

## THE TIPULIDAE OF MOUNT ISHIZUCHI AND THE OMOGO VALLEY, IYO, SHIKOKU, JAPAN

### First Supplementary List

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In the excellent report on the insect fauna of Mount Ishizuchi and Omogo Valley, published by the Shikoku Entomological Society (*Transactions*, volume, 3, Supplementum, pp. 1-137, Pars 5-6, pp. 71-166; 1953) I was invited to prepare the basic list for the Dipterous family Tipulidae. This list included 108 species and indicated the peculiar richness of this area for this particular group of flies. Since the basic list was published further additions have been made, based on the continuing study of rich collections sent to me through Professor Tamotsu Ishihara, collected by himself and by various members of the Shikoku Entomological Society, particularly Messrs. Tadao Edashige, Hide-nobu Ide, Hiroyuki Kusunoki, Terunori Mohri and Toshiro Yano. I am also indebted to Professor Michio Chūjō, outstanding student of the Chrysomelidae of Japan and Formosa, for some very interesting species that he secured on Mount Ishizuchi in August 1953. To all of these students of the Japanese insectan fauna I wish to express my deepest appreciation and thanks.

It is desirable that the basic list of species in the various groups be kept up to date and for that purpose I am here adding 32 species to the list of Tipulidae, bringing the total to 140 species. It is certain that many further additions to the list will be made in the future. The series of reports on the Japanese Tipulidae being published in the *Philippine Journal of Science* have been delayed and the expected date of appearance of novelties in the various parts are indicated under the various species as discussed.

#### TIPULINAE

##### 109. *Dictenidia pictipennis fasciata* Coquillett, 1898

Mt. Ishizuchi, August 18, 1953 (Chūjō).

**Distr.** Japan (Honshu, Shikoku, Kyushu).

##### (5) *Dictenidia miyatakei* Alexander, 1953, *in press*.

One further specimen was taken on Mount Ishizuchi, August 18, 1953 (Chūjō). The structures of the male hypopygium is quite distinct from that of the last specimen.

**110. *Tanyptera flavoposticata* sp. nov.**

Size relatively small (wing 12 mm. or less); general coloration black; halteres yellow; femora yellow, the tips abruptly black; tibiae brown, the posterior pair with a broad yellow subterminal ring; wings yellow, the outer radial field strongly infuscated; vein  $R_{1+2}$  preserved; abdomen yellow, the tergites trivittate with black, the sternites more extensively blackened; male hypopygium with the outer dististyle short and massive, its inner margin with about five teeth; inner dististyle a little larger, narrowed into a point, the lower beak a strong blackened spine.

♂.—Length about 11 - 12 mm.; wing 10 - 12 mm.; antenna about 3.3 - 3.5 mm.

♀.—Length about 13 mm.; wing 11 - 12 mm.

♂. Rostrum and palpi black. Antennae relatively short; scape black, pedicel and proximal flagellar segments, with their branches, yellow, the outer segments, including branches, infuscated; longest basal branches about twice the segments. Head black.

Thoracic dorsum black, the plerua gray pruinose; dorsopleural membrane darkened. Halteres yellow. Legs with the coxae black, gray pruinose; trochanters brownish black; femora yellow, the tips abruptly black, involving about the outer fifth or more; tibiae brown, more yellowed on the flexor surface; posterior tibiae darker brown to black, with a very broad pale yellow ring that is nearly terminal in position, involving more than one-third the segment, the extreme tip darkened; tarsi brownish black to black. Wings tinged with yellow; the prearcular and costal fields, with the stigma, clearer yellow; outer radial field, including cells  $R_2$ ,  $R_3$  and outer end of  $R_5$ , strongly infuscated; veins brownish black, paler in the brightened fields. Venations:  $R_{1+2}$  preserved, chiefly longitudinal in position; petiole of cell  $M_1$  longer than  $m$ ; basal section of  $M_4$  perpendicular, variable in length.

