

Taxonomic Notes on 6 Unrecorded Anthomyiid Flies from Korea (Diptera: Calyptratae)

韓國產 꽃파리류 6 未記錄種에 관하여
(파리목: 有辨類)

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ABSTRACT A total of 38 species belonging to 19 genera of the Anthomyiidae from Korea are treated. Among them, 1 genus and 6 species are new to Korean fauna.

KEY WORDS Systematics, Diptera, Cyclorrhapha, Anthomyiidae, Korea

초 록 저자 중 박성호에 의해 주로 채집된 700여점의 꽃파리류를 동정한 결과, 1 한국미기록속 및 6 한국미기록종을 포함 총 19속 38종으로 밝혀졌다. 따라서 한국산 꽃파리과는 총 26속 112종이 된다.

검 색 어 분류, 파리목, 가락지갑침파리아목, 유관류, 꽃파리과

In the present survey, the authors examined about 700 specimens which have been collected mainly by the third author, S.H. Park, during the last three decades. As the result, they identified 38 species belonging to 19 genera of anthomyiid flies, of which 1 genus, *Eurichota* Kowarz, and 6 species, *Emmesomyia megastigmata*, *E. subvillica*, *Pegomya winthemi*, *Eutrichota praepotens*, *Strobilomyia viaria* and *Eustalomyia vittipes*, were new to Korean fauna.

Most of the specimens examined here will be deposited in S.H. Park's collection, except for some duplicated specimens which will be re-

tained in the Systematic Entomology Laboratory, Department of Agricultural Biology, College of Agriculture, Kyungpook National University, Taegu, Korea.

Therefore, a total of 112 species belonging to 26 genera of Anthomyiidae are recorded from Korea.

SYSTEMATICS

1. *Emmesomyia megastigmata* Ma et al., 1982

노랑다리우리꽃파리(신칭)

(Fig. 1)

Contr. Shangh. Inst. Ent. 2: 225-227.

Male Black in ground color, with bluish grey pollen. Head 1.5-1.6 times as high as long in

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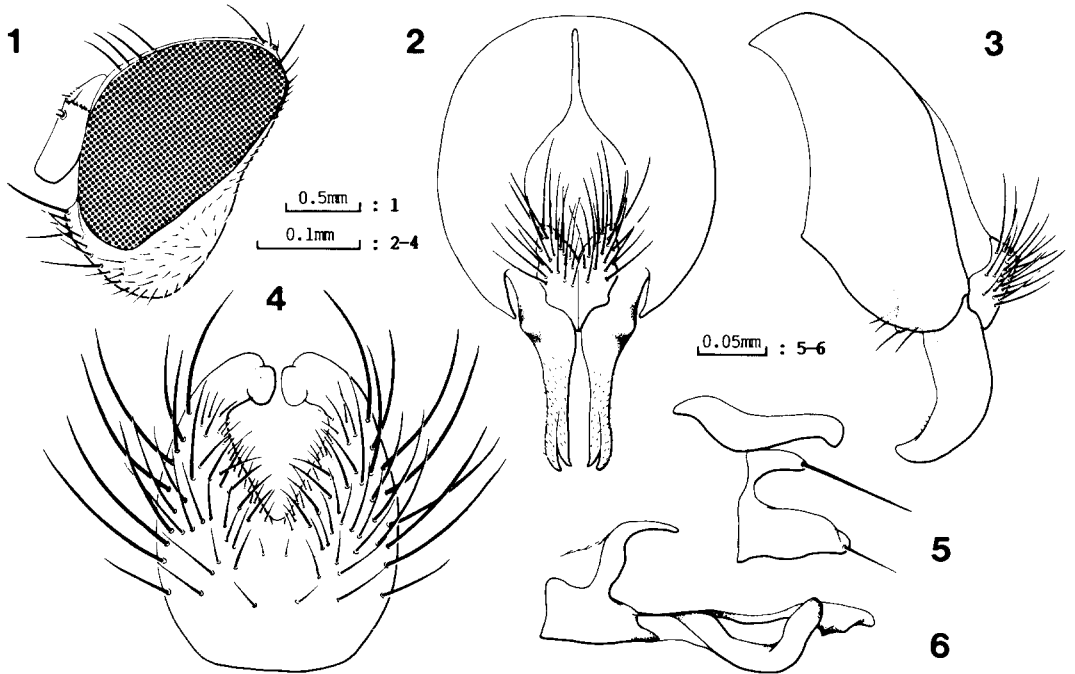


Fig. 1. *Emmesomyia megastigmata*, male. 1: head, lateral view; 2: hypopygium, dorsal view; 3: ditto, lateral view; 4: 5th sternite, ventral view; 5: gonocoxal lobe & gonostylus, lateral view; 6: basiphallus, epiphallus & distiphallus, lateral view.

profile. Frons at narrowest part closely approximated. Parafrontalia with 4-5 frontal setae; parafrontalia at level of lunule 0.6-0.7 times as wide as width of 3rd antennal segment. 3rd antennal segment 2.4-2.8 times as long as wide; arista pubescent, the longest hair 1.5-2.5 times as long as basal diameter of arista. *Pre acr* rows with irregular hairs between rows; *pra* strong, as long as or slightly longer than posterior *ntpl*. Mesopleuron with 2 distinct upper anterior setae, and having 2 strong and 10-13 accessory *pstg*. Pteropleuron armed with 2-4 robust setae. *Stpl* 2 : 2 or 2 : 3. Fore tibia with strong *p*; mid tibia with 1 *pd* and 2 *pv*; hind tibia with 3 *ad*, 1 *av* and 2 *pd*. Wing faintly brown. Calypter yellow to brown; the lower calypter being much protruded beyond the upper one. Knob of halter yellow. 5th sternite with small lobe at apex. Surstylus gently curved

inward in profile. Gonocoxal lobe bifurcate. Distiphallus triangular.

