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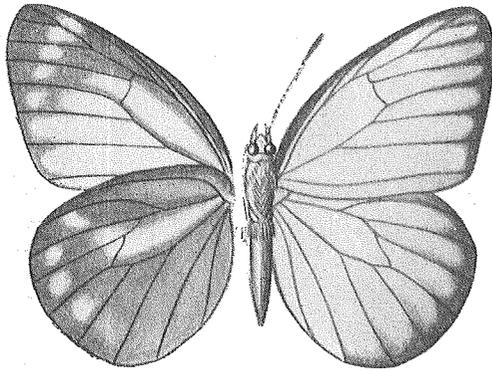


Fig. 2

Huphina nadina hirayamai n. f. (♂)

♂. The blackish part of the wings replaced by a light brownish colour and all the interspaces being not infuscated, while those of the secondaries with a light shade of brown.

Underside ochraceous instead of the greenish gray, the discoidal whity patch being much larger and with the terminal spots more conspicuous.

Hab.—Formosa; one male specimen was collected by Mr. S. HIRAYAMA at Musha.

TWO NEW SPECIES OF *APHIDIDAE* FROM HOKKAIDO

By

MOTONORI INOUE

(With two Textfigures)

In the course of the writer's studies on the aphid pests of trees in the forest zone of Hokkaido, two species which are injurious to coniferous trees were found. So far as his examinations are concerned these species are new to science. They will be described hereafter. In the near future the writer proposes to report on the biology of them.

The writer wishes to express his cordial thanks to Dr. K. ISHIHARA, director of the Hokkaido Forestry Experimental Station, for his kindness while the investigations were agreeably conducted. An expression of gratitude is also due to Dr. S. KUWAYAMA for his kind advice in many ways. Sincere thanks are also tendered to Dr. T. UCHIDA and Mr. M. HORI for their kindness in examining Dr. MATSUMURA's type-specimens of *Aphididae* deposited in the Entomological Museum, Hokkaido Imperial University.

Cinara ezoana n. sp.Nom. Jap.—*Ezomatsu-abura*.**Wingless viviparous female** (Apterous virgögenia).

Body dark yellowish brown. Eyes black. Antennae light brown, with distal ends of the 3rd, 4th and 5th joints and the 6th dark brown. Legs blackish brown, with basal halves of femora and middles of tibiae light brown. Cornicles and cauda black.

Body oblong, with many bristles, slightly covered with a powder. Head divided, with many stout hairs, without frontal tubercles. Eyes with ocular tubercles. Antennae covered with many long bristles; the 3rd joint with no or only one small circular sensorium at the tip; the 4th with 1 or 2 medium-sized or small sensoria; the 5th with no or one medium-sized sensorium below the large primary one; the 6th with a large sensorium, which is surrounded by much smaller ones; the relative length of joints about as follows: I+II-20, III-38, IV-19, V-26, VI-18 (15+3).

Rostrum very long and slender, extending a little beyond the end of abdomen. Cornicles situated on broad hairy cones. Cauda short, rounded, wider than long, with many long bristles. Anal plate larger than the cauda, broadly rounded, with many long bristles. Legs slender, with many long bristles.

Measurements in millimeters

| | |
|----------------------|------|
| Length of body | 2.52 |
| Width of body | 1.29 |
| Antenna | 1.12 |
| Femora: fore | 0.66 |
| middle | 0.61 |
| hind | 0.86 |
| Tibiae: fore | 0.88 |
| middle | 0.95 |
| hind | 1.40 |
| Tarsi: fore | 0.24 |
| middle | 0.24 |
| hind | 0.27 |

Winged viviparous female (Alate virgögenia).

Head and thorax dark yellowish brown. Abdomen yellowish brown. Legs blackish brown, the basal halves of femora and middles of tibiae light brown. Cornicles and eyes black. Antennae dark brown, except the basal halves of the 3rd, 4th and 5th joints.

