



<https://www.biodiversitylibrary.org/>

**The Canadian entomologist.**

Ottawa [etc.]Entomological Society of Canada [etc.]

<https://www.biodiversitylibrary.org/bibliography/7422>

**v. 46 (1914):** <https://www.biodiversitylibrary.org/item/22201>

Article/Chapter Title: Report on a collection of Japanese crane-flies  
(Tipulidae, Diptera) [three parts, plate XIX missing]

Author(s): Alexander 1914c,d,f

Subject(s): Tipulomorpha

Page(s): Page 157, Page 158, Page 159, Page 160, Page 161, Page  
162, Page 163, Page 164, Page 205, Page 206, Page 207, Page 208,  
Page 209, Page 210, Page 211, Page 236, Page 237, Page 238, Page  
239, Page 240, Page 241, Page 242

Holding Institution: MBLWHOI Library

Sponsored by: MBLWHOI Library

Generated 15 April 2019 12:45 PM

<https://www.biodiversitylibrary.org/pdf4/092530600022201>

This page intentionally left blank.

REPORT ON A COLLECTION OF JAPANESE CRANE-  
FLIES (*TIPULIDÆ*, *DIPTERA*).

(Continued from Vol. XLV., p. 322).

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

Subfamily: *TIPULINÆ*.

Tribe: *DOLICHOPEZINI*.

Genus: **Nesopeza**, gen. n.

Antennæ 13-segmented, segment 1 cylindrical with a few long hairs; segment 2 oval-cylindrical; segment 3 very long, cylindrical; the succeeding segments gradually shorter, the last very slender. Palpi with the apical segment slender, as long as all of the preceding segments combined. Legs excessively long and slender. Wing-venation as in *Dolichopeza* Curtis (lack of cell 1st M<sub>2</sub>, basal deflection of Cu<sub>1</sub> far before the fork of M, etc.), but the radial sector is very elongate, angulated at origin, almost as long as R<sub>3</sub> beyond the fork, Rs not short and simulating a cross-vein.

Type of the genus: *Dolichopeza gracilis*, de Meij.

**Nesopeza gracilis** de Meijere.

1911.—*Dolichopeza gracilis* de Meijere; Tijds. voor Ent., vol. 54, p. 60, 61; pl. 4, fig. 46.

One ♀ from Tokyo, Japan; August, 1912. (Vial D.)

This new genus represents one extreme of the *Dolichopeza* group and *Scamboneura* Osten Sacken, the other. In this genus the radial sector is extremely elongated, in *Dolichopeza* Curtis almost transverse and simulating a cross-vein, while in *Scamboneura* the origin of the sector is farther distad than the tip. See my key to the Dolichopezini, Psyche, vol. 19, p. 64. (April, 1912.)

Genus: **Dictenidia** Brullé.

Tribe: *CTENOPHORINI*.

*Dictenidia fasciata* Coquillett.

1898.—*Dictenidia fasciata* Coquillett; Proc. U. S. Nat. Mus., vol. 21, p. 304, 305.

1902.—*Dictenidia fasciata* Kertész; Cat. Dipt., vol. 2, p. 266.

One ♂ from Tokyo, Japan, Aug. 1912 (Vial 39). It agrees very closely with Coquillett's description. The specimen offers the following measurements:

Length 12 mm.; wing 10.2 mm.; antennæ 5 mm.

Fore leg femur 6.7 mm.; tibia 7.4 mm.

Middle leg femur 7 mm.; tibia 6.4 mm.; tarsus 6.9 mm.

Hind leg femur 8.8 mm.; tibia 10.4 mm.; tarsus 6 mm.

I supply a figure of the wing of this beautiful crane-fly, it never having been figured. (See Plate XII, fig. 8).\*

Tribe: TIPULINI.

Genus: **Pachyrhina** Macquart.

*Key to the Japanese Pachyrhinæ.*

1. Thoracic markings brown or black, distinct.....2.  
 Thoracic markings very pale, ill-defined.....*flavonota*, sp. n.
2. Mesonotal stripes pale brown; tip of wing narrowly and regularly bordered with dark brown; [scutellum and postnotum mostly yellowish; abdominal tergites trivittate].....*palloris* Coq.  
 Mesonotal stripes black; tip of wing hyaline or irregularly suffused with darker.....3.
3. Mesonotal stripes very broad, almost concealing the pale ground colour; tip of the wing clouded with darker.....*pullata*, sp. n.  
 Mesonotal stripes narrower, so that the yellow ground colour is well defined; tip of the wing clear.....4.
4. Scutellum and postnotum unmarked with darker.....*repanda*, sp. n.  
 Scutellum black; postnotum with a dark median vitta.....*virgata* Coq.

**Pachyrhina flavonota**, sp. n.

Head yellow, shining, without a distinct darker spot; mesonotum orange-yellow with well defined darker stripes.

Male.—Length 12 mm.; wing 10.6 mm.; antennæ 3.8 mm.

Female.—Length 14.6 mm.; wing 14 mm.

Male.—Palpi light brown; frontal prolongation of the head yellow, nasus brown, with a tuft of brown hairs; antennæ, scapal segments yellow, first flagellar segment yellow, on its inner face at three-fourths its length with a wart-like knob, remaining flagellar segments brown, the enlarged bases darker brown, inner face of the

\*Plate XII will appear in the next issue.

intermediate flagellar segments not very deeply incised; front, vertex and occiput shining yellow, no distinct mark on the vertex.

Pronotum yellowish; mesonotal præscutum orange-yellow with faint indications of darker stripes; a small brown mark in the notch of the transverse suture; scutum, scutellum and postnotum without distinct marks. Pleura light yellow. Halteres brownish yellow, the knobs yellow. Legs, coxæ and trochanters yellow, femora and tibiæ dull yellow, the tips darker, tarsi brown. Wings subhyaline, the tip broadly but indistinctly suffused with darker; stigma oval, brown; cells C and Sc. a little yellowish. Venation, see pl. XI. fig. 5.

Abdomen with the tergites yellowish, slightly darker medially and laterally; segments 8 and 9 brown; sternites yellowish. The male hypopygium with the 9th tergite from above (plate XI, fig. 6) with the caudal margin four-lobed, the central lobes on either side of the shallow median notch, these lobes provided with numerous black denticulæ; the 9th sternite from below with a broad and deep V-shaped median notch. Outer apical appendages narrow, tapering to a very long point; inner appendage with the usual cephalad prolongation, beneath which is a small, chitinized tooth. (See plate XI, fig. 15.)

Female.—Larger, the abdominal tergites with distinct brown blotches on each segment, these broadest behind, narrowed to a point in the front.

Holotype, ♂, Tokyo, Japan, August, 1912 (Vial K).

Allotype, ♀, Tokyo, Japan, August, 1912 (Vial 42).

### ***Pachyrhina palloris* Coquillett.**

1898.—*Pachyrhina palloris* Coquillett, Proc. U. S. Nat. Mus., vol. 21, p. 306.

1902.—*P. palloris* Kertész, Cat. Dipt., vol. 2, p. 321.

1910.—*P. palloris* Riedel, Deutsch. Ent. Zeitschr., p. 436.

Two females agreeing rather well with Coquillett's description, but showing the following differences: The median thoracic vitta is bisected from the front by a pale line, making this stripe double; sides of the scutellum brown; the antennæ, broken in the type, may be thus described: four basal segments yellow, remaining

segments with the enlarged basal third dark brownish black, the remainder of each segment dull yellow. The venation is shown in plate XI, figure 2. Vial K. Tokyo, Japan; August, 1912; 2 ♀.

***Pachyrhina pullata*, sp. n.**

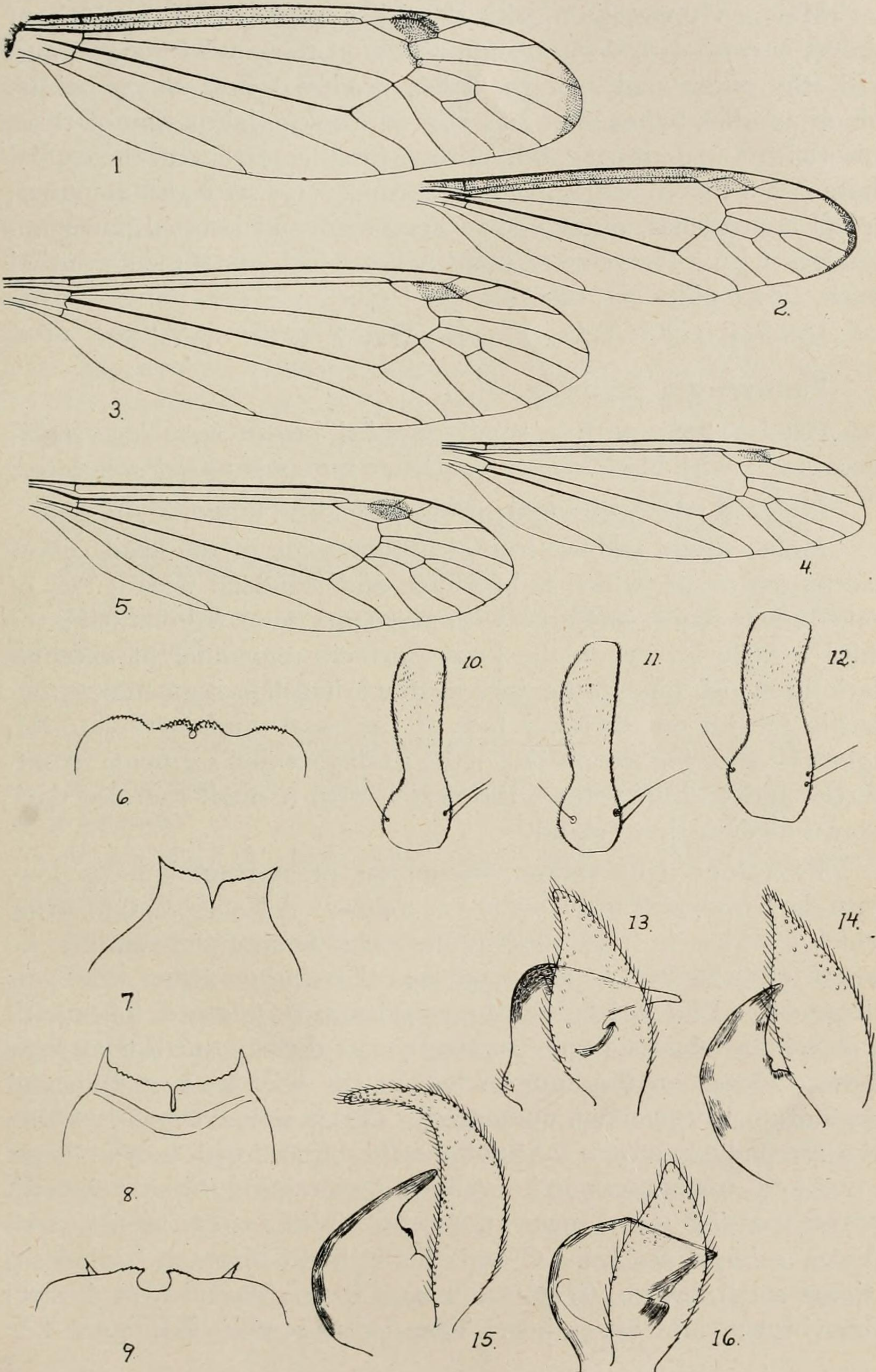
Thoracic dorsum mostly black; wings with the apex brownish.

Male.—Length 17.4 mm.; wing 12.9 mm.; antennæ 4.6 mm.†

Male.—Palpi brown, the third segment yellow; frontal prolongation of the head shiny black; antennæ with the first segment brown, paler apically, second segment yellow, third segment pale brown at the base, dark brown at tip, remaining segments dark brownish black. (See plate XI, fig. 12, for outline of the sixth antennal segment); vertex brownish yellow, darkening to the brown on the occiput and genæ.

Pronotum light yellow above; mesonotum dull yellow with three jet black stripes, the median stripe very broad and narrowed behind, the lateral stripes short, broad, straight, the space between these three stripes very narrow and greatly reduced; scutum with the median depression pale in front; behind and on the lobes black; scutellum and postnotum broadly black medially, paler on the lateral margin of the sclerites. Pleura yellow, with dark brownish black blotches as follows: An elongate, vertical mark on the propleura; mesopleura with a large blotch on the ventral portions of the episternum and the sternum; caudal edge of these two sclerites with an elongate vertical blotch extending from the wing-root to mesocoxa, the portion of the postnotum between the base of the wings and the halteres brown; metepimeron brown. Halteres pale, knobs whitish at the tips. Legs, fore coxæ brown, trochanter light yellow, femora yellow basally, browner at tip; other coxæ more yellowish, femora darkening to brown at tip, tibiæ brown, lighter basally; tarsi dark brownish-black. Wings hyaline or nearly so, cells C and Sc. yellowish; stigma brown, distinct; cord margined with brown; apex of wing brownish. Venation as in plate XI, fig. 1.

