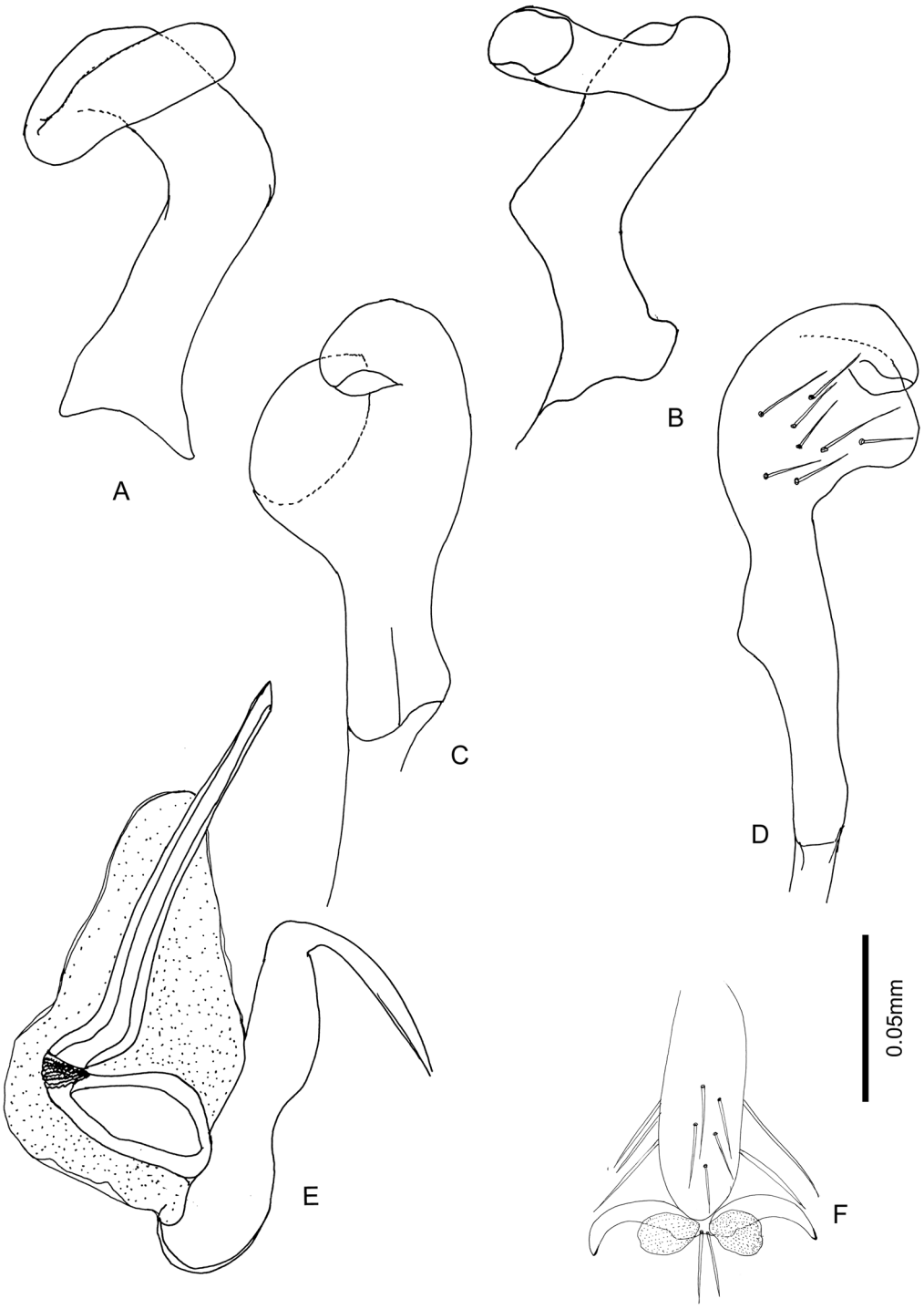

Fig. 20. Male genitalia and pretarsus of *Mertila rubrocephala* sp. nov., holotype, UASB. **A–B**. Right paramere in ventral and lateral views. **C–D**. Left paramere in ventral and dorsal views. **E**. Aedeagus in lateral view. **F**. Pretarsus.

