

TWO NEW SPECIES OF TUBULIFERA (THYSANOPTERA : PHLAETHRIPIDAE)
FROM N. E. INDIA WITH THE DESCRIPTION OF A NEW SUBGENUS

N. MURALEEDHARAN AND S. SEN

Zoological Survey of India, Calcutta

ABSTRACT

A new subgenus *Inermothrips* under the genus *Crotonothrips* Ananthakrishnan and two new species *Crotonothrips (Inermothrips) cacharensis* and *Liothrips aberrans* are described from N. E. India.

Genus *Crotonothrips* Ananthakrishnan.

Crotonothrips Ananthakrishnan, 1967, *Oriental Ins.*
1 (1-2) : 189.

Phaethothrips Ananthakrishnan, 1969, *Senckenber. iena*
biol., 50 (3-4) : 189,

Crotonothrips Ananthakrishnan, 1976, *Oriental Ins.*,
10 (3) : 411,

Inermothrips Subgen. nov.

General taxonomic characters as in *Crotonothrips*. Foretarsi unarmed in both sexes. B₁-B₃ of abdominal segment IX of females almost subequal.

Type species : *Crotonothrips (Inermothrips) cacharensis* sp. n.

Ananthakrishnan (1976) revised the genus *Crotonothrips* and provided a key to the known species of the genus. The species described below was collected from Assam and forms the first record of this genus from North Eastern India, all the hitherto

known species being reported from South India.

Crotonothrips (Inermothrips) cacharensis
sp. n. (Fig. 1).

Female (Macropterous) : Body brown ; head, prothorax and abdominal segments V-IX and tube dark ; forefemora yellow, brown at base ; mid-and hind femora brown, yellow at apex, foretibiae yellow ; mid-and hind tibiae brown ; all tarsi light brown ; antennal segments I brown, yellow at extreme base ; II yellow, brown at base and margin ; III-IV yellow ; VII-VIII brown. All setae dark brown, blunt. Wings, infumate.

Head broad, 180*—192 long, 188—200 wide across eyes, 220—232 across cheeks, 224—248 at base ; cheeks crenulate, slightly constricted at base, surface strongly reticulate. Eyes 72—80 long 60 wide all ocelli 24—28 wide, median ocellus over hanging

* All measurements in microns unless otherwise mentioned

at the base of antennae. Postoculars short, about half the length of eyes 48–52 long, blunt, placed 12–20 below posterior margin of eyes. Antennal segment III–VII pedicellate, VII–VIII forming a close unit; length (width)—I : 40–44 (36–40); II : 52–60 (32–36); III : 60–64 (28–32); IV : 56–60 (36); V : 56–60 (32); VI : 52 (28–32); VII : 44–48 (24–28); VIII : (12–16); sense cones 28–36 long. Mouthcone broad 96–100 long, 140–144 wide at base, 92–96 at apex. Maxillary

stylets ocular, very close at middle, maxillary guides distinct.

Prothorax about as long as head, 160–184 long, 260–280 wide at anterior margin, 360–400 at posterior margin. Pronotal chaetotaxy—anteroangulars 28–36 long, anteromarginals 20–28 long, midlaterals 36–48 long, postangulars 72 long, epimerals 100–112 long. Epimeral suture complete. Forefemora 84–100 wide, foretarsi with a hump. Pterothorax 380–400 long, 420–460 wide