Length: Body 5.8-6.0 mm; wing 6.0 mm.

Material examined 1♂, Kūmosan, GB, S. Korea, 15, VI, 1983 (T.H. Jo); 1♂, Chirisan, GN, S.Korea, 11, VIII, 1989 (Y.J. Kwon).

Distribution Korea (new record: South), China (Guangdong, Henan, Liaoning).

2. *Emmesomyia subvillica* Fan et al., 1982

해동우리꽃파리(신칭)

(Fig. 2)

Contr. Shangh. Inst. Ent. 2: 227.

Male Black in ground color, with bluish grey pollen. Head about 1.5 times as high as long profile. Interfrontalia linear and convergent caudad. Parafrontalia having 3-4 frontal setae.

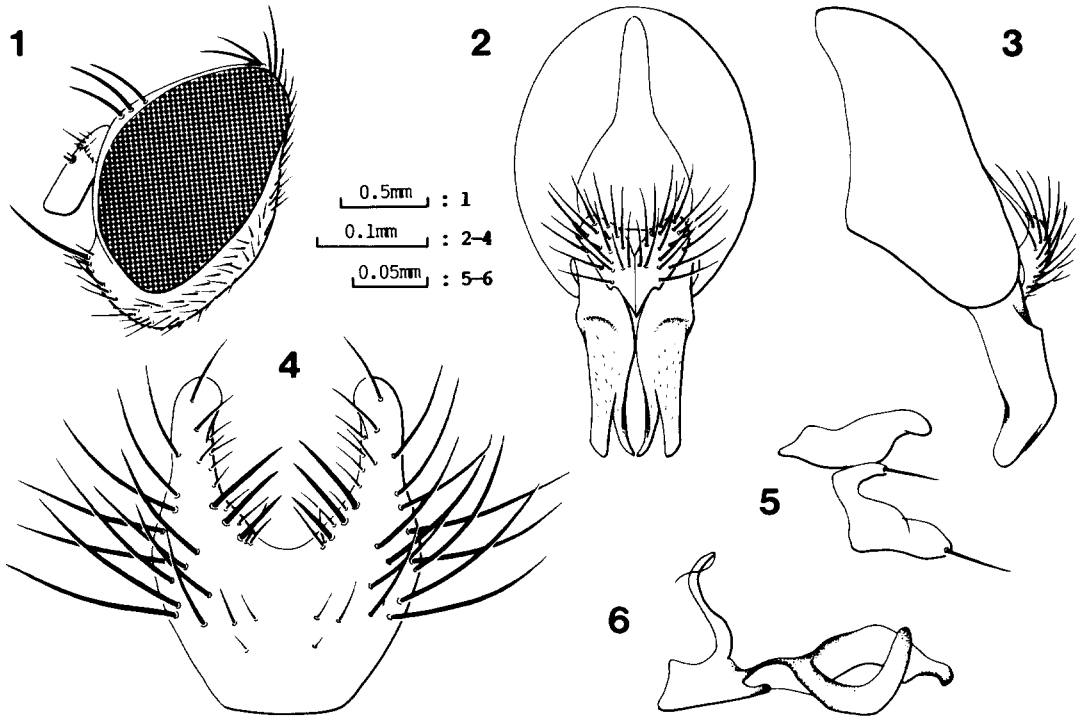


Fig. 2. *Emmesomyia subvillica*, male. For caption, see Fig. 1.

3rd antennal segment about twice as long as wide; arista pubescent, the longest hair about twice as long as basal diameter of arista. *Preacr* with some irregular hairs between rows; *pra* 0.8-0.9 times as long as posterior *ntpl* which slightly shorter than anterior *ntpl*. Mesopleuron with a distinct upper anterior seta, and having 1 strong and 6-8 fine accessory *pstg*. Pteropleuron with 1 strong seta. *Stpl* 2 : 3. Tibia yellow to brown; fore tibia with 1 *p*; mid tibia with 1 *pd* and 2 *pv*; hind tibia with 3 *ad*, 1 *av* and 2 *pd*. Wing faintly brown. Calypter whitish yellow; the lower calypter being much protruded beyond the upper one. Knob of halter yellow. Abdomen with a black narrow median vitta. 5th sternite with strong setae on each inner margin of lobe. Surstylus curved inward at apex in profile. Gonocoxal lobe bifurcate. Basiphallus bearing a long curved epiphallus.

Length: Body 5.5 mm; wing 5.6 mm.

Material examined 1 ♂, Kūmosan, GB, S. Korea, 11, V, 1983 (T.H. Jo).

Distribution Korea (new record: South), China (Liaoning, Shanxi).

3. *Pegomya winthemi* (Meigen, 1826)

송이꽃파리(신칭)

(Fig. 3)

Syst. Besch. 5:186 (*Anthomyia*).

Sapromyza blepharopteroides Dufour, 1839, Ann. Sci. Nat. Zool. (2) 12: 42.

Anthomyia scutellaris Roser, 1840, Corr. Württ. Landw. Ver. 37(1): 59.

Anthomyza latitarsis Zetterstedt, 1846, Dipt. Scand. 5: 1754.

Anthomyia digitaria Rondani, 1866, Atti Soc. Ital. Nat. Mil. 9: 152.

Pegomyia winthemi var. *obscura* Stein, 1906, Wien. Ent. Zeitg. 25: 62.