Abdomen with the first tergite brown, except on the side in front; segments 2 to 5 brown on the caudal half; segment 6 with the caudal half dark brown; segments 7 to 9 dark brown; sternites yellow; caudal half of the 7th to 9th segments dark brown.



JAPANESE CRANE-FLIES

Male.—Hypopygium, with the 9th tergite (pl. XI, fig. 7) from above, narrow with deep median notch on the caudal margin, and with the outer angles of the lobes produced into sharp points, which are directed caudad and laterad, the caudal margin of these lobes with fine denticulæ, 9th sternite from beneath with the caudal margin gently concave, pleural suture very strongly arcuated; apical appendages, outer one rather broad and pointed, inner appendage with a long curved point below which are three chitinized teeth. (See plate XI, fig. 14).

Holotype, ♂. Tokyo, Japan; May 7, 1912. (Vial 30.)

**Pachyrhina repanda**, sp. n.

Head yellow, with a small rounded brown spot on vertex; mesothorax with black stripes, scutellum and postnotum unmarked.

Male.—Length 12.9 mm.; wing 13.4 mm.; antennæ 5.2 mm.

Male.—Palpi yellow; frontal prolongation of the head yellow except the nasus, which is brownish and provided with a tuft of long brown hairs; antennæ with segments 1 to 3 yellowish, the third a little brown on the lower surface; remainder of antennæ dark brownish black; the intermediate flagellar segments rather deeply incised on the lower face at the basal third (see plate XI, figure 11, showing the outline of the sixth antennal segment); front, vertex and occiput yellow, the vertex with a small rounded dark brown median spot behind.

Pronotum light yellow; mesonotal præscutum light yellow, with dark brownish black stripes as follows: A broad median stripe which is widest in front, slightly narrowed behind and running the length of the sclerite; a shorter lateral stripe on either side, this stripe curved laterad before the pseudosuture; scutum, lobes with a prominent oblique stripe running across them; a small triangular median blotch on the anterior half of the sclerite; scutellum and postnotum light yellow, unmarked. Pleura pale yellowish white. Halteres light coloured, the knob a little suffused with brown. Legs, coxæ and trochanters light yellow, femora and tibiæ yellowish brown, passing into brown at the tip of the latter; tarsi brown. Wings subhyaline, cells C and Sc. a little brighter, yellowish; stigma small, brown, tip of the wing a little suffused with darker; veins brown, vein Sc. yellow. Venation as in plate XI, figure 3.



Abdomen, tergites yellow with an indistinct light brown blotch in the middle of each sclerite; lateral sutures darker; sternites yellow; segments 7 to 9 dark brown. Male hypopygium with the 9th tergite (see plate XI, fig. 8) from above with the caudal margin concave, with a deep, parallel-sided, median notch, the lateral angles produced into points which are directed caudad the caudal margin with small, black denticulæ and points; 9th sternite from below with the caudal margin about straight with a rounded median protuberence. Apical appendages, the outer fleshy lobe rather broad, the point moderately long and rather obtuse; the inner appendage is strongly chitinized, rounded-oval, on the cephalic face produced into a long point which is directed forward; below this point, very strongly chitinized and deeply incised. (See plate XI, fig. 16.)

Holotype, ♂, Tokyo, Japan; August, 1912. (Vial 43.)

***Pachyrhina virgata* Coquillett.**

1898.—*Pachyrhina virgata* Coquillett, Proc. U. S. Nat. Mus., vol. 21, p. 306.

1902.—*P. virgata* Kertész, Cat. Dipt., vol. 2, p. 325.

1910.—*P. virgata* Riedel, Deutsch. Ent. Zeitschr., p. 436.

Several specimens of this interesting species were included in the collection.

Male.—Length 10.8—11.8 mm.; wing 10.2—12.4 mm.; antennæ 4.6—4.9 mm.

Female.—Length 14.4 mm.; wing 13 mm.

I give a figure of the sixth antennal segment in plate XI, figure 10, and of the wing-venation in plate XI, figure 4. The male hypopygium may be described as follows: The 9th tergite from above (plate XI, figure 9) with the caudal margin having a broad rounded median notch into which the tips of the apical pleural appendages fit, the inner edge of the adjacent lobe produced into chitinized lobules which are provided with denticulæ; each lobule with a sharp chitinized point on its caudal margin, these points directed caudad. In a small ♂ (Vial 46) the median notch is not so rounded, more oval, the sharp caudal points are longer. Apical appendages, the outer fleshy lobe rather broad and pointed, inner lobe with a

long, cephalad-directed point which is provided with a few hairs on its lower face, with a deep notch beneath its base and a strongly chitinized protuberance. (See plate XI, fig. 13).

Vial 22; Tokyo, Japan; April 26, 1912; 1 ♂, 1 ♀.

Vial 35; Tokyo, Japan; May 7, 1912; 1 ♀.

Vial 43; Tokyo, Japan; Aug. 1912; 2 ♂.

Vial 44; Tokyo, Japan; Aug. 1912; 1 ♀.

Vial 46; Tokyo, Japan; Aug. 1912; 2 ♂.

Vial K; Tokyo, Japan; Aug. 1912; 1 ♀.

(To be continued.)

## THE PRESENCE OF RING-JOINTS IN AUSTRALIAN *SCELIONIDÆ*.

BY ALAN P. DODD, NELSON, N. Q., AUSTRALIA.

Quite recently while examining the antennæ of a Scelionid, *Gryonella reticulata* Dodd, I was somewhat surprised to find that two small ring-joints were present. As ring-joints have not been recorded in this family, I had never searched for them, and it was only accidentally that their presence in this species was noticed. This discovery caused me to examine the antennæ of numerous Scelionids in my collection. I found that in some cases there were obviously no ring-joints present; in others there appeared to be minute ring-joints, but I could not make sure of the fact, while in a few cases the ring-joints were distinct, though small. The following species possessed obvious ring-joints: Subfamily *Teleasinæ*, *Gryonella reticulata* Dodd; Subfamily *Balinæ*, *Acolomorpha minuta* Dodd; Subfamily *Scelioninæ*, *Hadronotus nigriceps* Dodd, *Opisthacantha giraulti* Dodd, *Sceliacanthella paroipennis* Dodd, *Leptoteleia aurea* Dodd, *Baryconus exsertus* Dodd, *B. longipennis* Dodd, and *B. trispinosus* Dodd.

The species, *Opisthacantha giraulti*, possessed apparently one ring-joint, but under high-power magnification there appeared to be three excessively thin ring-joints. *Gryonella reticulata* had two ring-joints, while the other species mentioned possessed but one each. This discovery is of considerable interest.

*Hydromanicus*, *Antarctopsyche*, *Symphitopsyche* and *Stenopsyche*. This latter genus has been placed in the Philopotamidæ since it has ocelli, but is more allied to *Hydropsyche* by all other characters.

The *Psychomyini* will include, besides the usual genera, *Ecnomus*; it was also placed here by MacLachlan. *Tinodes* is removed to the next tribe.

The *Polycentropini*, besides the usual genera, includes *Tinodes*; this move is also warranted by the structure of the male genitalia.

The *Philopotamini* has the usual genera, as placed by Dr. Ulmer, but without *Stenopsyche*.

(To be continued.)

## REPORT ON A COLLECTION OF JAPANESE CRANE-FLIES (*TIPULIDÆ*, *DIPTERA*).

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

(Continued from p. 164.)

Genus: **Tipula** Linnaeus.

*Key to the Japanese Tipulæ.*

1. Large species (over 30 mm. in length) . . . . . 2  
    Smaller species (less than 25 mm. in length) . . . . . 4
2. Wings ochre-brown, the cross-veins darker, the stigma bright yellow [abdomen ochraceous-brown, the sternum paler] . . . . . *præpotens* Wied (1)  
    Wings not ochre-brown with a yellow stigma . . . . . 3
3. Abdominal tergites with the apices brown; hypopygium pale dull fulvous brown, thoracic dorsum blackish with two rusty lines . . . . . *mikado* Westw. (2)  
    Abdomen with three dorsal longitudinal stripes, the median one indistinct on the basal segments . . . . . *coquilletti* End.
4. Wings hyaline or subhyaline, with the costal region darker . . 5  
    Wings either subhyaline without a dark costal border, or else variegated hyaline, gray and brown . . . . . 6
5. Thoracic notum yellowish; abdomen without a distinct stripe on either side . . . . . *yamata*, sp. n.

1 *Præpotens* Wiedemann; Aussercur. Zweifl. Ins., vol. 1, pp. 40, 41 (1828).

2 *Mikado* Westwood; Trans. Ent. Soc. Lond., for 1876, p. 504.

- Thoracic præscutum and scutum dark; abdomen yellow, with a broad brown stripe on either side of the yellow median vitta..... *aino*, sp. n.
6. Abdomen with the segments having a dark caudal margin... 7  
Abdomen lined with dark stripes..... 8
7. Caudal margin of the abdominal segments very narrow; wings light yellow without darker markings, except the prominent stigma..... *insulicola*, sp. n.  
Caudal margin of the abdominal segments broad, comprising at least two-thirds of the length of the sclerite; wings light gray with hyaline blotches..... *nipponensis*, sp. n.
8. Head yellowish..... 9  
Head black or dark brown..... 10
9. Abdomen with a median stripe; flagellum of antennæ black..... *japonica* Loew<sup>(1)</sup>  
Abdomen with three stripes, one median and two lateral: two basal flagellar segments yellow, remainder brown at base, yellow at tip..... *serricauda*, sp. n.
10. Large species (length, ♂, 15 mm.; wing, 19 mm.)..... *yusou*, sp. n.  
Small species (length, ♂, 10 mm.; wing, 13-5 mm.)..... *parva* Loew<sup>(2)</sup>

### **Tipula coquilletti** Enderlein.

1898 *Tipula nubifera* Coquillett; Proc. U.S. Nat. Mus., vol. 21, p. 305.

1902 *Tipula nubifera* Kertess; Cat. Dipt., vol. 2, p. 299.

1912 *Tipula coquilletti* Enderlein; Zoöl. Jahrb., vol. 32, pl. 1, p. 7.