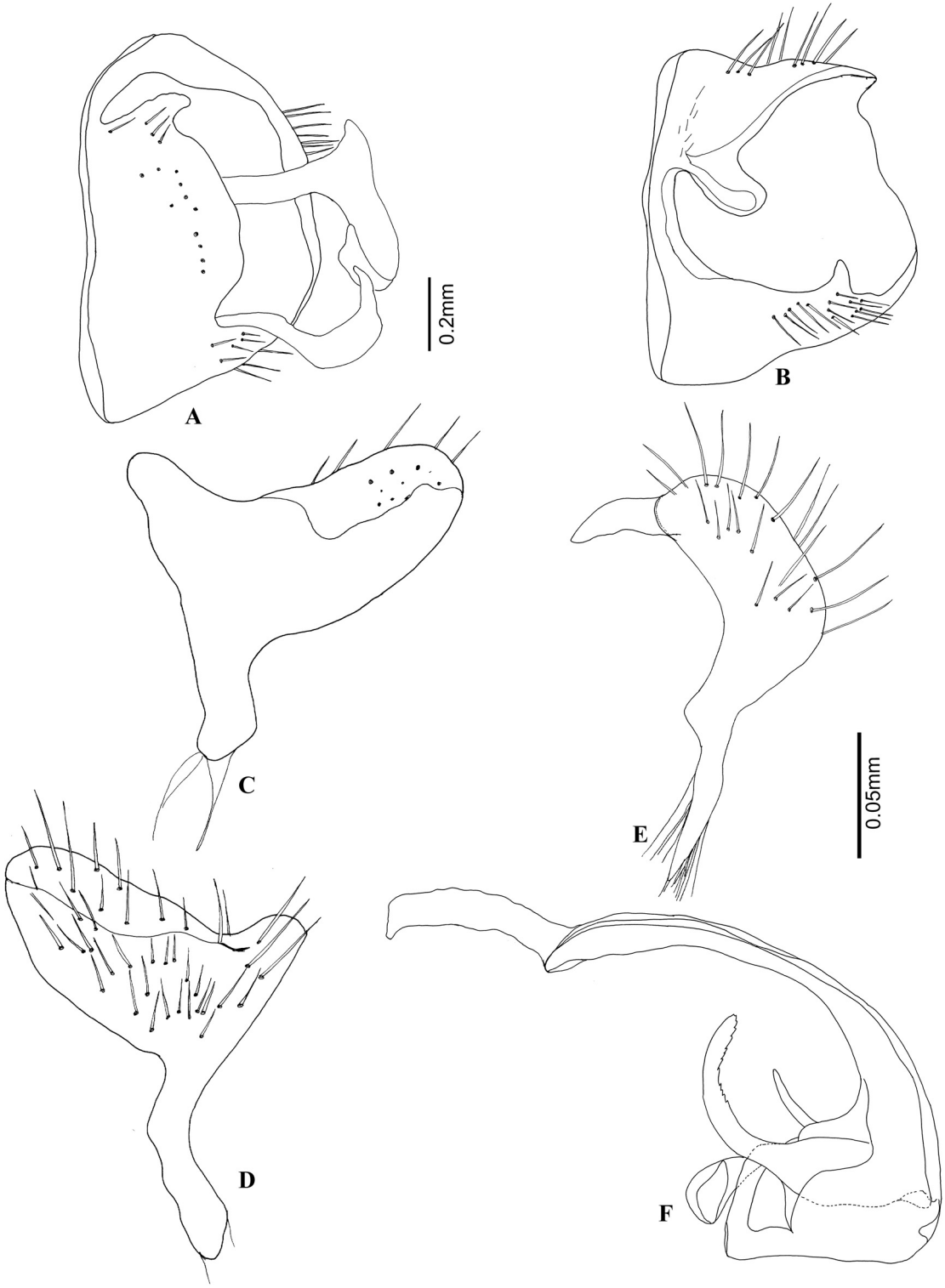

Fig. 21. Male genitalia of *Namyatovia castlerockensis* gen. et sp. nov., paratype, UASB. **A–B**. Genital capsule in dorsal and right lateral views. **C–D**. Right paramere in dorsal and ventral views. **E**. Left paramere in dorsal view. **F**. Aedeagus lateral view.