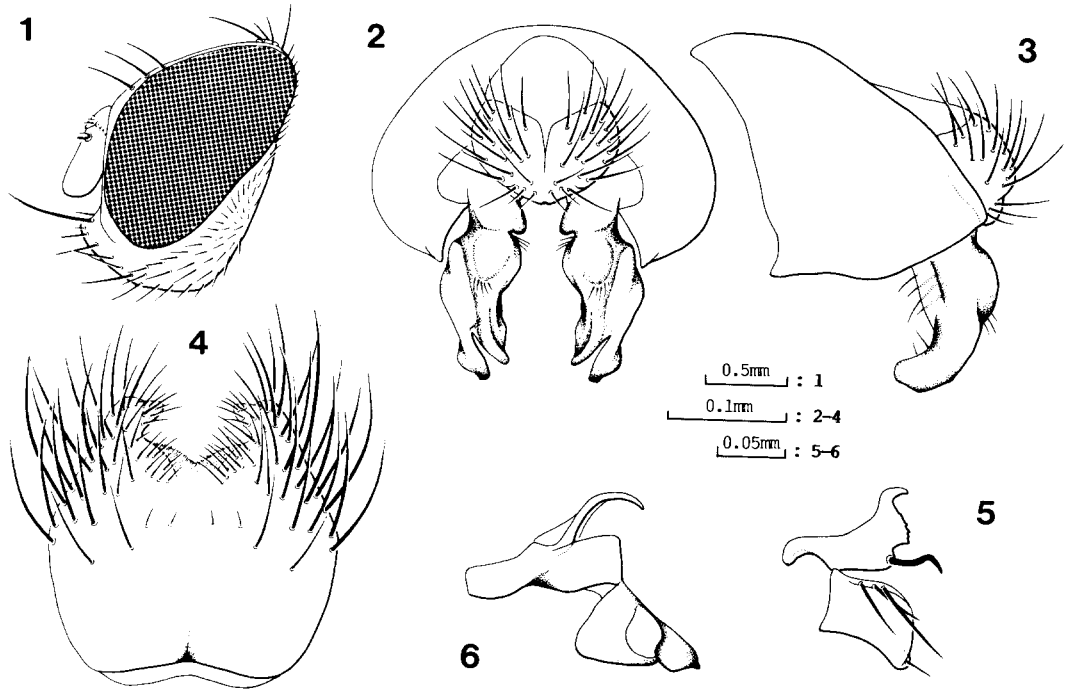


Fig. 3. *Pegomya winthemi*, male. For caption, see Fig. 1.

Pegomyia fuscofasciata Malloch, 1920, Trans. Amer. Ent. Soc. 46: 178.

Male Black in ground color with brownish grey pollen. Head 1.5-1.7 times as high as long in profile. Interfrontalia linear and convergent caudad. Parafrontalia armed with 2-3 frontal setae. Antenna yellow; 3rd antennal segment 1.8-2.2 times as long as wide, having shortly pubescent arista. Apex of scutellum and humeral callus tinged with brown to yellow; 2nd *ph* 0.3-0.6 times as long as 1st *ph*; *pra* as long as or slightly shorter than posterior *ntpl*. Mesopleuron with a distinct upper anterior seta, and having 1 strong and 3 fine *pstg*. *Stpl* 2 : 2. Femur and tibia yellow, tarsus dark brown; fore tibia with 1 *ad* and 1 *p*; mid tibia with 1 *ad*, 1 *pd* and 2 *pv*; hind tibia with 3 *ad*, 2 *av* and 2 *pv*. Wing faintly brown. Calypter yellow; the lower calypter being much protruded beyond the upper one. Knob of halter brown. Abdomen brown, with

black hind marginal band on each segment. Surstylus gently curved inward, incised at apex, with posterior middle margin broadly and roundly produced. Gonocoxal lobe with 3 upper and 1 apical setae. Gonostylus with dentate posterior margin, having 1 strong apical seta curved apically. Distiphallus triangular.

Length: Body 5.6-5.8 mm; wing 5.5-5.6 mm.

Material examined 2 ♂♂, Kūmosan, GB, S. Korea, 15, VI, 1983 (S.H. Park & T.H. Jo).

Distribution Korea (new record: South), Japan (Hokkaido), China (Liaoning), Czechoslovakia, Denmark, Finland, France, Germany, Hungary, Italy, Norway, Spain, UK, USSR (Russia), Yugoslavia, N. America.

Remarks The larva lives on *Agaricus* spp., *Armillaria mellea*, *Boletus* spp., *Inocybe* spp. and *Muscidula* spp. (Henning 1973).

4. *Eutrichota praepotens* (Wiedemann, 1817)