Abdominal tergites yellow, with broad black median and lateral stripes; sternites chiefly black, their posterior borders restrictedly yellow, more extensively so on sternites six and seven; eighth and ninth segments blackened, the eighth sternite narrowly pale on its posterior portion. Male hypopygium with the outer dististyle short and massive, its inner margin with about five teeth, the outermost longest. Inner dististyle slightly larger, extended into a narrow point, the lower beak a strong blackened conical spine.

♀. As in the male, differing in the sexual characters. Antenna with both the scape and pedicel black, basal four or five flagellar segments obscure yellow, segments eight to twelve conspicuously enlarged, subglobular, the terminal segment very reduced. Abdomen with the bases of the tergites blackened, restricting the yellow areas to the sublateral parts. Ovipositor with the basal shield shorter than the compressed cerci, the latter obtusely rounded at tips.

**Holotype**, ♂, Omogo Valley, 700 meters, April 26, 1953 (Yano). **Allotopotype**, ♀ pinned with the type. **Paratopotypes**, ♂♂, ♀♀, April 26-27, 1953 (Yano).

The other small-sized regional species, including *Tanyptera angustistyla* Alexander, *T. brevipecten* Alexander, and *T. perangusta* Alexander, are readily distinguished by the coloration of the legs and wings and, especially, by the entirely different male hypopygia.

#### 111. *Tipula* (*Schummelia*) *acirostris* sp. nov.

General coloration of praescutum yellow with three dark brown stripes; antennae relatively short, flagellum black; pleura variegated dark brown and yellow; femora yellow, the tips conspicuously black; wings weakly infuscated, patterned with whitish and darker clouds; cell *1st M*<sub>2</sub> small, cell *M*<sub>1</sub> long-petiole; abdominal tergites dark brown, the more basal ones with the incisures pale; male hypopygium with the posterior border of the tergite very shallowly emarginate, the lobes correspondingly low, on ventral margin of each lobe with a small blackened tooth; inner dististyle a very flattened blade, the lower margin at near two-thirds the length with an unusually slender rostrum, the apex of style broadly rounded.

♂.—Length about 11-12 mm.; wing 12-13.8 mm.; antenna about 4-4.2 mm.

Frontal prolongation of head, including nasus, obscure yellow; palpi dark brown, the incisures narrowly paler. Antenna (male) relatively short, about one-third the wing; scape obscure yellow, pedicel clearer yellow, flagellum black; flagellar segments subcylindrical, the basal enlargements poorly indicated; intermediate segments a trifle shorter than the verticils. Front and anterior vertex broadly yellow, the sides of the posterior vertex extensively infuscated, leaving a relatively narrow central yellow part; vertical tubercle lacking.

Pronotum obscure yellow, patterned laterally with dark brown. Mesonotal praescutum with the ground yellow, with three dark brown stripes, the anterior end of the broad central vitta somewhat paler, the lateral stripes virtually confluent with the central one at their anterior ends, restricting the interspaces to narrow obscure yellow lines; extreme lateral margin of praescutum narrowly darkened; scutal lobes dark brown, the central area yellow; scutellum brownish yellow, dark brown medially, with long yellow setae; mediotergite dark brown, obscure yellow medially, with abundant very long yellow setae; pleurotergite chiefly dark brown, the katapleurotergite extensively yellow. Pleura with the propleura and mesepisternum chiefly dark brown, variegated with yellow on the dorsal anepisternum and dorsal sternopleurite; mesepimeron yellow, with a darkened spot on dorsal part; ventral meron darkened; metapleura chiefly pale. Halteres infuscated, the base of stem and apex of knob obscure yellow. Legs with the coxae infuscated basally, most extensively so on the posterior pair, the apices paling to yellow; trochanters yellow; femora obscure brownish yellow, the tips conspicuously black, the amount subequal on all legs; tibiae brownish black; tarsi black; claws (♂) toothed. Wings with the ground weakly infuscated, patterned with restricted whitish areas and

darker clouds; the white marks occur before and beyond the dark brown stigma, across cell *Ist M*<sub>2</sub>, near outer end of cell *Ist M*<sub>2</sub>, and as a marginal spot in cell *Ist A* near vein *2nd A*; the darker clouds are chiefly in the outer radial field, at and near the fork of *M*<sub>1+2</sub>, and over *m-cu*; veins dark brown, lighter in the pale areas. Venation: Petiole of cell *M*<sub>1</sub> relatively long, fully one-fourth the cell; cell *Ist M*<sub>2</sub> small; *m-cu* just before fork of *M*<sub>2</sub>.