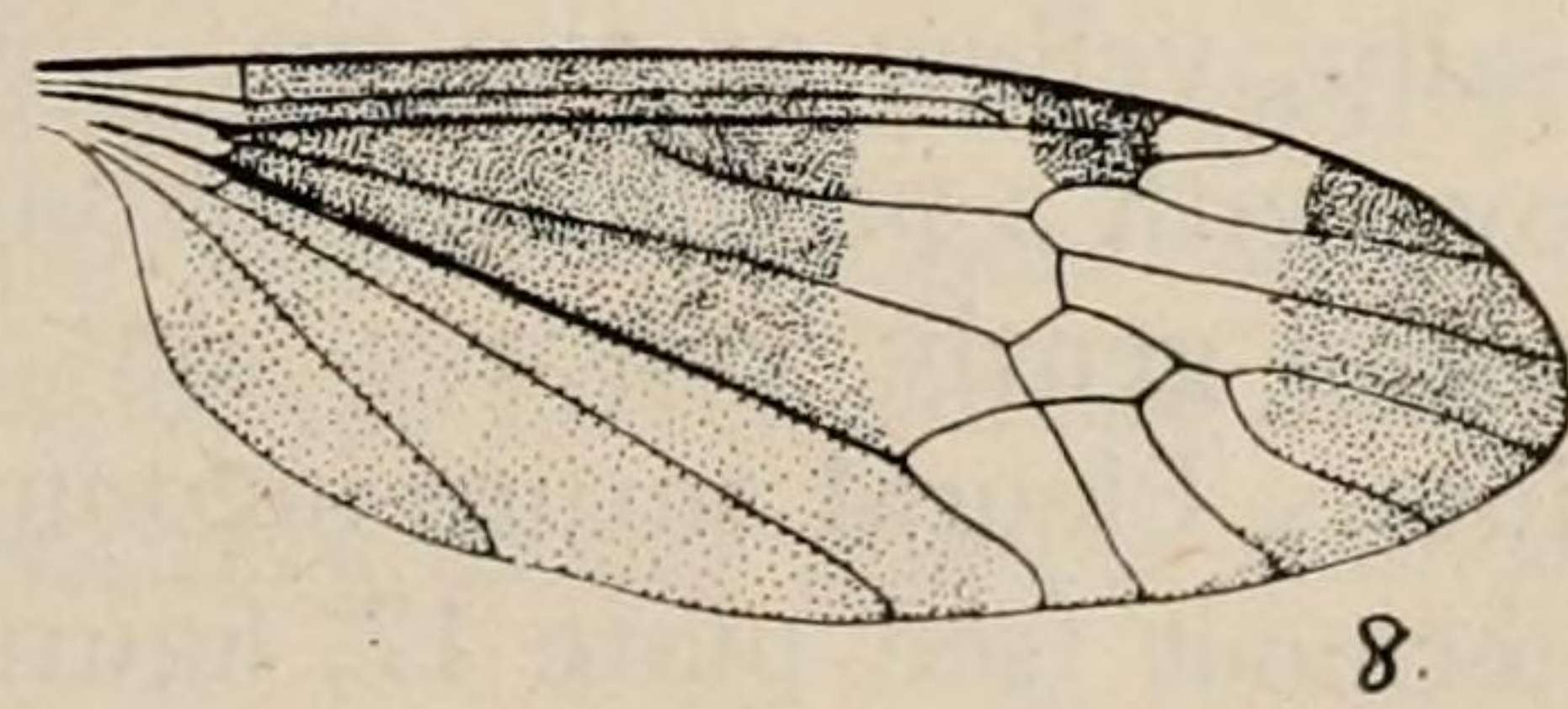
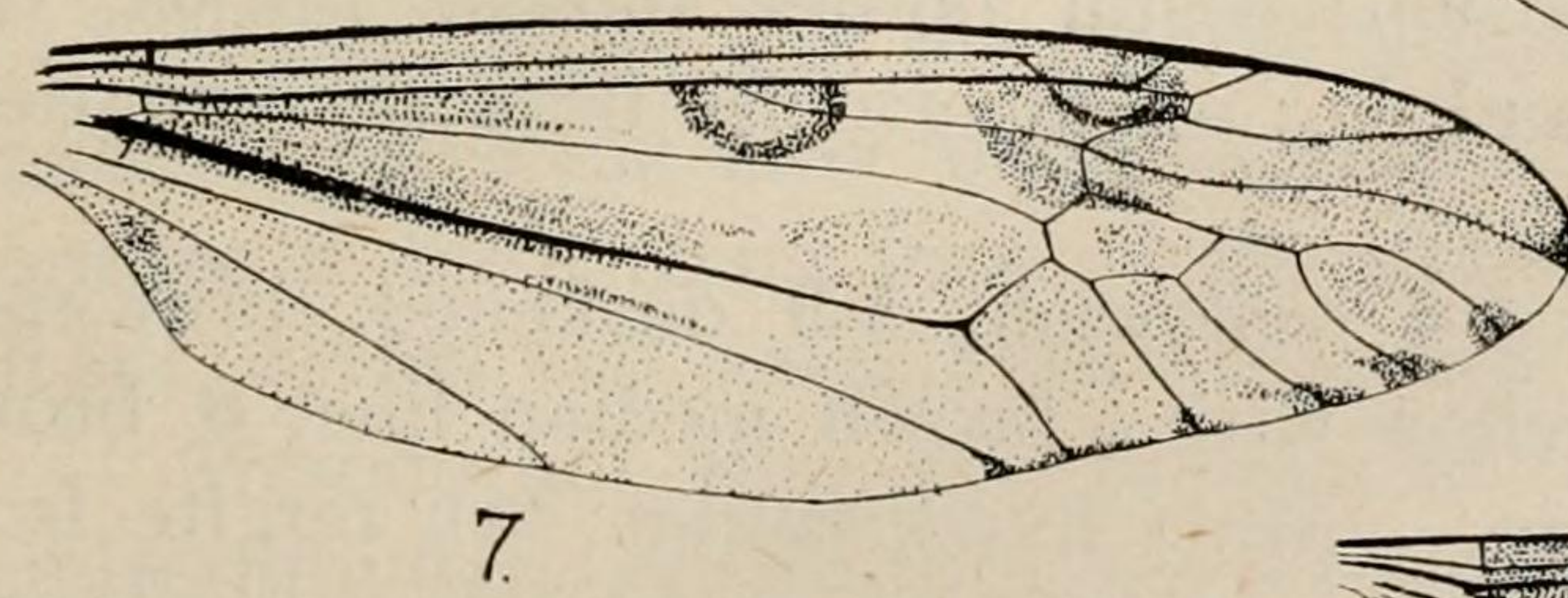
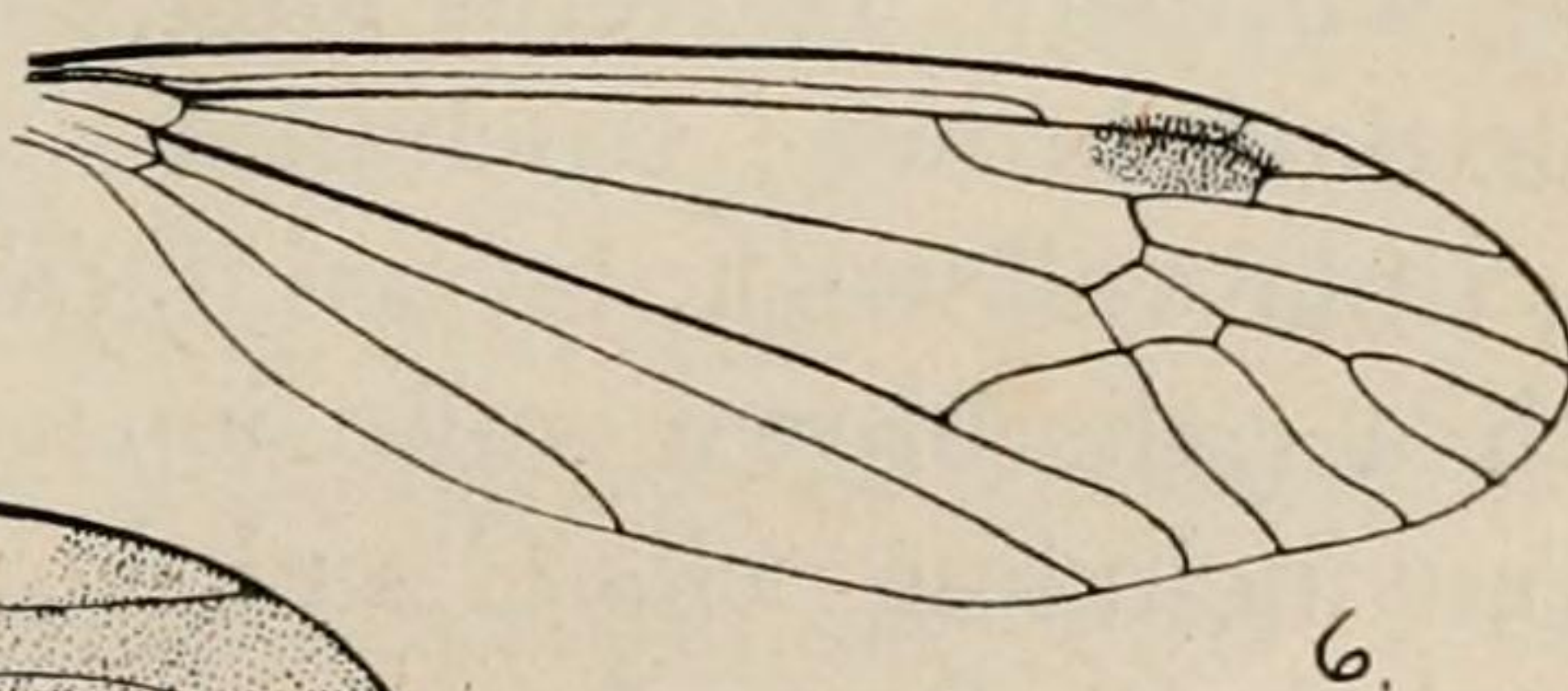
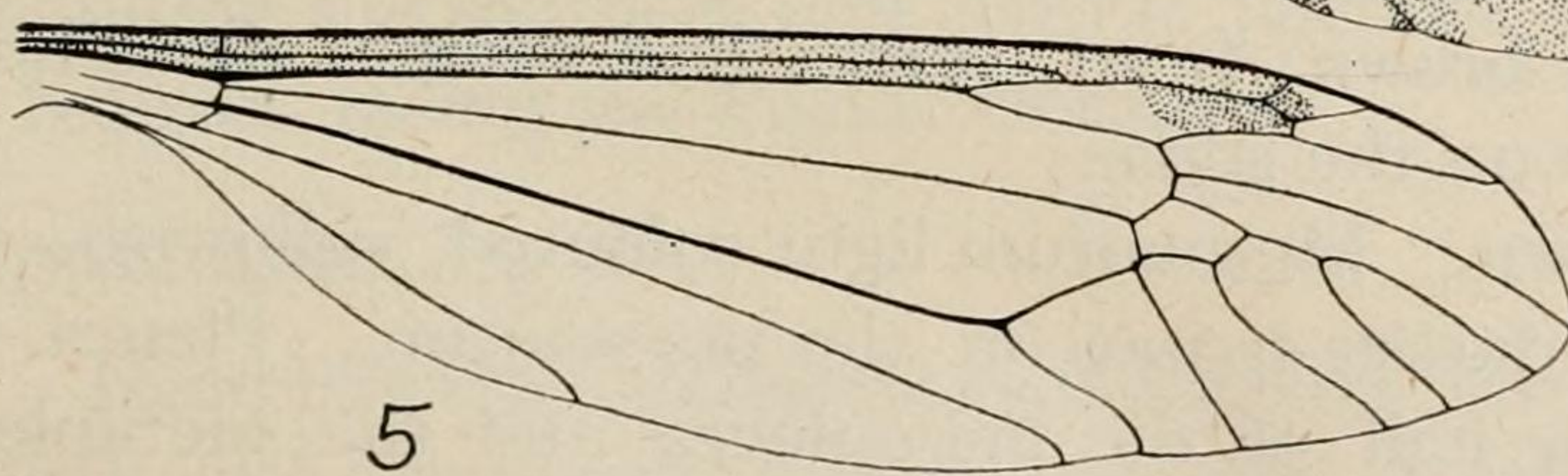
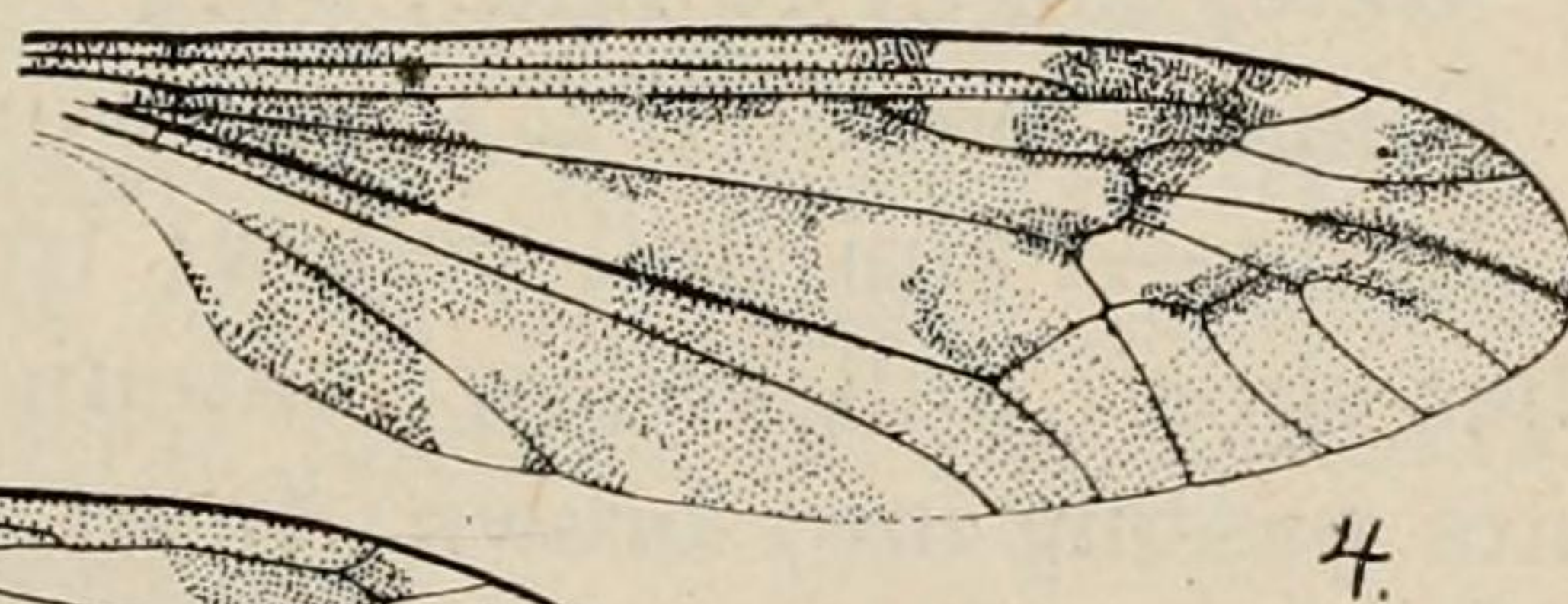
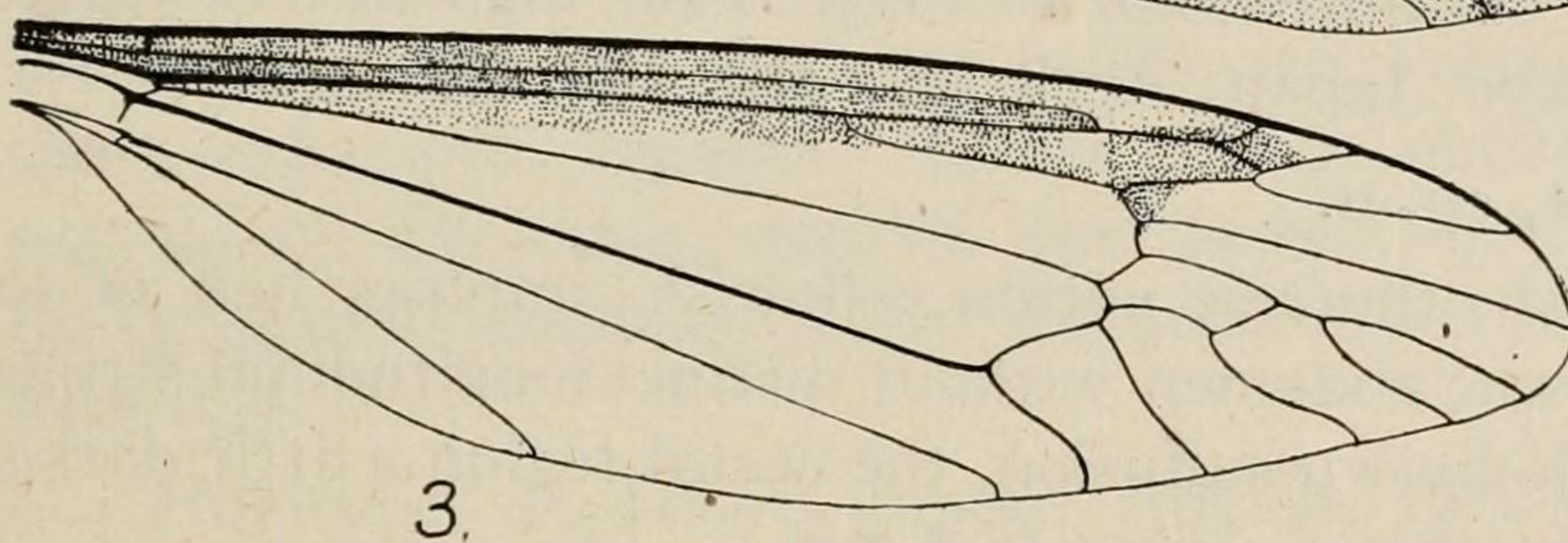
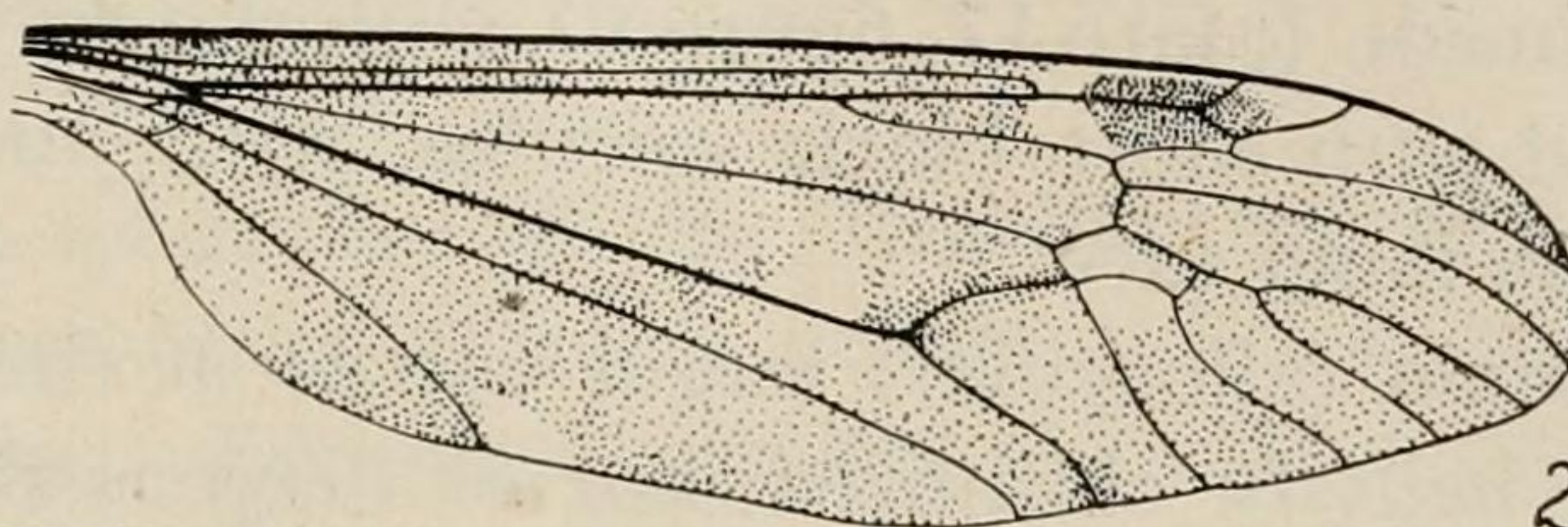
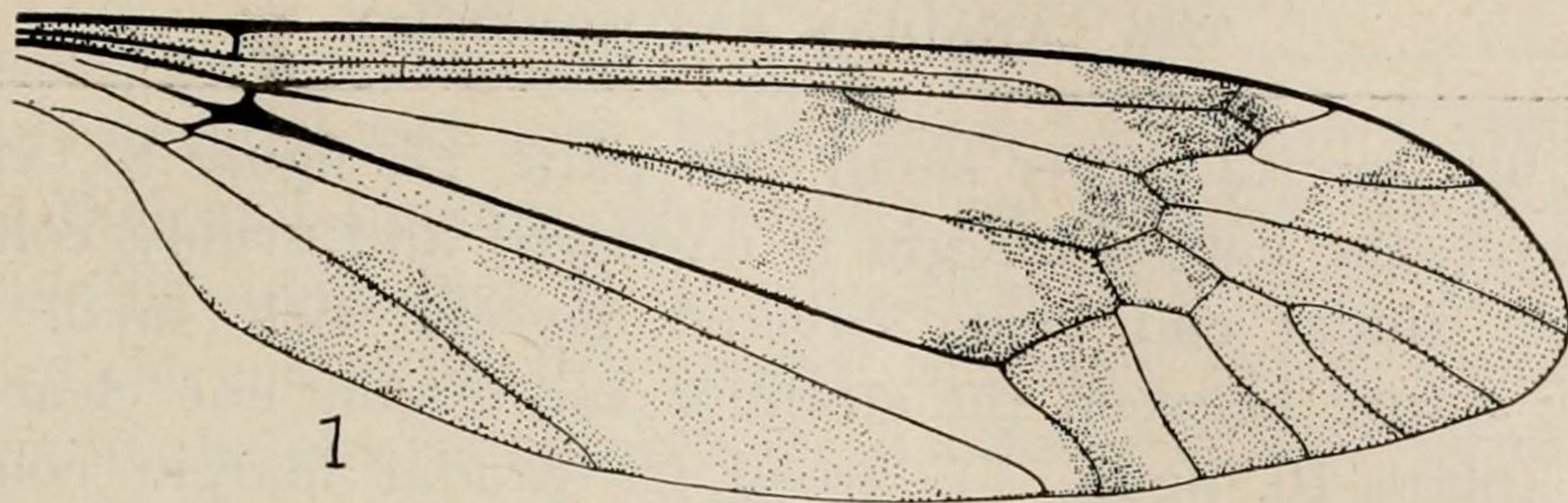
A male and female; the following addenda to Coquillett's description may be of value:

