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## *Drosophila* Survey in Hokkaido III Some Flies New to *Drosophila* Fauna of Hokkaido<sup>1)</sup>

With 14 Text-figures

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(Communicated by S. MAKINO)

This paper constitutes the third report from the *Drosophila* survey in Hokkaido. The work has been done under the direction of Dr. E. Momma according to the plan conducted by Prof. S. Makino since 1947. The number of species recognized in Hokkaido has considerably increased during these years, specimens of over fifty species of drosophilids being now at hand (Kikkawa and Peng 1938, Mizuno and Makino 1950, Makino and Kanehisa 1951, Makino and Takada 1951, Momma and Takada 1954, Ishihara 1955, Suzuki 1955, and Momma, 1956). Most of these were previously known to belong to the genus *Drosophila*; a few are represented by eight different genera. In the present paper the author will describe three species which are to be newly added to *Drosophila* fauna of Hokkaido.

The author wishes to express his cordial thanks to Professor Sajiro Makino for his keen interest in the subject and for reading through the manuscript. Further thanks are extended to Dr. Eizi Momma for kind direction with much valuable advice, and also to Dr. Toyohi Okada, Tokyo Metropolitan University, who gave valuable criticism in identification of the species names.

### *Drosophila transversa* (C-type)<sup>2)</sup>

#### *External characters of imagines:*

♂, ♀: Arista with about 9 branches. Antennae grayish-yellow. Front more than 1/2 width of head, wider above, brownish. Middle orbital very fine, about 1/5 anterior and 1/4 posterior. Second oral about 1/2 first. Palpi yellow, with a few

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1) Contribution No. 335 from the Zoological Institute, Faculty of Science, Hokkaido University, Sapporo, Japan.

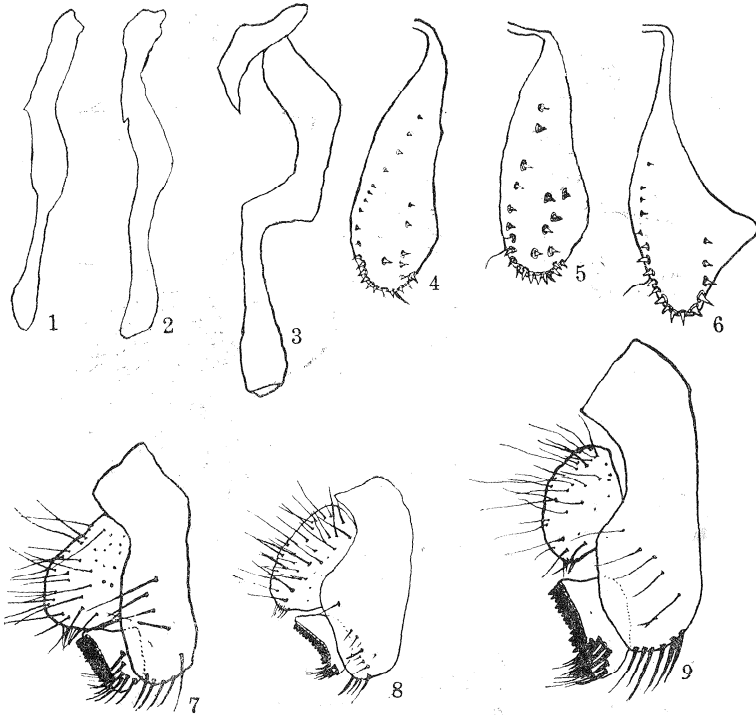
Supported by a grant-in-aid from the Scientific Research Fund of the Ministry of Education, administered by E. Momma.

2) According to a personal communication from Dr. Okada. "*Drosophila transversa*" occurring in Japan can be divided into three types based on the difference of their genital apparatus. Two other types, designated as A- and B-types, were found by Momma and others to occur commonly in several districts of Hokkaido.

prominent bristles. Carina broad and flat. Checks yellowish-brown; their greatest width about  $1/3$  diameter of eyes. Eyes pure red.

Acrostichal hairs in 6 rows; no prescutellars. Mesonotum and scutellum reddish-yellow, shining. Pleurae yellow. Sterno index about 0.6. Legs yellow.

Abdomen brownish-yellow with four black triangular spots on each segment from second to fifth, these spots usually larger than those of other types of



Figs. 1-3. Aedeagus of three types of *Drosophila transversa* (A-, B- and C-type, lateral views). Figs. 4-6. Egg-guides of three types of *Drosophila transversa* (A-, B- and C-type). Figs. 7-9. Male hypopygia of three types of *Drosophila transversa* (A-, B- and C-type).

*Drosophila transversa*, and sometimes confluent.

Wings slightly darker, both crossveins clouded. Costal index about 3.2; 4v index about 1.8; 5x index about 0.8; 4c index about 1.2.

Length of body 2.3-2.5 mm. in male, 2.5-2.8 mm. in female; wings 2.5-2.7 mm. in male, 2.5-3.0 mm. in female.

#### *External genital apparatus:*

♂: Anterior margin of genital arch straight, heel absent, toe roundish, under margin of genital arch roundish and with a few long bristles; middle portion with about 5 bristles. Anal plate roundish, upper portion with dense bristles. Clasper one, primary teeth about 13, short, arranged in a straight row

along the margin and in upper 2/3; lower portion with about 8 long teeth and a few thin hairs (Fig. 9).

Aedeagus with a long apical recurved process (Fig. 3).

♀: Egg-guide with a quadrate tip and waved upper margin (Fig. 6).

Relationship: This is a member of the *quinaria* group of the subgenus *Drosophila*.