Abdomen with the first tergite brownish gray, darker laterally; succeeding tergites dark brown, the incisures, particularly the posterior borders obscure yellow; sternites obscure yellow, the basal ones clearer, restrictedly patterned with darker, especially basally; outer segments, including the hypopygium, more uniformly blackened. Male hypopygium with the tergite transverse, its posterior border very shallowly emarginate, the lobes correspondingly low; on ventral surface of each lobe just back from the margin with a small blackened tooth. Outer dististyle narrow, broadest near base, tapering gradually to the obtuse tip. Inner dististyle a very flattened blade, bearing on its lower margin at near two-thirds the length an unusually slender rostrum; apex of style broadly rounded, the surface with relatively few setae.

**Holotype**, ♂, Omogo Valley, August 3, 1952 (Kusunoki). **Paratype**, ♂, Mount Isuzuchi, summit, 1931 meters, August 18, 1953 (Chūjō).

In its general appearance, the present fly is most like *Tipula Schummelia nipponensis* Alexander but from the structure of the male hypopygium is more as in *T. (S.) imanishii* Alexander, of the Japanese Alps. The latter differs in coloration and venation and in the details of structure of the male hypopygium, particularly the tergite and inner dististyle.

## 112. *Tipula (Schummelia) omogicola* sp. nov.

Allied to *macrotrichiata*; general coloration of thorax brownish gray, the praescutum with three scarcely darker brown stripes; antenna (♂) elongate, flagellar segments bicolored; femora yellow, the tips narrowly dark brown; wings pale brownish or grayish yellow, the prearcular and costal fields more saturated yellow; narrow pale brown seams over the cord; sparse macrotrichia in outer end of cell *R*<sub>5</sub>; cell *Ist M*<sub>2</sub> small, narrowed outwardly, *m* short to entirely obliterated; *m-cu* long, at fork of *M*; abdomen with basal three segments yellow, the outer ones brown; hypopygium brownish black, the posterior border of the ninth tergite produced medially into a setiferous compressed blade; inner dististyle with the blade broad but relatively high.

♂.—Length about 8-8.5 mm.; wing 10-11 mm.; antenna about 5 mm.

Frontal prolongation of head short, brownish yellow; nasus short, tipped with long black setae; palpi light brown, the terminal segment passing into black. Antenna (♂) elongate, about one-half as long as wing; basal three segments yellow, succeeding ones bicolored, black basally, including the small enlargements, the tips yellow, in cases more extensively so than in others. Head dark brown, gray behind, whitish yellow on front and surrounding the antennal bases; vertical tubercle lacking.

Pronotum brownish testaceous. Mesonotum brownish gray, the praescutum with three scarcely darker brown stripes, the centers of the scutal lobes similarly patterned; mediotergite clearer gray; pleurotergite dark brown, paler ventrally. Pleura gray, with a narrow brown longitudinal line over the ventral anepisternum; ventral sternopleurite and meron darkened; dorsopleural region buffy yellow. Halteres yellow, the base of knob weakly darkened. Legs with the coxae yellow, their bases inconspicuously darkened; trochanters yellow; femora yellow, the tips narrowly dark brown; tibiae yellowish brown, tarsi passing into black; claws ( $\delta$ ) very small, simple. Wings with the ground pale brownish or grayish yellow, the prearcular and costal fields more saturated yellow; stigma long-oval, dark brown conspicuous; outer radial cells more conspicuously darkened; narrow pale brown seams over the cord, including *m-cu*; cells before cord slightly darker than those immediately beyond; obliterative areas before and beyond stigma and along the cord; veins brown, clear yellow in the flavous fields. Sparse macrotrichia in outer end of cell  $R_5$ , in cases with three or four further trichia in extreme outer part of cells  $R_3$  and  $M_1$ . Venation:  $R_5$  relatively long, gently arcuated; cell *1st M*<sub>2</sub> small, narrowed outwardly, *m* short to entirely obliterated; *m-cu* long, oblique, at the fork of *M*.

