



**DESCRIPTION OF A NEW SPECIES OF THE GENUS *EUBORELLIA*
BURR, 1909 (INSECTA: DERMAPTERA) FROM NAINITAL DISTRICT OF
UTTARAKHAND STATE**

B. LAL AND V.D. HEGDE*

Zoological Survey of India, M-Block, New Alipore, Kolkata 700 053.

E-mail: hegde67@yahoo.co.in

* Corresponding Author

INTRODUCTION

The present paper is based on the study of a new species of *Euborellia* Burr, 1909 collected from Nainital district of Uttarakhand state (Western Himalayan Ecosystem). Gangola (1968) has described two new species viz; *Euborellia kumaonensis* collected from Nainital district and *Euborellia askotensis* from Pithoragarh district of Uttarakhand but on the basis of the description and figures provided in his paper, the fate of the systematic position of these species is uncertain. Srivastava (2003) has provided detailed description of 08 species of *Euborellia* which includes 04 new species. Out of these, 02 species viz; *Euborellia annulipes* (Lucas, 1847) and *Euborellia compressa* (Borelli, 1907) are apterous, having sides of abdominal segments carinate. The first one has the genital parameres with external apical angle rounded while the second species has external apical angle acute with a little projection. The new species described here comes close to these two species in being apterous with sides of abdominal segments carinate but differs in the structure of parameres having external apical angles neither round nor acute. Besides the structure of the distal lobe is also different from these two species. Moreover, there are marked differences in the shape of pronotum, metanotum and in having crenulated inner margin of forceps. Another distinguishing character which differentiates this species is its smooth and almost quadrate ultimate tergite which is transverse with weak punctuation in *E. annulipes* and also transverse with almost

smooth in *E. compressa*. The other remarkable characters include its smooth abdomen which is punctulated in *E. annulipes* and its truncated penultimate sternite which is subtruncate in *E. compressa*.

Euborellia nainitalensis, sp. nov. (Fig.1-8)

Description :

Male : Body smooth, general color ranging from light brown to blackish brown, antennae brown with two apical segments light blackish brown, Pronotum, Meso- and Metanotum brown, legs light brown, femora with deep brownish bands at about middle, abdominal tergites, ultimate tergite and forceps blackish brown.

Head smooth, pentagonal, slightly broader than long, frons tumid, frontal sutures faint, median suture distinct, hind margin slightly emarginated posteriorly in the middle. Eyes black, prominent, much smaller than, post-ocular area. Antennae 15+ (broken) segmented, first stout, shorter than the distance between antennal bases, expanded apically, 2nd short, about as long as broad, 3rd long and slender, 4th slightly shorter than preceding, gently expanded apically, 6th and onwards gradually slightly thinning, increasing in length distally with slight expansion towards apices. Elytra and wings absent. Pronotum smooth, quadrangular, anteriorly a little less wide than head, posterior margin very slightly wider than its length, anterior margin feebly convex, lateral margins gently sinuate and slightly reflexed towards middle, sides slightly diverging

posteriorly, hind margin briefly rounded with a faint emargination in the middle, median sulcus fine but distinct, passing through a faint depression in the middle posterior zone of prozona. Prozona well differentiated with metazona. Both lateral zones of prozona more tumid than metazona. Meso and metanotum transverse, both shorter in length than pronotum. Mesonotum with hind margin truncate. Metanotum with hind margin briefly and steeply undulated forming deep emargination at hind mid point. Legs typical of the genus, femora with deep brownish bands in middle. Abdomen smooth, gently narrowed anteriorly. Sides of abdominal segments 6th - 9th acute angled posteriorly and carinate. Penultimate Sternite smooth with hind margin truncate. Ultimate tergite almost quadrate, smooth, convex above, gently

expanded in middle, sloping anteriorly and posteriorly, hind margin scarcely emarginated, laterally oblique, minute tubercles present above the roots of forceps. Median sulcus distinct. Forceps with branches subcontiguous and stout at base, trigonal upto about basal half, straight upto about two-third, afterwards depressed gradually, tapering apically, incurving in apical one third, asymmetrical with right branch more strongly incurved ending in apices hooked and pointed, inner margin crenulated.