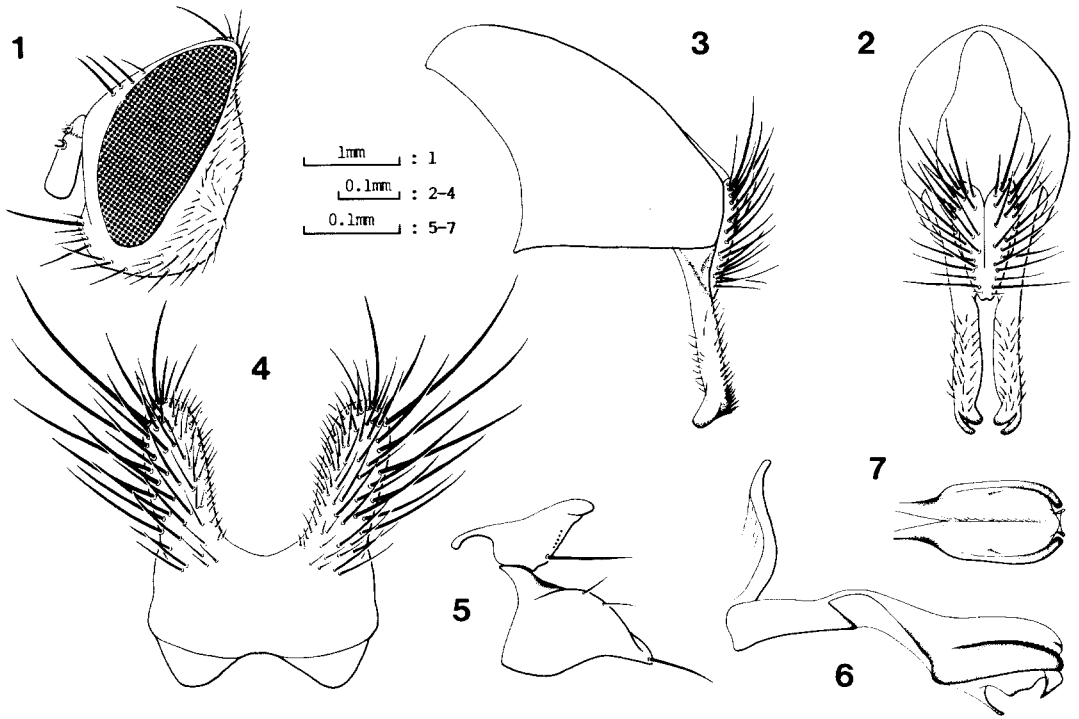


Fig. 4. *Eutrichota praepotens*, male. For caption, see Fig. 1. except for 7: distiphallus, dorsal view.

툼날꽃파리(신칭)
(Fig. 4)

Zool. Mag. 1: 83 (*Anthomyia*).

Male Black in ground color, with grey pollen. Head 1.3-1.4 times as high as long in profile. Frons at narrowest part nearly as wide as distance between posterior ocelli. Interfrontalia lacking interfrontal seta. Parafrontalia with 3-4 strong frontal seta. 3rd antennal segment 2.2-2.5 times as long as wide; arista long plumose, the longest hair much longer than width of 3rd antennal segment. Mesonotum with 3 paler brown vittae; 2nd *ph* about half as long as 1st *ph*; *pra* slightly longer than anterior *ntpl* which about twice as long as posterior *ntpl*. Mesopleuron with a long upper anterior seta, and 3 robust *pstg*. *Stpl* 1: 2 or 2: 2. Leg yellow, except for tarsus;

fore tibia with 1 *ad* and 1 strong *p*; mid tibia 1 *ad*, 1 *pd* and 2 *pv*; hind tibia 2 *ad*, 1-2 *av*, 2 *pd* and no apical *pv*. Wing faintly brown; costal spine as long as humeral cross vein. Calypter whitish yellow. Knob of halter yellow. Abdomen with a black narrow median vitta. Surstylus nearly straight, incised at apex. Gonocoxal lobe with 2 weak subapical and 1 apical setae. Basiphallus bearing a long curved epiphallus. Distiphallus armed with some denticles.

Length: Body 9.5 mm; wing 10 mm.

Material examined 1 ♂, Kyeryongsan, CN, C.Korea, 20, V, 1984 (T.H. Jo).

Distribution Korea (new record: Cental), Japan (Hokkaido), Austria, Czechoslovakia, Finland, France, Germany, Netherlands, Sweden, UK, USSR (Kurland, Ukraina).

5. *Strobilomyia viaria* (Huckett, 1965)

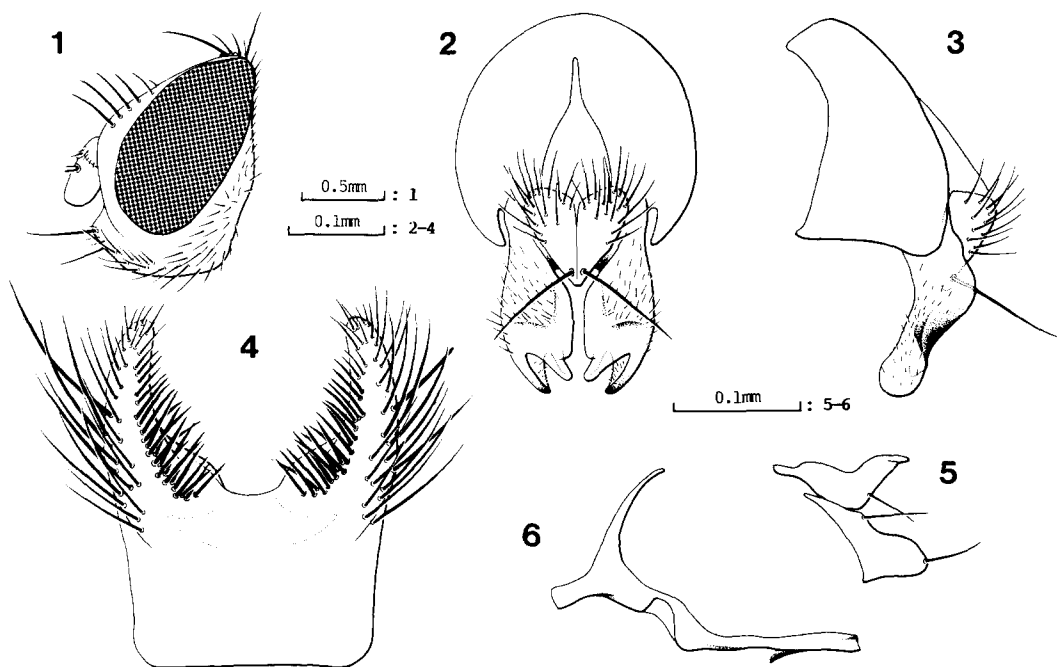


Fig. 5. *Strobilomyia viaria*, male. For caption, see Fig. 1.

