

## NOTES ON NEW AND KNOWN INDIAN THYSANOPTERA.

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This contribution is presented as a continuation of a series of systematic papers on Indian Thysanoptera published till now either by the senior author or jointly by both the writers since 1925. Recent collections and studies having added considerably to supplement our knowledge of these little known insects, it was thought convenient to publish the results of these studies so far completed. In this paper about 23 species of thrips are included ; of these 8 forms appear to be new to science, 4 are found to belong to new genera and 3 of genera not previously recorded from India. In addition to short descriptions of the new forms recorded, bionomical notes are also added under each of the species noted either new or already recorded ones. The idea in presenting this paper is to bring our knowledge of this group of insects up to date as far as possible. The authors are especially indebted to Dr. H. Priesner, the world-famous Thysanopterologist for help and suggestions in the study of these forms.

The species included in this paper are :—

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| 1. <i>Neocorynothrips asiaticus</i> , gen.<br>et sp. nov.                  | 12. <i>Isoneurothrips orientalis</i> Bag.                     |
| 2. <i>Frankliniella sulphurea</i> Schm.                                    | 13. <i>Projectothrips pruthi</i> Moulst.                      |
| 3. <i>Heliothrips kadaliphila</i> Ram.<br>& Marg.                          | 14. <i>Thrips florum</i> Schm.                                |
| 4. <i>Ayyaria chaetophora</i> Ky.  | 15. <i>Thrips tabaci</i> Lind.                                |
| 5. <i>Fulmekiola saccharicida</i> , sp.<br>nov.                            | 16. <i>Gnomonothrips coimbatorensis</i> ,<br>gen. et sp. nov. |
| 6. <i>Taeniothrips brunneicornis</i><br>(Bag.).                            | 17. <i>Oxyrrhinothrips beharensis</i> , sp.<br>nov.           |
| 7. <i>Taeniothrips distalis</i> Ky.  | 18. <i>Oxyrrhinothrips rostrata</i> , sp.<br>nov.             |
| 8. <i>Taeniothrips nigricornis</i> (Schm.).<br>(= <i>longistylus</i> Ky.). | 19. <i>Ecacanthothrips steinskyi</i> Schm.                    |
| 9. <i>Taeniothrips niloticus</i> Pr.                                       | 20. <i>Androthrips melastomae</i> (Zim.).                     |
| 10. <i>Megaphysothrips subramanii</i> ,<br>gen. et sp. nov.                | 21. <i>Neosmerinthothrips gloveri</i> , sp.<br>nov.           |
| 11. <i>Euphysothrips menozzi</i> Bag.                                      | 22. <i>Gynaikothrips pallicrus</i> Ky.                        |
|  | 23. <i>Chiridothrips indicus</i> , gen. et<br>sp. nov.        |

### TEREBRANTIA.

#### **Neocorynothrips**, gen. nov.

This new genus comes near *Corynothrips*, *Trichromothrips* and *Macrurothrips*. It is allied to *Corynothrips* Williams in the head being produced in front of eyes into a triangular process upon which the antennae are inserted. It is allied to *Macrurothrips* Vuillet in the head widened

posteriorly and in having the sixth antennal joint the longest of all ; and lastly it is allied to *Trichromothrips* Priesner in the following characters : i. Antennae 8-jointed ; style 2-jointed, very slender but shorter than joint 6. ii. Bristles of body short. iii. Mouth cone short ; maxillary palpi slender, 2-jointed. iv. Body without any polygonal structures. v. Prothorax at hind angles with 2 moderately long bristles. vi. Bristles of abdominal segment 9 well developed. To sum up the genus can be distinguished by the features stated.

*Genotype*.—*Neocorynothrips asiaticus*, sp. nov.

***Neocorynothrips asiaticus*, sp. nov.**

*Female*.—Length 1.283 mm. General colour light greyish brown with plenty of pinkish pigment on the thorax and greater part of the abdomen ; head, the apical segment of the abdomen, wings and antennal joints 3 to 8 grey ; legs grey and covered with pigment excepting the front tibiae which appear light yellowish ; ocelli with reddish pigment ; eyes black.

