

## THYSANOPTERA OF THE GEENTON

(Continued from page 46)

*Glyptothrips barythripoides* n. sp.

**FEMALE** (Aparous). General body color uniform narcissus yellow (Dictionary of Color—Maers and Paul, Plate 10) with much red hypodermal pigment. Antennae shading to brown at tip. Tube darker, harvest yellow (Plate 12) tipped with blackish brown.

Head about 1.3 times as long as wide. Cheeks slightly arched, converging very slightly posteriorly. Dorsum deeply reticulated, ventral surface less deeply reticulated. Eyes small, occupying but little more than a sixth of the length and a third of the width of the head, protruding, showing about six facets in lateral outline. Ocelli large but colorless, situated far forward, posterior pair opposite middle of eyes; anterior directed forward. Bordered by dark red crescents. Postocular bristles, about as long as eyes, curved inward, blunt, thick and heavy but of the color of head and not conspicuous, situated far out on cheeks. Post ocellar bristles and a pair midway between the eyes and the posterior border small and inconspicuous. Mouth cone very broadly rounded, short, scarcely reaching the middle of the short prothorax.

Antennae about twice as long as head. Segments 1 and 2 concolorous with the head, 3 to 8 progressively shaded darker with brown, pedicels of 3-6 brownish yellow. Sense cones long and thick but colorless. Bristles darker, long, heavy blunt.

*Prothorax* but half as long as head and, including coxae, nearly three times as wide as long. Outer bristles on posterior angles heavy, curved, blunt, light colored; inner similar but smaller. Surface of thorax and abdomen reticulated but much more finely so than head.

*Pterothorax* about as wide as prothorax, sides nearly straight and parallel; anterior angles very sharp.

Abdomen thick and heavy; gray blotches in the middle of segments 3-8. Bristles short, thick, and curved except two pair on segment 9, which are slender, pointed and three-fourths and two-thirds respectively as long as tube. Tube very long and heavy, with prominent longitudinal grooves suggesting *Barythrips* or *Symphyothrips*.

Measurements (average of type and 4 paratypes): Total body length 1.4 mm.; head, length .20 mm., width .155 mm.; prothorax, length .10 mm., width, including coxae .28 mm.; mesothorax, width .28 mm.; abdomen, width .34 mm. Tube length .21 mm., width at base .08 mm., at apex .03 mm. Antennal segments, length (width) I, 41 (35); II, 48 (34); III, 61 (27); IV, 56 (29); V, 53 (26); VI, 46 (23); VII, 37 (19); VIII, 32 (12) microns. Total length .33 mm.

**MALE.** Very similar to female but smaller, especially the tube. Measurements of type. Total body length 1.19 mm.; head, length .17 mm., width .14 mm.; prothorax, length .095 mm., width including coxae .21 mm.; mesothorax, width .23 mm.; abdomen, width .26 mm.; tube, length .15 mm., width at base .065 mm., at apex .028 mm. Antennal segments, length (width) I, 37 (30); II, 40 (28); III, 52 (25); IV, 47 (26); V, 44 (23); VI, 42 (21); VII, 30 (18); VIII, 28 (10).

In shape of the antennal segments this species resembles very closely the last. The pedicel of the 3rd segment is very long

and slender and has a subbasal annulation suggesting that of the *tritici* group of *Frankliniella*. Its spines are much heavier and the tube strikingly different.

Described from 16 females and 5 males all from moulding leaves, Gainesville, Fla. (Nov. 3 & 17, 1929, & Jan. 19, 1930; Winter Park, Fla., May 3, 1934; Gulf Hammock, Fla., Feb. 6, 1932 (A. N. Tissot); Micanopy, Fla., Aug. 13, 1933; Petersburg, Va., Sept. 3, 1933 (J. W. Kea); Pearl River, Miss., Dec. 28, 1931 (Erdman West); Gatlinburg, Tenn., Aug. 15, 1932; decaying pine needles, Trenton, Fla., May 8, 1934 (A. N. Tissot).

The heavy tube, suggestive of *Barythrips* and *Synthothrips* differentiates this species from all others. The antennae are very similar to those of the preceding species.

*Glyptothrips batesi* n. sp.

FEMALE. Length about 1.0 mm. General color canary yellow (Maers & Paul, Dictionary of Color, Pl. II, L. 3) with much hypodermal pigment, purple by transmitted light; bright red by reflected. Thorax, antennal segment 3, and especially abdomen heavily shaded with brown; tube and antennal segments 4-8 Mandalay brown.

