

# New and Unrecorded Species of Drosophilidae in Korea

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韓國產 초파리科의 新種과 未記錄種

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## 摘 要

*Drosophila* 屬의 2 新種의 記載와 *Microdrosophila* 屬의 韓國未記錄 3 種을 記錄했다.

*Drosophila magnidentata* sp. nov. 國名: 큰니초파리(新稱)

*Drosophila takadai* sp. nov. 國名: 흐린별초파리(新稱)

*Microdrosophila (Microdrosophila) fuscata* OKADA, 1960

*Microdrosophila (Microdrosophila) urashimae* OKADA, 1960

*Microdrosophila (Oxystyloptera) matsudairai* OKADA, 1960

Two new species of the genus *Drosophila* and three hitherto unrecorded Korean species of the genus *Microdrosophila* are reported here.

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### ***Drosophila magnidentata* sp. nov.**

Male and female: Body about 2.0–2.2 mm, yellowish brown. Longitudinal axis of the eye anteroventrally oblique to the body axis. Eye red, oval and somewhat pentagonal, roughly pubescent. Antenna with 2nd joint yellow, 3rd brown and exceedingly broaden below. Arista with about 9 branches including a fork, 2 below it. Palpus yellow, oval, with one prominent subapical seta and a few shorter ventral setae. Ocellar triangle brownish black. Periorbits paler than front, not reaching frontal margin, and with a few short hairs arranged along eye margin. Front broad, flat, greyish brown, slightly narrower than half the head width at the level of ocellars. Slightly narrowing below, and with a few prominent frontal hairs. Face yellowish, flat, carina flat. Cheek yellowish grey, about 1/5 as broad as the greatest diameter of eye.  $orb_2$  about 1/3 length of  $orb_1$ ,  $orb_3$  as long as  $orb_1$  and situated inside  $orb_2$ , which is much nearer to  $orb_3$  than to  $orb_1$ . Vibrissa stout very long.

Mesonotum yellowish brown, narrower than head in width, and exceedingly flat at side view. Scutellum yellowish brown. Thoracic pleura yellowish brown, with two longitudinal black stripes. 2 long humerals, subequal in length. Acrostichals in 4–6 irregularly rows. Anterior dorsocentrals approximately half length of posterior ones, cross distance of dorsocentrals over 1.5 times the length distance. Anterior scutellars divergent, less than half length of posterior ones, situated nearer to the base of scutellum than to the posterior scutellars. Sterno-index about 0.4. Legs yellow, preapicals on all three tibiae, apicals on middle. Wings hyaline, C-index about 2.0, 4 v-index about 2.8, 4 c-index

about 1.6, 5 x-index about 3.3.

First costal section with 2 stout apical bristles, 3rd costal section with heavy bristles on its basal about 2/5. Halteres yellow, stem with a black patch on its anterior margin. Abdominal tergites brownish yellow, with black caudal band on each tergites. Abdominal sternites white.

Periphallallic organs (fig. 1,B) : Genital arch broad, upper and below portion narrowing and white, middle portion black, upper margin with about 3 and lower margin about 6 hairs. Clasper with 2 stout black teeth on the distal margin and with several hairs. Anal plate white, oblong, tapering below, with about 5 hairs, and separated from the genital arch.

Phallic organs(fig. 1,C) : Aedeagus pale yellow, broad, and curved dorsad. Ventral fragma pale yellow, broader than long. Anterior paramere minute, with a few sensilla. Novasternum pale yellow, with a long seta.

Egg-guides(fig. 1,D) : Lobe yellowish brown, with 14 reddish brown teeth, and with 3 distal teeth. Basal isthmus brown and long.

Holotype : Male, Mt. Jukyeop, Kyungki Province, Korea. Aug. to Oct., 1960(Lee).

Allotype : Female, collected together with holotype.

Relationships: Closely allied to *D. varidentata* OKADA & CHUNG, but differs from in the shapes of periphallallic and phallic organs. This species seems to be a member of subgenus *Dichaetophora*, chiefly judging from the fact that the longitudinal axis of the eye is anteroventrally oblique to the body axis and that the length of the anterior dorsocentrals is approximately half length of the posterior ones.

Remarks : The type specimens are deposited at Chungang University, Seoul, Korea.

