

A NEW GENUS AND TWO NEW SPECIES OF THRIPS INHABITING
EUGENIA GALLS (THYSANOPTERA : PHLAEOTHIRIPIDAE)

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ABSTRACT

Mutothrips validus a new genus and species and a new species *Arrhenothrips brevis* are described from the leaf galls of *Eugenia*.

Three species of *Arrhenothrips* Hood, viz., *A. ramakrishnae* Hood, *A. dhumrapaksha* Ramk., and *A. acuminatus* Ananthakrishnan are on record from South India (Ananthakrishnan and Jagadish, 1969 ; Ananthakrishnan 1969 a, b, and 1978). Recently Sen (1977) described another new species *A. longisetis* from North Eastern India with a key to the Indian species of *Arrhenothrips*. The present paper includes the description of a new inquiline genus *Mutothrips validus* gen. et sp. n., occurring along side with a new gall making species *Arrhenothrips brevis* sp. n., from the galls of *Eugenia* sp. (Myrtaceae) (Plate III) collected in Mercara (Coorg District, Karnataka), at elevation of 1,500 metres.

Mutothrips gen. n.

Head about as long as wide, weakly transversely reticulate, slightly longer than prothorax, with interocellar region strongly reticulate. Antenna 8 segmented, segment 3 a little asymmetrical, more elongate and narrower with one sensillum. Mouth cone narrowly rounded, maxillary stylets occluded, not meeting at middle. Postocular and pro-

thoracic setae well developed, long and pointed. Forefemora moderately enlarged and foretarsal tooth well developed. Macropterous and apterous conditions distinct, with double fringes when macropterous. B_2 of abdominal segment IX short in both sexes. Tube shorter than head.

Type-species : *Mutothrips validus* gen. et sp. n.

This genus appears to come near the genus *Liophlaeothrips* Priesner, differing from it in having B_1 and B_2 of IX abdominal segment not expanded, but pointed, and B_2 short in both sexes.

1. *Mutothrips validus* sp. n. (Fig. 1)

Macropterous female (male) : Body bicolorous, abdominal segments II and III yellow with slightly brownish anterior margins, segment IV yellowish brown with posterior half more yellowish than brown. Antennal segments 1-4 yellowish, segment 5 brownish, with a slightly yellowish basal portion, segments 6, 7 and 8 brownish. Forefemora mostly yellow, slightly brownish at

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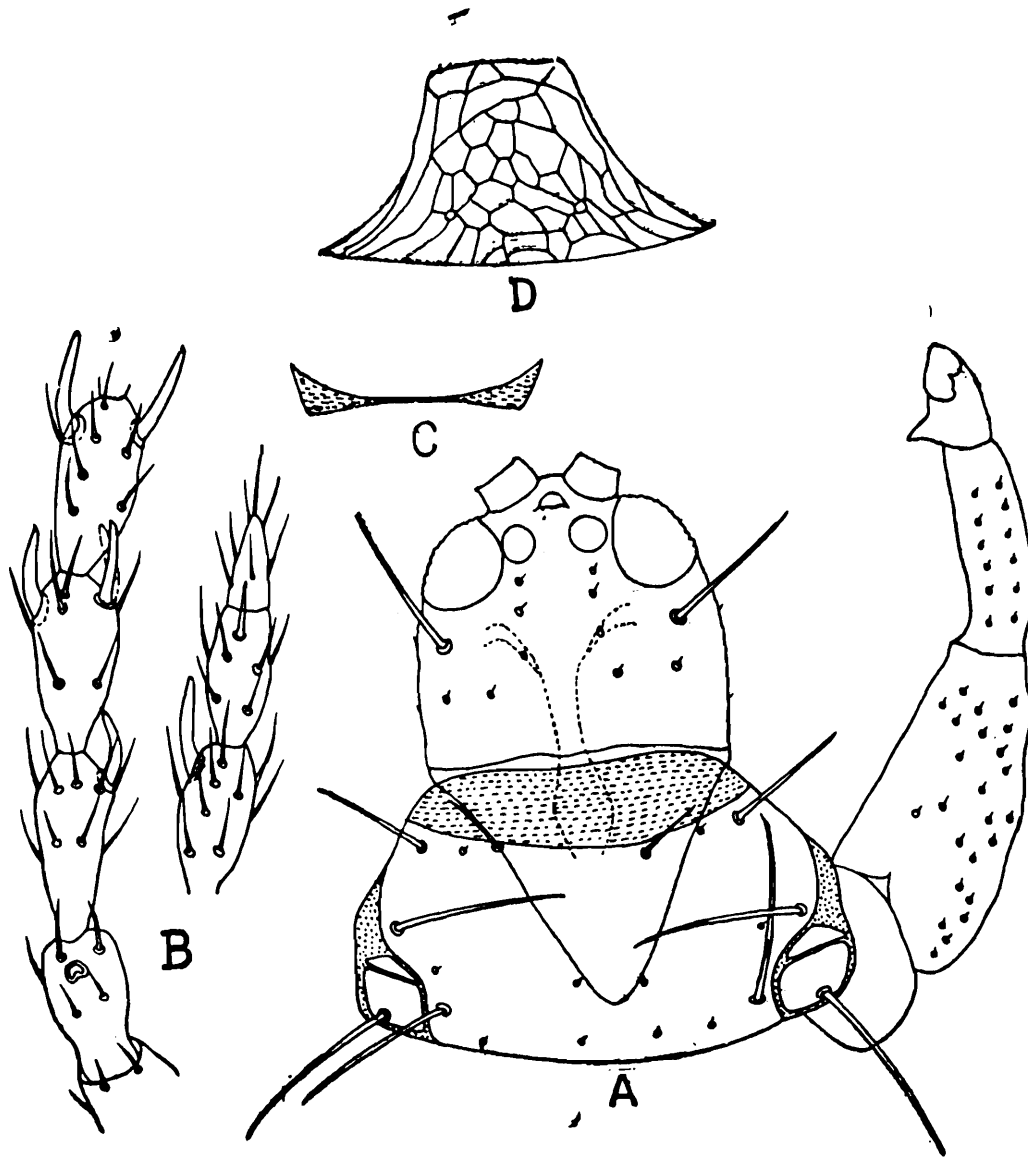