Measurements: (Average of 9 paratypes and type). Total body length from .86 mm. to 1.6 mm. (The variation in length is chiefly in the abdomen.) Head, length .17 mm., width .13 mm.; prothorax, length .12 mm., width (including coxae) .22 mm.; pterothorax, width .21 mm.; abdomen, greatest width .33 mm.; tube, length .11 mm., width at base .066 mm., at apex .031 mm. Antennal segments, length (width) I, 37 (36); II, 44 (31); III, 63 (28); IV, 56 (28); V, 54 (24); VI, 51 (23.8); VII, 40 (20); VIII, 38 (11) microns. Total length .38 mm.

Head about a third longer than wide; frons sharply angular, and extending well beyond the eyes, acuminate between the bases of the antennae. Cheeks strongly arched, sharply constricted behind the eyes. Dorsum faintly reticulated; cheeks more strongly. Postocular bristles stout and long but nearly colorless, extending well beyond the eyes, capitate. Two weak bristles between the eyes. Eyes small, showing from three to five large facets in lateral outline, bulging, almost black, pilose.

Mouth cone broadly rounded reaching about half way across prosternum. Antennae a little more than twice as long as the head; segment I concolorous with the head; II somewhat, and III considerably darker; 4-8 almost uniformly Mandalay brown, pedicels of IV and V lighter. Segment 8 pedicelled.

Prothorax, a third shorter than the head and (including coxae) nearly twice as wide as long. Long bristles with colorless capitate ends on anterior and posterior angles and along the lateral margin at about a fourth of the distance from the anterior margin. These bristles are slightly curved and all fully half as long as prothorax.

Pterothorax, considerably narrower than the prothorax, sides nearly straight and parallel. A single bristle near each lateral margin nearly

as long as those on prothorax. Legs concolorous with the head, tarsi a little lighter. Fore tarsus with a stout curved spine.

Abdomen usually short and heavy but sometimes rather long and slender. Darker than prothorax; in some specimens almost black. Bristles on segment 9 nearly as long as tube, a short, straight, thick bristle on each anterior angle of segment 1. Tube short and thick. Lighter in apical third. Terminal bristles short; none as long as tube.

WINGED FEMALE. Very similar to apterous female except in the presence of ocelli and wings. Ocelli situated far forward; posterior pair but little posterior to anterior margins of eyes; anterior on vertex between the bases of the antennae; margined by orange-red crescents.

Wings, long (membrane reaching base of tube) but narrow, almost uniformly brown in color.

MALE. Similar to female but usually smaller and abdomen much more slender, usually somewhat darker. Legs more slender. Fore tarsal tooth no larger than in female. Eyes somewhat larger, showing six or seven facets in lateral outline.

Measurements: (Average of ten males). Total body length .95 mm. Head, length .14 mm., width .12 mm.; prothorax, length .09, width (including coxae) .21 mm.; pterothorax, width .18 mm.; abdomen, greatest width .24 mm.; tube, length .096 mm., width at base .05 mm., at apex .028 mm. Antennal segments, length (width) in microns, I, 28 (32); II, 40 (25); III, 59 (24); IV, 51 (22); V, 46 (21); VI, 44 (20); VII, 36 (18); VIII, 33 (11). Total length .33 mm.

NYMPHS. Pale straw yellow in color with much hypodermal pigment, purple by transmitted, yellow by reflected light. In the nymphs of *G. reticulatus* the pigment is bright red.

Antennal segment I is concolorous with the head; II to VII progressively darker; VI and VII grayish-brown. II is oval in outline; III to VI top-shaped, pedicelled; VII club-shaped, pedicelled, and about as long as VI. The nymph of *G. reticulatus* of corresponding length is considerably darker, light brownish gray. Antennal segment II is colorless in apical .4. Antennal segments III to V cup-shaped, not pedicelled. VI nearly square in outline. VII conical, longer than V and VI together, broadly joined to VI.

Described from several hundred apterous females and a single winged one, and many males. This is a common species in moulding leaves on the forest floor. Next to *Trichothrips pergandei* Hood it is usually the most common thrips in such situations. First collected at Gainesville, Fla., by Marston Bates, after whom the species is named. Collected from many localities in Florida, as far south as Mulberry in Polk Co., in the Cherokee National Forest in northern Georgia, and in the Great Smoky National Park near Elkmount, Tenn.

*Glyptothrips eddeyi* n. sp.

APTEROUS FEMALE. Body color brown (weathered oak—Maerz and Paul, 1930, Plate 8, L. 11) head and first four antennal segments lighter, legs amber yellow. Body length about 1.1 mm. (varying from .81 mm. to 1.4 mm.)