#### *Drosophila takadai* sp. nov.

Male and female: Body about 2.8 mm, yellowish brown. Eye pubescent. Arista with about 8—9 branches including a fork, 2 below it. Palpus yellowish grey, with about 2 prominent bristles. Front about half as broad as head-width. Carina broad and high.

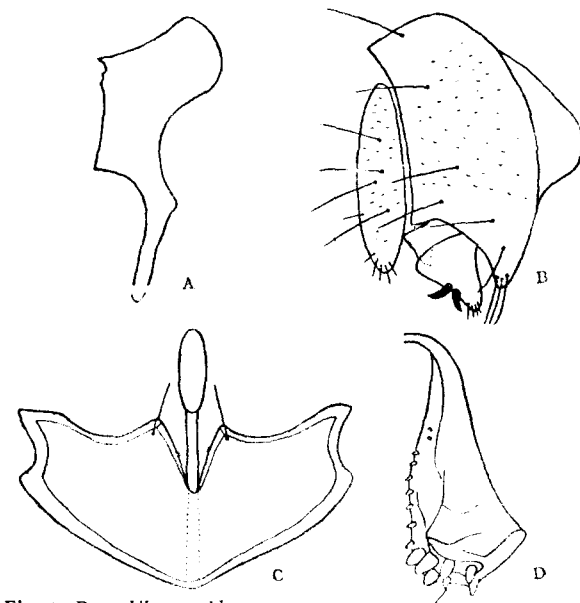


Fig. 1. *Drosophila magnidentata* sp. nov.

A. Aedeagus (lateral aspect). B. Periphallallic organs(lateral aspect). C. Phallic organs (ventral aspect). D. Egg-guide.

Check yellowish brown, about 1/4 as broad as the greatest diameter of eye.  $Orb_2$  minute, about 1/5 length of  $orb_1$ .  $Or_2$  about 4/5 vibrissa.

Mesonotum yellowish brown. Humerals 2, acrostichals in 6 rows. Cross distance of dorsocentrals about half the length distance. Anterior scutellars slightly divergent. Sterno-index about 0.5. Halters yellow.

Legs yellow. Preapicals on all three tibiae. Apicals on middle. Wings hyaline, crossveins clouded. C-index about 3.0, 4 v-index about 1.4, 4 c-index about 0.9, 5 x-index about 1.0, C 1-bristles 2, unequal in size and thickness. 3rd costal section with heavy bristles on its basal about 2/5.

Abdominal tergites yellowish brown, with obscure band interrupted at middle. The band with 4 small indistinct dark patches.

Periphallallic organs (fig. 2,C) : Genital arch yellow, apically tapering, and with about 7 hairs; Clasper with about 10—12 teeth in a row, and about 17—20 secondary teeth arranged in a few rows. Anal plate with about 35 long hairs.

Phallic organs (fig. 2,A) : Aedeagus dark brown, rectangularly curved dorsad, and bilobed at tip. Anterior paramere with a few sensilla apically. Posterior paramere obscure. Novasternal plate circular, and with a fine submedian spine,

Ventral fragma semielliptic and broadly rounded at tip.

Egg-guides (fig. 2, D): Lobe yellowish orange, broadly rounded at tip, with about 18 teeth. Basal isthmus short and narrow.

Eggs (fig. 2, E): Egg with 3 filaments, median one thicker than lateral ones.

Pupae (fig. 2, F): Yellowish brown, anterior spiracles about 12 posterior spiracles divergent.

