

***Euborellia ornata* sp. nov. from Nepal**
(Dermaptera: Anisolabididae)

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Abstract. A new species of the genus *Euborellia* Burr, 1910, *Euborellia ornata* sp. nov., is described, based on material from Nepal. The habitus and diagnostic characters are illustrated.

Key words. Dermaptera, Anisolabididae, taxonomy, description, new species, Nepal, Palearctic Region

Introduction

Euborellia Burr, 1910 is a widespread cosmopolitan group uniting primarily small earwigs, usually dark with non-contrasting coloration. It comprises species that are difficult to distinguish due to uniform habitus and relatively high variability, and the monophyly of this taxon is by no means established; at least the regular structure of sclerotised denticulate pads of the genital lobes can be considered an apomorphy of the genus (STEINMANN 1989b, ANISYUTKIN 1998a,b). Another feature previously suggested to characterize this genus, namely the short and wide parameres (BRINDLE 1978, STEINMANN 1989b), fails to distinguish among some representatives of *Anisolabis* Fieber, 1853 and *Gonolabis* Burt, 1900 (ANISYUTKIN 1998a,b). The number of currently known *Euborellia* species is 50; about 10 of these species are Palearctic (STEINMANN 1989a,b; ANISYUTKIN 1998a,b; SRIVASTAVA 2003; KOČÁREK 2011). Only one species, *Euborellia annulipes* (Lucas, 1847), is cosmopolitan and currently known from Nepal (BRINDLE 1974, 1987; SAKAI 1997). A new species, *Euborellia ornata* sp. nov., is described here from Nepal, based on material deposited in the National Museum, Praha, Czech Republic.

Material and methods

Nomenclature and morphological terminology follows that used by STEINMANN (1989b). The specimens of *Euborellia ornata* sp. nov. were dry-mounted, examined, studied, and photographed with an Olympus SZ61 stereomicroscope (20–40× magnification) equipped with an ocular grid and an Olympus E-410 camera. Micrographs of 10 layers of focus of the

same specimen were combined with Quick Photo Camera 2.3 software. The type specimen was mounted on a label, and dissected body parts (penultimate sternite) were mounted with methylcellulose glue on the same board as the specimen. A genital armature was mounted in dimethyl hydantoin formaldehyde resin (DMHF, a water-soluble mounting medium) on the same label as the specimen.

The specimens studied are deposited in the National Museum, Praha, Czech Republic (NMPC).

Taxonomy

Euborellia ornata sp. nov.

(Figs. 1–6)

Type locality. Nepal, Eastern Region, Koshi Zone, foothills of Mt. Kangchenjunga (locality data specified by S. Bílý (pers. comm. 2010), the collector of type specimens).

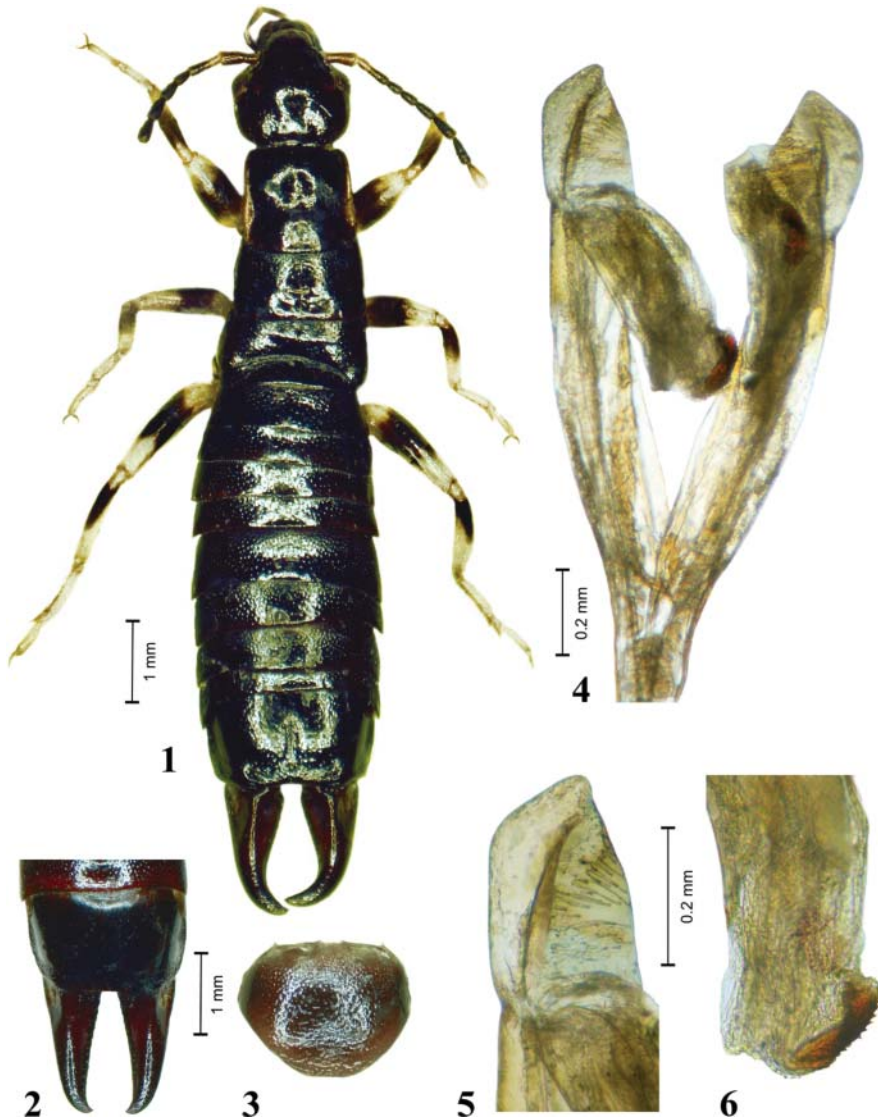
Material examined. HOLOTYPE: ♂, 'E Nepal, 28.4. / 1988 Hill / S. Bílý leg. // 2000 m [reverse of the label]' (NMPC). The specimen is provided with additional printed red label: 'HOLOTYPUS / *Euborellia / ornata* sp. n. / det. P. Kočárek 2011'. PARATYPE: ♀, 'E Nepal, 28.4. / 1988 Hill / S. Bílý leg. // 2000 m [reverse of the label]' (NMPC). The specimen is provided with additional printed red label: 'PARATYPUS / *Euborellia / ornata* sp. n. / det. P. Kočárek 2011'.

