

THYSANOPTERA FROM THE SOCIETY ISLANDS*

By

DUDLEY MOULTON

DIRECTOR OF AGRICULTURE, STATE OF CALIFORNIA

and

JOHN B. STEINWEDEN

AGRICULTURAL COMMISSIONER, CITY AND COUNTY OF SAN FRANCISCO

SUBORDER TEREBRANTIA HALIDAY

SUPERFAMILY THRIPOIDEA HOOD, 1915

FAMILY THIRIPIDAE UZEL, 1895

SUBFAMILY THIRIPINAE KARNEY, 1921

Genus THRIPS Linné, 1746

THRIPS Linné, Fauna Svecica, ed. 1, p. 220, 1746.

THRIPS Uzel, Mon. Ord. Thysanoptera, p. 173, 1895.

Thrips aleuritis, new species (fig. 1, *a-d*).

Female Holotype

Color: body light brown to dark brown with the head and thorax at most only slightly lighter than the abdomen. First and second antennal segments concolorous with head, third yellowish or light brown, other segments dark brown except extreme base of the fourth, which is light. Legs slightly lighter than body. Wings uniformly brown. Eyes dark purplish black, ocelli with orange red crescents. Body spines dark.

Total body length, 1.095 mm.; head length, 0.105 mm., width, 0.135 mm.; prothorax length, 0.112 mm., width, 0.157 mm.; pterothorax length, 0.195 mm., width, 0.225 mm.; greatest width of abdomen, 0.255 mm. Segments of antennae: length (width) in microns: I, 20 (23); II, 32 (23); III, 44 (20); IV, 44 (19); V, 36 (16); VI, 45 (16); VII, 16 (16); total length, 240 μ . Length of spines: interocellar, 28 μ .; on posterior angles of prothorax, outer, 44 to 48 μ , inner, 44 to 48 μ ; inner pair on posterior margin 24 μ ; on metanotum, outer pair, 24 μ , inner, 40 μ ; on ninth abdominal segment, inner, 68 μ ; on tenth abdominal segment, 80 μ .

Head broader than long, not rounded in front, cheeks arched, surface behind eyes cross-striated. Interocellar spines small, placed outside of ocellar triangle alongside of anterior ocellus, a row of six small spines behind each eye. Eyes large and prominent, only slightly protruding, occupying about half of head length. Ocelli small, posterior pair anterior to a line connecting posterior margins of eyes. Mouth cone short, narrowed

* Pacific Entomological Survey Publication 6, article 6. Issued January 12, 1933.

at tip, not reaching to posterior margin of prosternum. Antennae moderately stout, more than twice as long as head.

Prothorax broad and rounded at the sides. Pronotum with fine cross-striations and set with 50 to 60 small setae, spines on posterior angles rather short, equal in length, a series of three small spines on each side along the posterior margin. Median spines on metanotum placed close to anterior margin or only slightly behind it. Pterothorax with sides rounded, and metanotum reticulated. Legs strong, well-developed posterior tibiae with a series of about 12 closely spaced, stout spines on the inner side. Wings fully developed. Spines on fore wing as follows: costa 25, fore vein with 7 at the base, 3 in distal portion, hind vein with 12 to 14. Abdomen rather broad, not greatly narrowed at apex. Comb on eighth abdominal segment complete. Spines on ninth and tenth abdominal segments strong.

The spines on the posterior angles of the prothorax of the paratypes studied vary in length from 48 to 70 μ while the spines on the fore wings are as follows: costa 24 to 29, fore vein with 7 at base, 3 in distal portion, hind vein with 12 to 17, usually 14 to 16.

The uniformly brown wings and the color of the head and thorax, which is not distinctly lighter than that of the abdomen, distinguish this species from closely related forms. *Albipes* Bagnall has the head yellowish white, the prothorax yellow, the abdomen brown, legs yellow and the wings lighter in the basal fourth. *Pallipes* Bagnall has the wings light in the basal fourth, the legs yellow and the comb on the eighth abdominal segment irregular. *Oryzae* Williams is separated by the slender head and prothorax, the long mouth cone and the long ninth abdominal segment.