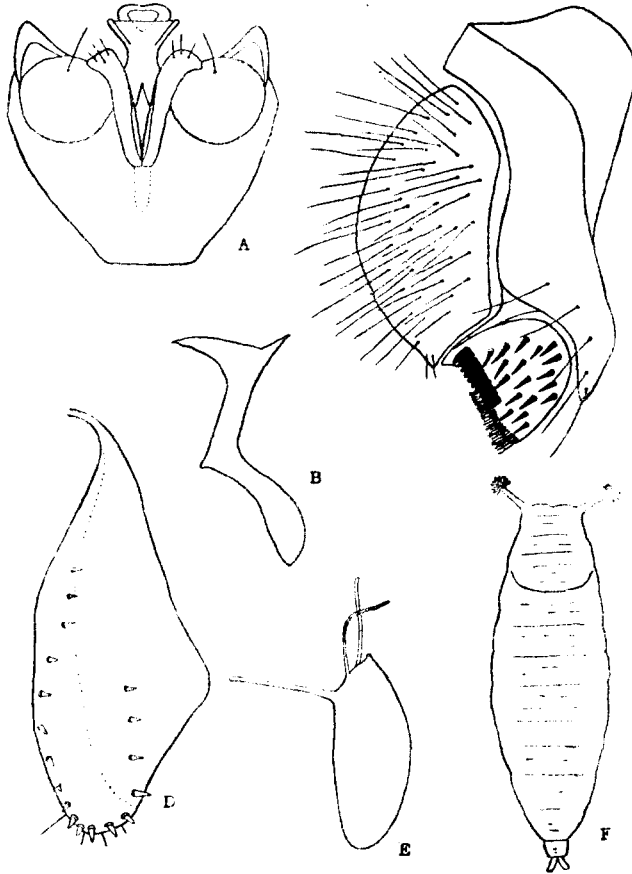


Fig. 2. *Drosophila takadai* sp. nov.  
 A. Phallic organs (ventral aspect). B. Aedeagus (lateral aspect).  
 C. Peripheral phallic organs (lateral aspect). D. Egg-guide.  
 E. Egg. F. Pupa.

***Microdrosophila (Microdrosophila) urashimae* OKADA.**

Okada, T., 1960. *Kontyu* 28, 4.

This species is new to Korean drosophilid fauna. The author collected 2 specimens (1 ♀, 1 ♂) by net sweeping at Muju in Sept., 1958, and 2 specimens (1 ♀, 1 ♂) by net sweeping at Mt. Chiri in Aug., 1959.

Distribution: Korea; Mt. Chiri, Muju. Japan.

***Microdrosophila (Oxystyloptera) matsudairai* OKADA.**

Okada, T., 1960. *Kontyu* 28, 4.

This species is new to Korean drosophilid fauna. The author collected a single female by using fermenting fruit-baits at Kongju in Sept., 1956, and the

Holotype: Male, Daekwanryung, Kang-Won Province, 10 Aug, 1962 (Lee).

Allotype: Female, collected together with holotype.

Paratypes: 7 ♂♂ and 13 ♀♀, collected together with holotype; 3 ♂♂ and 1 ♀, 18 July, 1963, Daekwanryung.

Relationships: Belongs to the *quinaria* section of the subgenus *Drosophila*. Distinctly different from *D. brachynephros* OKADA, *D. angularis* OKADA and *D. unispina* OKADA, in the color pattern of the abdominal tergites and in the shapes of phallic organs.

Remarks: The specific name is contributed to Dr. Haruo Takada, Kushiro-Women's College, Japan. The type specimens are deposited at Chungang University. Seoul, Korea.

***Microdrosophila (Microdrosophila) fuscata***

OKADA, Okada, T., 1960. *Kontyu* 28, 4.

This species is new to Korean drosophilid fauna. The author collected 16 specimens (10 ♀♀, 6 ♂♂) by net sweeping at Mt. Chiri in July, 1960 and 6 specimens (4 ♀♀, 2 ♂♂) by net sweeping at Muju in Aug, 1960.

Distribution: Korea; Mt. Chiri, Muju. Japan.

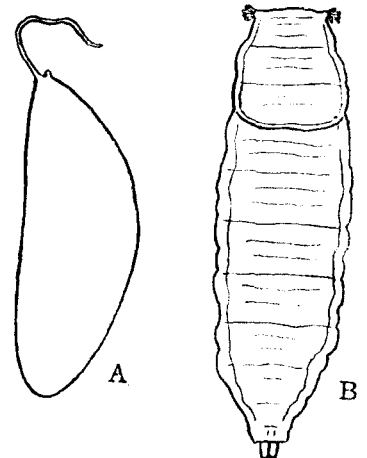


Fig. 3. *Microdrosophila matsudairai* OKADA  
 A. Egg. B. Pupa.

author collected many specimens by net sweeping in various localities.

Remarks : Egg with one long filament (fig. 3,A), pupa yellowish grey, anterior spiracle with 5 short branches, without stems. Posterior spiracles are closed (fig. 3,B).

Distribution : Korea; Yeosu, Masan, Mt. Chiri, Mt. Undal, Muju, Mt. Sokli, Kongju, Mt.Sulak. Japan.

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