The legs in my specimens have the femora and tibiæ almost uniformly dark brown; abdomen very long for a *Tipula*. The wing is shown in plate 16, figure 7. Male hypopygium: 8th tergite rather broad, its caudal margin almost straight; 8th sternite (see plate <sup>(3)</sup> figure 17), much produced caudad into a scoop-like lobe which is very deeply notched medially, the tips of the lobes directed

1 *Japonica* Loew; Wiener Ent. Monatschr., Vol. 2, p. 101, 102 (1858).

2 *Parva* Loew; Wiener Ent. Monatschr., vol. 2, p. 102 (1858).

3 Plate 17 will appear in the next issue.



JAPANESE CRANE-FLIES.

inward; 9th tergite rather small (see plate 17, figure 8), viewed from above, the caudal margin is narrowed and evenly concave, the whole caudal end being covered densely with small black spicules; suture between the sternum and tergum not clear; 9th sternite (plate 16, figure 7), broad, its caudal margin concave. Pleural appendage, a large flattened lobe (see plate 17, figure 10), on the inside (plate 17, figure 9), with the dorsal outer angle densely provided with short black spicules, with numerous other spicules down the inner face.

Female (allotypic): tergal valves of the ovipositor long and slender, heavily chitinized, not so deep as the high sternal valves.

Vial 13; Tokyo, Japan; April 25, 1912; 1♂, 1♀.

### **Tipula yamata**, sp. n.

Head blackish; thoracic notum yellowish; anterior half of the pleura dark brown; abdomen without distinct longitudinal stripes; wings with a pale brown suffusion, the costal region a little darker.

Male, length 12 mm.; wing 16.6 mm.

Female, length 19.2 mm.; wing 16.8 mm.

Male.—Palpi dull yellow; frontal prolongation of the head rather short, dull yellow; antennæ light yellow, the flagellar segments passing into brown; front, vertex and occiput dark brown passing into yellow on the genæ.

Pronotum brown. Mesonotum light coloured, yellowish, with indistinct, narrow, darker stripes on the præscutum. Pleura, propleura and anterior half of the mesopleura and the metapleura, pale, whitish. Halteres long, slender, pale. Legs: fore and middle coxæ dark brown; trochanters and femora yellow, light brown at tip; tibiæ yellowish, brown darker at the tip; tarsi brown. Wings with a pale brown suffusion; costal border darker brown, this colour including cells C and Sc.; stigma greyish brown. Venation, see plate 16, figure 5.

Abdominal tergites 1-4 yellowish, 5-9 darkened, brownish; sternites 1-6 yellow, 7 yellow with a brown median line, 8 brown basally, yellow at the tip. Male hypopygium: 9th tergite from above with a prominent median chitinized protuberance, its caudal margin gently concave and with short bristles and chitinized points. Pleural suture incomplete; pleural appendages as follows: outermost (see plate 17, figure 3), a broad, flattened lobe quite

densely covered with long hairs, these hairs rather stout except along the caudal margin where they are delicate, fringe-like; just inside this appendage is a cylindrical, chitinized arm directed toward the end of the 9th tergite, the apex evenly rounded; the largest of the pleural appendages is a flattened arm whose apex is notched and crenulated and fits into the notch of the 9th tergite; the penis is very long and slender, the central vesicle large and rounded.

Female.—About as in the ♂, the flagellar segments subannulate, the apical three-fifths of each segment being much paler than the basal portion; abdominal tergites 5-7 with a dark brown basal mark, segments 8 to the end brown; valves of the ovipositor short and sharply pointed. In one ♀, the entire tergum beyond segments 1-3 is almost entirely dark brown but this may be caused by the gravid condition of the abdomen which is greatly distended with eggs.

Holotype, ♂, Tokyo, Japan; August, 1912 (Vial 42).

Allotype, ♀, Tokyo, Japan; August, 1912 (Vial K).

Paratypes, 2 ♀, Tokyo, Japan; May 7, 1912 (Vial 34).

The specific name is that of an aboriginal Japanese race inhabiting the southern and central portions of the southern half of Nippon, facing the Pacific Ocean.

### **Tipula aino**, sp. n.

Head blackish; præscutum and scutum dark coloured; abdomen yellow with two dorsal brown lines, one on either side of the broad ground stripe; wings with a slight gray tinge, costal region brown.

Male.—Length 16 mm.; wing 16.5-18.4 mm.

Female.—Length 19.4 mm.; wing 20.5 mm.

Male.—Palpi and the frontal prolongation of the head brown; antennæ with the three basal segments orange, segments 4 and 5 orange at the extreme base, entire remainder of the antennæ black; front, vertex and occiput dark coloured, blackish.