*Head*.—Longer than broad ; vertex drawn forward between the bases of the antennae ; the produced portion of the vertex with two or three short spines on each lateral margin, situated to the anterior margin of the eyes ; there is a regular longitudinal conspicuous row of spines along the inner margin of each of the eyes, the row reaching almost to the bases of the antennae ; ocelli placed close to the posterior end of the eyes ; eyes large, projecting ; cheeks more or less corrugated ; mouth cone short and broadly rounded reaching the middle of the prosternum. Antennae elongated : joints 3 to 6 elongated ; joints 7 and 8 almost equal in length ; joint 6 the longest ; joints 3 to 6 more or less of uniform shape and provided with spines ; first two joints of the antennae concolorous with the head.

*Thorax*.—Prothorax broader than long and almost as long as head ; sides clearly arched ; posterior angles with two spines of which one is conspicuous ; anterior angle with a forwardly directed short spine. Fore legs comparatively stouter than the hind legs and fringed with bristles ; hind legs longer and also fringed with bristles. In fact all the legs fringed with bristles. Wings extend to the 8th abdominal segment, elongated and narrow ; lower vein with 11 or 12 setae at equal intervals ; upper vein with 2 spines at the apical region of the wing ; fore wing shows two rows of spines besides the costal but in the upper vein there are very few, practically only two spines at the distal end. Body without polygonal sculpturing.

*Abdomen*.—Elongated, as long as head and thorax together ; segment 9 abnormally elongated, with very strong laterally pointed spines along posterior margin ; segment 10 tubular with shorter spines ; posterior margins of the abdominal segment on the ventral side provided with about half a dozen short bristles in a transverse row.

*Measurements*.—Head : length 0.143 mm., breadth 0.121 mm. ; prothorax : length 0.114 mm., breadth 0.186 mm. ; pterothorax breadth 0.243 mm. Abdomen : length 0.750 mm. 9th abdominal segment length 0.143 mm., 10th abdominal segment length 0.107 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	21	18	64	64	50	79	14	14
Breadth	21	21	14	18	14	14	7	7

Described from a single specimen collected on garden crotons in Coimbatore (V M. Coll.—T. V R. No. 221).

**Frankliniella sulphurea** Schmutz.

1913. *Frankliniella sulphurea*, Schmutz, *Sitz. Akad. Wiss. Wien* CXXII, p. 1019.  
 1925. *Frankliniella sulphurea*, Ramakrishna, *Journ. Bomb. Nat. Hist. Soc.* XXX, p. 865.  
 1926. *Frankliniella sulphurea*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 195.  
 1928. *Frankliniella sulphurea*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 255.  
 1929. *Frankliniella sulphurea*, Moulton, *Rec. Ind. Mus.* XXXI, p. 93.

*Habitat and Locality.*—From Prickly pear flowers, Adoni, Bellary. (T. V R. Coll.—T. V R. No. 415). A very common species noted in almost all flowers; some of the previous records are on Jasmine flowers from Kollegal, on shoots of chillies from Kadiyam, Godaveri, in groundnut flowers from Guntur, in cotton flowers in Coimbatore, etc., and in flowers of *Datura fastosa* at Barkuda Island, Chilka Lake, Orissa.

**Heliothrips kadaliphila** Ramakrishna and Margabandhu.

1931. *Heliothrips kadaliphila*, Ramakrishna and Margabandhu, *Journ. Bomb. Nat. Hist. Soc.* XXXIV, p. 1033.

*Habitat and Locality.*—On Banana, Ponnani, Malabar. (T. V R. Coll.—T. V R. No. 481). Previous record is from the same plant from Coimbatore. This insect was first described from material collected on Banana from Kallar at the foot of the Nilgiri hills in 1930. The insect was later noted on one or two occasions as a fairly serious pest on the same food plant in parts of Malabar and control measures had to be adopted to check its injuries.

**Ayyaria chaetophora** Karny.

1926. *Ayyaria chaetophora*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 193.  
 1928. *Ayyaria chaetophora*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 255.  
 1931. *Ayyaria chaetophora*, Ramakrishna and Margabandhu, *Journ. Bomb. Nat. Hist. Soc.* XXXIV, p. 1034.

