



## First record of *Gonolabis electa* Burr, 1910 (Dermaptera: Anisolabididae) from India

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**ABSTRACT:** *Gonolabis electa* Burr, a small earwig is reported for the first time from India. This species is widely distributed in the Oriental Region and adventives to Ethiopian Region but not recorded so far from India. © 2017 Association for Advancement of Entomology

**KEY WORDS:** *Gonolabis electa*, earwig, Oriental Region, India

Dermaptera (earwigs) is a polyneopteran insect order with about 2200 described species mainly from tropical and warm temperate regions (Popham, 2000; Grimaldi and Engel, 2005; Haas *et al.*, 2012). The dermapteran fauna of India has been studied intensively and were recorded 315 species by Srivastava (1988, 2003 and 2013). Further, Lal and Hegde (2012) described a new species *Euborellia nainitalensis* from Nainital, Uttarakhand. The present report adds an additional record to India. Several studies have proved that earwigs act as pests and at the same time they are beneficial also. They are pests in gardens and agricultural fields in many cases, which often feed on pollen grains, petals, tender foliage and shoots causing damage to the plants. *Euborellia stali* (Dohrn) has been observed to bore into the tender pods of groundnut (*Arachis hypogaea*) and feeds on its kernels (Cherian and Basheer, 1940). Earwigs act as 'scavengers' of the nature as these are omnivorous and protect our environment by consuming dead and decaying insects, fruits and

vegetables etc. In certain cases, earwigs are also considered as valuable bio control agents for crop pests, consuming armyworms, aphids, mites, scale insects, sugarcane rootstock borers and tropical corn borers.

The genus *Gonolabis* Burr belongs to the family Anisolabididae. It is distributed in the Oriental, Australian and Ethiopian Regions (Srivastava, 2003). There are nine species reported under the genus from India. The species *G. analia* (Ramamurthy & David), *G. emarginata* (Ramamurthy & David), *G. nilgiriensis* (Srivastava), *G. penicillata* (Borelli), *G. punctata* (Srivastava) and *G. sisera* (Burr) are known from Tamil Nadu; *G. burri* (Srivastava) is known from Maharashtra and *G. krishnappai* Srivastava from Karnataka. Srivastava (2003) stated that, *G. electa* is widely distributed in the Oriental Region and adventives to Ethiopian Region but not recorded so far from India. The genus *Gonolabis* is defined by the following characters: size small to large (7.5 to

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Fig. 1 *Gonolabis electa* -male



Fig.2 *Gonolabis electa* -female

23.5mm); apterous or with elytra abbreviated in various shapes; eyes shorter than the postocular area; abdomen gradually enlarging posteriorly, attaining maximum width at ultimate tergite or spindle shaped; forceps short arcuate or long and slender, contiguous or subcontiguous near base, gently incurved apically.

**Material examined:** INDIA: Kerala: Ponmudi, Thiruvananthapuram district, 15.x.2012, K.G.Emiliyamma, 1Male, 1Female, Registration No. ZSI/WGRC/IR-INV- 4533.

#### Measurements:

Length of body:	Male: 8.2	Female: 8.1
Length of forceps:	Male: 1.4	Female: 1.6

**Diagnostic characters: Male(Fig. 1):** Body colour reddish brown to black; antennae dark brown or lighter in colour; basal segment sometimes yellow; sides of pronotum and legs yellow, femora darker. Head broader than long, frons convex, sutures indistinct, hind margin slightly emarginate in middle posteriorly; eyes shorter than postocular area; antennae 15 segmented; 1<sup>st</sup> segment stout, slightly expanded apically, shorter than the distance between antennal bases; 2<sup>nd</sup> short; 3<sup>rd</sup> long and cylindrical; 4<sup>th</sup> elongated, shorter than 3<sup>rd</sup>; 5<sup>th</sup> cylindrical, almost equal to 3<sup>rd</sup>, remaining segments gradually increasing in length and becoming thin; pronotum as long as broad, quadrate, slightly

widened posteriorly, all margins straight; prozona slightly convex and indistinctly separated from metazona, median sulcus weakly marked; apterous; mesonotum with hind margin straight and metanotum emarginate posteriorly; legs with 1<sup>st</sup> segment of hind tarsi is equal to the combined length of 2<sup>nd</sup> and 3<sup>rd</sup>; abdomen narrowed at base, gradually increasing in width posteriorly and attaining maximum width at 9<sup>th</sup> tergite, the surface above of 9<sup>th</sup> tergite punctulated, weakly convex, sides of segments acute angled posteriorly; penultimate sternite rounded posteriorly, narrowly emarginate in middle; ultimate tergite broader than long, almost smooth, sometimes with one or two rows of punctulations, weakly raised on either side of middle line, median sulcus distinct, laterally with a short, oblique carina, hind margin in middle almost straight, oblique above the base of forceps; forceps with branches remote at base, short, arcuate, trigonal above in basal one-third, afterwards depressed, internally serrated. **Female (Fig. 2):** Resembles male in all characters, except the ultimate tergite narrowed posteriorly; penultimate sternite convex posteriorly in middle; forceps simple and straight.

**Remarks:** The studied specimens are exactly similar to the descriptions of Srivastava (2003), except for the following characters: body brownish black; 2<sup>nd</sup> segment of antenna yellowish brown; 4<sup>th</sup> and 5<sup>th</sup> segments of antennae equal in length; the length of 1<sup>st</sup> tarsal segment is longer than the combined length of 2<sup>nd</sup> and 3<sup>rd</sup> tarsal segments; ultimate tergite with one row of punctulation.

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