Head about as wide as long, frons rounded, projecting but little in front of the eyes; cheeks slightly rounded; dorsum with very weak reticulation, usually visible only on the sides and near posterior margin. Postocular bristles very long (93 microns in the type), pointed. A pair of conspicuous bristles situated posterior to the postocular and a third of the distance to the posterior margin of the head. Eyes small, showing 4 or 5 facets in lateral outline, ocelli lacking. Cheeks sharply constricted behind the eyes but eyes not so markedly bulging as in the other species. Mouth cone broadly rounded, reaching about half way across the prosternum. Antennae about 2.5 times as long as the head, first four or five segments concolorous with or a little lighter than the head, last three or four rather abruptly darker (weathered oak). Segment 2 cup-shaped, 3 top-shaped, 4 nearly spherical (except for the pedicel), 5-7 oval in outline, 8 conical, all with broad pedicels. Sense cones long and heavy but colorless, bristles also colorless.

Prothorax about twice as wide as long, bristles on posterior angles long (outer about 116 microns), pointed. Legs rather slender and weak. Fore tarsus unarmed.

Bristles on the 9th segment of the abdomen longer than the tube. Tube about as long as the head and about half as wide at the base; lighter distally; terminal bristles shorter than the tube.

Measurements: (Average of type and 9 paratypes). Total body length 1.1 (from .8 to 1.4). Head, length .13 mm.; width .134 mm. Prothorax, length .12 mm., width (including coxae) .23 mm. Mesothorax, greatest width .21 mm. Abdomen, greatest width .27 mm. Tube length .133 mm., width at base .068 mm., at apex .035 mm. Antennal segments, length (width) I, 42.5 (37); II, 43.8 (32); III, 52 (34); IV, 46 (35); V, 45 (32); VI, 43 (28); VII, 41 (26); VIII, 35 (16) microns. Total length .34 mm.

APTEROUS MALE. Similar to female but decidedly smaller, and body darker in color, especially the abdomen. Fore femora not enlarged, fore tarsus unarmed.

Measurements of type: Total body length .64 mm. Head, length .106 mm., width .116 mm. Prothorax, length .119 mm., width (including coxae) .22 mm. Mesothorax, greatest width .21 mm. Abdomen, greatest width .21 mm. Tube, length .117 mm., width at base .069 mm., at apex .032 mm. Antennal segments, length (width) I, 35 (38); II, 35 (30); III, 44 (31); IV, 40 (33); V, 40 (28); VI, 40 (25); VII, 37 (23); VIII, 35 (14) microns. Total length .275 mm.

Described from eighty females and two males taken from clumps of broom sedge (*Andropogon*) at Clemson College, S. C. (first collected by Dr. C. O. Eddy, after whom the species is named), also by O. L. Cartwright and J. C. Watts; near Asheville, N. C. (Arthur Jacot, collector); at Gainesville, Fla., by the author; from a "swamp grass", Clemson College, S. C. (C. L. Cartwright); bluegrass, Walhalla, S. C. (J. C. Watts);—November to February.

**Glyptothrips flavescens** Hood

The male of this species seems never to have been described. The writer has in his possession a single male collected at Ames, Ia., Nov. 14, 1932 by Floyd Andre.

APTEROUS MALE. Identical with the female in color but appreciably smaller.

Measurements: Total body length 1.3 mm. Head, length .16 mm., width .17 mm. Prothorax, length .105, width (including coxae) .245 mm. Mesothorax, greatest width .26 mm. Abdomen, greatest width (at segment 2), .32 mm. Tube, length .14 mm., width at base .06 mm., at apex .028.

Antennal segments, length (width): I, 47 (37); II, 51 (37); III, 49 (31); IV, 46 (34); V, 47 (32); VI, 42 (28); VII, 69 (23) microns. Total length .35 mm.

The following key will aid in the separation of the five species:

- a. Antennae 7-segmented, color almost uniformly brown; pterothorax much wider than prothorax.....*flavescens* Hood
- aa. Antennae 8-segmented; pterothorax but little or no wider than prothorax; at least partly yellow or yellowish brown.
  - b. Tube half as wide as head, heavy and ribbed, body bristles long and slender, those at posterior angles of prothorax nearly as long as prothorax.....*barythripoides*
  - bb. Tube not half as wide as head, not ribbed or especially heavy.
    - c. Intermediate antennal segments abruptly contracted to long, slender pedicels; postoculars short, barely reaching the eyes, or entirely lacking; entire head heavily reticulated .....*reticulatus*
    - cc. Intermediate antennal segments gradually contracted to short pedicels; postoculars conspicuous.
      - d. Postoculars robust and capitate, reaching about the anterior margins of the eyes; vertex faintly but evidently reticulated.....*batsei*
      - dd. Postoculars slender, reaching far beyond the eyes, pointed; reticulations evident only on sides of head and near the posterior margin.....*eddeyi*

**ALLOTHRIPS**

Two species of this genus occur in the geenton, but in different habitats.