*Habitat and Locality.*—On *Dolichos lablab*, Malabar. (K. P. A. Coll.—T. V R. No. 448). Previously collected from castor shoots from Samalkota, on garden croton in Coimbatore and in grass sweepings in Walayar forests, Malabar.

**Fulmekiola saccharicida**, sp. nov.

*Female.*—Length 0.864—0.893 mm. General colour yellowish grey; abdomen of a darker hue; thorax and head light yellowish grey; legs

pale yellowish ; antennal joints 3, 4 and 5 and basal half of 6 pale yellow or hyaline, the upper half of 6 and 7 shaded grey ; eyes black, ocelli with red pigment ; wings light grey ; abdomen and tip of mouth cone of a darker hue.

*Head*.—As long as broad and as long as prothorax ; vertex slightly produced anteriorly and there is a distinct bristle on the vertex near the anterior inner margin of each eye ; head surface behind eyes transversely striated ; there are very minute setae on the cheeks, behind each eye and also along eye margin ; there are also three or four small bristles in a transverse row behind eyes ; cheeks slightly arched ; ocelli crescent-shaped, placed near each other ; mouth cone bluntly tipped and reaching middle of prosternum. Antennal joints 3 and 4 equal, elongate and cylindrical, 2 and 5 equal but 2 stouter, 6 longest and 7 very small, pointed.

*Thorax*.—Each of the posterior angles of the prothorax with two fairly long weak bristles. Pterothorax as long as head and thorax together, broader anteriorly. Wings reaching the 8th abdominal segment. Forewing : costa with 16 spines ; upper vein with 8 spines at the basal fourth, one beyond and another at the distal fourth ; lower vein : with 11 spines in a regular row from opposite the 7th of upper vein and ending just before its last bristle. All legs and joints of antennae, surface of head and prothorax with minute setae.

*Abdomen*.—Abdominal segments of about same breadth up to 8th ; 9th and 10th with some strong bristles directed backwards.

*Measurements*.—Head : length 0.100 mm., breadth 0.100 mm. ; prothorax : length 0.100 mm., breadth 0.121 mm. ; pterothorax breadth 0.157 mm. ; abdomen length 0.543 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII
Length	14	29	36	36	29	43	14
Breadth	16	16	14	14	14	14	7

Described from specimens collected on sugarcane leaves in Coimbatore. (V M. Coll.—T. V R. No. 218).

This species can be distinguished from *Fulmekiola indica* Ram. & Marg. by the variation in measurements of the different parts and in the number of wing spines.

**Taeniothrips brunneicornis** (Bagnall).

1916. *Physothrips brunneicornis*, Bagnall, *Ann. Mag. Nat. Hist.* (8) XVII, p. 218.

1918. *Physothrips brunneicornis*, Bagnall, *Ann. Mag. Nat. Hist.* (9) XIX, p. 206.

1928. *Taeniothrips brunneicornis*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 256.

*Habitat and Locality*.—On Lucerne, Poona, Bombay. (T. V R. No. 281). Species first described from Japan and previously recorded from India on rose at Darjeeling.

**Taeniothrips distalis** Karny.

1913. *Taeniothrips distalis*, Karny, *Arch. Naturg.* 79 A, p. 122.  
 1926. *Taeniothrips distalis*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 196.  
 1928. *Taeniothrips distalis*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 256.

*Habitat and Locality.*—In flowers of *Nepelium litchi*, Pusa (T. B. Fletcher Coll.—T. V. R. No. 263) and on Lucerne, Poona, Bombay. Previously recorded from lab lab flowers, Anakapalle, on sannhemp (*Crotalaria juncea* flowers from Coimbatore and Samalkota and in *Pongamia glabra* flowers from Bangalore. A very common and widely distributed species.

**Taeniothrips nigricornis** (Schmutz).

1913. *Frankliniella nigricornis*, Schmutz, *Sitz. Akad. Wiss. Wien.* CXXII, p. 1020.  
 1923. *Taeniothrips longistylus*, Karny, *Journ. Siam. Socy.* XVI, p. 99.  
 1926. *Taeniothrips longistylus*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 196.  
 1928. *Taeniothrips longistylus*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 258.