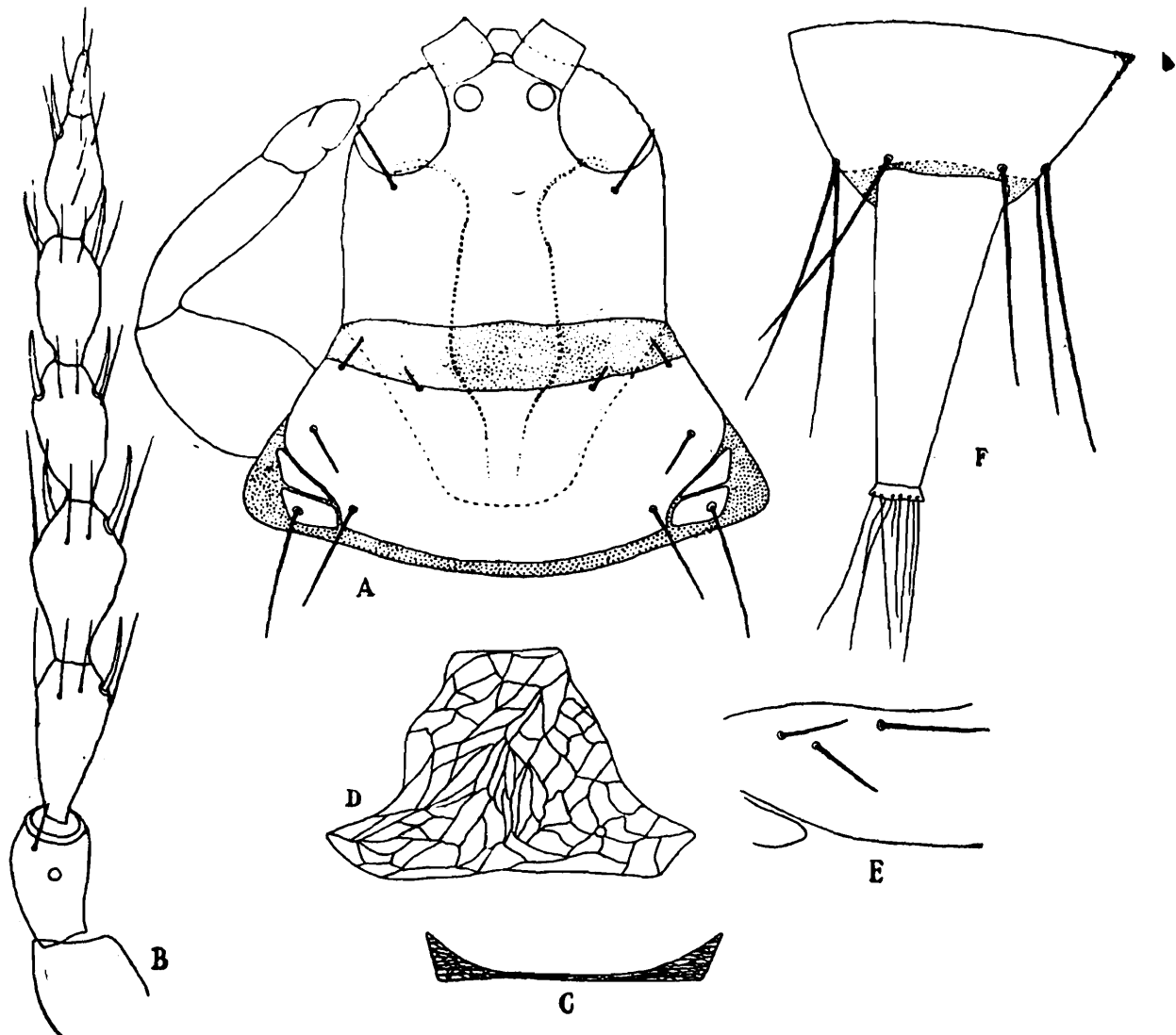


Fig. 1. *Crotonothrips (Inermothrips) cacharensis* ♀, A—Head and prothorax, B—Antenna, C—Pelta, D—Mesopraesternum, E—Basalwing bristles, F—Terminal abdominal segments.

across meso- and 412—448 across metathorax. Forewings broad, almost uniform wide 697—731 long, 76—96, wide with 6—7 double fringes, basal wing bristles 56 ; 60 ; 72 long respectively. Mesopraesternum complete, extremely thin at middle.

Abdomen 400—460 wide at base, 396—480 at middle, 300—340 across segment VIII, 160—232 across segment IX. Petta roughly triangular. B_1 — B_3 of segment IX : 120—144 ; 140—180 ; 184—200 long respectively. Tube 180—204 long, anal setae 108—120 long. Total body length 1.79—2.13 mm.

Male (Macropterous) : Colouration as in female. Head 176 long, 180 wide across eyes, 208 across cheeks, 216 across base. Eyes 72—76 long, 60 wide, postoculars 60 long. Antennal segments 1—8, length (width) —32 (36) ; 52 (32—36) ; 60 (28) ; 60 (32) ; 56 (28) ; 52 (24) ; 44 (24) ; 28 (16) ; sense cones 32—36 long. Mouthcone 140 long, 180 wide at base, 104 at apex.

Prothorax 160 long ; 272 wide at anterior margin ; 380 at posterior margin. Anteroangulars 28 long ; anteromarginals 16 long ; midlaterals 40 long ; postangulars 60 long ; epimerals 96 long. Forefemora 92 wide. Pterothorax 380 long, 428 wide across meso- and 400 across metathorax. Forewings 697—714 long ; 72—88 wide ; basal wing bristles 56 ; 64 and 72 long with 6—7 double fringes.