Body long, broadest at the base of cornicles of the abdomen, with many long bristles and slightly covered with a powder. Head divided, with many stout hairs, and without frontal tubercles. Eyes with distinct ocular tubercles; cornicles situated on hairy cones. Antennae covered with many long bristles; the 3rd joint provided with 2 to 6 medium-sized or rather small circular or oval sensoria; the 4th with 2 to 4 medium-sized circular sensoria; the 5th with 1 or 2 similar sensoria plus the large primary one; the 6th with a large sensorium which is surrounded by smaller ones; the relative length of the joints about as follows: I+II-20, III-47, IV-23, V-32, VI-20 (17+3).

Wings hyaline with a grayish tinge, costa and stigma dark brown, stigma long, veins brown, radial sector short and straight, the 3rd oblique, faintly indicated, twice forked, but, not rarely once forked; hind wings with two obliques, but the second slenderer than the first.

Rostrum slender, extending a little beyond the end of abdomen. Cornicles situated on broad hairy cones. Cauda and anal plate almost as in the apterous form. Legs slender, with many long bristles.

Measurements in millimeters

| | |
|---------------------------|------|
| Length of body | 2.81 |
| Width of body | 1.18 |
| Antenna | 1.32 |
| Length of fore wing | 3.23 |
| Width of fore wing | 1.14 |
| Length of hind wing | 2.06 |
| Width of hind wing | 0.64 |
| Femora: fore | 0.81 |
| middle..... | 0.65 |
| hind | 1.10 |
| Tibiae: fore | 1.10 |
| middle | 1.14 |
| hind | 1.80 |
| Tarsi: fore | 0.25 |
| middle | 0.25 |
| hind | 0.30 |

Host—*Picea Glehnii* MASTER.

Picea jezoensis CARR.

Distribution—Hokkaido (Nopporo, Tonbetsu, Wakkanai, Ashoro, Kushiro, Mukawa, Saru, Frano, Rishiri).

Type—Described from many wingless and winged viviparous females collected at Nopporo, Hokkaido, Japan, in July and August, 1935.

Notes—Oviparous females and males are wingless.

This species is easily distinguished from the next species by the much longer rostrum, by the 2nd oblique of the hind wings slenderer, and by

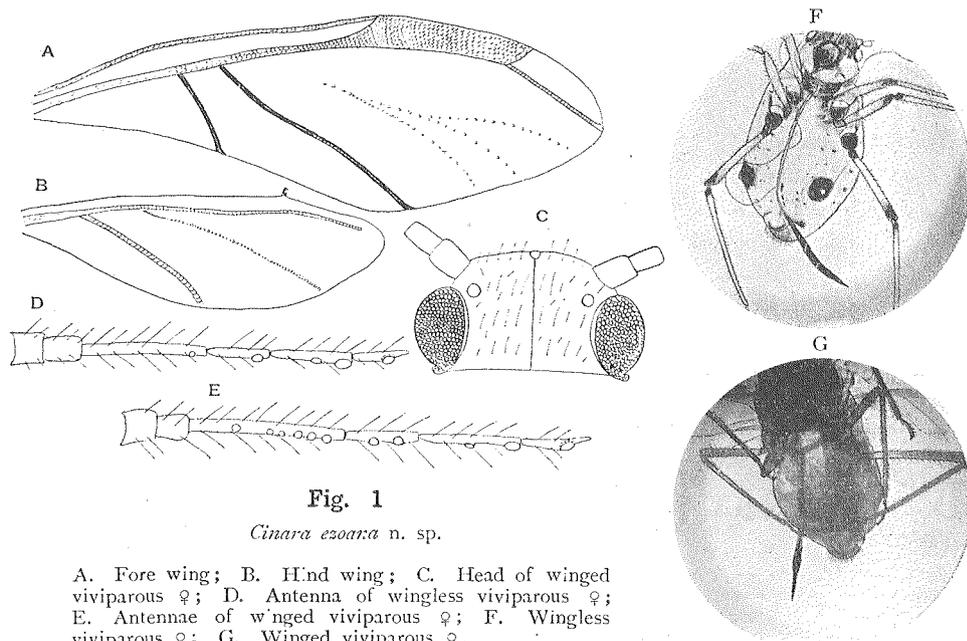


Fig. 1

Cinara ezouana n. sp.