*Habitat and Locality.*—On *Mimosa pudica* flowers, Wynaad hills, 2,000 ft. (T. V. R. Coll.—T. V. R. No. 465). Previously recorded from flowers of *Cajanus indicus*, *Crotalaria juncea*, Lucerne and in shoots of *Melia azadarichta* from Coimbatore and from flowers of *Vigna catiang* from Malabar.

**Taeniothrips niloticus** Priesner.

1930. *Taeniothrips niloticus*, Priesner, *Bull. Soc. Roy. Ent. Egypte*, p. 11.

*Habitat and Locality.*—On Babul (*Acacia arabica*), Kollegal and Hanur. (T. V. R. Coll.—T. V. R. No. 330a and 425). Also from Guntur in the same plant (V. M. Coll.). This is the first record of this species for India.

**Megaphysothrips**, gen. nov.

This genus can be separated by the following distinguishing features:—the lower vein with only four but exceedingly long bristles; there is practically only one long postero-angular bristle on prothorax, the second being much smaller; hind margin with six pairs of additional bristles. The genus is also characterised by the presence of a long incurved postocular spine characteristic of *Euphysothrips* Bagnall.

*Genotype.*—*Megaphysothrips subramanii*, sp. nov.

**Megaphysothrips subramanii**, sp. nov.

*Female.*—Length 1.217—1.250 mm. General colour dark yellowish brown; head behind eyes, portions of thorax, antennal joints 1, 2 and 4-8 and all femora yellowish brown; tibiae, tarsi, ocellar region and antennal joints 3-5, 7 and 8 of a lighter yellowish tinge; wings uniformly yellowish grey, base lighter; eyes black, ocelli without pigment; abdomen, ovipositor, head and thorax brownish. Some specimens have a uniform lighter colour.

*Head.*—Slightly broader than long; vertex distinctly produced in front between the bases of the antennae; eyes large and oval, slightly projecting laterally; ocelli indistinct; two or three short postocular setae, one of these projecting beyond each cheek; the setae are more or less arranged in a transverse line on the head behind eyes; also one short bristle abutting the inner margin of the eye also placed posteriorly; away from the eyes, in between, two more bristles; from the posterior margin of the eyes a long inward curved spine; again in between eyes two short bristles; thus head beset with short bristles or setae; head behind eyes transversely striated; cheeks slightly arched behind eyes, margin slightly corrugated. Antennal joints 1 and 2 short, stout and cylindrical; joint 3 slightly constricted at base, gradually widens and again narrows towards apex, almost jar-shaped; joint 4 the longest, more or less of similar shape as joint 3 but with no basal constriction; joint 5 narrow at base and of almost the same breadth beyond; joint 6 as broad as 5 at base and narrowing distally; joints 7 and 8 short and narrow; joints 3 and 4 with forked sense cones. Mouth cone short and blunt extending to middle of prosternum.

*Thorax.*—Prothorax almost of the same length as or slightly longer than the head and much broader than head; prothorax itself broader than long; sides of prothorax distinctly arched; surface fringed with a number of minute setae; anterior and posterior margins with 13 to 14 spines in a line; each of the posterior angles with two not very conspicuous spines. Pterothorax broad, longer than head and thorax together, and lateral sides rounded or convex and broader than prothorax. Legs of uniform size and colour. Wings: costa of upper vein with 20-21 spines; upper vein: one-fifth away from the base 3 distinct spines and with 9 spines on the whole; lower vein with 4 conspicuously long spines placed farther apart; the wing-scale with 2 or 3 spines at apex.

*Abdomen.*—A transverse fringe of cilia along apical margin of 8th segment; posterior abdominal segments with conspicuous lateral spines and 9th segment with 6 or 8 long spines along apical margin longer than those on 10th segment; 9th segment longer than 10th; abdomen broadest between 5th and 7th segments.

*Measurements.*—Head: length 0.100 mm., breadth 0.136 mm.; prothorax: length 0.114 mm., breadth 0.164 mm.; pterothorax breadth 0.228 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	14	29	50	57	36	43	7	7
Breadth	21	21	21	21	21	14	7	7

Described from specimens found feeding on coffee rust, Dodhkan Estate, Mysore, collected by Mr. T. V. Subramaniam, Mysore State Entomologist after whom the authors have named the species. (T. V. R., No. 331).