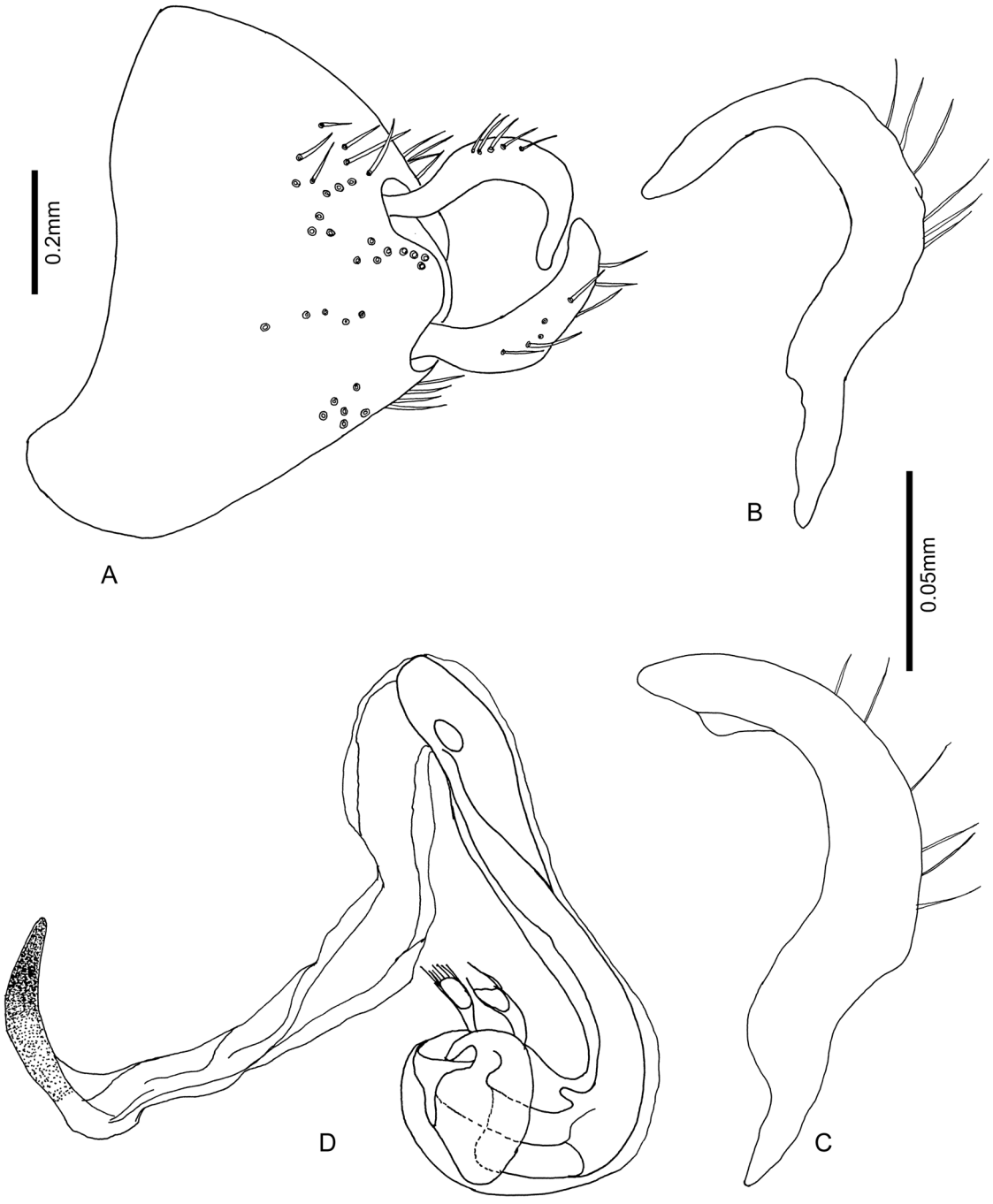

Fig. 22. Male genitalia of *Namyatovia sirsiensis* gen. et sp. nov., holotype, UASB. **A**. Genital capsule in ventral view. **B**. Left paramere in dorsal view. **C**. Right paramere in dorsal view. **D**. Aedeagus in lateral view.