Abdomen 412 wide at base, 400 at middle, 252 across segment VIII, 160 across segment IX ; B_1 — B_3 of segment IX—144, 84 and 208 long respectively. Tube 180 long, anal setae 100 long. Total body length—1.9 mm.

Holotype : ♀ (Z. S. I. Reg. No. 95/H17) ; allotype : ♂ (Z. S. I. Reg. No. 96/H17) ;

paratypes : 3 ♀♀ (Z. S. I. Reg. Nos. 97—99/H17) INDIA : Assam, Cachar Dist. Loharband 13. x. 1975, (*Dr. N. Muraleedharan*) Coll.) paratypes : 3 ♀♀ (Z. S. I. Reg. Nos. 100—102/H17) INDIA : Assam, Silchar, Cachar Dist. 1. x. 1975 (*Dr. N. Muraleedharan* Coll.) deposited in the National Zoological Collection, Zoological Survey of India, Calcutta.

Liothrips aberrans sp. n. (Fig. 2)

Female Macropterous : Body brown ; head, prothorax, abdominal segments, tube and all femora brown ; foretibiae and all tarsi yellow ; hind and mid tibiae brown. Antennal segments I and II brown, III yellow, IV—VI yellow with apical half brownish, VII and VIII pale brown. All setae dark brown, roughly pointed. Wings transparent with a median brown streak. All major setae long and well developed.

Head long, 380—392 long, 268—280 wide across eyes, 272—292 wide across cheeks, 240—264 wide at base. Cheeks finely crenulate with one or two setae. Eyes 120 long, 80—96 wide, ocelli 28 wide. Postoculars, 104—112 long. Antennal segments elongate ; length (width) I 40—48 (56—60), II 72—84 (40), III 160 (36—40), IV 156—160 (44—48), V 128 (44), VI 100 (44), VII 80—84 (32—36), VIII 44—52 (16—20) ; Sense cones 32—40 long. Mouthcone pointed, 200—220 long, 232—256 wide at base and 80—120 wide at apex, Maxillary stylets occluded, close at middle.

Prothorax shorter than head, 200—252 long, 256—276 wide at anterior margin, 408—420 wide at posterior margin. Anteroangulars 92—96 long, anteromarginals 84—100 long, mid laterals 116—180 long, postangulars 200—208 long, epimerals 180—212 long. Epimeral suture complete. Forefemora 344—380 long, 132—140 wide. Ptero-

thorax 612—697 long, 629—680 wide across mesothorax and 595—646 wide across metathorax. Forewings 1.19—1.39 mm long, 140 wide with 13—18 double fringes; basal wing bristles 148—160, 160—188, 156—180 long. Mesopraesternum, incomplete, and repre-

ment IX. B_1 — B_3 of segment IX, 190—200, 180—200, 180—200 long. Tube 340 long, Anal setae 220—240 long. Total body length 3.52—3.57 mm.

Male Macropterous : Colour as in female. Head 348—360 long, 252 wide across eyes, 252 across cheeks, 212—216 wide at base. Eyes 104 long and 80 wide; Ocelli 24—28, wide. Postoculars 80—88 long. Antennal segments length (width) I 40 (48—56), II 60—80 (36), III 136—148 (32), IV 136—140 (40—44), V 100—112 (40), VI 88—100 (36), VII 72—76 (28—32) VIII 40 (16—20). Sense cones 32—40 long. Mouthcone 180—200 long, 212—228 wide at base and 92—100 wide at apex.

Prothorax 212—220 long, 228—260 wide at anterior margin, 340—400 wide at posterior margin. Anteroangulars 80—88, anteromarginals 80—88, midlaterals 120—140, postangulars 168—172, epimerals 164—176. Forefemora 320 long and 112—128 wide.

Pterothorax 544—595 long, 527—595 wide at meso and 510—561 at metathorax. Forewings long, 112—120 wide at middle and with 14 double fringes, Basal wing bristles 120; 160; 132 long respectively.

Abdomen 476—561 wide at base, 425—527 across middle, 289—340 across VIII and 160—196 across segment IX B_1 — B_3 of IX 148—200; 80—172; 260 long respectively Tube 320—360 long and anal setae 190—200 long.

Total body length 3.11—3.33 mm.