A. Fore wing; B. Hind wing; C. Head of winged viviparous ♀; D. Antenna of wingless viviparous ♀; E. Antennae of winged viviparous ♀; F. Wingless viviparous ♀; G. Winged viviparous ♀.

the 3rd antennal joint of the winged viviparous female with 2 to 6 sensoria.

It is also easily distinguished from *Nippolachnus abietinus* MATSUMURA by the much longer rostrum, by the eyes with distinct ocular tubercles and by the fact that the radial sector of the fore wings is short and straight.

***Tuberolachnus todocolus* n. sp.**

Nom. Jap.—*Todomatsu-ôxbura*.

Wingless viviparous female (Apterous virgogenia).

Head brown. Thorax and abdomen dark green or black with a greenish tinge. In the specimens treated with potash, some dark brown patches visible on the dorsum of abdomen. Eyes dark red. Antennae light brown, with the distal ends of the last four joints dark brown. Legs light brown, with the tibiae, tarsi and distal ends of femora black. Cornicles black. Cauda and anal plate dark yellow, with a greenish tinge.

Body oval, broadest at middle of the abdomen, with many very stout long bristles, and slightly covered with a powder. Head divided with many stout hairs. Eyes with ocular tubercles. Antennae with many long stout bristles; the 3rd and 4th joints lacking sensoria; the 5th with one medium-sized circular sensorium below the large primary one; the 6th with a large sensorium, which is surrounded by much smaller ones; the relative length of joints about as follows: I+II-18, III-43, IV-16, V-22, VI-20 (16+4).

Rostrum not so long, reaching the middle of abdomen. Cornicles situated on hairy cones. Cauda very short, rounded, much wider than long, with many stout long bristles. Anal plate larger than cauda, broadly rounded, with many long stout bristles.

Measurements in millimeters

| | |
|----------------------|------|
| Length of body | 2.86 |
| Width of body | 1.74 |
| Antenna | 1.11 |
| Femora: fore | 0.76 |
| middle | 0.77 |
| hind | 1.03 |
| Tibiae: fore | 0.91 |
| middle | 1.01 |
| hind | 1.33 |
| Tarsi: fore | 0.23 |
| middle | 0.26 |
| hind | 0.29 |

Winged viviparous female (*Alate virgogenia*).

Head brown. Thorax blackish brown with a greenish tinge. Abdomen dark green. Legs brown; tarsi, tibiae and distal ends of femora black. Eyes dark red. Antennae light brown; distal ends of the last four joints dark brown. Cornicles black. Cauda and anal plate dark yellow, with a greenish tinge.

Body long, broadest at the base of cornicles of the abdomen, with many very stout long bristles and slightly covered with a powder. Head divided, with many stout hairs, without frontal tubercles. Eyes with distinct ocular tubercles. Antennae covered with many stout long bristles; the 3rd joint provided with 9 to 14 medium-sized or rather large circular sensoria, arranged in a row over the whole length except at the base; the 4th with 2 to 4 medium-sized or small circular sensoria; the 5th with 1 to 3 medium-sized or small sensoria plus the large primary one; the 6th with a large sensorium,

which is surrounded by much smaller ones; the relative length of joints about as follows: I+II-20, III-55, IV-20, V-26, VI-22 (17.5+4.5).

Wings hyaline, with a brownish tinge, stigma grayish, long and broad, veins yellowish brown, radial sector short and very slightly or scarcely curved, the 3rd oblique, slenderer than the other veins, twice forked; hind wings with two obliques, but the second not slenderer.

Rostrum reaches well past the third coxae. Cornicles situated on broad hairy cones. Cauda short, rounded, wider than long, the anal plate larger than cauda, broadly rounded, with many long bristles. Legs large and very stout, with many stout long bristles.