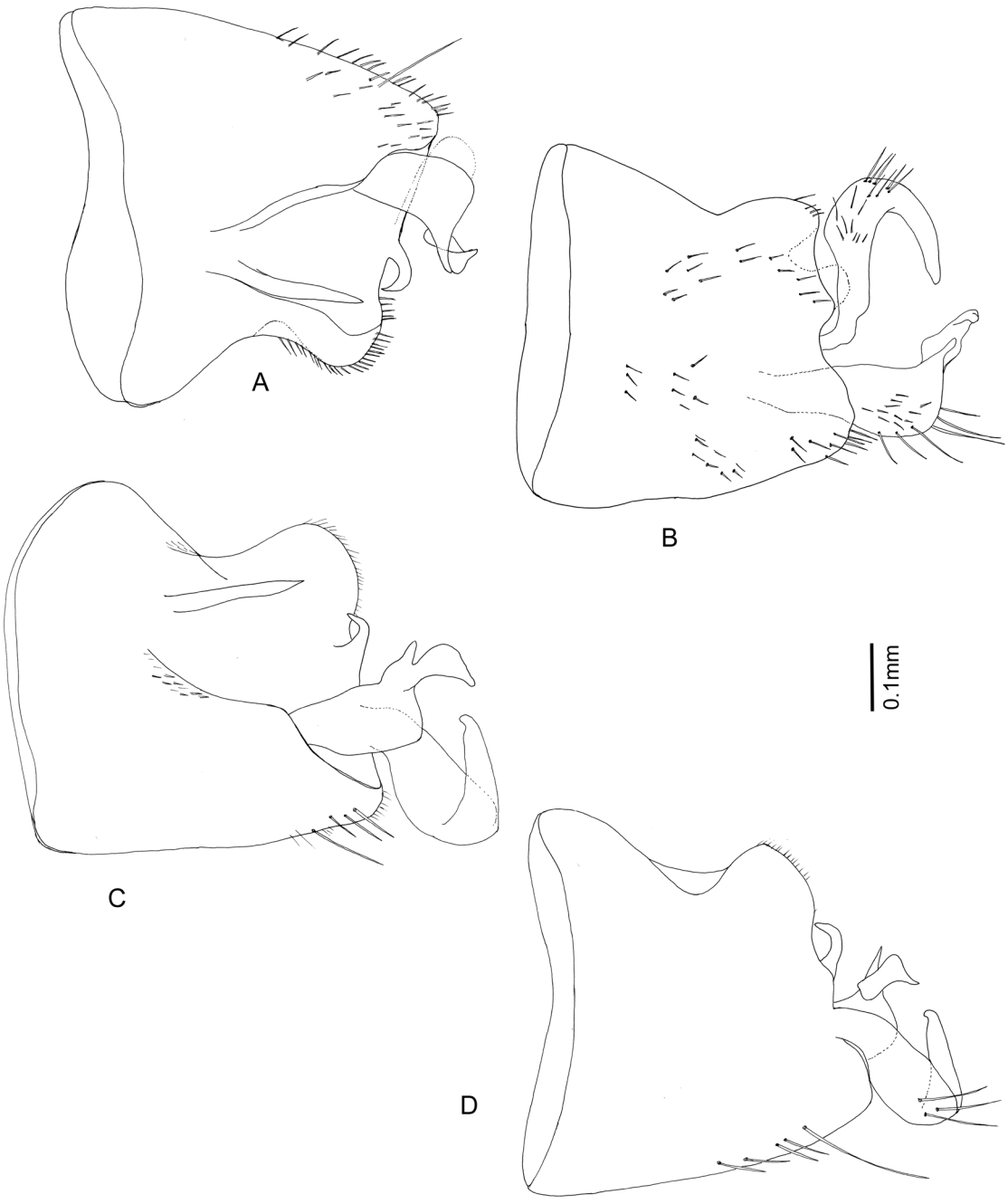

Fig. 23. Genital capsule of *Stonedahlia mishmiensis* gen. et sp. nov., ♂, paratype, UASB. **A**. Dorsal view. **B**. Ventral view. **C**. Left lateral view. **D**. Right lateral view.