Fig. 1. *Mutothrips validus* (macropterous female) : A—Head and Prothorax, B—Antenna, C—Mesopraesternum, D—Pelta.

extreme base and along outer margin ; mid-femora yellowish with slightly brownish distal areas along both margins ; hind femora bicoloured, mostly yellow, brownish at apex and along distal outer margins ; all tibiae and tarsi yellow. Wings uniformly clouded greyish brown. All setae brown.

Head 184—194 (173)* long, 163—173 (153) wide across eyes, 178—194 (163) across cheeks, and 173—184 (168) at base. Eyes 63—67 (55)

long, and 41—43 (45) wide, with median ocellus 20 (20) wide placed 20 (20) from paired ocelli 20 (20) wide and 25-36 (36) apart. Postoculars 82—97 (82) long. Antennal segments, length (width) :

Female : 41(30-33) ; 46-51(31-32) ; 61 (26) ; 56(31) ; 51(26) ; 51(20) ; 41(15) ; 31(10).

Male : 41(31) ; 51(31) ; 61(26) ; 51(31) ; 51(28) ; 51(25) ; 41(20) ; 31(10).

* all measurements in microns unless otherwise specified.

Sensecones 12-32 (18-28) long. **Mouth cone** 173 (163) long, 173-182 (163) wide at base and 35-45 (35) at apex.

Prothorax 168-173 (148) long, 183-204 (114) wide across anterior margin, and 347-357 (357) across posterior margin; anteroangulars 74-82 (82), anteromarginals 51-55 (41), midlaterals 98-101 (82), postangulars 124-130 (92) and epimerals 133-138 (102). **Pterothorax** 357 (357) long, 367-395 (387) wide across mesothorax and 337-347 (347) wide across metathorax. **Forefemora** 204-214 (224) long and 82-102 (92) wide; foretarsal tooth 17-25 (31) long. **Forewings** 745-765 (785) long, 66-92 (61) wide at base, 45-60 (51) at middle and 26-41 (36) at apex; basal wing setae 61-71 (71), 75-82 (82) and 82-92 (92) long respectively, with 7-8 (8) double fringes.

Abdomen 367-418 (377) wide at base, 362-398 (337) at middle, 255-275 (214) across segment VIII and 173 (133) across segment IX. B_1-B_3 of IX segment 142 (132), 76-82 (61) and 132-142 (132) long respectively. **Tube** 133 (133) long, 61-71 (66) wide at base, 40-45 at middle and 31-35 (31) at apex.