Genus **Euphysothrips** Bagnall.

1926. *Euphysothrips*, Bagnall, *Ann. Mag. Nat. Hist.* (9) XVIII, p. 646.

This is the first record of the genus from India. It was originally erected by Bagnall and is characterised by the following features according to him: "head widening from behind eyes to base; antennae with 2-jointed style; mouth-cone long reaching across prosternum; maxillary palpi 3-jointed, long; two pairs of long postocular bristles; two long bristles at each hind angle of the pronotum, the outer much longer than the inner; lower vein of fore wing without a regular series of setae, but with a few scattered ones; fringe of abdominal tergite 8 long." The genus is easily recognised chiefly by the presence of two pairs of postocular bristles and the chaetotaxy of the wing which corresponds to that of *Anaphothrips* Uzel in having both veins of forewing furnished with a few scattered setae.

The following key may be found useful in distinguishing the allied genera:

- I. Fore vein of forewing with distinct intervals between groups of spines, (posterior vein with regularly placed spines).
  - i. Forewing with transverse bands .. *Taeniothrips*, s. str.
  - ii. Forewing without transverse bands .. *Physothrips* Karny.
- II. Lower vein of forewing without a regular series of setae, but with a few scattered ones; two pairs of long postocular bristles .. *Euphysothrips* Bagnall.
- III. Both veins of forewing regularly set with spines .. .. *Isochaetothrips* Moulton.

**Euphysothrips menozzi** Bagnall.

1926. *Euphysothrips menozzi*, Bagnall, *Ann. Mag. Nat. Hist.* (9) XVIII, p. 646.

1927. *Euphysothrips menozzi*, Bagnall, *Ann. Mag. Nat. Hist.* (9) XIX, p. 570.

1933. *Euphysothrips menozzi*, Priesner, *Bull. Soc. Roy. Ent. Egypte*, 1-3, p. 4.

*Habitat and Locality.*—On ears of cumbu (*Pennisetum typhoideum*), Koilpatti, South India. (T. V R. Coll.—T. V R. No. 431). Also on Lucerne from Coimbatore (V M. Coll.—T. V R. No. 431). The species was first described by Bagnall from insects obtained from flowers of *Clematis vitalba* from France. Priesner has recorded both sexes from Egypt "in the vineyards belonging to the Royal Khassa where it very likely lives on grasses which grow between the vines."

**Isoneurothrips orientalis** Bagnall.

1915. *Isoneurothrips orientalis*, Bagnall, *Ann. Mag. Nat. Hist.* (8) XV, p. 593.

1926. *Isoneurothrips orientalis*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 197.

1928. *Isoneurothrips orientalis*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 261.

*Habitat and Locality.*—On Jasmine, Poona, Bombay. (T. V R. No. 285). First noted in Sarawak in 1915 and the previous records are from flowers of *Morinda tinctoria* and Jasmine from Coimbatore and Kollegal.

**Projectothrips pruthi** Moulton.

1929. *Projectothrips pruthi*, Moulton, *Rec. Ind. Mus.* XXXI, p. 96.

*Habitat and Locality*.—On Screwpine (*Pandanus*), Coimbatore. (T. V R. Coll.—T. V R. No. 482). The specimens collected generally agree with the description of Moulton and especially in the possession of an extra long joint of the antennae. First noted in Orissa.

**Thrips florum** Schmutz.

1913. *Thrips florum*, Schmutz, *Sitz. Akad. Wiss. Wien* CXXII, p. 1003.

1926. *Thrips florum*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 198.

1928. *Thrips florum*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 261.

1929. *Thrips florum*, Moulton, *Rec. Ind. Mus.* XXXI, p. 98.

1934. *Thrips florum*, Ramakrishna, *Rec. Ind. Mus.* XXXVI, p. 493.

*Habitat and Locality*.—On Tea and Rose flowers from Byrekhan, Mysore. (D. S. Rao Coll.—T. V R. Nos. 417 and 429). Priesner is of opinion that the one on rose flowers is a variety with somewhat shorter antennae and with the 4th antennal joint pale at basal fourth.