Description. Body blackish brown, shiny; head blackish brown with two pale brown spots between eyes, antennae blackish brown with yellowish antennomeres 1, 2, 10 and 11; pronotum blackish brown with paler sides; legs yellowish brown, femora and tibiae banded with brown; abdominal tergites blackish brown; forceps reddish brown. Cuticle punctured, shiny; tegminae and wings entirely absent. Length without forceps 9.2 mm (♂) and 10.4 mm (♀), length of forceps 1.6 mm (♂) and 1.9 mm (♀).

Head (Fig. 1) as wide as long, postfrontal and coronal sutures fine but distinct, frons convex, hind margin feebly emarginated in middle. Eyes blackish brown, 0.5 times as long as the length of head behind eyes. Antennae of holotype male with 9 antennomeres, in paratype with 15 antennomeres (both incomplete), conical; antennomere 1 long, narrowed basally, widened terminally, as long as the length of antennomeres 2 and 3 together; antennomere 2 transverse, only slightly longer than wide; antennomere 3 longer than antennomere 4.

Pronotum (Fig. 1) smooth about as long as broad, widened posteriorly; anterior margin nearly straight, lateral margins straight, gently reflexed in middle, posterior margin broadly rounded. Median sulcus fine but distinct. Meso- and metanotum transverse, smooth, former posteriorly truncate and latter broadly emarginate. Sternal plates typical for the genus. Tegmina and wings entirely absent. Legs relatively long compared to other *Euborellia*, yellow with darker bands on femora and tibiae; femora stout; tibiae clad with thick and fine hairs; hind tarsi with segment 1 almost equal to combined lengths of segments 2 and 3.

Abdomen (Fig. 1) sparsely punctulate, tergites with exception of the ultimate one convex, somewhat widened posteriorly, lateral glandular folds invisible. Tergites 7–9 rugoso-striate at sides and each with a low blunt rugoso-striate lateral longitudinal ridge. Ultimate tergite transverse, sides convex, slightly narrowed posteriorly, slightly depressed medially with visible median longitudinal furrow, lateral longitudinal ridge rugoso-striate, hind margin in middle lightly concave. Penultimate sternite narrowed posteriorly with posterior margin subtruncate (Fig. 3). Pygidium flat. Male forceps with branches subcontiguous and stout at base, gradu-



Figs. 1–6. *Euborellia ornata* sp. nov. 1 – habitus of male (holotype); 2 – ultimate tergite and forceps of female (paratype); 3 – male penultimate sternite, ventral view; 4 – male genitalia; 5 – left paramere of male genitalia; 6 – left distal lobe of male genitalia.

ally tapering apically, almost straight in basal two thirds, both slightly incurved afterwards, apices gently hooked, inner margin finely crenulated, trigonal in basal half above, afterwards depressed. Female forceps with branches contiguous, simple and straight (Fig. 2).

Male genitalia (Figs. 4, 5, 6) typical for *Euborellia*, with parameres short, slightly longer than broad (3 : 2), narrowed apically, external apical angle and margin convex (Fig. 5); end

of longer distal lobe quadratic, with dark brown, strongly sclerotized and rounded distal denticulated pad; proximal denticulated pad small and flat, not strongly sclerotized (Fig. 6).