Measurements in millimeters

| | |
|---------------------------|------|
| Length of body | 3.43 |
| Width of body | 1.64 |
| Antenna | 1.34 |
| Length of fore wing | 4.16 |
| Width of fore wing | 1.40 |
| Length of hind wing | 2.69 |
| Width of hind wing | 0.77 |
| Femora: fore | 0.97 |
| middle | 0.82 |
| hind | 1.41 |
| Tibiae: fore | 1.10 |
| middle | 1.26 |
| hind | 2.06 |
| Tarsi: fore | 0.27 |
| middle | 0.29 |
| hind | 0.32 |

Host—*Abies mayriana* MIYABE et KUDO.

Abies sachalinensis Fr. SCHM.

Distribution—Hokkaido (Nopporo, Kushiro, Furano, Oshamanbe, Rikubetsu, Wakkanai, Tonbetsu, Mukawa, Nukabira, Saru).

Type—Described from many wingless and winged viviparous females collected at Nopporo, Hokkaido, Japan, in July and August, 1935.

Notes—Oviparous females are wingless and the males winged.

This species is very closely related to *Todolachnus abietis* MATSUMURA, from which it is distinguished by the ocular tubercles, by the 6th antennal joint lacking medium-sized sensoria, except the usual primary one, by the dark

brown colour of the oviparous female, and by the black colour of the cornicles.

This species is also closely related to *Dilachmus momii* SHINJI. The writer, however, has not yet seen the type of it, judging from the original description, it may be distinguished by the colour of cauda and anal plate, and by the relative length of the antennal joints.

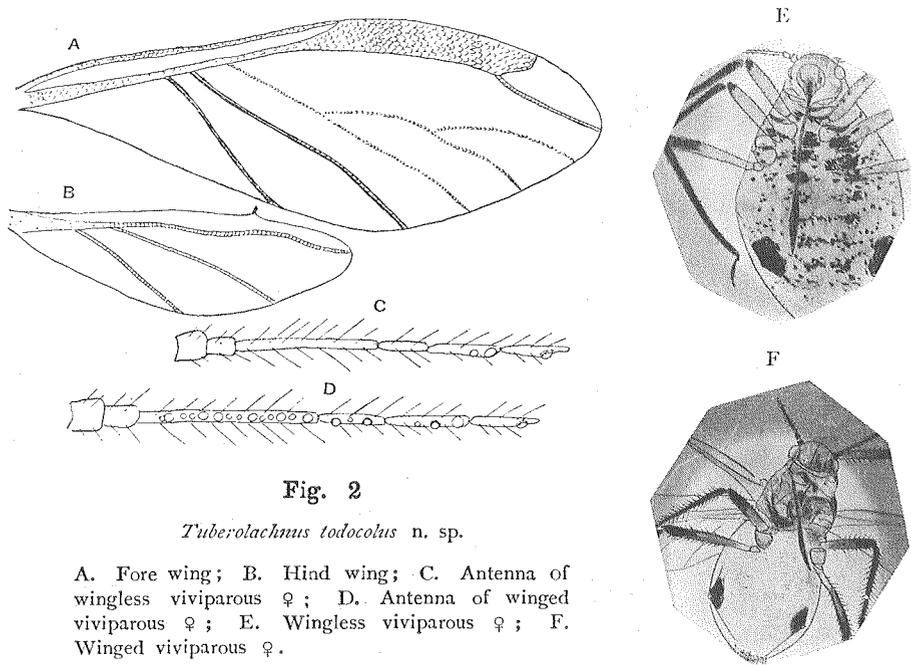


Fig. 2

Tuberolachnus todocolus n. sp.

A. Fore wing; B. Hind wing; C. Antenna of wingless viviparous ♀; D. Antenna of winged viviparous ♀; E. Wingless viviparous ♀; F. Winged viviparous ♀.

摘 要

筆者は北海道林業試験場に於て、北海道の主要樹木を加害する蚜蟲科 *Aphididae* の研究中、次の二新種を發見したるを以て茲に公表する。

1. *Cinara esoana* INOUE (sp. nov.) エヅマツアブラ (宿主) エヅマツ

2. *Tuberolachnus todocolus* INOUE (sp. nov.) トドマツオホアブラ (") トドマツ

尙本種の生態及防除法は目下研究中なれば、近き將來に於て結果の公表を期し度い。