Total body length : 2.020-2.040 mm. (2.020 mm.).

Apterous female (male) : Colour as that of macropterous forms. **Head** 173-184 (153-163) long, 153-163 (138-153) wide across eyes, 14-94 (163-173) across cheeks and 184-194 (163-173) at base. **Eyes** 46-51 (46) long and 36-41 (36-41) wide with median ocellus 10-15 (10) wide placed 21-25 (21-26) from paired ocelli 10-15 (10) wide, 36 (31-36) apart. **Postoculars** 87-97 (56-75) long. **Antennal segments length (width)** :

Female : 31(36) ; 41(36) ; 56-61(31) ; 51-56(31) ; 51(31) ; 51(26) ; 36-41(20) ; 25-31 (12-16).

Male : 36-41(31-36) ; 40-46(26) ; 55-56 (31) ; 51(31) ; 46-51(31) ; 46-51(26) ; 31-36 (25-26) ; 25(12).

Sensecones 16-20 (18-20) long. **Mouth cone** 179-194 (163-173) long, 173-184 (153-158) wide at base and 25-28 (25-26) at apex.

Prothorax 178-184 (153-184) long, 20-265 (094-230) wide at anterior margin, 385-434 (325-428) at posterior margin; anteroangulars 82-92 (66-78), anteromarginals 61-71 (45-61), midlaterals 122-133 (91-102), postangulars 132-148 (96-115) and epimerals 143-153 (115-138). **Pterothorax** 316-377 (345-367) long, 377-433 (316-418) wide across mesothorax and 357-418 (306-398) across metathorax. **Forefemora** 234-245 (214-265) long, and 86-92 (92-125) wide; foretarsal tooth 21-26 (31-46) long.

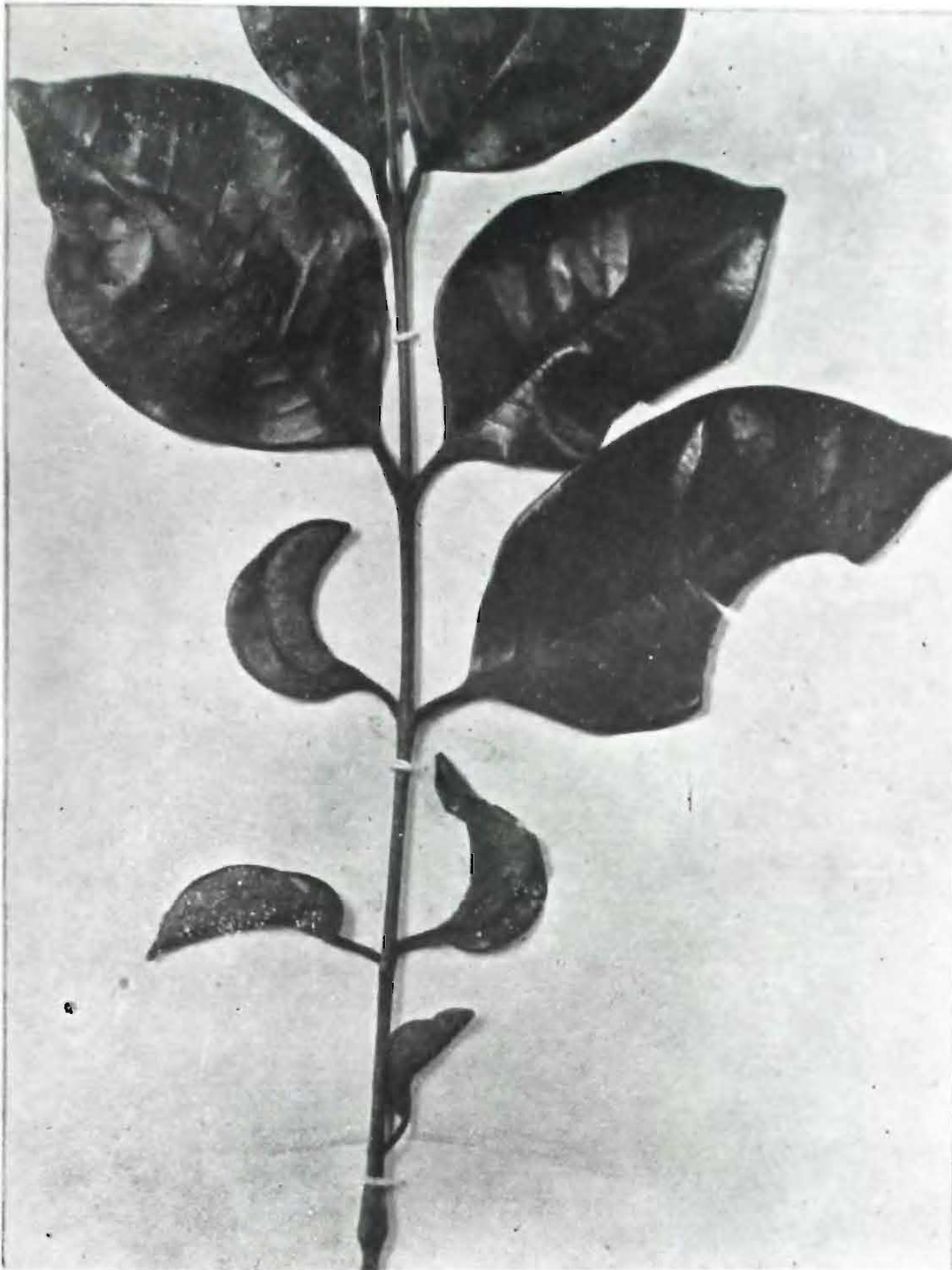
Abdomen 423-459 (337-418) wide at base, 398-423 (286-375) wide at middle, 281-286 (194-224) across VIII segment and 173-184 (133-143) across segment IX. B_1-B_3 of IX segment 132 (122-161), 82 (51-75) and 132 (122-163) long respectively. **Tube** 143 (112-133) long, 71 (66) wide at base, 41 (39-41) at middle and 36 (31-36) apex.