**A. megacephalus** Hood

This species was described from specimens taken under bark of various trees. The writer has taken 42 females and 28 males from (in order of abundance) *Tillandsia* sp. on tree trunks, Spanish moss, "boots" of leaves on palm trees, dry leaves on

ground (3 specimens), bark of pecan trees, lichens, Jew's ear fungus; at Gainesville, Astatula, Quincy and Citra, Fla.

*A. nubillicauda* n. sp.

**APTEROUS FEMALE.** General body color brownish yellow, abdomen darker, especially the posterior segments. Antennal segments 4-7 and often 3 abruptly brown, 1 often shaded with brown. Posterior one-sixth of tube abruptly brown.

Head considerably longer than wide, widest in posterior half, cheeks strongly arched; faintly reticulated, provided with few or many thick, short, knobbed, colorless bristles (a few such bristles occur on the femora of *A. megacephalus* but not on the cheeks). Postocular bristles nearly as long as the eyes, stout but colorless, strongly capitate. Dorsum smooth. Eyes small, composed of only a few large facets; ocelli absent. Mouth cone broadly rounded, reaching nearly to mesosternum. Antennae nearly one and a half times as long as head. Segment II cup-shaped; III top-shaped; IV-VI roughly spherical, except for the wide pedicels and prolonged on ventral side; VII conical.

Prothorax considerably shorter than head and (including coxae) about twice as wide as long. A short, thick, capitate, colorless bristle on each posterior angle and a much shorter one on each anterior angle.

Pterothorax considerably narrower than the prothorax; sides nearly straight. Legs rather slender. Fore tarsus unarmed.

Abdomen thick and heavy. Bristles few and short, those on segment 9 about two-thirds as long as tube. Tube short and wide; terminal bristles scarcely as long as the tube.

Measurements: Total body length 1.4 mm. (varying from 1.13 mm. to 1.6 mm.). Head, length .24 mm., width .195 mm.; prothorax, length .15 mm., width (including coxae) .32 mm.; pterothorax .28 mm.; abdomen, greatest width .41 mm. Tube, length .14 mm., width at base .08 mm., at apex .04 mm. Antennal segments, length (width): I, 44 (47); II, 58 (39); III, 59.5 (37); IV, 46 (39); V, 45.5 (35); VI, 44 (33); VII, 66 (28) microns. Total length .34 mm.

**MALE.** Very similar to the female in coloration but considerably smaller, especially the abdomen. Fore femora considerably enlarged and fore tarsus armed. This tooth varies considerably in size, slightly curved.

Measurements: Total body length 1.04 mm.; head, length .20 mm., width .156 mm.; prothorax, length .115 mm., width (including coxae) .25 mm.; pterothorax, width .22 mm., abdomen, greatest width .27 mm.; tube, length .14 mm., width at base .06 mm., at apex .03 mm. Antennal segments, length (width): I, 44 (41); II, 52 (34); III, 55 (34); IV, 43 (36); V, 41 (34); VI, 42 (31); VII, 62 (28). In lateral profile segments IV, V, and VI are 48, 46 and 44 microns respectively in length. Total length .29 mm.

Described from about two hundred males and females taken at Gainesville, Mayo, Ft. White, Monticello, Micanopy, Perry, Quincy, Astatula, and Lower Matecumbe Key (G. F. Weber), Fla., and at Birmingham, Ala. (H. E. Bratley), all from moulding leaves on the forest floor except a few from Spanish moss. Taken during all months of the year.

This is distinctly an inhabitant of moulding leaves on the forest floor, very distinct from the preceding species, in ecologi-

cal distribution, which is distinctly an inhabitant of the bark of trees and epiphytes growing on tree trunks.

Easily told from *A. megacephalus* by the much lighter color, longer and differently shaped head and the coloration of the tube. That of *megacephalus* is sometimes clouded apically but the cloud lacks the definite boundaries of this species and is not nearly as dark.