Abdomen yellow on proximal three segments, the lateral borders and posterior margin of the third tergite narrowly infuscated; outer segments brown, the relatively large hypopygium brownish black, the appendages paler; basal sternites more extensively yellow. Male hypopygium with the posterior border of the ninth tergite produced medially into a compressed blade, the sides with long dense setae; lateral lobes of tergite somewhat produced, obtuse. Outer dististyle broadest beyond base, the tip obtuse. Inner dististyle with the blade broad but relatively high, the beak simple, slender. Aedeagus slender, straight, narrowed to the apex.

**Holotype**,  $\delta$ , Omogo Valley, 800 meters, June 2, 1953 (Mohri). **Paratopotypes**, 1  $\delta$ , June 6, 1952 (Yano); 1  $\delta$ , May 31, 1953 (Edashige),

Distinguished from the most similar species, *Tipula* (*Schummelia*) *macrotrichiata* Alexander, by details of coloration, the antennae, venation and, especially, the male hypopygium, particularly the inner dististyle and aedeagus.

### 113. *Tipula* (*Tipulodina*) *joana* Alexander, 1919

Omogo Valley, 700 meters, April 27, 1953 (Yano).

**Distr.** Japan (Honshu, Shikoku).

### 114. *Tipula* (*Acutipula*) *bubo* Alexander, 1918

Omogo Valley, August 3, 1952 (Kusunoki). Mount Ishizuchi, summit, 1981 meters, August 18, 1953 (Chūjō).

**Distr.** Karafuto; Japan (Hokkaido, Honshu, Shikoku); Korea.

**115. *Tipula* (*Vestiplex*) *serricauda* Alexander, 1914**

Omogo Valley, 300 meters, May 31, 1953 (Moiiri).

**Distr.** Japan (Honshu, Shikoku)**116. *Tipula* (*Oreomyza*) *harutai* Alexander, 1954, *in press*.**

Omogo Valley, April 25, 1953 (Edasiuige).

**Distr.** Japan (Honshu, Shikoku).**117. *Tipula* (*Oreomyza*) *mohriana* sp. nov.**

Belongs to the *fragilis* (*marmorata*) group; size large wing, male, 17mm. general coloration of mesonotum dull gray, the praescutum with four brown stripes; femora obscure yellow, the tips abruptly blackened; wings very pale gray, vaguely patterned with whitish spots, the stigma darker brown; abdomen yellow, the outer segments dark brown; male hypopygium with the outer dististyle long and narrow, with a blackened marginal tooth near base: gonapophysis a slender curved black spine; eighth sternite produced into two relatively narrow lobes that are separated by a broad U-shaped notch.

♂.—Length about 15 mm.; wing 17 mm.; antenna about 4 mm.

♀.—Length about 18 mm.; wing 18 mm.

Frontal prolongation of head dark brown; nasus long and slender; palpi brownish black. Antennae relatively short, as shown by the measurements; scape and pedicel light yellow, flagellum black; flagellar segments with moderately large basal swellings, subequal to the longest verticils. Head gray, vaguely patterned with darker, including indications of a median vitta; vertical tubercle very low and rounded.