Holotype : ♀ (Z. S. I. Reg. No. 1/H17); allotype ♂ (Z. S. I. Reg. No. 2/H17); paratypes : 2 ♀♀ (Z. S. I. Reg. Nos. 3—4/H17) INDIA : W. Bengal, Ghoombanjan, Darjeeling District 29. iv. 1976 (A. R. Bhaumik and party Coll.) paratypes : 1 ♂, 1 ♀ (Z. S. I. Reg. Nos. 5—6/H17) INDIA ;

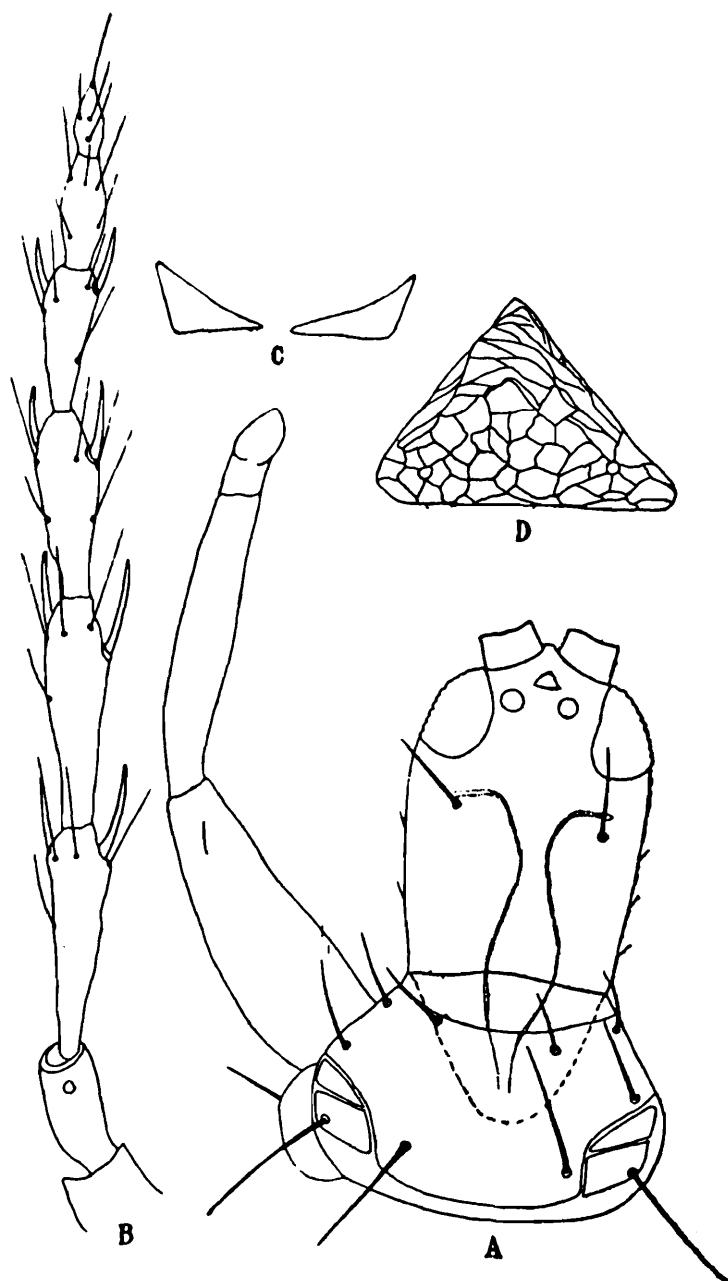


Fig. 2. *Liothrips aberrans*, ♀, A—Head and prothorax, B—Antenna, C—Pelta, D—Mesopraesternum.

sented as two triangular sclerites. Abdomen 595—680 wide at base, 578—629 at middle, 317—425 across VIII, 248—260 across seg-

W. Bengal, Dow Hills, Darjeeling District, 30. iv. 1976 (*A. R. Bhanmik and party* Coll.) ; paratype : 1 ♀ (Z. S. I. Reg. No. 7/H17)
INDIA : Sikkim, Phensong, near Gangtok. (*A. R. Bhaumik and party* Coll.), deposited in the National Zoological Collection, Zoological Survey of India, Calcutta.

This species is closely related to *Liothrips himalayanus* Ananthakrishnan and Jagadish but can be easily distinguished by the dark setae, shorter postoculars, well developed anteroangulars and anteromarginals and clear wings.

ACKNOWLEDGEMENT

We express our sincere gratitude to the Director, Zoological Survey of India, Calcutta for providing facilities to work, confirming the identity of the new taxa, going through the manuscript and offering valuable suggestions.

REFERENCE

ANANTHAKRISHNAN, T. N. 1976. New gall thrips of the genus *Crotonothrips* (Thysanoptera). *Oriental Ins.*, 10 (3) : 411-419.