Mesonotum with the præscutum and most of the scutum uniformly dark brown with narrow darker stripes, one median and one on either side; scutum pale medially, lobes very dark; scutellum and postnotum dull yellow, the latter a little brown on the sides and in some specimens entirely dark. Pleura dull yellow

with a brown tinge on the propleura and anterior portions of the mesopleura. Halteres rather long, pale. Legs: coxæ and trochanters light yellow; femora orange-yellow the tip brown; tibiæ yellowish on the basal half, thence passing into brown; tarsi brown. Wings with a dark brown costal border, this including cells C, Sc., and the cephalic halves of cells R and 1st R<sub>1</sub>; stigma even darker; most of cells R and M and the bases of cells R<sub>2</sub>, R<sub>3</sub> and R<sub>5</sub> hyaline; remainder of the wings with a brownish-gray tinge. Venation as in plate 16, figure 3.

Abdominal tergites yellow with a broad brown stripe on each side, these stripes becoming confluent on segments 7 and 8; caudal margin of segments 3-6 narrowly brown; sternites dull yellow, the caudal margins of the segments a little darker. Male hypopygium: 9th tergite from above (see plate 16, figure 4), with the latero-caudal angles produced into strong spines between which is a small rounded lobe covered with hairs; suture between the tergum and sternum not clear; appendages of the pleural region viewed from the side (see plate 17, figure 5), two in number, the more ectad of which is a large, oval lobe, somewhat chitinized on its edges, its ventro-cephalic margin on the inside with a small oval knob provided with hairs; inner lobe very large, its caudal edge thickened and here provided at its tip with a comb of bristles directed caudad and an apical bunch directed dorsad; inner face of this appendage near its tip with a group of about 14 sharp points.

Female.—Ovipositor with the sternal valves very high, blade-like, the tips subacute; tergal valves very slender apically, the tip scarcely enlarged.

Holotype, ♂, Tokyo, Japan; April 13, 1912 (Vial 12).

Allotype, ♀, Tokyo, Japan; April 13, 1912 (Vial 12).

Paratypes, 5 ♂, 5 ♀; as follows:

Vial J; 1 ♀, Tokyo, Japan; August, 1912 (Cornell).

Vial 12; 2 ♂, 2 ♀, Tokyo, Japan; April 13, 1912 (Cornell).

Vial 40; 3 ♂, 2 ♀, Tokyo, Japan, August, 1912 (U. S. Nat. Mus.).

The specific name is that of an aboriginal Japanese race formerly occupying the northern half of Nippon, now confined to Yesso and the islands to the northward.



***Tipula insulicola*, sp. n.**

Antennæ annulated black and yellow; thorax without indistinct brown stripes; wings light yellow with a prominent oval brown stigma; abdominal segments with a dark caudal margin.

Female.—Length 11.2 mm.; wing 11.3 mm.

Female.—Palpi and frontal prolongation of the head brown, the latter short and stout; antennæ with the three basal segments yellow, remaining segments with the basal two-fifths dark brown, the apices light yellow, these colours abruptly contrasted; front, vertex and occiput brown.

Præscutum dull yellow with three indistinct brown stripes of which the median one is broad, the lateral ones shorter and narrower; scutum with the lobes reddish; scutellum and postnotum dull yellow. Pleura dull yellow. Halteres dull yellow. Legs: coxæ, trochanters and femora light yellow; tibiæ brownish yellow, a little darkened at the tip; tarsi brown. Wings light yellow, cells C and Sc. a little brighter; stigma prominent, oval; an indistinct hyaline stripe across the wing beginning before the stigma and including cell 1st M<sub>2</sub>. Venation, see plate 16, figure 6.

Abdominal tergites dull yellow, each segment narrowly but distinctly margined with dark brown all around, sternites very pale, almost white, each segment with the caudal margin narrowly brown; genital segment reddish yellow. Ovipositor with the tergal valves having a stout, enlarged base, the valves produced caudad into exceedingly slender points which are slightly expanded at their tips; tergal valves much shorter than the elongate, bladelike sternal valves which are directed caudad.

Holotype, ♀, Tokyo, Japan; August, 1912 (Vial K).

(To be continued.)

---

**TWO NEW CALIFORNIA THAMNOTETTIX  
(HOMOPTERA).**

BY E. D. BALL, LOGAN, UT.

While collecting in California, several years ago, a single specimen of a beautiful *Thamnotettix* was captured, but escaped from the net; not, however before its characters were pretty defi-

*Myzus lycopersici* Clarke.—26 antenna of wingless viviparous female; 27 antenna, 28 head, 29 cornicle and 30 cauda of winged viviparous female; 31 antenna of winged male; 32 antenna of oviparous female.

Plate VII. *Myzus lycopersici* Clarke.—33 hind tibia of wingless oviparous female.

*Rhopalosiphum howardii* Wilson.—34 antenna of wingless viviparous female; 35 head, 36 wing, 37 cornicle, 38 cauda and 39 antenna of winged viviparous female; 40 antenna of winged male.

*Eulachnus rileyi* Williams.—41 antenna of wingless viviparous female; 42 head, 43 antenna, 44 beak, 45 wing and 46 hind tarsus of winged viviparous female; 47 antenna of winged male, 48 hind tibia of wingless oviparous female.

Plate XVIII. *Symdobius albasiphus* n. sp.—49 antenna, 50 cornicle and 51 cauda and anal plate of wingless viviparous female; 52 head, 53 antenna and 54 cauda and anal plate of winged viviparous female; 55 antenna and 56 wing of winged male; 57 antenna and 58 hind tibia of wingless oviparous female.

---

## REPORT ON A COLLECTION OF JAPANESE CRANE-FLIES (*TIPULIDÆ*, *DIPTERA*).

BY CHARLES P. ALEXANDER, ITHACA, N. Y.

(Continued from p. 211.)

### ***Tipula nipponensis*, sp. n.**

Head yellowish; thorax yellow with brown stripes; abdomen with the caudal margin of the segments broadly brown; wings variegated gray, brown and hyaline.

Male: Length 12.8 mm.; wing 13.6 mm.; antennæ about 4 mm.

Female: Length 13–14.1 mm.; wing 14.2–15.2 mm.

Male: Palpi brown, the terminal segment very long and pale; frontal prolongation of the head very short and stout, yellowish; antennæ, segments 1 and 2 yellow, flagellar segments with the somewhat enlarged base dark brown, the remainder of each segment dull yellow; front, vertex and occiput dull yellow, the sides of the vertex and the genæ dark brown.

Pronotum pale; mesonotum dull yellow with dark brown stripes, the median one bisected by a pale line, lateral stripes short,

very close to the median stripe; scutum with the lobes brown; scutellum and postnotum yellowish medially, the sides dark brown, a narrow indistinct median line. Pleura yellowish with brown blotches as follows: On sides of the propleura; a large blotch on the mesoepisternum and mesosternum; a very dark spot on the dorsocephalic angle of the mesepimerum, a dark blotch at the base of the halteres. Halteres paler. Legs, coxæ dull yellow with the base on the outer side tinged with brown; trochanters yellow; femora yellow, the tip brown; tibiæ light brown, tarsi dark brown. Wings with a light gray suffusion, cells C and Sc a little lighter, yellowish; stigma brown; hyaline spots as follows: In front of and beyond the stigma, cell 1st M<sub>2</sub>, a large blotch in the end of cell M and a spot in cell 1st A near the end of vein 2nd A; veins Cu and 2nd A narrowly seamed with brownish. Venation (see plate XVI, figure 2).

Abdominal tergites with the basal third yellowish, apical two-thirds brown; pleural line conspicuously dark brown; sternites light yellow, each segment with a narrow, transverse subbasal brown band. Male hypopygium: 9th tergite from above narrow, not nearly as wide as the 8th tergite, its lateral angles rounded, its caudal margin deeply and broadly notched. Pleural appendages from the side (see plate XIX, fig. 2). A more dorsal and ectal fleshy lobe which is directed backward, this lobe cylindrical, tapering, provided with sparse long hairs; entad and ventrad of this lobe is a large bifid appendage whose caudal arm is feebly chitinized, pale, with abundant hairs, the inner or cephalic arm is chitinized, and with strong teeth which approach the caudal margin of the 9th tergite. Penis with the central vesicle large, its convex side directed dorsad, the penis proper, long and slender.

Female.—Almost as in the ♂, the antennæ shorter; ovipositor with the tergal valves much more slender than the high sternal valves.

Holotype, ♂, Tokyo, Japan; April 26, 1912 (Vial 25).

Allotype, ♀, Tokyo, Japan; April 26, 1912 (Vial 25).

Paratype, ♀; Tokyo, Japan; April 26, 1912 (Vial 25).

### **Tipula serricauda**, sp. n.

Head with a brown median stripe; thorax with three brown stripes; abdomen trivittate with brown; female ovipositor with the

sternal valves exceedingly short, tergal valves long, serrated on the outer margin; wings clouded brown, gray and hyaline.

Female.—Length about 23 mm.; wing 18-18.8 mm.