Pronotum brownish gray. Mesonotal praescutum dull gray with four brown stripes, the pale median ground line narrower than the stripes; posterior sclerites of notum dark gray, the scutal lobes patterned with brown. Pleura dark gray, variegated with lighter gray on the dorsal sternopleurite and pteropleurite; dorsopleural membrane obscure brownish yellow. Halteres with stem obscure yellow, knob brown, paling to whitish at tip. Legs with the coxae dark gray, paling to obscure yellow at tips, this being very extensive on the posterior coxae; trochanters yellow; femora obscure yellow, the tips abruptly blackened, a little more extensive on the fore legs than on the hind pair; tibiae brownish yellow, the tips more narrowly dark brown; tarsi pale basally, passing into black. Wings very pale gray, vaguely patterned with whitish spots, especially before and beyond the stigma, beyond midlength of cell *M*<sub>1</sub> and subbasally in cells *C*<sub>u</sub> and the Anals; stigma relatively narrow, dark brown, confluent with a narrow seam over the anterior cord; prearcular and costal regions more yellowed; veins brownish black, paler in the brightened fields, especially before the arcus. Venation: Petiole of cell *M*<sub>1</sub> subequal to *m*; second section of vein *M*<sub>1+2</sub> and vein *M*<sub>2</sub> arcuated.

Abdomen yellow, the outer segments, including the hypopygium, dark

brown. In the female, the abdomen more obscure brownish yellow, presumably caused in part by internal discoloration; outer segments passing into dark brown. Male hypopygium differing in all details from that of *kiushiuensis*. Ninth tergite produced into two slender lobes that are very strongly divergent, on a microscope slide appearing virtually at a straight angle; posterior border between the lateral lobes with a few blackened spicules. Basistyle with a backed flange on mesal face. Outer dististyle long and narrow, the dorsal edge near base with a blackened tooth. Inner dististyle with the beak very small. Gonapophysis appearing as a slender curved black spine; on either side of phallosome with a broadly flattened pale lobe. Eighth sternite produced into two relatively narrow lobes that are separated by a broad V-shaped notch.

**Holotype**, ♂, Mount Ishizuchi, 1600–1800 meters, October 18, 1952 (Mohri). **Allotopotype**,

Named in honor of the collector, Mr. Terunori Mohri, who has added materially to our knowledge of the Tipulidae of Shikoku. The only other regional member of the group, *Tipula* (*Oreomyza*) *kiushiuensis* Alexander, while being very similar in its general appearance to the present fly, is entirely distinct in the structure of the male hypopygium, including all structures, the most evident being the dististyles, phallosome and eighth sternite.

**118. *Tipula* (*Oreomyza*) *nigrocostata* Alexander, 1924**

Omogo Valley, September 28, 1952 (Yano).

**Distr.** Japan (Honshu, Shikoku, Kyushu).

**119. *Tipula* (*Oreomyza*) *otiosa* Alexander, 1924**

Omogo Valley, 700 meters. April 25, 1953 (Edashige and Yano).

**Distr.** Japan (Honshu, Shikoku).

**120. *Tipula* (*Oreomyza*) *strix* Alexander, 1918**

Jōju, Mount Ishizuchi, August 17, 1953 (Chūjō).

**Distr.** Japan (Honshu, Shikoku).

**121. *Tipula* (*Oreomyza*) *trupheoneura* Alexander, 1920**

Omogo Valley, 800 meters, May 4, 1952 (Ide).

**Distr.** Japan (Honshu, Shikoku, Kyushu).

**LIMONIINAE**

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**122. *Limonia* (*Libnotes*) *nohirae* (Alexander, 1918)**

Omogo Valley, October 17–20, 1952 (Mohri).

**Distr.** Japan (Honshu, Shikoku)

**123. *Limonia (Discobola) annulata* (Linnaeus, 1758)**

Mount Ishizuchi, summit, 1931 meters, August 18, 1953 (Chūjō).

**Distr.** Japan (Hokkaido, Honshu, Shikoku); widespread throughout the Holarctic Region, in eastern Asia ranging southward into the highest mountains of Mindanao and Borneo.

**124. *Limonia fusca* Meigen, 1804**

Omogo Valley, 700 meters, April 26, 1953 (Yano), May 31, 1953 (Mōri).