Total body length : 1.877-2.254 mm. (1.571-1.979 mm.).

Material : Holotype macropterous ♀, allotype macropterous ♂, and paratypes 9♀♀ (2 macropterous and 7 apterous) and 4♂♂ (4 apterous), within leaf galls of *Eugenia* sp. (Myrtaceae), INDIA : KARNATAKA : Mercara, 31.12.1977. Types in the collections, (TNA) of the Entomology Research Unit, Loyala College, Madras.

2. *Arrhenothrips brevis* sp. n. (Fig. 2)

Macropterous female : Body brown, including mid and hind tibiae. Antennal segments 1, 7 and 8 brown, 2-6 with increasing shades of yellowish brown. Pronotum with distinct polygonal reticulations. Fore-



Eugenia sp. leaf gall

tibia except along outer margin and to little extent on inner margin more yellowish, all tarsi yellowish to yellowish brown. Wings uniformly shaded brown. All setae brown and pointed.

Head 204-214 long, 153-173 wide across eyes, 163-184 across cheeks and 163-184 at base. Eyes 71-82 long, and 41-51 wide, with median ocellus 20 wide, placed 31 from paired ocelli 20 wide, 31 apart. Postoculars 92-102

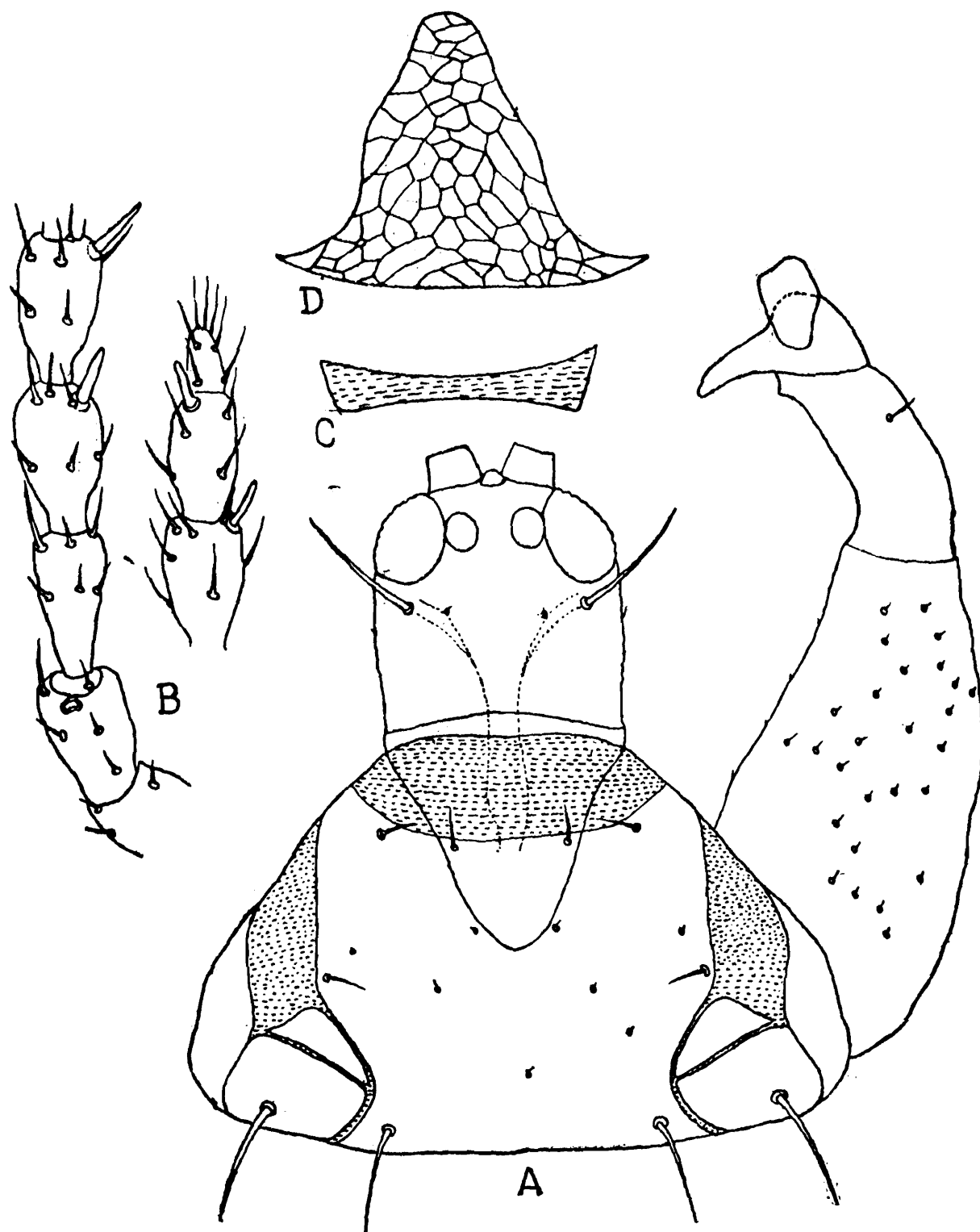


Fig. 2. *Arrhenothrips brevis* : A—Head and Prothorax, B—Antenna, C—Mesopraesternum, D—Pelta.

long. Antennal segments length (width) : 41(31-36) ; 46-51(31-36) ; 56-61(31 ; 51-56 (36) ; 51(36) ; 46-51(31) ; 41-46(26) ; 26 (10) ; sensecones 16-20 long. Mouth cone 163-183 long and pointed, 153-168 wide at base and 26-31 at apex.