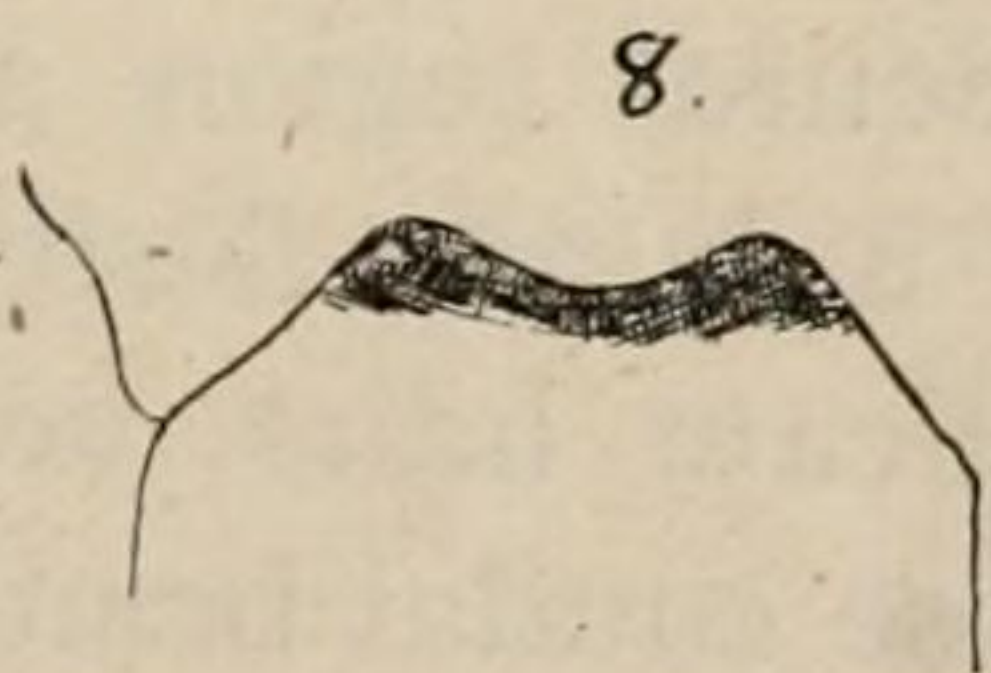
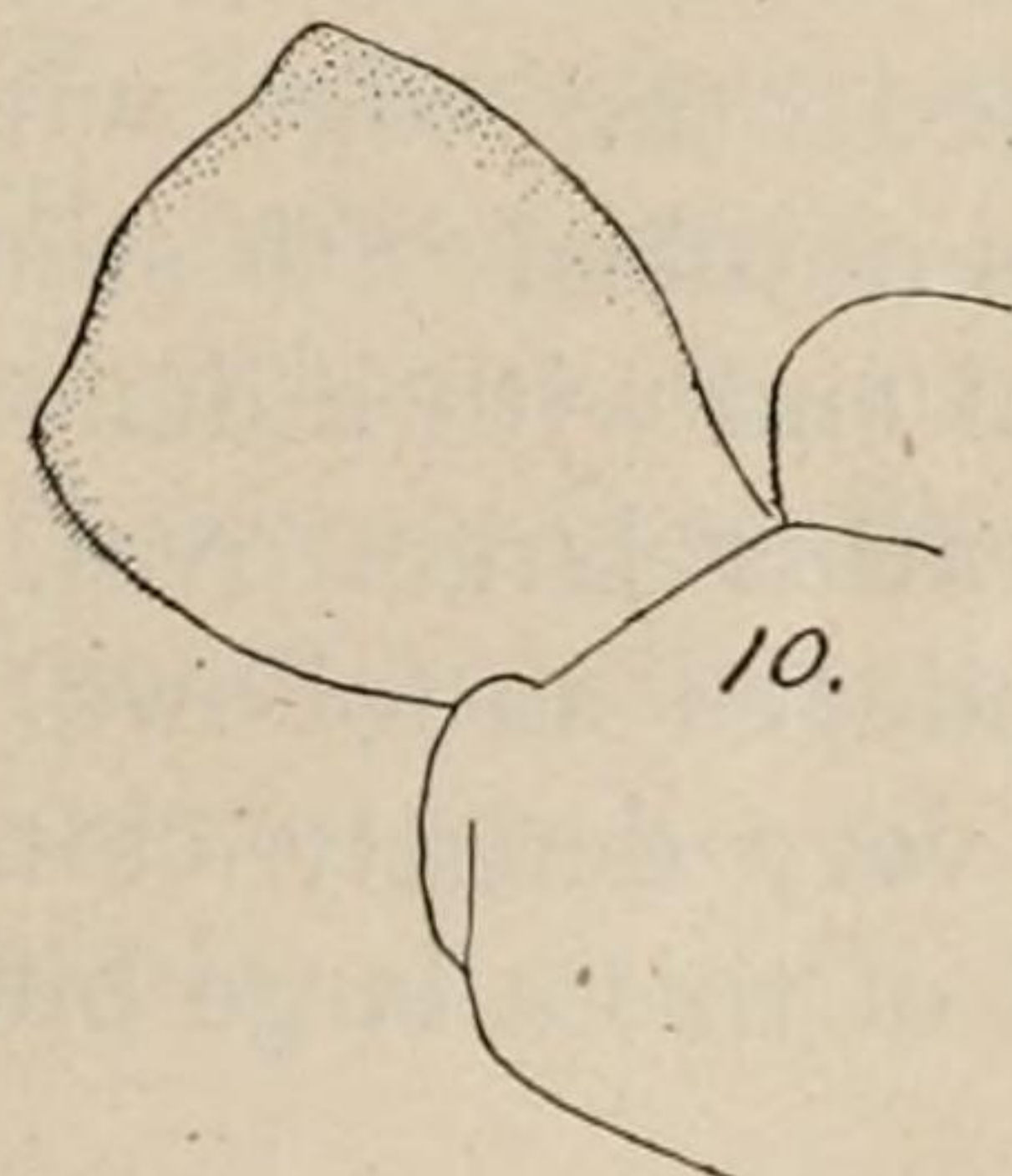
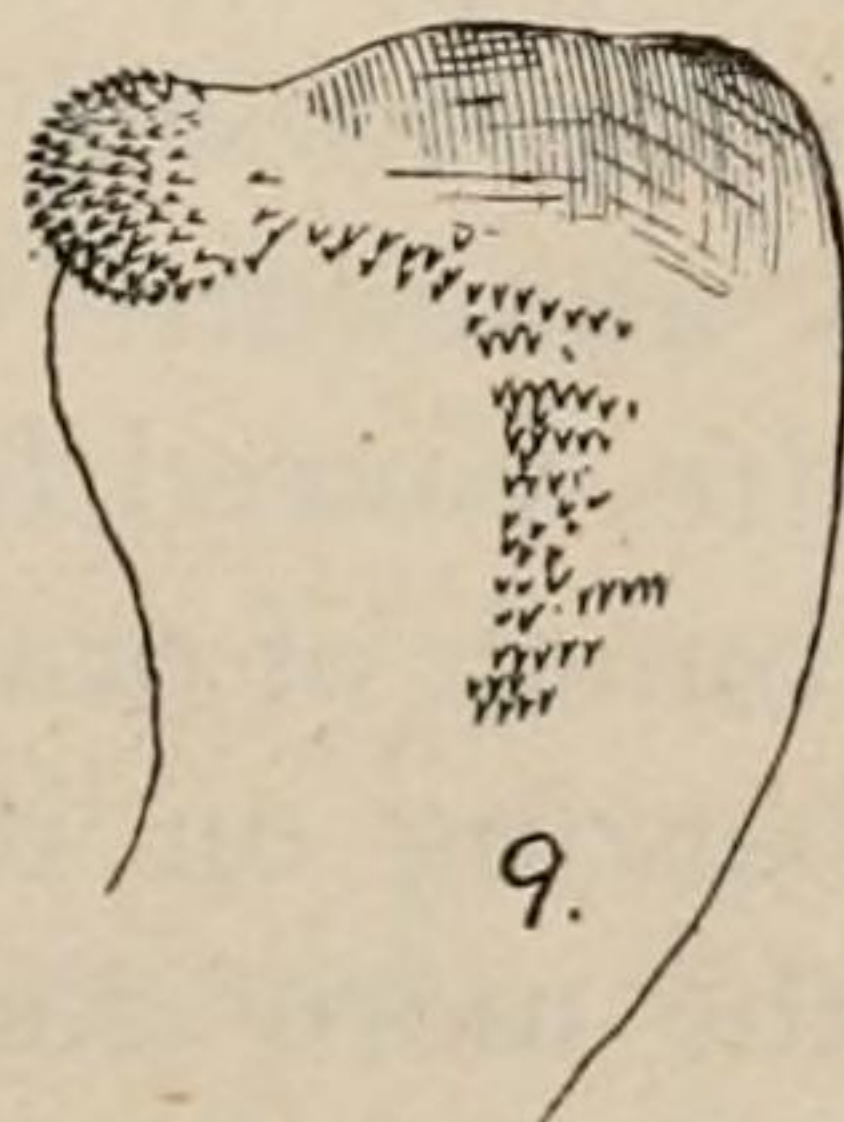
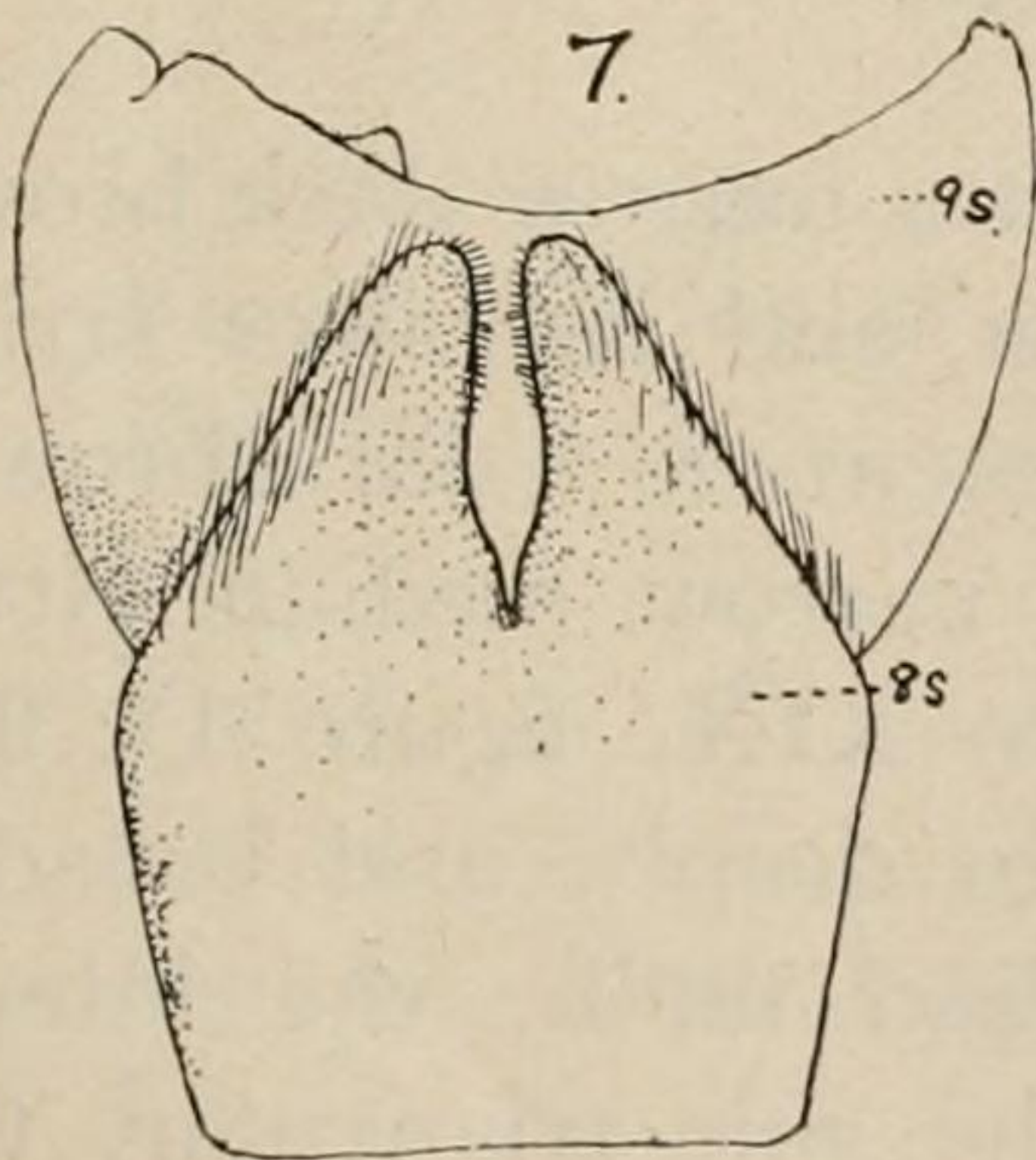
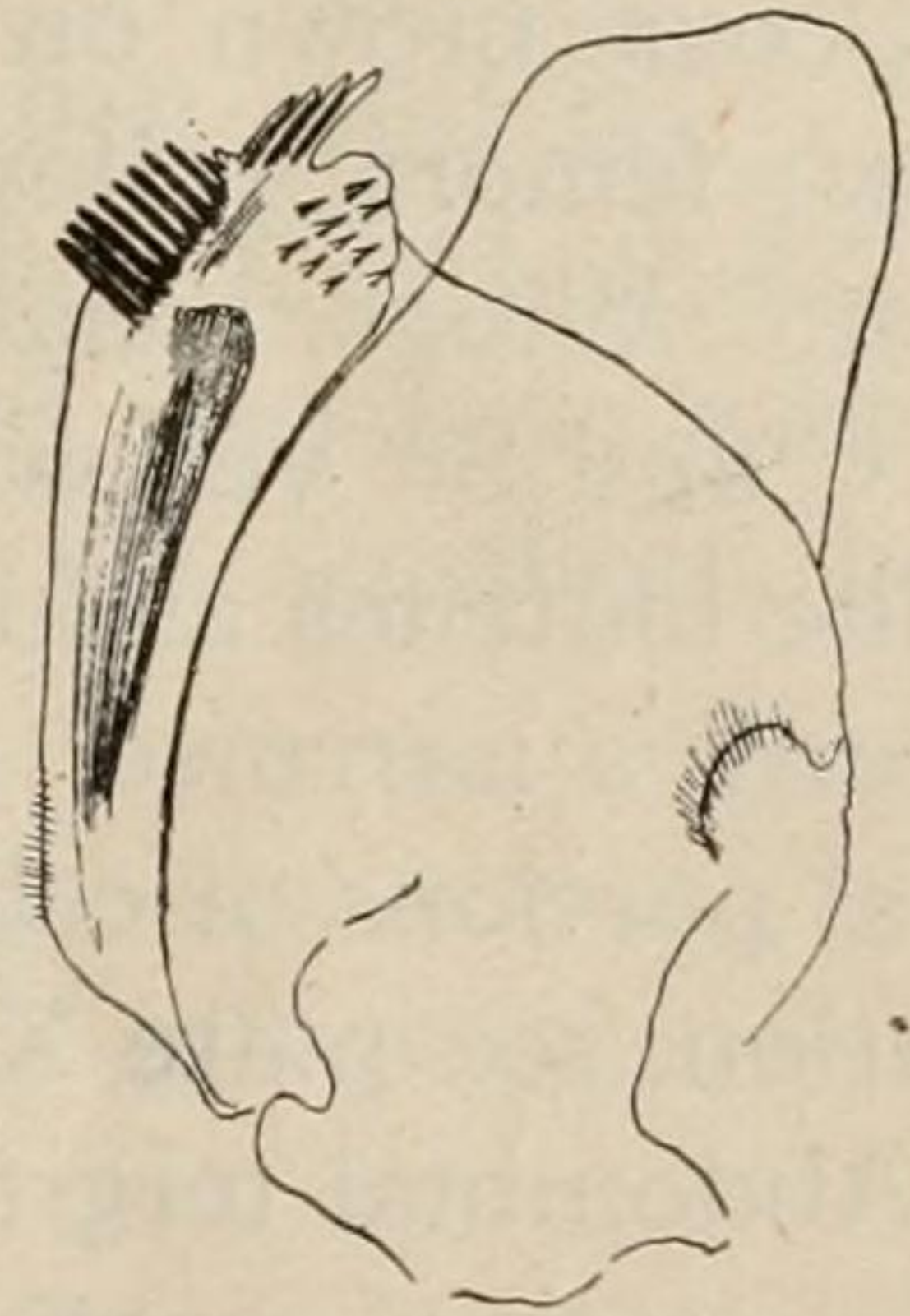
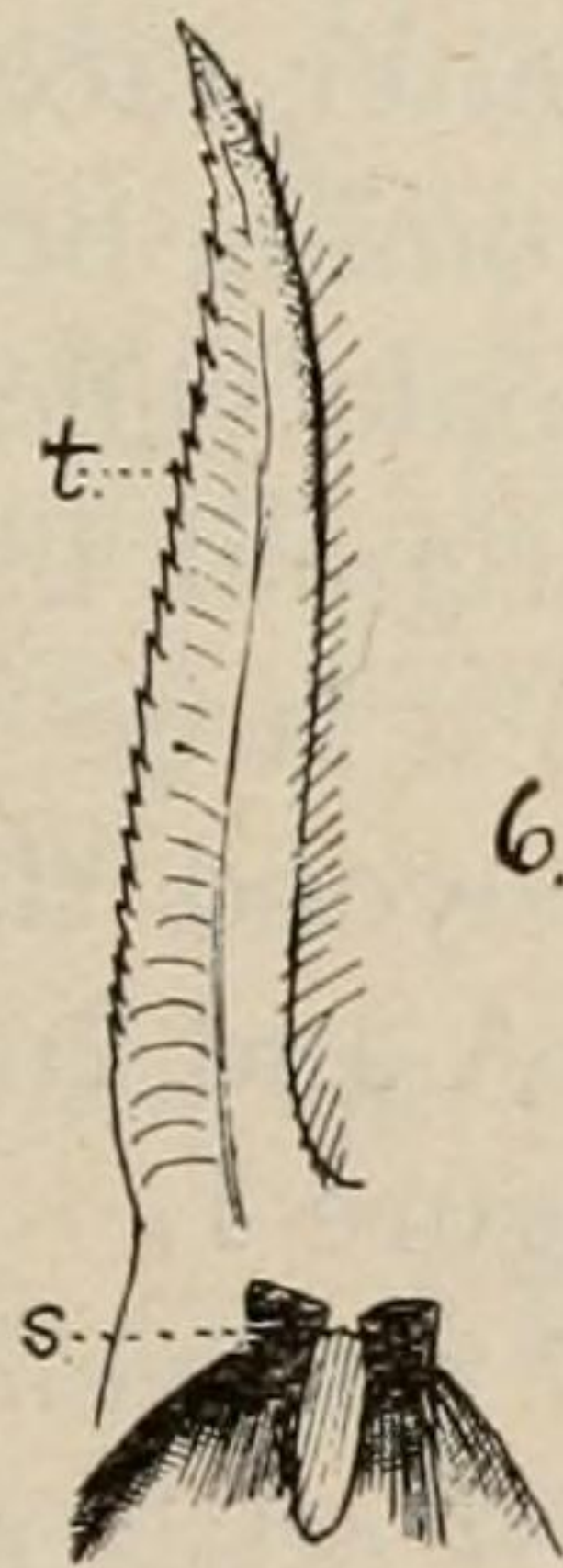
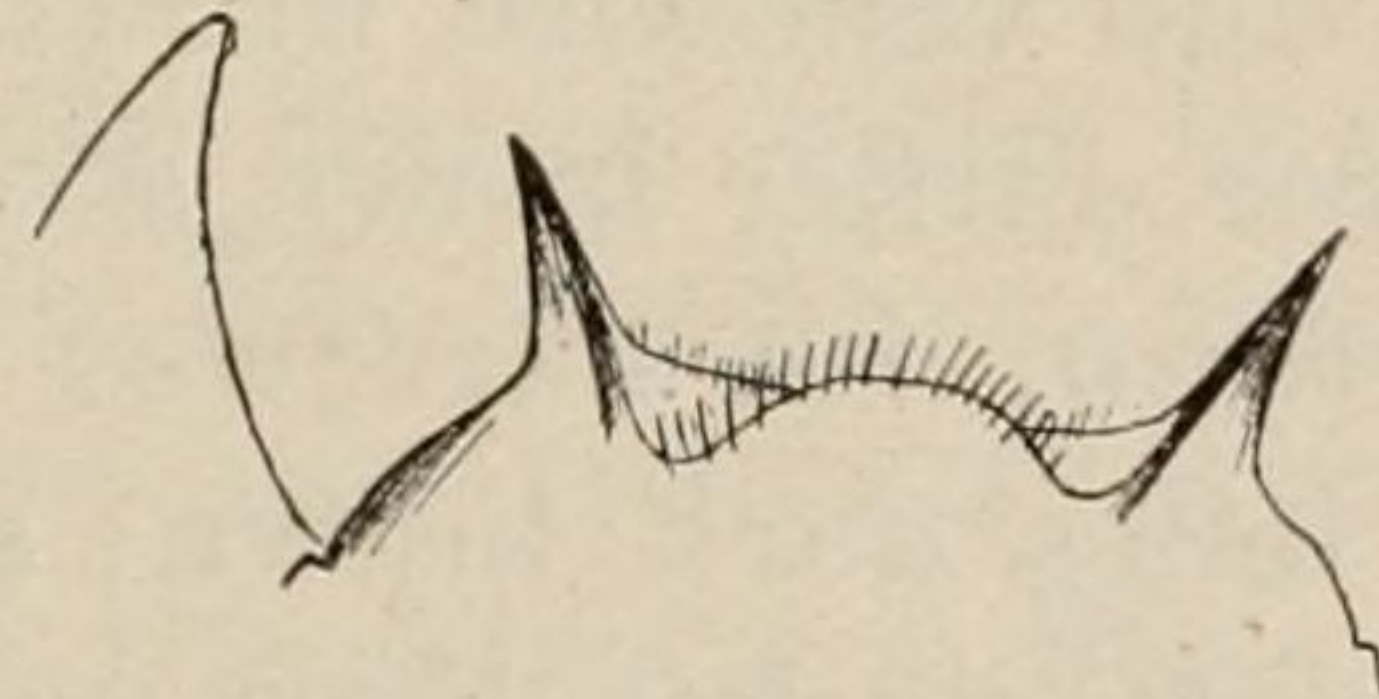
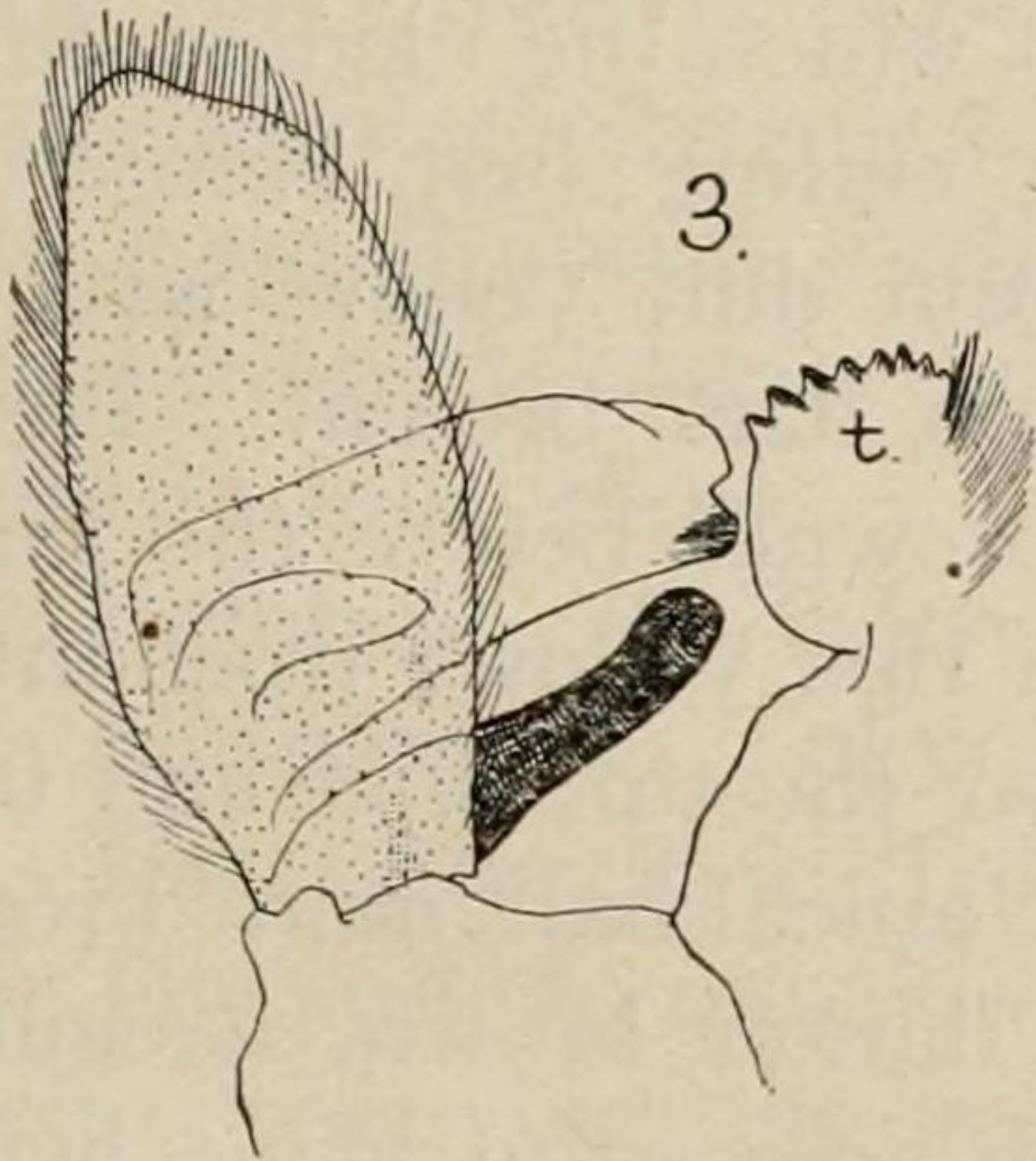
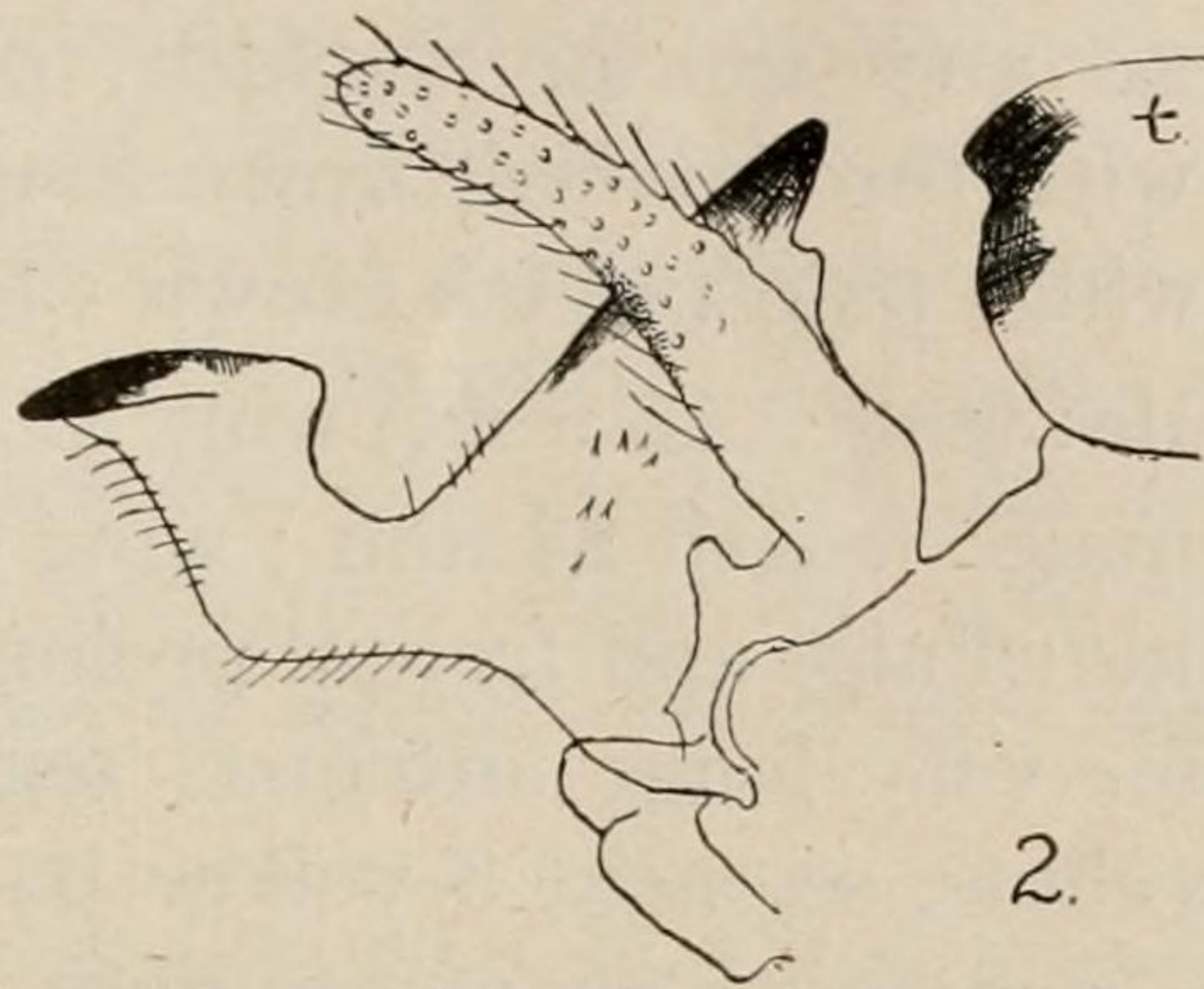