**Thrips tabaci** Lindeman.

1888. *Thrips tabaci*, Lindeman, *Die Schädl. Ins. d. Tabac. Basl. Bull. Soc. Imp. Nat. Moscou* I, p. 10.

1902. *Thrips tabaci*, Hinds, *Proc. U. S. Nat. Mus.* XXVI, p. 179.

1926. *Thrips tabaci*, Karny, *Ent. Mem. Dept. Agri. India* IX, p. 199.

1928. *Thrips tabaci*, Ramakrishna, *Ent. Mem. Dept. Agri. India* X, p. 265.

1932. *Thrips tabaci*, Ramakrishna, *Agri. and Livestock, India* II, p. 394.

*Habitat and Locality*.—On Daisy flowers, Ootacamund, Nilgiri Hills (T. V R. No. 288). A species of very great economic importance and a serious pest of onions and hence popularly called the "onion thrips". Previous Indian records are from cabbage, onion, garlic, cotton, etc. It has a world wide distribution.

**Gnomothrips**, gen. nov.

This genus comes close to *Rhaphidothrips* Uzel but the antennae are different. It can be easily distinguished by the antennal structure and the feeble general armature of the body. The generic characters are as given for the species *G. coimbatorensis*—the genotype described below.

**Gnomothrips coimbatorensis**, sp. nov.

*Female*.—Length 1.133 mm. General colour yellowish grey suffused with red pigment especially on thorax; head, abdomen and antennae of darker hue; eyes black, ocelli with red pigment; legs and wings of a lighter yellowish colour. Body comparatively long, thorax and abdomen being appreciably so.

*Head*.—Surface of head smooth; cheeks slightly arched; head slightly produced forwards, not armed; anterior ocellus close to the vertex and the other two placed very close to the inner margin of each eye towards its anterior end; mouth cone short reaching middle of prosternum. Antennal joints 4 and 6 equal, both being long, widening at middle and narrowing towards apex; joints 3 and 4 short and broad; 7 small and 8 longer than 7 and narrow.



*Thorax.*—Each of the posterior angles of prothorax with two long weak bristles. Legs comparatively short; fore femora slightly swollen; all legs unarmed; hind tibia with a short stout spur at inner margin of apex. Wings reach 6th abdominal segment.

*Abdomen.*—Abdomen long and of almost uniform breadth up to the 8th segment, beyond which it narrows towards the anal end; anal apex feebly armed.

*Measurements.*—Head: length 0.129 mm., prothorax: length 0.143 mm.; pterothorax: breadth 0.193 mm.; abdomen: length 0.643 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	21	21	32	43	29	43	9	14
Breadth	18	18	21	21	14	18	7	7

Described from a single specimen obtained from *Cyperus bulbosus*, Coimbatore. (V M. Coll.—T. V R. No. 226).

***Oxyrrhinotrips beharensis*, sp. nov.**

*Female.*—Length 1.00 mm. General colour golden yellow; body margin narrow and apex of mouth cone dark; ocelli with orange red pigment; antennal joints 3 to 8 greyish; eyes large and black; wings hyaline with fringes grey.

*Head.*—Head slightly broader than long; vertex not arched; cheeks almost straight; eyes large and roundish; mouth cone pointed and reaching beyond prosternum. Antennal joints 3 to 6 more or less similar in structure; joint 7 smallest of all; joints with short bristles.

*Thorax.*—Prothorax broader and longer than the head and broader than long; sides arched and slightly broadening posteriorly; posterolateral angle of each side with two long bristles. Pterothorax broadest region of the body. Two conspicuous spurs on the hind tibiae. Wings reaching almost the apex of the abdomen; basal portion of upper vein with 7 or 8 spines, one in the middle and distally two to three; the lower vein with 14 spines in a regular row; the row of bristles on the lower vein begins almost opposite to the 7th basal setae of the upper vein.

*Abdomen.*—Abdomen long, gradually broadening from the 1st to the 6th and slightly narrowing down; 9th and 10th forming a cone pointed below and almost equal in length; abdominal segments distinct and with lateral spines.