북쪽잎갈꽃파리(신칭)
(Fig. 5)

Mem. Ent. Soc. Can. 42: 106 [*Hylemya* (*Lasiomma*)].

Lasiomma melania melaniola Fan, 1982, Journ. Noth-East. For. Inst. 1982(1): 7, 11.

Male Black in ground color, with faintly brown pollen. Head 1.4-1.5 times as high as long in profile. Frons width slightly narrower than diameter of anterior ocellus. Interfrontalia and parafrentalia with a short interfrontal seta and 5-6 strong frontal setae. 3rd antennal segment about 1.5 times as long as wide; arista shortly pubescent. *Pre acr* rows with several fine irregular hairs between rows; 2nd *ph* slightly shorter than 1st *ph*; *pra* strong, 0.8-0.9 times as long as posterior *ntpl*. Notopleuron without accessory seta. *Stpl* 2 : 2. Leg black;

fore tibia with 2 *p-pv*; mid tibia with 1 *ad*, 1 *pd* and 2 *pv*; hind tibia with 7 *ad*, 5 *av*, 3 *pd* and 3 *pv*. Wing faintly brown; costal spine practically indistinguishable from costal setae. Calypter brown. Knob of halter yellow. 5th sternite with a series of strong setae on each inner margin of lobe. Cercal plate with 2 long apical setae. Surstylus incised at apex, distinctly notched at junction portion between inner flange and lobe. Gonocoxal lobe with 1 subapical and 1 apical setae. Distiphallus long and slender.

Length: Body 4.7 mm; wing 4.6 mm.

Material examined 1 ♂, Kūmosan, GB, S. Korea, 13, VI, 1983 (S.H. Park).

Distribution Korea (new record: South). China (Heilongjiang, Liaoning), USSR (E. Siberia), N. America.

Remarks The larva lives on *Larix gmelini*, *L. kaempferi*, *L. laricina* and *L. sibirica* (Michelsen 1988).

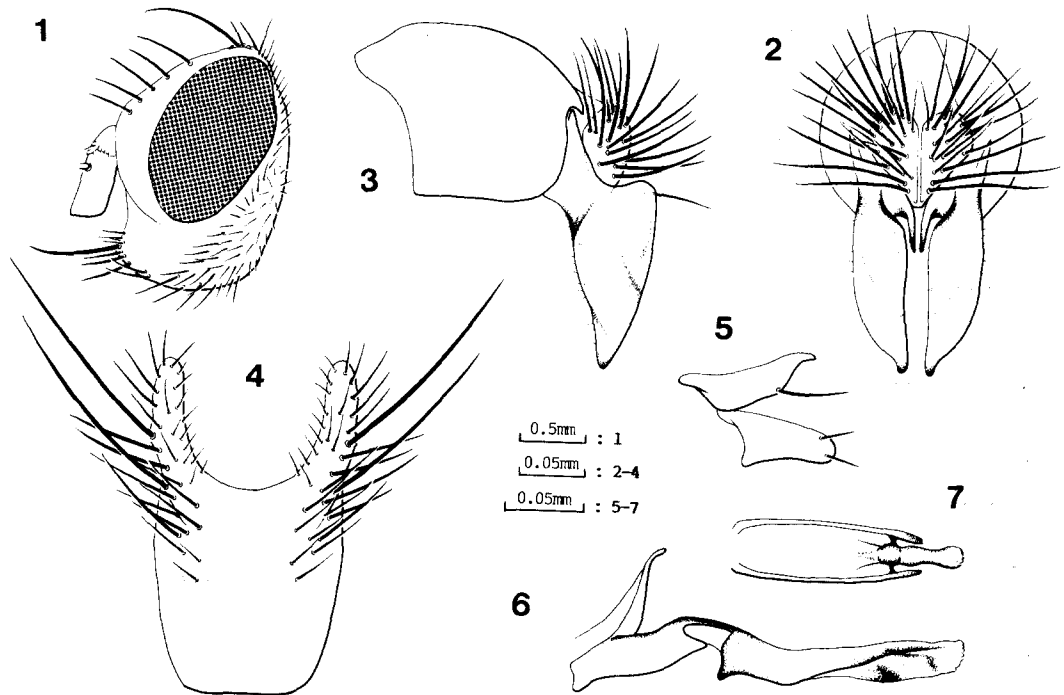


Fig. 6. *Eustalomyia vittipes*, male. For caption, see Fig. 1, except for 7: distiphallus, dorsal view.

6. *Eustalomyia vittipes* (Zetterstedt, 1845)

무늬벌집살이꽃파리 (신칭)

(Fig. 6)

Dipt. Scand. 4: 1649 (*Anthomyia*).

Anthomyza decorata Zetterstedt, 1852, Dipt. Scand. 11: 4323.

Anthomyia arrogans Rondani, 1866, Atti Soc. Nat. Mil. 9: 185.

Eustalomyia steini Schroeder, 1924, Stett. Ent. Zeitg. 84: 189.

Eustalomyia lepraota Séguy, 1928, Bull. Soc. Ent. France: 153.