Prothorax 240-255 long, 219-234 wide across anterior margin, and 418-439 across posterior margin ; anteroangulars 35-37, anteromarginals 32-35, midlaterals 37-39, postangulars 80-90 and epimerals 112-126. Pterothorax 408-439 long, 393-459 wide across mesothorax and 377-428 wide across metathorax. Fore femora 349-398 long and 122-153 wide ; fore tarsal tooth 6-82 long. Forewings 918-969 long, 92-102 wide at base, 76-82 wide at middle and 51-61 wide at apex ; basal wing setae 61-65, 66-70 and 77-82 long respectively. No double fringes.

Abdomen 388-439 wide at base 367-408 at middle, 286-306 across VIII segment and 163-204 across IX segment. B₁-B₃ of IX segment 152-154, 85-94 and 129-043 long respectively. Tube 184-194 long, 70-82 wide at base 55 at middle and 36 at apex.

Total body length : 2.101-2.519 mm.

Material : Holotypes ♀, paratypes 11♀♀,

within leaf galls of *Eugenia* sp. (Myrtaceae), INDIA : KARNATAKA : Mercara, 31.12.1977. Types in the TNA collections, Entomology Research Unit, Loyala College, Madras.

This species differs from the other Indian species of *Arrhenothrips* in the absence of double fringes.

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