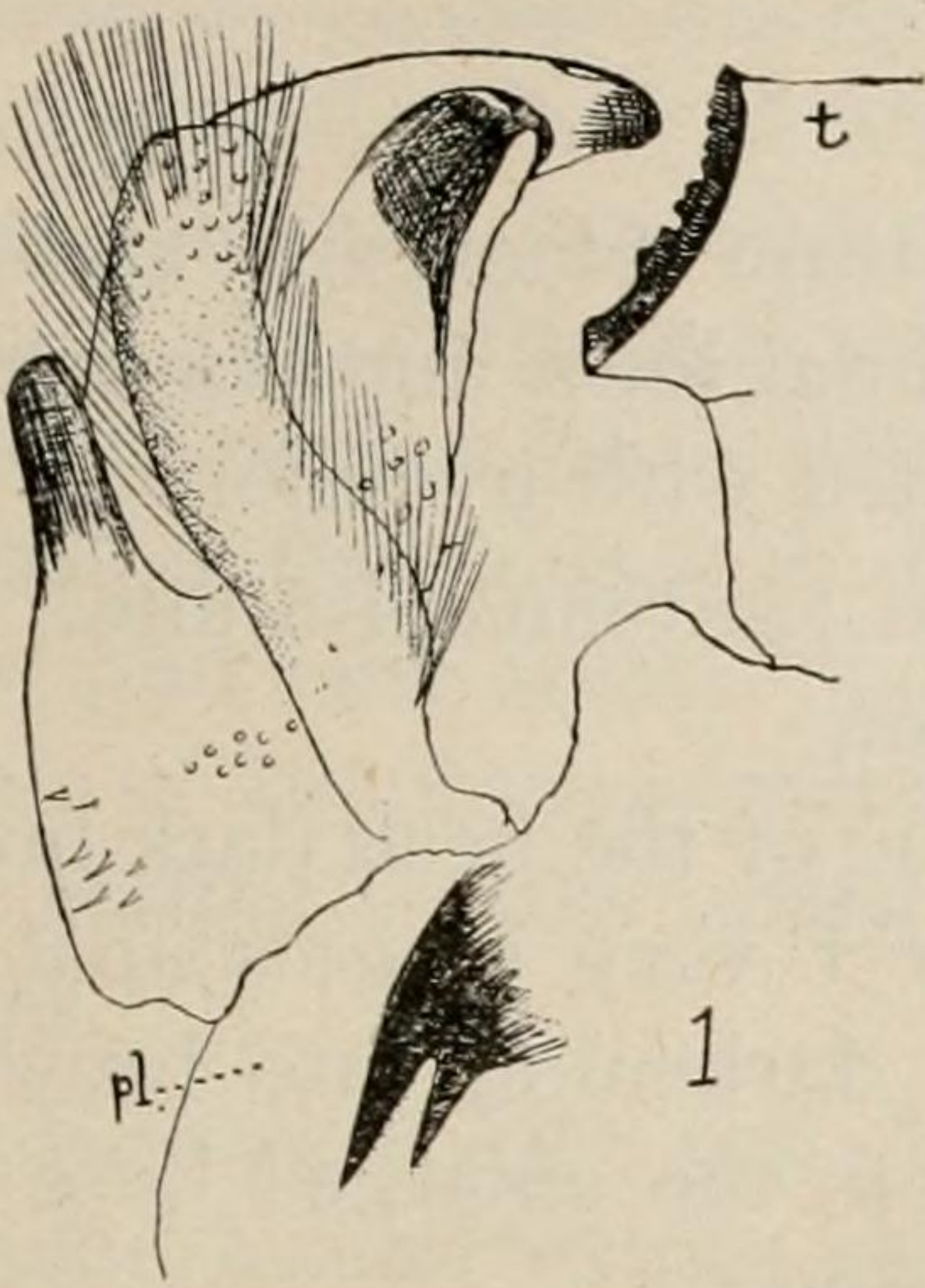
Female.—Palpi with the base dark, the apical segments pale; frontal prolongation of the head rather short, dark above, pale beneath; antennæ, four basal segments light yellow, the remaining segments a little brown at the base, yellow apically; front, vertex and occiput dull yellow, the head with an elongate brown median stripe.