Male Black in ground color, with grey pollen. Head about 1.5 times as high as long in profile. Frons much wider than the distance between posterior ocelli; parafrontalia with 5-6 frontal setae. 3rd antennal segment 2.4-2.5 times as long as wide; arista long plumose, the longest

hair 1.2-1.3 times as long as width of 3rd antennal segment. Mentum of haustellum stout and dark brown. Palpus slender and yellow. Mesonotum with a distinct brown median vitta, and having 6-7 *pre acr*; scutum and scutellum with black lateral markings; *pra* robust, 0.7-1.3 times as long as posterior *ntpl*. Mesopleuron with 2-3 *pstg*. *Stpl* 1 : 3 or 2 : 4. Leg yellow to dark brown; fore femur with black dorsoposterior stripe; fore tibia with 0-1 *ad* and 1-2 strong *p-pv*; mid tibia with 1 *ad*, 1 *pd* and 3-4 *pv*; hind tibia with 3-5 *ad*, 3-4 *av*, 3-6 *pd* and 1-7 *pv*. Wing faintly brown; costal spine as long as humeral cross vein. Calypter whitish yellow. Knob of halter yellow. Abdomen with a black median vitta, and a fore marginal band on each segment. Surstylus with finger shaped process at inner base. Gonocoxal lobe with 2 apical setae. Distiphallus long and slender.

Length: Body 60-90 mm; 55-70 mm.

Material examined 1♂, Kūmosan, GB, S. Korea, 12, VII, 1983 (S.H. Park); 3♂♂, same locality, 22, V, 1984 (S.H. Park & T.H. Jo).

Distribution Korea (new record: South), Japan (Hokkaido, Honshu), China (Jiangsu, Qinghai), France, Finland, Germany, Hungary, Italy, Sweden, USSR, N. America.

NEW COLLECTION DATA FOR 32 KNOWN SPECIES

7. *Fucellia apicalis* Kertestz, 1908

점박이 해변꽃파리

Material examined 1♂, Okch'ōnsa, GN, S. Korea, 6, VI, 1974 (S.H. Park).

8. *Emmesomyia hasegawai* Suwa, 1979

우리꽃파리

Material examined 8♂♂, Hallasan, JJ, S. Korea, 17, VI, 1973 (S.H. Park).

9. *Emmesomyia oriens* Suwa, 1974

동양우리꽃파리

Material examined 9♂♂, Hallasan, JJ, S. Korea, 17-19, VI, 1973 (S.H. Park); 1♂, Kūmosan, GB, S.Korea, 22, VI, 1983 (T.H. Jo).

10. *Emmesomyia socia suwai* Ge et Fan, 1988

대륙우리꽃파리

Material examined 2♂♂, Hallasan, JJ, S. Korea, 17, VI, 1973 (S.H. Park).

11. *Pegomya cunicularia* (Rondani, 1866)

나도시금치꽃파리

Material examined 1♂, Myōngsōk, GN, S. Korea, 9, VI, 1973 (S.H. Park).

12. *Pegomya flavifrons* (Walker, 1849)

장구채꽃파리

Material examined 15♂♂, Chirisan, GN, S. Korea, 3, VI, 1973 (J.S. Park).

13. *Pegomya quadrivittata* (Karl, 1935)

마디풀꽃파리

Material examined 2♂♂, Ssanggye, GN, S. Korea, 28, V, 1973 (J.S. Park); 4♂♂, Naeyōnsan, GB, S.Korea, 27, IV, 1981 (S.H. Park); 30♂♂, same locality 14-30, V, 1981 (S.H. Park & S.L. Sohn); 28♂♂, Ilwōlsan, GB, S. Korea, 28-29, V, 1984 (T.H. Jo).

14. *Pegomya rufina* (Fallén, 1825)

대륙시금치꽃파리

Material examined 1♂, Kūmosan, GB, S. Korea, 22, VI, 1983 (S.H. Park).

15. *Parapegomyia schineri* (Schnabl, 1911)

짧은주걱꽃파리

Material examined 1♀, Kūmosan, GB, S. Korea, 1, VI, 1983 (T.H. Jo); 1♂, same locality, 12, VII, 1983 (T.H. Jo); 1♂, Ilwōlsan, GB, S. Korea, 28-29, V, 1984 (T.H. Jo); 1♂, Kūmosan, GB, S. Korea, 5, VI, 1984 (S.H. Park).

16. *Mycophaga testacea* (Gimmerthal, 1834)

노랑꽃파리

Material examined 1♂, Kūmosan, GB, S. Korea, 12, VI, 1983 (T.H. Jo).

17. *Alliopsis billergi* (Zetterstedt, 1838)

밭꽃파리

Material examined 1♂, Kūmosan, GB, S. Korea, 13, IV, 1983 (S.H. Park); 2♂♂ & 1♀, P'algongsan, GB, S.Korea, 17, IV, 1984 (S.H. Park); 1♂, same locality, 1, V, 1984 (T.H. Jo).

18. *Pegoplata palposa* (Stein, 1897)

넓적꽃파리

Material examined 1♂, Chirisan, GN, S.

Korea, 13-17, VII, 1973 (S.H. Park); 2♂♂, same locality, 10-15, VII, 1979 (J.K. Kim); 2♀♀, Odaesan, GW, C. Korea, 1-3, VIII, 1980 (S.H. Park).