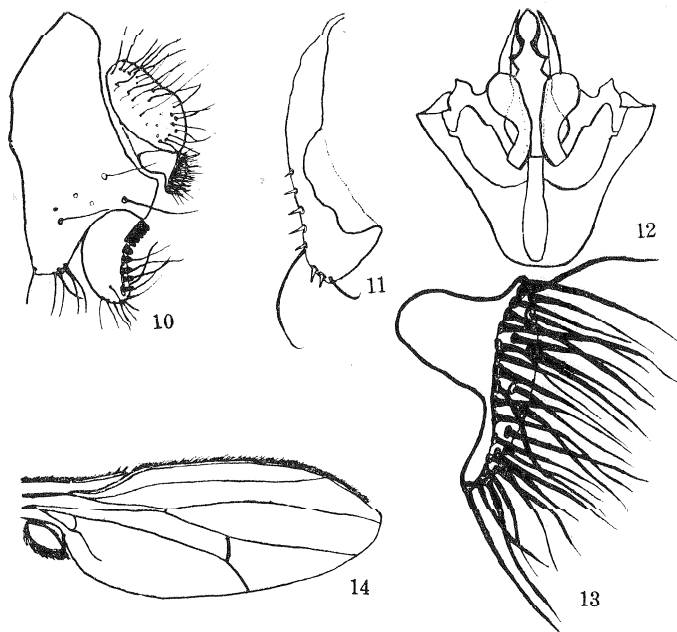


Fig. 10. Male hypopygium of *Scaptomyza* sp. Fig. 11. Egg-guide of *Scaptomyza* sp. Fig. 12. Phallic organ of *Scaptomyza* sp. Fig. 13. Triangular plate of *Scaptomyza* sp. Fig. 14. Wing of *Leucophenga magnipalpis*.

*Notes*; A single male of this species was collected in the Botanical Garden, Sapporo, in September, 1955, and several males and females in Tokachi-Mitsumata, in the eastern part of the Taisetsu mountain group, with the use of banana-baited traps, in September, 1955.

*Scaptomyza* sp.

*- consimilis ?*

*External characters of imagines:*

♂: Arista with about 6 branches. Antennae yellow. Front about 1/2 width of head, wider above. Middle orbital about 1/4 anterior and 1/3 posterior. Second oral about 1/2 first. Face yellow. Palpi yellow with only one prominent bristle. Cheeks yellow; their greatest width about 1/5 diameter of eyes. Eyes dark red.

Acrostichal hairs in 4 rows; no prescutellars. Mesonotum, scutellum and pleurae dark brown. Posterior scutellars long and not upright. Sterno index

about 0.7. Legs yellow.

Abdomen whitish yellow, with posterior dark brown bands which are interrupted at middle dorsal line, on each segment from second to fifth.

Wings clear. Third costal section with heavy bristles on its basal 1/3. Costal index about 2.3; 4v index about 1.5; 5x index about 1.2; 4c index about 1.3.

Length of body 2.0-2.2 mm. in male, 2.0-2.3 mm. in female; wings 2.4-2.5 mm. in male, 2.5-2.6 mm. in female.

*External genital apparatus:*

♂: Anterior margin of genital arch waved and broadly chitinized; wide outgrowth present on posterior margin just above the clasper. Middle portion of genital arch with about 6 long bristles; heel right angle with one long bristle; toe making an obtuse angle, with a few long bristles. Anal plate oval with dense bristles. Clasper one, roundish, with about 10 short teeth, arranged along the sinuated margin. A few long marginal bristles in middle and lower portions of clasper (Fig. 10). There is a triangular plate provided with dense bristles on its posterior portion (Fig. 13). Egg-guide and phallic organs are shown in Figures 11 and 12.

Relationship: This is a member of the genus *Scaptomyza*.

Notes; A few individuals were collected by the use of a net in Tokachi-Mitsumata in late September, 1955.

✓ *Leucophenga magnipalpis* Duda

*Mitsumata*

*External characters of imagines:*

♀: Arista with about 9 branches. Antennae reddish-yellow. Front more than 1/3 width of head, wider above, reddish-brown. Middle orbital almost same length as other two, but slightly shorter than anterior. Only one prominent oral bristle. Carina developed. Palpi very large, black; lacking any prominent bristle. Cheeks reddish-yellow; their greatest width about 1/6-1/7 diameter of eyes. Eyes reddish-brown.

Acrostichal hairs in 6 rows; a pair of small prescutellars present. Mesonotum and scutellum reddish-brown. An indistinct brownish stripe on mesonotum. Pleurae reddish-brown with indistinct brownish pattern on mesopleurae. Sterno index about 0.8. Legs yellow.

Abdomen pale yellow. Blackish spotted pattern on each segment from second to fifth but these are indistinct.

Wings clear, pointed a little at the tip. Third costal section with heavy bristles on its basal 3/5. Costal index about 2.5; 4v index about 1.8; 5x index about 1.2; 4c index about 1.2 (Fig. 14).

Length of body 3.0 mm. in female; wings 3.0 mm. in female.

Relationship: This is a member of the genus *Leucophenga*.

Notes; A single female was collected by net sweeping in the Botanical Garden, Sapporo, in July, 1954.

## LITERATURE CITED

- Kikkawa, H. and F. T. Peng 1938 Jap. Jour. Zool. **7**: 507-552.  
Makino, S. and T. Mizuno 1950 D. I. S. **24**: 86.  
——— and H. Kanehisa 1951 D. I. S. **25**: 110.  
——— E. Momma, H. Takada and T. Ishihara 1952 D. I. S. **26**: 109.  
Mizuno, T. 1952 Pap. Coord. Comitt. Res. Genet. III: 51-55.  
Momma, E. and H. Takada 1954 Annot. Zool. Japon. **27**: 97-101.  
Suzuki, K. 1955 Zool. Mag. (Tokyo) **64**: 44-49.