**Distr.** Japan (Hokkaido, Shikoku); widespread throughout the Holarctic Region.

**125. *Helius (Helius) obliteratus* (Alexander, 1920)**

Omogo Valley, June 2, 1953 (Mōri).

**Distr.** Japan (Honshu, Shikoku, Kyushu).

**126. *Antocha (Antocha) subconfluente* Alexander, 1930**

Omogo Valley, May 31, 1953 (Mōri).

**Distr.** Japan (Shikoku, Kyushu).

**PEDICINI****127. *Pedicia (Tricyphona) optabilis* (Alexander, 1924)**

Omogo Valley, May 11, 1952 (Ishinara), June 6, 1952 (Yano).

**Distr.** Japan (Shikoku, Kyushu).

**128. *Pedicia (Tricyphona) vetusta* (Alexander, 1913)**

Omogo Valley, October 17, 1952 (Mōri), October 20, 1952 (Kusunoki). Mount Ishizuchi, 1600–1800 meters, October 18, 1952 (Mōri).

**Distr.** Japan (Hokkaido, Honshu, Shikoku).

**129. *Ula (Ula) cincta* Alexander, 1924**

Omogo Valley, 800 meters, June 2, 1953 (Mōri).

**Distr.** Japan (Hokkaido, Shikoku).

**HEXATOMINI****130. *Limnophila (Prionolabis) atrofemorata* nom. nov.**

New name for *Limnophila (Prionolabis) nigrofemorata* Alexander, Philippine Journ. Sci. 66: 117–118, 1938; nec *Limnophila nigrofemorata* Alexander, Proc. U. S. Nat. Mus., 72, Art. 2; 14, 1927

Mount Ishizuchi, 1600–1800 meters, October 18, 1952 (Mōri).

**Distr.** Japan (Honshu, Shikoku).



131. **Limnophila (Phylidorea) mundella Alexander, 1931**  
Omogo Valley, 800 meters, June 2, 1953 (Mohri).  
**Distr.** (Honshu, in Alps, Shikoku).
132. **Nippolimnophila omogiana Alexander, 1954, in press.**  
Omogo Valley, 700 meters, April 26, 1953 (Yano).  
**Distr.** Japan (Shikoku).
133. **Elephantomyia (Elephantomyia) hokkaidensis Alexander, 1924**  
Mount Ishizuchi, 1600-1800 meters, October 18, 1952 (Mohri).  
**Distr.** Japan (Hokkaido, Honshu, Shikoku).

#### ERIOPTERINI

134. **Cladura (Cladura) decem-notata Alexander, 1924**  
Omogo Valley, October 17, 1952 (Mohri).  
**Distr.** Japan (Shikoku, Kyushu).
135. **Cladura (Cladura) tetraspila Alexander, 1947**  
Omogo Valley, October 20, 1952 (Kusunoki). Mount Ishizuchi, 1600-1800 meters, October 18, 1952 (Mohri).  
**Distr.** Japan (Honshu, Shikoku).
136. **Gonomyia (Gonomyia) omogoensis Alexander, 1954, in press.**  
Omogo Valley, June 6, 1952 (Yano).  
**Distr.** Japan (Shikoku).
137. **Erioptera (Erioptera) elegantula Alexander, 1913**  
Omogo Valley, 700 meters, April 26, 1953 (Yano).  
**Distr.** Japan (Honshu, Shikoku).
138. **Ormosia (Ormosia) atripes Alexander, 1919**  
Omogo Valley, 700 meters, April 26, 1953 (Yano).  
**Distr.** Japan (Honshu, Shikoku).
139. **Molophilus (Molophilus) apicidentatus Alexander, 1954, in press.**  
Omogo Valley, June 5, 1952 (Yano).  
**Distr.** Japan (Shikoku).
140. **Molophilus (Molophilus) takaoensis Alexander, 1933**  
Omogo Valley, June 5, 1952 (Yano).  
**Distr.** Japan (Honshu, Shikoku).