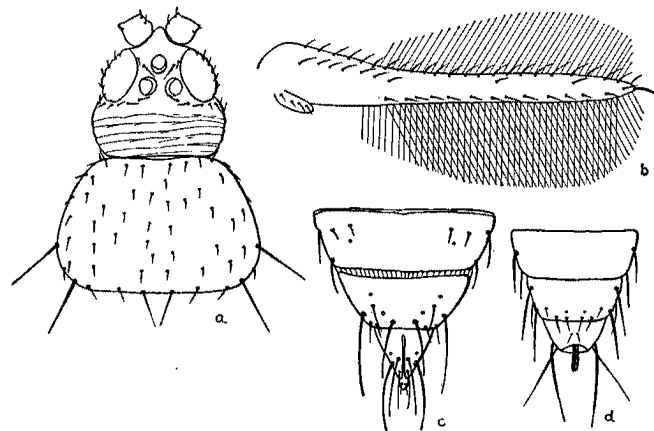


FIGURE 1. *Thrips aleuritis*, new species: a, female, head and prothorax; b, female, right fore wing; c, female, end of abdomen; d, male, end of abdomen.

Male Allotype

Body golden yellow in color, first three antennal segments concolorous with body, IV to VII brown with IV and V lighter at base.

Total body length, 0.765 mm.; head length, 0.083 mm.; width, 0.120 mm.; prothorax length, 0.105 mm.; width, 0.135 mm.; pterothorax length, 0.195 mm.; width, 0.180 mm.; greatest width of abdomen, 0.120 mm. Total length of antennae, 210 μ . Length of spines, intercellar, 20 μ ; spines on posterior angles of prothorax, 38 to 42 μ ; on ninth abdominal segment, outer, 40 to 44 μ ; on tenth segment, 72 μ .

Similar to female in appearance, form, and chaetotaxy except for smaller size, narrower abdomen, lighter color of body and basal segments of antennae. Abdominal segments without clear areas on the sternites.

Type Material: female holotype, male allotype, and one male paratype collected on *Aleurites moluccana*, November 21, 1928, Moulton no. 3645. Types deposited in Bernice P. Bishop Museum.

Type locality: Faraura Valley, Hitiaa, Tahiti.

Seven female paratypes, three male paratypes and several larval paratypes were collected on *Lantana camara* at Faraura Valley, Hitiaa, Tahiti, November 17, 1928, Moulton no. 3642, and at Papetoai, Moorea, Moulton no. 3646, November 30, 1928. Specimens were also collected at Hitiaa from unrecorded host plants as follows: Moulton no. 3643, November 18, 1928, altitude 1,500 feet; no. 3644, November 19, 1928, altitude 1,500 feet; no. 3654, November 16, 1928, altitude 1,500 feet; A. M. Adamson.

SUBORDER TUBULIFERA HALIDAY

SUPERFAMILY PHLOEOTHRIPOIDEA HOOD, 1915

FAMILY PHLOEOTHRIPIDAE UZEL, 1895

SUBFAMILY PHLOEOTHRIPINAE KARNY

TRIBE HAPLOTHRIPINI PRIESNER, 1927

Genus HAPLOTHRIPS Amyot and Serville, 1843

Priesner, Thysanoptera of Europe, p. 564, 1927.

Haplothrips gowdeyi Franklin.

Many specimens (male and female) of this species collected from the following hosts and localities:

Tahiti: Fautaua Valley, altitude 1,500 feet, December 12, 1928, on *Aleurites moluccana*, Moulton no. 3650; Papara Valley, altitude 750 feet, December 21, 1928, host unrecorded, Moulton no. 3652; Mumford and Adamson.

Moorea: Papetoai, sea level, November 30, 1928, on *Lantana camara*, Moulton no. 3646; A. M. Adamson.

This is one of the most common species of thrips in the South Sea islands, where it infests many plants. It has been reported from the Barbados, Cuba, Brazil, Hawaii, Fiji, Australia, Japan, Formosa, and Abyssinia.

Genus NEOHEEGERIA Schmutz

Schmutz, Ann. K. K. Nat. Hist. Hofmus., Band 23, p. 344, 1909.

Priesner, Thysanoptera of Europe, p. 628, 1927.

Neoheegeria hibisci, new species (fig. 2, *a-c*).

Female Holotype

Body color dark brown with a suggestion of red hypodermal pigmentation, pterothorax and first four abdominal segments somewhat lighter. Antennae dark brown except apical portion of segment two and segment three, which are yellow shaded with brown. Legs concolorous with body except all tarsi, fore tibiae, tips of fore femora and bases and tips of mid and hind femora, mid and hind tibiae, which are yellow. Wings lightly shaded with brown. Eyes dark purplish black in basal half, remainder clear white. Ocelli with dark purplish red crescents. Body spines light yellowish brown.

