

INSECTA : COLEOPTERA : CUCUJIDAE :  
LAEMOPHLOEINAE

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(With 2 Figures)

INTRODUCTION

The representatives of the family Cucujidae are commonly known as "flat bark beetles" and belongs to the largest superfamily Cucujoidea under the section Clavicornia. Classification and characterisation of the family has hitherto been unsatisfactory, as a result of which there has been a tendency to use it as dumping ground. At present, it includes two subfamilies viz. Cucujinae and Laemophloeinae. They are usually found to live under bark of logs or dead standing trees, haystacks, vegetable garbage, leaf litter etc. and some are pests of stored grains and their products. Of the family Cucujidae, so far Indian Cucujinae is represented by two genera viz. *Cucujus* F. and *Pediacus* Shuck. and Laemophloeinae by ten genera.

The paper presents the results of the study based on a collection of Cucujidae collected during Namdapha Survey. The Cucujidae fauna from Arunachal Pradesh was hitherto unrecorded. This includes one genus of Cucujinae and seven genera of Laemophloeinae and all the species are recorded here for the first time from Arunachal Pradesh with the first record of the genus *Xylolestes* Lefkovitch from India.

SYSTEMATIC ACCOUNT

Subfamily : (A) CUCUJINAE

1. ***Pediacus bhutanicus*** Sengupta

1978. *Pediacus bhutanicus* Sengupta, *Entomologica Basiliensia*, 3 : 219-222.

*Material examined* : 24 ex., India : Arunachal Pradesh : Deban, 27 km. E. of Miao in Tirap dist., 11-13.ii.1982, *S. Biswas & Party*, under bark.

*Distribution* : India ; Arunachal Pradesh, Bhutan.

*Remarks* : Sengupta (1978) has described this species from Bhutan. In the present study it is being recorded for the first time from India,

2. **Pediacus rufipes** Grouvelle

1908. *Pediacus rufipes* Grouvelle, *Annls. Soc. ent. Fr.*, 77 : 461, t. 9, f. 7.

*Material examined* : 1 ex., India : Arunachal Pradesh ; Deban, 27 km. E. of Miao in Tirap dist., 11.xii.1982, S. Biswas & Party, under bark.

*Distribution* : India : Tamil Nadu, Arunachal Pradesh.

*Remarks* : This species was earlier recorded only from Nilgiri hills (Tamil Nadu), now it is being recorded for the first time from Arunachal Pradesh.

Subfamily : (B) LAEMOPHLOEINAE

3. **Placonotus proximus** (Grouvelle)

1908. *Laemophloeus proximus* Grouvelle, *Annls. Soc. ent. Fr.*, 77 : 476, 472.

1977. *Placonotus proximus* (Grouvelle) : Mukhopadhyay and Sengupta, *Oriental Insects*, 11(4) : 555-566.

*Material examined* : 32 ex., India : Arunachal Pradesh : Gibbon land, 3.v.1981, S. Biswas & Party ; 1 ex., Arunachal Pradesh ; Tirap : Deban north, 28.iv.1981, S. Biswas & Party, decaying wood ; 18 ex., Arunachal Pradesh : Namdapha, 21.iv.1982, S. Biswas & Party, decaying wood.

*Distribution* : India : Tamil Nadu, Meghalaya, Arunachal Pradesh.

*Distribution* : Grouvelle (1908) described this species under the genus *Laemophloeus* from Nilgiri hills (Tamil Nadu). In 1977, Mukhopadhyay & Sengupta transferred this species from the genus *Laemophloeus* to *Placonotus*. Though this species is well represented in India, upto now it is recorded only from Tamil Nadu, Meghalaya (Songsak) and Arunachal Pradesh.