19. *Pegoplatia virginea* (Meigen, 1826)

애늪적꽃파리

Material examined 1♂, Chirisan, GN, S. Korea, 3, VI, 1973 (S.H. Park); 1♂, Myönsök, GN, S.Korea, 9, VI, 1973 (S.H. Park); 4♂♂, Tasolsa, GN, S.Korea, 19, V, 1974 (S.H. Park & J.S. Park); 4♂♂, Okch'önsa, GN, S.Korea, 6, VI, 1974 (S.H. Park); 1♀, Odaesan, GW, C. Korea, 1-3, VIII, 1980 (S.H. Park); 1♂, Chirisan, GN, S.Korea, 21-24, VII, 1982 (S.H. Park); 4♂♂ & 1♀, Kūmosan, GB, S.Korea, 1-8, VI, 1983, (T.H. Jo); 11♂♂ & 3♀♀, 15-22, VI, 1983 (S.H. Park & T.H. Jo); 1♂, 3, VIII, 1983 (T.H. Jo); 1♂, all same locality, 23, VIII, 1983 (T.H. Jo); 3♀♀, Pohyönsan, GB, S. Korea, 5, VI, 1983 (T.H. Jo); 12♂♂ & 3♀♀, Ilwölsan, GB, S.Korea, 28-29, V, 1984 (T.H. Jo); 9♂♂ & 2♀♀, Kūmosan, GB, S.Korea, 5, VI, 1984 (S.H. Park & T.H. Jo).

20. *Anthomyia avisignata* Suwa, 1987

창무늬꽃파리

Material examined 5♂♂, Hallasan, JJ, S. Korea, 17, VI, 1973 (S.H. Park).

21. *Anthomyia illocata* Walker, 1856

검정띠꽃파리

Material examined 2♀♀, Chirisan, GN, S. Korea, 13-17, VII, 1973 (J.S. Park); 7♂♂ & 3♀♀, Ullöngdo, GB, S.Korea, 27, VII-8, VIII, 1978 (S.H. Park, J.S. Park & J.G. Kim); 1♀, Naeyönsan, GB, S.Korea, 8, IX, 1978 (J.G. Kim); 1♀, Kach'ang, GB, S.Korea, 14, V, 1984 (T.H. Jo).

22. *Anthomyia koreana* Suh et Kwon, 1985

꽃파리

Material examined 1♂, Ssanggye, GN, S. Korea, 27, V, 1973 (S.H. Park); 1♂, Chirisan, GN, S.Korea, 13-17, VII, 1973 (S.H. Park); 3♂♂, Yangsan, GN, S.Korea, 8-9, VI, 1974 (S.H. Park); 1♂, Ullöngdo, GB, S.Korea, 27, VII-8, VIII, 1978 (S.H. Park); 4♂♂, Kūmosan, GB, S. Korea, 20, IV, 1983 (S.H. Park); 9♂♂, 18, V, 1983 (S.H. Park & T.H. Jo); 2♂♂ & 1♀, 8, VI, 1983 (S.H. Park); 6♂♂, 22, VI, 1983 (T.H. Jo); 4♂♂, 12, VII, 1983 (T.H. Jo); 7♂♂ & 1♀, all same locality, 27, VII-3, VIII, 1983 (S.H. Park & T.H. Jo); 1♀, Pohyönsan, GB, S. Korea, 5, VI, 1983 (T.H. Jo); 4♂♂ & 1♀, P'algonsan, GB, S.Korea, 17, IV-1, V, 1984 (S.H. Park & T.H. Jo); 1♂, Kyeryongsan, CN, C.Korea, 20, V, 1984 (S.H. Park); 1♂, Kūmosan, GB, S.Korea, 5, VI, 1984 (T.H. Jo).

23. *Anthomyia plumiseta* Stein, 1918

어리검정띠꽃파리

Material examined 1♀, Okch'önsa, GN, S. Korea, 27, V, 1979 (J.K. Kim).

24. *Lasiomma meadei* (Kowarz, 1880)

대륙잎갈꽃파리

Material examined 1♂, P'algonsan, GB, S. Korea, 17, IV, 1984 (S.H. Park).

25. *Lasiomma octoguttatum*

(Zetterstedt, 1845)

소양잎갈꽃파리

Material examined 1♂, Kūmosan, GB, S. Korea, 27, IV, 1983 (T.H. Jo); 3♂♂, 11, V, 1983 (S.H. Park & T.H. Jo); 2♂♂, all same locality, 8, VI, 1983 (S.H. Park & T.H. Jo).

26. *Egle minuta* (Meigen, 1826)

애버들꽃파리

Material examined 1♂, Kŭmosan, GB, S. Korea, 30, III, 1983 (S.H. Park).

27. *Adia cinerella* (Fallén, 1825)

씩이꽃파리

Material examined 1♂, Kŭmosan, GB, S. Korea, 27, IV, 1983 (S.H. Park); 6♂♂, same locality, 9-16, VIII, 1983 (T.H. Jo).

28. *Paregle vetula* (Zetterstedt, 1838)

털보꽃파리

Material examined 1♀, Kŭmosan, GB, S. Korea, 20, IV, 1983 (S.H. Park).