*Measurements.*—Head: length 0.100 mm., breadth 0.129 mm.; prothorax: length 0.129 mm., breadth 0.164 mm.; pterothorax: breadth 0.228 or 0.200 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	21	29	43	57	36	43	7	7
Breadth	21	21	14	14	14	14	7	7

Described from specimens got on Mango, Pusa. (D. P. S. Coll.—T. V R. No. 230).

**Oxyrrhinothrips rostrata**, sp. nov.

*Female*.—Length 0.817 mm. This is different from the last species *O. beharensis* (No. 230) and is distinguished by the following features : i. Mouth cone distinctly elongated and tubular reaching middle of the mesosternum ; ii. cheeks distinctly arched and narrowing abruptly behind ; iii. body comparatively longer ; iv. prothorax much more conspicuous ; v. the postangular prothoracic spines more conspicuous ; vi. the outer margin of the front tibiae armed with short setae ; and vii. the posterolateral spines of the 9th and 10th abdominal segments also more conspicuous. On the whole the armature and mouth cone very strong and conspicuous. In most other respects it is similar to *O. beharensis*.

*Measurements*.—Head : length 0.075 mm., breadth 0.100 mm. ; prothorax : length 0.083 mm., breadth 0.117 mm. ; pterothorax breadth 0.183 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	17	17	33	33	33	38	8	4
Breadth	17	17	17	17	17	17	8	4

Described from a single specimen obtained from cotton in Coimbatore. (T. V R. Coll.—T. V R. No. 266).

## TUBULIFERA.

**Ecacanthothrips steinskyi** Schmutz.

1913. *Ecacanthothrips steinskyi*, Schmutz, *Sitz. Akad. Wiss. Wien* CXXII, p. 1028.

1930. *Ecacanthothrips steinskyi*, Priesner, *Treubia* XI, p. 362.

*Habitat and Locality*.—Collected from Cotton by the Mysore State Entomologist Mr. T. V Subramaniam in Mysore. (T. V R. No. 371). Priesner gives a key to the species of the genus (Priesner, 1930). The species is a new record for India.

**Androthrips melastomae** (Zimmermann).

1900. *Mesothrips melastomae*, Zimmermann, *Bull. Inst. Bot. Buitenzorg* VII, p. 17.  
 1912. *Androthrips melastomae*, Karny, *Marcellia* XI, p. 153.  
 1913. *Androthrips melastomae*, Karny and Docters v. Leeuwen-Reijnvaan, *Bull. Jard. Bot. Buitenzorg*, (2) X, p. 66.  
 1923. *Androthrips melastomae*, Karny, *Treubia* III, p. 314. (Reference).

*Habitat and Locality.*—In galls of some wild plant, Nilgiri hills (S. Rao. Coll.—T. V R. No. 376).

**Neosmerinthothrips gloveri**, sp. nov.

*Female.*—Length 2.583–2.933 mm. General colour dark grey with portions here and there lighter; isolated patches of reddish pigment on the different parts of the body; eyes black; antennal joints 1, bases of 2, 5, 6, 7 and 8, head, thorax and tube of a darker hue; all the femora, middle and hind tibiae, abdominal joints, and antennal joints 3 and 4 are of a lighter tinge; antennal joint 3 and foretibiae and all tarsi paler; wings hyaline with borders faintly yellowish, fringes grey.

*Head.*—Head slightly longer than broad; cheeks almost parallel; eyes large; ocelli conspicuous with slight pigment, the posterior two placed in a line with the hind margin of the eyes; one long postocular bristle projecting laterally forwards over the eyes; cheeks with isolated spines behind the eyes; mouth cone short and bluntly pointed, not reaching the middle of prosternum. Antennae elongate, slightly longer than head, 8-jointed; joint 1 short as usual cup-shaped; 2 also cup-shaped, broad towards apex and narrowed at base; 3 to 6 almost similar in shape, narrowed at base and broadening towards apex; 7 of almost same breadth throughout, and the last pointed; all the joints carry bristles; 3 and 4 with conspicuous sense-cones also.

*Thorax.*—Prothorax broader than head but shorter in length; each of the posterior angles carries a pair of spines and there are two or three smaller ones along posterior margins. Fore legs with the femur swollen; the tarsus with a stout conspicuous tooth; the outer margin of the front tibiae slightly curved. Wings with cross fringes 10 or 11; 4 short spines on the wing-scale.