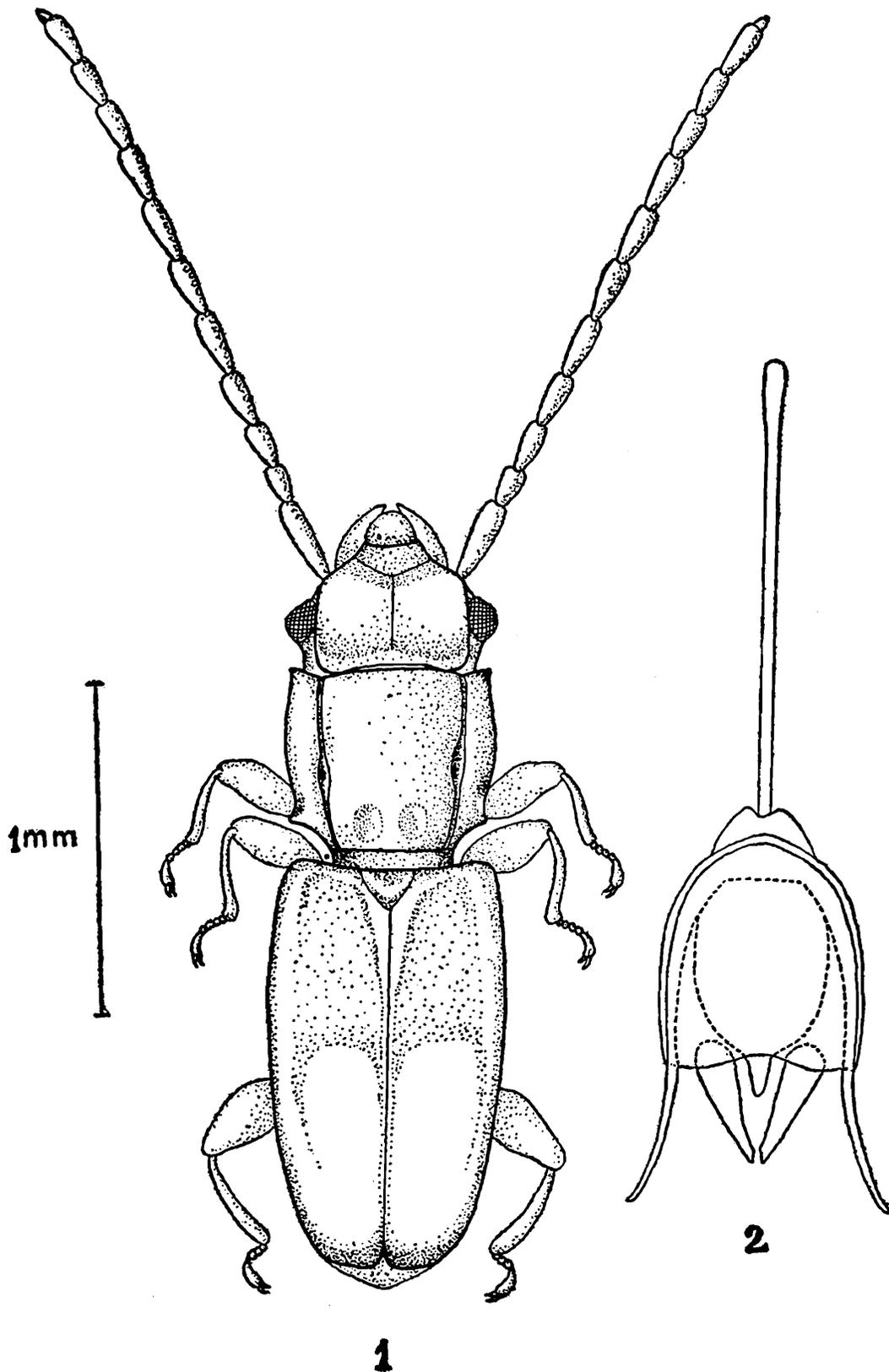
4. **Placonotus debanus** sp. nov.

(Figs. 1-2)

General appearance (Fig. 1) small, narrowly elongated, somewhat parallel sided, head and pronotum deep brownish black, elytra pale yellowish brown.