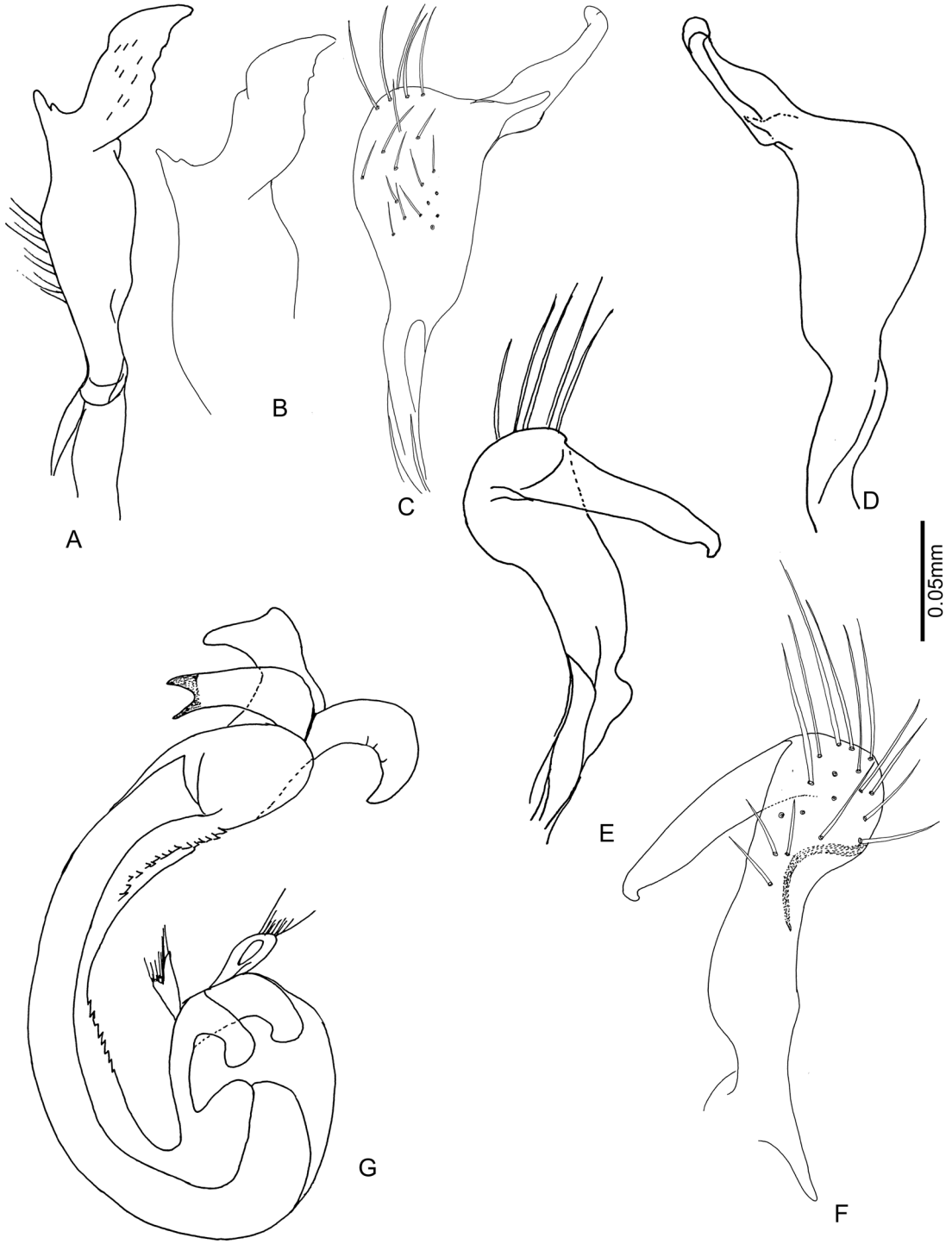

Fig. 24. Male genitalia of *Stonedahlia mishmiensis* gen. et sp. nov., ♂, paratype, UASB. **A**. Right paramere in left lateral view. **B**. Apex of right paramere, magnified. **C**. Right paramere in dorsal view. **D**. Right paramere in right lateral view. **E**. Left paramere in dorsal view. **F**. Left paramere in lateral view. **G**. Aedeagus in lateral view.