Mesonotal præscutum light brown, with three broad dark brown stripes of which the median one is very broad and is bisected by a pale line, lateral stripes close to the median one; scutum dull brownish yellow, the lobes mostly dark brown; scutellum brownish yellow; postnotum light brown, with three dark brown longitudinal stripes. Pleura brown, much darker on the mesosterna. Halteres rather short, dull yellow, the knob a little brown. Legs, coxæ with the externo-cephalic face brown; trochanters dull yellow, femora and tibiæ yellow, the tips brown; tarsal segment 1 brownish yellow, brown at the tip; segments 2-5 brown. Wings gray, cells C and Sc yellowish brown; dark brown blotches as follows; At base of vein M, in middle of cell M<sub>1</sub> adjoining vein Cu, at origin of Rs, stigmal region including the cephalic portion of the cord. Hyaline blotches scattered over the wing, the largest beyond the stigma, extending obliquely across the wing to cell 1st M<sub>2</sub>; a large blotch in cells R and M near the basal third, another in cell M near the tip; others before the stigma and in the anal cells. Venation (see plate XVI, fig. 4).

Abdominal tergites brownish yellow, with three indistinct dark brown longitudinal stripes which extend the length of the abdomen. Ovipositor of a remarkable structure; viewed from beneath (see plate XIX, fig. 6), the sternal valves are remarkably short, not even attaining the base of the upper valves; upper valves parallel on a horizontal plane, slightly curved, the inner margin smooth, the outer margin with numerous saw-like teeth. Sternites dull yellow, a broad brown longitudinal median stripe rather indistinct on segments 1-3 but becoming darker and better defined on the apical segments.

Holotype, ♀, Tokyo, Japan; August, 1912; vial 41.

Paratype, ♀, Tokyo, Japan; August, 1912; vial 41.



**Tipula yusou**, sp. n.

Head and thorax blackish; postnotum blackish; abdomen yellow with three dorsal brown longitudinal lines and one median stripe; wings pale greyish brown variegated with hyaline.

Male: length 15 mm.; wing 19.2 mm.; antennæ 4-5 mm.

Female: length 23 mm.; wing 21 mm.

Male: Palpi and frontal prolongation of the head dark brown, the latter very long; antennæ, segment 1 very long; scapal segments yellow, segment 3 yellow basally darkening into brown at the tip, remaining segments dark brown, the enlarged base even darker, front, vertex and occiput dark brown.

Pronotum dull yellowish brown. Mesonotal præscutum light brown with three darker brown stripes of which the median one is elongate cuneiform, its narrowed point ending just before the suture; scutal lobes dark brown; scutellum dull yellow with an indistinct, narrow darker line; postnotum dark brown. Pleura dark brown. Halteres pale, the stem browner before the knob. Legs, coxæ brown on the outer face, the tips yellow; trochanters yellow; femora yellow, becoming brown at the tip; tibiæ and tarsi brown. Wings, basal half pale yellowish, apical half more brown, cells C and Sc yellowish; stigmal blotch darker brown, irregular; hyaline blotches as follows: a large blotch across the wing before the cord; a narrower one beyond the cord; a large blotch in the caudal portions of cells 1st A and 2nd A; cell M pale in the middle. Venation, see plate XVI, figure 1.

Abdominal tergites 1-7 dull yellow with a narrow dark brown median stripe; segments 3-7 with a shorter and narrower stripe near the lateral margin of each sclerite; segments 8-9 dark brown; sternites dull yellow, also with a distinct, narrow median vitta. Male hypopygium (Lateral aspect, see plate XIX, figure 1): 9th tergite from above, with the caudal margin deeply and broadly rounded, the edge with abundant chitinized teeth, the lateral angles notched; 8th sternite, viewed from the side triangular, the caudal end with a dense bunch of orange coloured hairs; 9th sternite rather large, oval, bearing on its pleural region a group of appendages as follows: the more dorsal a large, fleshy, sigmoid lobe, very densely clothed with long delicate hairs, ventrad and entad of this a large bifid appendage whose caudal branch ends in

a cylindrical chitinized arm, and whose cephalic branch is produced dorsad into a spoon-shaped appendage whose concavity is directed toward the chitinized portion of the 9th tergite; instead of these appendages is a large lobe whose point is chitinized and directed cephalad, the sides with deep parallel grooves. The penis is rather short and very stout; just underneath its tip inside the pleura are a pair of apophyses (shown in the figure), these strongly chitinized and ending in two sharp spines of which the caudal one is the larger.

Female.—Like the ♂, but the dorsal abdominal stripe is much broader, lateral stripes also much broader; on the caudal half of the 7th tergite and on the 8th tergite, all three of the dorsal vittæ unite and cover the segment; the sternal vitta is very broad, but is interrupted at the end of the 6th segment; segments 7 and 8 with a small brown median spot near the caudal margin, and the anterior and posterior edges of the sclerite a little darker; genital segment dull yellow.

Holotype, ♂, Tokyo, Japan; May 7, 1912; vial 36.

Allotype, ♀, Tokyo, Japan; April 26, 1912; vial 21.

Paratypes, 2 ♀, Tokyo, Japan; April 23, 1912; vial 3.

The specific name is that of an aboriginal Japanese race formerly occupying the north-west shores of the southern half of Nippon facing the Sea of Japan.

#### EXPLANATION OF PLATES.

##### PLATE XI.

- Fig. 1. Wing of *Pachyrhina pullata*, sp. n.  
 Fig. 2. " *P. palloris* Coquillett.  
 Fig. 3. " *P. repanda*, sp. n.  
 Fig. 4. " *P. virgata* Coquillett  
 Fig. 5. " *P. flavonota*, sp. n.  
 Fig. 6. Dorsal aspect, 9th tergite, of *P. flavonota*, sp. n.; ♂.  
 Fig. 7. " " " *P. pullata*, sp. n.; ♂.  
 Fig. 8. " " " *P. repanda*, sp. n.; ♂  
 Fig. 9. " " " *P. virgata* Coquillett; ♂.  
 Fig. 10. Sixth antennal segment, *P. virgata* Coquillett; ♂.  
 Fig. 11. " " " *P. repanda*, sp. n.; ♂.  
 Fig. 12. " " " *P. pullata*, sp. n.; ♂.

Fig. 13. Pleural appendages, ♂ hypopygium, *P. virgata* Coquillett.

Fig. 14. Pleural appendages, ♂ hypopygium, *P. pullata*, sp. n.

Fig. 15. " " " " *P. flavonota*, sp. n.

Fig. 16. " " " " *P. repanda*, sp. n.

#### PLATE XVI.

Fig. 1. Wing of *Tipula yusou*, sp. n.

Fig. 2. " *T. nipponensis*, sp. n.

Fig. 3. " *T. aino*, sp. n.

Fig. 4. " *T. serricauda*, sp. n.

Fig. 5. " *T. yamata*, sp. n.

Fig. 6. " *T. insulicola*, sp. n.

Fig. 7. " *T. coquilletti* Enderlein.

Fig. 8. " *Dictenidia fasciata* Coquillett

#### PLATE XIX.

Fig. 1. Hypopygium of *Tipula yusou*, sp. n.  
Lateral aspect; t = 9th tergite; pl = pleura.

Fig. 2. Hypopygium of *T. nipponensis*, sp. n.  
Lateral aspect; t = 9th tergite.

Fig. 3. Hypopygium of *T. yamata*, sp. n.  
Lateral aspect; t = 9th tergite.

Fig. 4. Hypopygium of *T. aino*, sp. n.  
Dorsal aspect of the 9th tergite.

Fig. 5. Hypopygium of *T. aino*, sp. n.  
Pleural appendages, lateral aspect.

Fig. 6. Ovipositor of *T. serricauda*, sp. n.  
Ventral aspect; t = tergal valve; 5 = sternal valve.

Fig. 7. Hypopygium of *T. coquilletti* End.  
Ventral aspect; 8s = 8th sternite; 9s = 9th sternite.

Fig. 8. Hypopygium of *T. coquilletti* End.; 9th tergite from above.

Fig. 9. Hypopygium of *T. coquilletti* End.; pleural appendage from the inside.

Fig. 10. Hypopygium of *T. coquilletti* End.; pleura and its appendage from the outside.