Head 1.7 times wider than long, apical margin of clypeus concave, fronto-clypeal suture distinctly curved, median line on vertex distinct and extending up to fronto-clypeal suture from base, vertex at middle elevated and puncturation on it fine and dense. Eyes' small, black, slightly projected and finely faceted, a line below the eye present.

Antenne reddish brown, extending more than  $2/3$ rd. length of its body, scape narrowly elongated pedicel slightly shorter than segment 3, segment 4 slightly shorter than segments 5-8 which are subequal, segments 9-11 form a loose weak elongated club. Prothorax about as



Figs. 1-2. *Placonotus debanus* sp. nov. 1, Dorsal view ; 2, Aedeagus.

long as broad, lateral margin parallel-sided up to middle and then distinctly outwardly curved, lateral line on pronotum extending up to

base and with a distinct deep pit at middle, two small rounded depression present at base, front angle slightly projected, hind angle projected, with rounded apex, puncturation on pronotum fine and dense. Scutellum brownish black, triangular and densely punctured. Elytra 1.7 times longer than wide, a small part of pygidium exposed, humeral angle rounded, apical angle subtruncate, puncturation on it finely and irregularly arranged. Aedeagus (Fig. 2) with short exophallic apodeme, broadened at apex, phallobase about as long as broad and its lateral margin parallel-sided, parameres elongated and narrowed at apex.

*Measurements* : Total length of holotype 2.50 mm., width of head across the eyes 0.64 mm., length of antenna 2.00 mm., length and width of prothorax 0.60 mm., 0.60 mm., length of elytra 1.2 mm., width of elytra across middle 0.70 mm.

Holotype : ♂, 7 ♂ ♀, paratypes India : Arunachal Pradesh : Deban, 11.xii.1982, S. Biswas and Party, under bark.

*Distribution* : India : Arunachal Pradesh.

*Remarks* : This species is closely related to *Placonotus proximus* (Grouvelle) but can be easily distinguished by its lateral margin of pronotum being curved outwardly below the middle, vertex elevated at middle and with two rounded depression spots at base, parameres elongated and narrowed at apex. (Fig. 2).

### 5. *Placonotus testaceus* (F.)

1787. *Cucujus testaceus* Fabricius, *Mantissa Insectorum* 1 : 166.

1849. *Laemophloeus suberis* Lucas, *Expl. Sci. Algeria Crustacis, Arachnidès, Myriapodes et Hexapodes*, 2 : 479.

1917. *Laemophloeus notatithorax* Obenberger, *Arch. Naturgesch*, A (4) 82 : 25.

1959. *Placonotus testaceus* (Fabricius) : 1959b, *Trans. R. ent. Soc. Lond.*, 111(5) : 95-118.

*Material examined* : 7 ex., India : Arunachal Pradesh : Deban, 11.xii.1982, S. Biswas and Party, under bark.

*Distribution* : India : Arunachal Pradesh, Bhutan, Europe, Italy.

*Remarks* : This is a distinct species and distributed in all Zoogeographical regions. Besides the colouration of the species, the general form of pronotum is very characteristic and can be readily separated from all other species so far described.

6. *Cryptolestes pusillus* (Schönh.)

1791. *Cucujus minutus* Olivier, *Encycl. Meth.*, 6 : 243, nec Fourcroy, 1785.  
 1817. *Cucujus pusillus* Schönherr, *Synonymia Insectorum*, 1(3) : 55.  
 1831. *Cucujus testaceus* Stephens, *Ill. Brit. Ent. Mandib.*, 4 : 224.  
 1839. *Cucujus crassicornis* Waltl, *Isis, Jena*, 3 : 225.  
 1843. *Laemophloeus longicornis* Mannerheim, *Bull. Soc. Nat. Mosc.* 16 : 303.  
 1850. *Laemophloeus* (sic) *brevis* Fairmaire, *Rev. Mag. Zool.*, (2) 2 : 56.  
 1851. *Laemophloeus parallelus* Smith, *List of Coleoptera in the British Museum*, 1 : 7  
 1899. *Laemophloeus pauper* Sharp, *Biol. C. Amer. Col.*, 2(1) : 530.