*Abdomen.*—Abdomen elongate, longer than head and thorax together; wing-retaining spines of the abdominal segments 3 to 5 conspicuous.

*Measurements.*—Head: length 0.329 mm., breadth 0.279 mm.; prothorax: length 0.221 mm., breadth 0.421 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	43	64	93	86	71	64	50	36
Breadth	29	36	29	34	29	29	29	14

Described from specimens obtained on *Zizyphus jujuba* in Namkum, Ranchi, by Mr. P. M. Glover. (T. V R. No. 450).

Though the general form of this insect appears to be that of *Mesothrips*, the shape of the head, prothorax, tube, wings and antennae bring it nearer to *Bolothrips* Priesner; but this does not belong to this latter genus either as the fore legs of the female are stout and the tarsi heavily toothed as in certain species of *Neosmerinthothrips* Schmutz; the head and antennae are however considerably longer than in recorded species of the latter.

We have pleasure in naming this insect after Mr. P. M. Glover, Entomologist, Lac Research Institute, Ranchi, who discovered the insect and allowed us to study it.

### **Gynaikothrips pallicrus** Karny.

1923. *Gynaikothrips pallicrus*, Karny, *Treubia* III, p. 315.

*Habitat and Locality*.—On some wild plant galls, Nilgiri Hills. (S. Rao. Coll.—T. V R. No. 377). The species is not recorded before from India. Karny has described his species from Malaya collected on leaves of *Vitis lanceolaria*.

### **Chiridothrips**, gen. nov.

This is an interesting new genus which can conveniently be included under the group *Plectrothripini* of Priesner. The characteristic and noteworthy features are: i. the long tube; ii. the large prothorax; iii. the short middle antennal joints as in *Margaritothrips*; iv. especially the produced antennal joints in joint 2 as in *Chirothrips*; v. one of the legs probably with a tooth-like projection; and vi. fore femora seem to have 1-2 teeth inside and may be fore tibiae as well.

*Genotype*.—*Chiridothrips indicus*, sp. nov.

### **Chiridothrips indicus**, sp. nov.

*Female*.—Length 1.229 mm. General colour dark brown; tube, posterior portion of abdomen and hind tibiae and 1st antennal joint dark brown; the rest with the exception of antennal joints yellowish grey; the hind part of 2nd joint and the tip of 8th joint dark grey; the rest of the antennal joints uniformly light yellowish; eyes dark, ocelli with deep pigment.

*Head*.—Head slightly longer than broad or almost rounded in front with cheeks arched; cheeks carry a conspicuous bristle behind eye; mouth cone broadly triangular, almost reaching the hind margin of prosternum. Antennae apparently 7-jointed, no marked division between 7th and 8th joints; looks like a 7-jointed specimen. It is curious to note that the specimen shows only 7 joints in both the antennae; the 1st, *i.e.*, the basal joint very short and stout; the 2nd joint more or less funnel-shaped, broadened towards the outer margin distally; joints 3 to 6 narrow at base and broadening distally; 7th narrow and not bulging; the last joint elongate.

*Thorax*.—Prothorax with front margin short, hind margin very broad, general shape pyramidal with the sides curved and arched out-

wards ; anterior portion of thorax curved like a hat and each of the anterior angles with a forwardly directed spine ; each of the posterior angles with two long bristles ; pterothorax of uniform breadth throughout gradually narrowing posteriorly, broadest towards the base. Legs short. Wings reaching almost to the last abdominal segment ; wing-retaining spines are conspicuous on the abdominal segments.

*Abdomen.*—Ninth abdominal segment with two spines on each lateral side almost half as long as the tube. Tube elongated, provided with 5 or 6 spines at the tip.

*Measurements.*—Head : length 0.179 mm., breadth 0.157 mm. : prothorax : length 0.143 mm., breadth 0.314 mm.

*Antennal joints.*

—	I	II	III	IV	V	VI	VII	VIII
Length	29	43	36	36	36	36	29	43
Breadth	..	36	29	29	21	18	14	11

Described from a single specimen on *Dolichcs lablab*, in Coimbatore. (V M. Coll.—T. V R. No. 224).