Total body length, 3.735 mm.; head length, 0.390 mm., width, 0.293 mm.; prothorax length, 0.330 mm., width, 0.465 mm.; pterothorax length, 0.525 mm., width, 0.600 mm. Abdomen: greatest width, 0.675 mm.; tube length, 0.405 mm.; width at base, 0.135 mm.; width at tip, 0.060 mm. Antennal segments, length (width) in microns: I, 44 (48); II, 84 (40); III, 120 (48); IV, 116 (42); V, 124 (44); VI, 112 (36); VII, 80 (32); VIII, 64 (28); IX, 56 (20); total length, 800 μ . Length of spines: postocular, 150 μ ; on anterior angles of prothorax, 84 μ ; sides, 104 μ ; posterior angles, 152 μ ; eighth abdominal segment, 120 μ ; ninth abdominal segment, 375 μ ; end of tube, longer, 260 to 315 μ . shorter, 72 μ .

Head one and one-third as long as wide, rounded in front and extended forward between bases of antennae, cheeks parallel, only slightly narrowed posteriorly, marked with very fine transverse, anastomosing lines. Postocular spines long and pointed, dorsal surface of head with a pair of very fine setae behind postoculars, sides of head with a pair of very fine setae behind postoculars, sides of head with four or five prominent bristles, 20 μ long, which are not borne on warts. Eyes occupying about one-third the side of the head. Ocelli large, well developed, posterior ones contiguous with eyes. Mouth cone long and pointed, reaching to posterior margin of prosternum. Maxillary palpi 3-segmented, the two basal segments very short, and the third about three times as long as the other two. Labial palpi 2-segmented, very short. Antennae 8-segmented, segment VII distinctly separated from VIII, which is narrowed at the base. Sense area on segment II near center of segment, two long slender sense cones on III, four on IV, two on V, and two on VI.

Prothorax shorter than head, distinctly narrower than pterothorax, all spines well developed with pointed tips, pair at the posterior angle longest. Mesonotum with fine transverse and metanotum with fine longitudinal anastomosing lines which form small cell-like areas. Legs moderately stout, fore femora slightly enlarged and unarmed, fore tibiae and fore tarsi unarmed. Wings well developed, broad, narrowed in the middle, each fore wing with 26 to 32 double fringe hairs along the posterior margin and with three pointed spines at the base, the first short and the other two long.

Abdomen elongate and ovate, tube about same length as head, spines pointed at tips, those on ninth segment longest.

Male unknown.

Moorea: Papetoai, sea level, November 30, 1928, on *Hibiscus tiliaceus*, female holotype, and one female paratype, Moulton no. 3647, A. M. Adamson. Type in Bernice P. Bishop Museum.

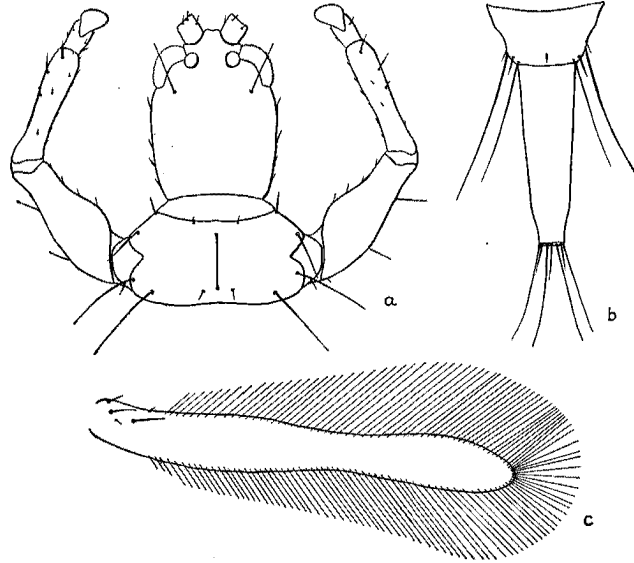


FIGURE 2. Female of *Neoheegeria hibisci*, new species: *a*, head and prothorax; *b*, end of abdomen; *c*, right fore wing, double-fringe hairs not shown.

The color, the shape of the head and the large number of double-fringe hairs on the fore wings separate this new species from most of the known forms and it can be distinguished from the closest of these as follows: *biroi* Priesner has the third to sixth antennal segment yellow and only 6 or 7 double-fringe hairs; *dalmatica* Schmutz has three sense cones on the third antennal segment, and 14 to 17 double-fringe hairs; *johni* Priesner has 7 or 8 double-fringe hairs; *lederi* Priesner has 10 or 12 double-fringe hairs.