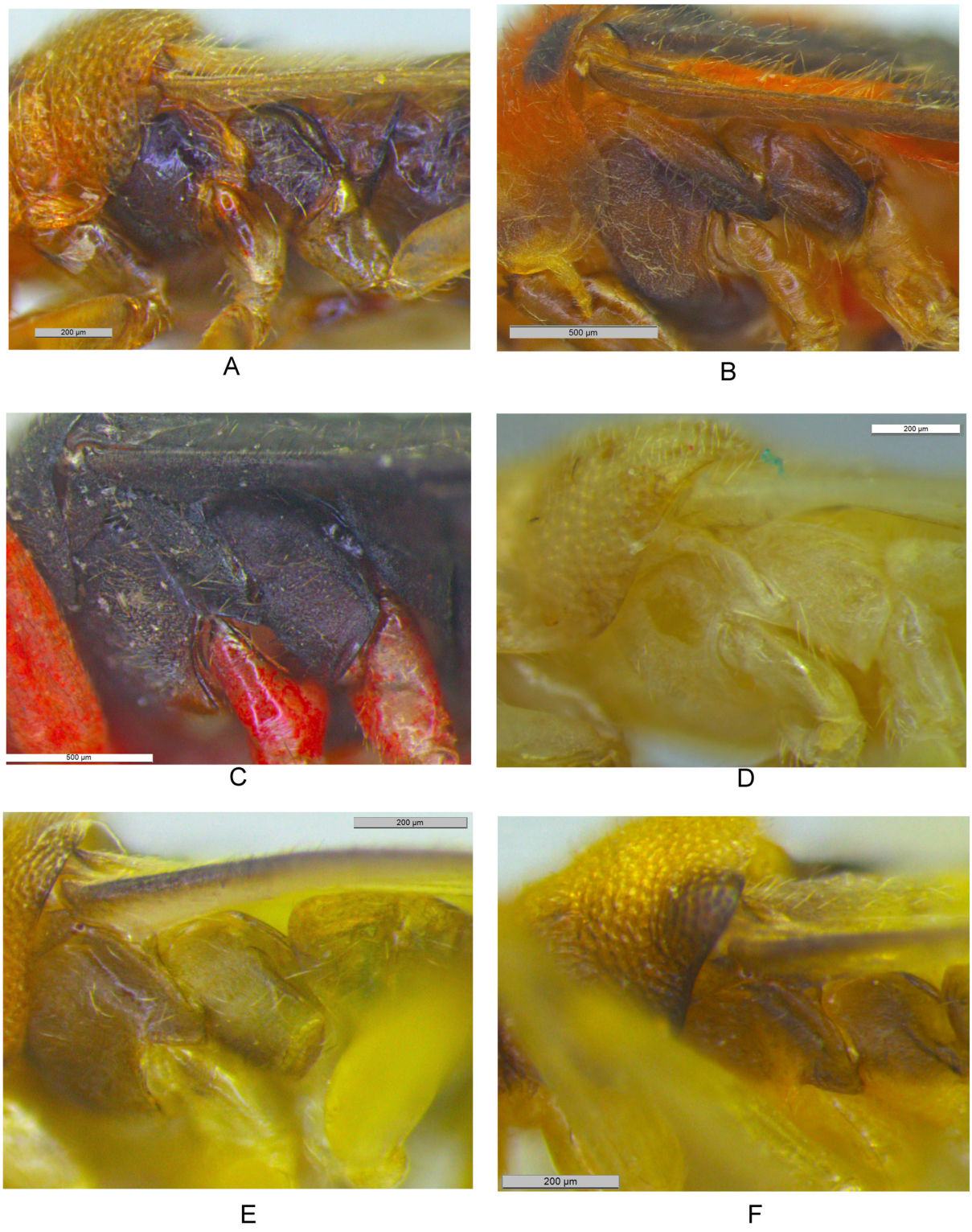

Fig. 25. Scent gland evaporatory area. **A**. *Harpedona vittlaensis* sp. nov., UASB. **B**. *Lopidolon dandeliensis* sp. nov., UASB. **C**. *Mertila rubrocephala* sp. nov., UASB. **D**. *Stonedahlia mishmiensis* gen. et sp. nov., UASB. **E**. *Namyatovia castlerockensis* gen. et sp. nov., UASB. **F**. *Namyatovia sirsiensis* gen. et sp. nov., UASB.

Fig. 26. Habitats and living specimens. **A–C**. *Ernestinus ramkeshariae* Yasunaga & Ishikawa, 2016 on *Colocasia esculenta.* **A**. Nymphs. **B–C**. Adult. **D–F**. *Ernestinus mimicus* Distant, 1911 on *Lagenandra* sp. **D**. Aquatic habitat. **E**. Nymph and freshly moulted adult. **F**. Adult. All specimens at UASB.

Fig. 27. Habitats and living specimens. **A–B**. *Harpedona sanguinipes* Distant, 1909 on *Colocasia esculenta.* **A**. Nymphs. **B**. Mating adults. **C**. *Prodromus clypeatus* Distant, 1904 on banana. **D**. *Stonedahlia mishmiensis* gen. et sp. nov. on *Colocasia* sp. **E**. *Lopidolon dandeliensis* sp. nov. on *Diplocentrum recurvum.* All specimens at UASB.