### TRICHOTHRIPS

#### *T. pergandei* Hood

This is by far the most common species in moulding leaves on the forest floor. Over two hundred individuals have been taken in a half bushel of such leaves. It has been taken in practically all stations where such material has been collected thruout the northern half of Florida but has not been taken south of Polk County. Also taken at Asheville and Bent Creek, N. C. (Arthur Jacot, Coll.), Elkmount and Gatlinburg, Tenn., Petersburg, Va. (J. W. Kea, Coll.), Clemson College, S. C. (J. C. Watts, Coll.). A few have been taken in woody fungi (*Polyporus versicolor*, Lentinus), in epiphytes on tree trunks, and a single specimen in a morning glory blossom at Pigeon Forge, Tenn. It occurs in very dry situations, as in pine needles, but is scarce in low, wet woods. It has been taken during all months of the year but, like all the species of the geenton, is relatively scarce at the close of the rainy season.

#### *T. anomocerus* Hood

This species, like the last, seems to be primarily associated with moulding leaves, both deciduous and pine. Also on Reindeer moss, Tillandsia, Broomsedge, Indian Pipe (A. N. Tissot); also taken on sedges in a clearing, and on wild onions at Clemson College, S. C. (J. C. Watts, Coll.); Alachua, Liberty, Marion, Lake and Taylor Counties, Fla.; Clayton, Ga.

#### *T. bratleyi* n. sp.

MACROPTEROUS FEMALE. Length 1.4 mm. to 2.5 mm. the difference largely in the length of the abdomen. Color, light brown by reflected light, brownish yellow by transmitted light, with much hypodermal pigment, purple by transmitted light, orange by reflected. All tibiae, tarsi and the first three antennal segments clear lemon yellow; tube brass yellow (Maers & Paul, Plate II, L, 6) with a sharply defined brown apex.

Head about a third longer than wide. Cheeks either straight or concave, either parallel or converging (sharply so in two females) posteriorly but abruptly widened at base, rounded in front but broadly acuminate between the bases of the antennae, vertex smooth, postocular bristles long and slender, reaching beyond the anterior border of the eyes, capitate,

colorless. Eyes rather large, black by transmitted light, red by reflected; facets very small. Ocelli large, sub-approximate, bordered by wide, reddish brown crescents. Labrum broadly rounded, much exceeded by the labium which reaches the mesosternum. Antennae about 1.6 times as long as head. Segments 1-3 light lemon yellow; 4 darker yellow shaded with brown apically; 5-8 olive wood brown (Maers & Paul, Pl. 15, E, 10), 5 paler at base. First two segments unusually narrow, 3-5 club-shaped, 6 oblong, 7 and 8 closely united into a conical mass but suture plainly evident, oblique, 7 pedicellate. Sense cones and spines long and slender but colorless.

Prothorax only about half as long as head, a long slender capitate, colorless bristle at each posterior angle.

Legs rather short, fore tarsus with a sharp, curved tooth.

Wings well developed, membrane reaching the base of the tube, provided with a conspicuous brown band below the middle and a brown patch at extreme base, with six or seven interlocated hairs on the posterior margin of anterior wings.

Tube rather long and slender, sides sinuate in outline; terminal bristles nearly as long as tube.

Measurements: Head, length .33 mm., greatest width (behind eyes) .25 mm.; prothorax, length .16 mm., width (including coxae) .38 mm.; pterothorax, width .38 mm.; abdomen, greatest width .42 mm., tube, length .20 mm., width at base .093 mm., at apex .042 mm. Antennal segments, length (width) in microns: I, 45 (47); II, 69 (37); III, 96 (40); IV, 92 (40); V, 66 (33); VI, 61 (35); VII & VIII, 85 (28). Total length .54 mm.

**APTEROUS FEMALE.** Similar to macropterous female in color but one much darker with antennal segments 1 & 2 yellowish brown; shorter, from 1.4 to 1.9 mm. in length. Cheeks straight and parallel. Eyes small, showing about 3 large facets in lateral outline. Ocelli present, (in one female only the anterior ocellus is present). Labium scarcely reaches the posterior border of labrum.

Measurements of type: Head, length .25 mm., width .22 mm.; prothorax, length .17 mm., width (including coxae) .38 mm.; pterothorax, width .33 mm.; abdomen, greatest width .47 mm.; tube, length .19 mm., width at base .10 mm., at apex .038 mm. Antennal segments, length (width) in microns: I, 51 (48); II, 63 (40); III, 85 (42); IV, 77 (42); V, 68 (36); VI, 65 (35); VII & VIII, 83 (32). Total length .50 mm.

(To be continued)

---

## Printing for All Purposes

Carefully Executed  
Delivered on Time

Pepper Printing Company

Gainesville, Florida