*Material examined* : 13 ex., India : Arunachal Pradesh : Gibbon land, 3.v.1981, S. Biswas & Party, under bark ; 4 ex., Arunachal Pradesh : Tirap : Deban north, 28.iv.1981, S. Biswas & Party, decaying wood.

*Distribution* : India : West Bengal, Arunachal Pradesh, Bhutan, Africa, Arab, Europe, Réunion and Mauritius.

*Remarks* : This is a cosmopolitan species and occur both in stored grains as well as under bark.

7. *Cryptolestes* sp.

*Material examined* : 1 ex., India : Arunachal Pradesh : Tirap, Deban, 28.v.1981, S. Biswas and Party, under bark.

*Remarks* : I am not attempting to describe the species at present due to lack of sufficient material for studies. This species has somewhat resemblances with *Cryptolestes ferrugineus* (Steph.) but can be easily separated by its antenna being longer in male than female and its outer margin of mandible with transverse elevation.

8. *Laemophloeus neglectus* Grouvelle

1883. *Laemophloeus neglectus* Grouvelle, *Ann. Mus. Genova*, 18 : 282.

*Material examined* : 1 ex., India : Arunachal Pradesh : Gibbon land, 3.v.1981, S. Biswas & Party ; 1 ex., Arunachal Pradesh : Deban, 11.xii.1982, S. Biswas & Party.

*Distribution* : India : Tamil Nadu, Arunachal Pradesh.

*Remarks* : Grouvelle (1883) described this species from Nilgiri hills : Tamil Nadu. Present study recorded this species as new from Arunachal Pradesh.

9. *Microlaemus* sp.

*Material examined* : 2ex., (1 ex. partly damaged), INDIA : Arunachal

Pradesh ; Tirap ; Deban north, 28.iv.1981, S. Biswas & Party, decaying wood.

*Remarks* : This species can be distinguished from any other species so far described under this genus by its two lateral line on pronotum. This species will be described elsewhere.

#### 10. *Leptophloeus incertus* (Grouvelle) Comb. n.

1888. *Laemophloeus incertus* Grouvelle, *Ann. Mus. Genova*, (2) 6 : 627.

General appearance elongated, flattened, shiny, head and pronotum deep reddish brown, elytra slightly pale reddish brown in colour.

Head transverse, apical margin of clypeus truncate, fronto-clypeal suture indistinct, median line on vertex short and extending up to middle, lateral line at the inner margin of eyes weakly carinated and extending up to base, a short lateral line below the eye present, puncturation on vertex moderately large and densely arranged, specially along the side margin. Eyes small, black, moderately coarsely faceted and slightly advance from base. Antenna reddish brown, its length slightly longer than head and pronotum together, scape moderately large, pedicel slightly larger than segment 3, segments 4-8 subequal, segments 9-11 transverse and distinctly form club. Prothorax about as long as broad, slightly narrowed posteriorly, one lateral line on each side, front angle rounded, hind angle little projected, puncturation similar as on head. Scutellum deep reddish brown, transverse, finely and densely punctured. Elytra two times longer than its width, lateral margin slightly narrowed posteriorly, humeral and apical angle rounded, each elytron with three cells, each cell with irregularly arranged fine puncture.

*Material examined* : 1 ex., INDIA : Arunachal Pradesh : Gibbon land, 3.5.1981, S. Biswas & Party ; 1 ex., Arunachal Pradesh : Deban, 11.xii.1981, S. Biswas & Party.

*Remarks* : Grouvelle (1888) described this species from Burma and latter he recorded the same species from India : Tamil Nadu : Nilgiri hills. This species is closely related to *Leptophloeus janeti* (Grouv.) but can be easily separated by its apical angle of elytra being rounded and single lateral line on pronotum.