Genitalia with parameres quadrangular, as long as broad, external apical angles gently dilated at its apices without any marked convexity or concavity, distal lobes with characteristic chitinous pads, oblique median membrane and virga discernible.

Table : Showing the differences of *Euborellia nainitalensis* (sp. nov.) with its closely related species (*E. annulipes* and *E. Compressa*).

Parts of the body	<i>E. annulipes</i>	<i>E. Compressa</i>	<i>Euborellia nainitalensis</i> (sp. nov.)
Head	Weakly transverse, about as long as broad.	Triangular, longer than broad.	Pentagonal, slightly broader than long.
Pronotum	About as long as broad, anteriorly as wide as head, Lateral margins widened posteriorly.	Slightly longer than broad, anteriorly as wide as head, Lateral margins straight, gently widened posteriorly.	Square shaped anteriorly a little less wide than head, lateral margins gently sinuate towards middle, posteriorly slightly wider than the length of the pronotum.
Metanotum	Hind margin broadly emarginate	Hind margin broadly emarginate	Hind margin briefly and steeply undulated forming deep emargination at hind mid point.
Abdomen	Spindle-shaped, Punctulated.	Elliptical or slender, tergites smooth.	Gently narrowed anteriorly, tergites smooth.
Legs	Yellow, Femora banded with black	Clear yellow	Light brown, banded with deep brownish bands.
Ultimate tergite	Tranverse and weakly punctate	Tranverse and almost smooth.	Squarish and smooth.
Forceps	Trigonal upto basal one-third	Trigonal upto basal one-third	Trigonal upto basal half.
Genitalia	Parameres with external apical angles round.	Parameres with external apical angles acute with a little projection.	Parameres with external apical angles gently dilated.



Fig. 1. *Euborellia nainitalensis* sp. nov. (Dorsal view)

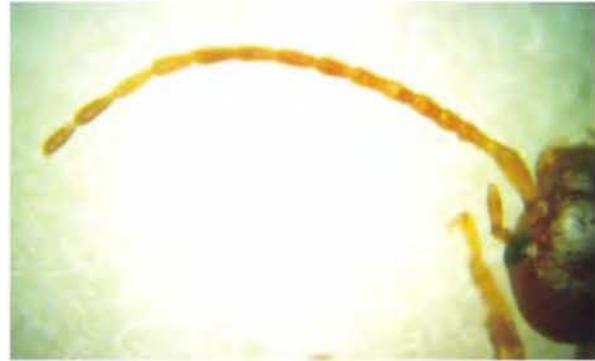


Fig. 4. Figure showing antennal segments



Fig. 2. Male Genitalia



Fig. 5. Penultimate sternite



Fig. 3. Carina on sides of 6th -9th abdominal segments



Fig. 6. Pro., Meso. and Metanotum



Fig. 7. Abdominal segments 6th-9th(Ventral view)



Fig. 8. Ultimate tergite with forceps

Length of Body: 12 mm.

Length of Forceps: 02 mm.

Holotype ♂, INDIA: Uttarakhand, Kumaon Hills, Nainital Dist., from the hills surrounding Sat- Tal lake, thickly wooded with pine trees, 26.v.1948, Coll. H. S. Pruthy.

ACKNOWLEDGEMENTS

We are very much thankful to Dr. K. Venkataraman, Director, Zoological Survey of India, Kolkata for the facilities. We are very much indebted to Dr. G.K. Srivastava, Ex. Emeritus Scientist and Dr. Kailash Chandra, Addl. Director, ZSI for their valuable suggestions during the preparation of the manuscript.

REFERENCES

- Gangola, D.C. 1968. Studies on the Dermaptera of Kumaon Hills, Part II, Carcinophoridae and Labiduridae. *The Entomologist*, 101: 52-59.
- Srivastava, G.K. 2003. Fauna of India and the adjacent countries - Dermaptera (Part II), Superfamily: *Anisolaboidea* : 1-235.