Differential diagnosis. *Euborellia ornata* sp. nov. is an entirely apterous species (i.e. without vestiges of tegmina or wings) and differs from all other apterous species of *Euborellia* by the peculiar coloration and combination of the following characters: quadratic pronotum; yellow legs with darker bands on femora and tibiae (Fig. 1); and characteristic male genitalia with parameres short, slightly longer than broad (3 : 2), with both lateral margins slightly convex; distal lobe quadratic (Figs. 4, 5). Very specific is the shape of the lateral denticulated pads of the longer distal lobe (Fig. 6) with largely prominent, rounded and strongly sclerotized distal denticulated pad, and flat, finely sclerotised proximal pad.

Etymology. The Latin adjective, *ornatus*, -a, -um, is given in reference to the outstanding coloration of the new species, unusual in *Euborellia*.

Bionomy. Unknown. Collected on pasture with fragments of forests with *Castanopsis* and *Rhododendron* (S. Bílý, pers. comm. 2010).

Distribution. Nepal, Eastern Region, Koshi Zone.

Key to *Euborellia* species recorded or expected in Himalayas (based on males)

- 1 (4) Tegminae and wings fully developed. 2
- 2 (3) Sides of abdominal tergites 6 to 9 ecarinate. *E. plebeja* (Dohrn, 1863)
- 3 (2) Sides of abdominal tergites 7 to 9 carinate. *E. femoralis* (Dohrn, 1863)
- 4 (1) Tegmina short, reduced or absent; wings rudimentary, concealed, or absent. 5
- 5 (12) Tegmina present as narrow lateral ovate flaps on mesonotum, wings not developed. 6
- 6 (7) Sides of abdominal segments recurved, parameres with external apical angle not projecting; larger species (10–13 mm). *E. annandalei* (Burr, 1906)
- 7 (6) Sides of abdominal segments not recurved, parameres with external apical angle a little projecting; smaller species (8–11 mm). 8
- 8 (9) Parameres with a distinct inner apical concavity. *E. annulata* (Fabricius, 1793)
- 9 (8) Parameres without a distinct inner apical concavity. 10
- 10 (11) Sides of abdominal segments 6 to 9 acuteangulate and carinate, paramere with upper margin straight. *E. abbreviata* Srivastava, 1977
- 11 (10) Sides of abdominal segments 6 to 9 obtusangulate and ecarinate, paramere with upper margin convex. *E. manipurensis* Srivastava, 1979
- 12 (5) Tegminae completely absent. 13
- 13 (14) Body blackish brown, legs yellow with conspicuous dark bands on femora and tibiae, parameres longer than wide (3 : 2). *E. ornata* sp. nov.
- 14 (13) Body yellow or yellowish brown, legs yellow or with dark rings on femora, parameres about as long as wide. *E. annulipes* (Lucas, 1847)

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References

- ANISYUTKIN L. N. 1998a: K poznaniyu uchovertok podsem. Anisolabidinae (Dermaptera, Anisolabididae) yugovostochnoy Azii. [To the knowledge of earwigs of the subfamily Anisolabidinae (Dermaptera, Anisolabididae) of South-East Asia]. *Entomologicheskoe Obozrenie* **77**: 787–804 (in Russian, English summary).
- ANISYUTKIN L. N. 1998b: To the knowledge of earwigs of the subfamily Anisolabidinae (Dermaptera, Anisolabididae) from SE Asia. *Entomological Review* **78**: 627–641.
- BRINDLE A. 1974: The Dermaptera of Nepal. *Senckenbergiana Biologica* **55**: 141–164.
- BRINDLE A. 1978: The Dermaptera of Africa. Part II. *Annales Musée Royal de l'Afrique Centrale, Serie 8, Sciences Zoologiques* **225**: 1–204.
- BRINDLE A. 1987: New Dermaptera records from Nepal, with descriptions of new species and a review of the Himalayan fauna (Insecta). *Courier Forschungsinstitut Senckenberg* **93**: 333–351.
- KOČÁREK P. 2011: Dermaptera of Iran with description of *Euborellia angustata* sp. nov. *Acta Entomologica Musei Nationalis Pragae* **51**: 381–390.
- SAKAI S. 1997: A review of the Assam-Sikkim Himalayan fauna of Dermaptera, with description of a new species. *Bulletin of Biogeographical Society of Japan* **52**: 45–58.
- SRIVASTAVA G. K. 2003: *Dermaptera part II. Superfamily: Anisolaboidea. Fauna of India and adjacent countries*. Zoological Survey of India, Kolkata, 235 pp.
- STEINMANN H. 1989a: World catalogue of Dermaptera. *Series Entomologica* (Dordrecht) **43**: 1–934.
- STEINMANN H. 1989b: *Dermaptera Catadermaptera 2. Tierreich 108*. Walter de Gruyter, Berlin – New York, 504 pp.