#### 11. *Leptophloeus janeti* (Grouvelle)

1899. *Laemophloeus janeti* Grouvelle, *Ann. Soc. ent. Fr.*, 68 : 177.

1959. *Leptophloeus janeti* (Grouvelle) : Lefkovitch, *Trans. R. ent. Soc. Lond.*, 111 : 95-118.

*Material examined* : 2 ex., INDIA : Arunachal Pradesh : Tirap : Deban north, 21.iv.1981, S. Biswas & Party, decaying wood ; 1 ex., Arunachal Pradesh : Deban, 27 km. E. of Miao in Tirap dist., 13.xii.1982, S. Biswas & Party ; 1 ex., Arunachal Pradesh : Gibbon land, 3.v.1981, S. Biswas & Party.

*Distribution* : India : Tamil Nadu, Arunachal Pradesh, Africa, Europe.

*Remarks* : Grouvelle (1899) described this species from Nilgiri hills (Tamil Nadu) under the genus *Laemophloeus*. Lefkovitch (1959) during the revision of European Laemophloeinae transferred the species *janeti* from the genus *Laemophloeus* to *Leptophloeus*. In the present study this species is being further recorded from Arunachal Pradesh (India).

## 12. *Xylophloeus* sp.

*Material examined* : 1 ex., India : Arunachal Pradesh : Deban, 11.xii.1982, S. Biswas & Party, under bark.

*Remarks* : While examining the Laemophloeinae collection of Zoological Survey of India I came across few examples of Laemophloeinae labelled as *Laemophloeus miles* Grouvelle, though it is not published so far. Actually this is a distinct species belonging to the genus *Xylophloeus* Lefkovitch, details of which will be published elsewhere. The present single example also belongs to the same species under the genus *Xylophloeus*. During the revision of African Laemophloeinae, Lefkovitch (1962) erected the genus *Xylophloeus* for the species *Laemophloeus patens* Grouvelle including six new species under it. Till 1978, this genus remained unrecorded from India. Incidentally, Mukhopadhyay & Sengupta (1978) recorded the genus for the first time by one species from India ( West Bengal & Uttar Pradesh) and by one species from Bhutan.

## 13. *Xylolestes ovalis* (Grouvelle)

1883. *Laemophloeus ovalis* Grouvelle, *Ann. Mus. Genova*, 18 : 281.

1978. *Xylolestes ovalis* (Grouvelle) : Mukhopadhyay & Sengupta, *Entomologica Basiliensia*, 3 : 224-225.

*Material examined* : 4 ex., India : Arunachal Pradesh : Namdapha camp, 21.iv.1981, S. Biswas & Party, decaying wood.

*Remarks* : Grouvelle (1883) described this species under the genus *Laemophloeus* from Borneo. During the revision of African Laemophloeinae Lefkovitch (1962) erected the genus *Xylolestes* for the species

*Laemophloeus unicolor* Grouvelle. Mukhopadhyay & Sengupta (1978) transferred the species *ovalis* (Grouvelle) from the genus *Laemophloeus* to *Xylolestes* and recorded the genus for the first time from Bhutan. In the present study the genus *Xylolestes* is being recorded for the first time from India.

#### SUMMARY

124 examples of Cucujidae collected from Namdapha : Tirap district has been identified. These belong to two subfamilies of the Cucujidae viz. Cucujinae and Laemophloeinae. Of the two subfamilies, the Cucujinae is represented by two species of the genus *Pediacus* Shuck and Laemophloeinae represented by eleven species belonging to the genera viz. *Placonotus*, *Cryptolestes*, *Laemophlous*, *Microlaemus*, *Leptophloeus*, *Xylophloeus*, and *Xylolestes*. Of these one species, *Placonotus debanus* is described as new to science and all other species of both the subfamilies have been recorded for the first time from Namdapha : Arunachal Pradesh with the first record of the genus *Xylolestes* from India.

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