29. *Hydrophoria ruralis* (Meigen, 1826)

장수꽃파리

Material examined 2♂♂, P'algongsan, GB, S. Korea, 20, VII, 1963 (S.H. Park); 32♂♂ & 1♀, Naejangsan, JB, S.Korea, 19-21, VI, 1972 (S.H. Park); 2♂♂, Chirisan, GN, S.Korea, 21, VI, 1972 (S.H. Park); 8♂♂, Ch'ŏnggok, GN, S. Korea, 8, IV, 1973 (S.H. Park); 6♂♂, Ssanggye, GN, S.Korea, 27-28, V, 1973 (S.H. Park & J.S. Park); 10♂♂, Chirisan, GN, S. Korea, 3, VI, 1973 (J.S. park); 1♂, Myŏngsŏk, GN, S.Korea, 9, VI, 1973 (S.H. Park); 10♂♂, Okch'ŏnsa, GN, S.Korea, 10, VI, 1973 (S.H. Park & J.S. Park); 8♂♂ & 1♀, Chirisan, GN, S.Korea, 13-17, VII, 1973 (S.H. Park & J. S. Park); 50♂♂, Okch'ŏnsa, GN, S.Korea, 6, VI, 1974 (S.H. Park & J.S. Park); 14♂♂, Yangsan, GN, S.Korea, 8-9, VI, 1874 (S.H. Park); 37♂♂, Okch'ŏnsa, GN, S.Korea, 27, V, -2, VI, 1979 (S.H. Park & J.K. Kim); 3♂♂, Naeyŏnsan, GB, S.Korea, 30, VI, 1981 (S.R. Sohn); 2♂♂, same locality, 4, VI, 1981 (S.H. Park); 5♂♂ & 1♀, Kach'ang, GB, S.Korea, 14-21, V, 1983 (S.H. Park & T.H. Jo); 45♂♂ & 9♀♀, Kŭmosan, GB, S.Korea, 1-22, VI, 1983 (S.H. Park & T.H. Jo); 1♂, Pohyŏnsan,

GB, S.Korea, 5, VI, 1983 (T.H. Jo); 1♂, Ch'ŏngsong, GB, S.Korea, 18-20, VII, 1983 (S.H. Park); 1♂, Kŭmosan, GB, S.Korea, 12, VII, 1983 (T.H. Jo); 6♂♂ & 1♂, P'algongsan, GB, S.Korea, 17-24, IV, 1984 (S.H. park & T.H. Jo); 8♂♂ & 1♀, Kŭmosan, GB, S.Korea, 5, IV, 1984 (T.H. Jo).

30. *Leucophora grisella* Hennig, 1967

더듬이기생꽃파리

Material examined 1♀, Ssanggye GN, S. Korea, 28, V, 1973 (J.S. Park).

31. *Leucophora sponsa* (Meigen, 1826)

참기생꽃파리

Material examined 1♂, Ullŭngdo, GB, S. Korea, 7-12, V, 1978 (S.H. Park).

32. *Leucophora unistriata* (Zetterstedt, 1838)

벌기생꽃파리

Material examined 1♂, Kŭmosan, GB, S. Korea, 25, V, 1983 (S.H. Park); 4♂♂, P'algongsan, GB, S. Korea, 17, IV, 1984 (S.H. Park & T.H. Jo).

33. *Delia antiqua* (Meigen, 1826)

고자리꽃파리

Material examined 1♂, Ilwŏlsan, GB, S. Korea, 28-29, V, 1984 (T.H. Jo).

34. *Delia echinata* (Séguy, 1923)

별고자리꽃파리

Material examined 3♂♂, Kŭmosan, GB, S. Korea, 13-20, IV, 1983 (S.H. Park & T.H. Jo); 1♂, same locality, 18, V, 1983 (S.H. Park); 1♂, P'algongsan, GB, S. Korea, 17, IV, 1984 (S. H. Park).

35. *Delia longithecata* Suwa, 1974

가시고자리꽃파리

Material examined 1♂, Ilwŏlsan, GB, S. Korea, 28-29, V, 1984 (T.H. Jo).

36. *Delia platyura* (Meigen, 1826)

씨고자리꽃파리

Material examined 9♂♂, Naejangsan, JB, S. Korea, 25-27, V, 1972 (S.H. Park); 1♂ Baekch'ŏn'gol, GN, S. Korea, 13, V, 1973 (S.H. Park); 13♂♂ & 1♀, Ssanggye, GN, S. Korea, 20-27, V, 1973 (S.H. Park & J.S. Park); 27♂♂ & 1♀, Chirisan, GN, S.Korea, 3, VI, 1973 (S.H. Park & J.S. Park); 1♂, & 1♀, Myŏngsŏk, GN, S.Korea, 9, VI, 1973 (S.H. Park); 2♂♂ & 1♀, Hallasan, JJ, S.Korea, 17-18, VI, 1973 (J.S. Park); 1♂, same locality, 30, V, 1973 (S.H. Park); 10♂♂ & 1♀, Ullŭngdo, GB, S.Korea, 7-12, V, 1978 (S.H. Park); 4♂♂ & 7♀♀, same locality, 27, VII-8, VIII, 1978 (J.G. Kim & J.S. Park); 4♂♂, Naeyŏnsan, GB, S.Korea, 8, IX, 1978 (S.H. Park); 3♂♂ & 2♀♀, Okch'ŏnsa, GN, S. Korea, 2, VI, 1979 (S.H. Park); 1♂ & 2♀♀, Kach'ang, GB, S.Korea, 14-21, V, 1983 (T.H. Jo); 37♂♂, Kŭmosan, GB, S.Korea, 13-27, IV, 1973 (S.H. Park & T.H. Jo); 16♂♂ & 2♀♀, 11-18, V, 1973 (S.H. Park & T.H. Jo); 8♂♂ & 5♀♀, 5-15, VI, 1973 (S.H. Park & T.H. Jo); 2♀♀, 22-29, VI, 1973 (T.H. Jo); 1♀, 3, VIII, 1983 (T.H. Jo); 3♀♀, 16-23, VIII, 1983 (T.H. Jo); 1♀, all same locality, 23, IX, 1983 (T.H. Jo); 1♀, P'algongsan, GB, S.Korea, 17, IV, 1984 (S.H. Park); 8♂♂ & 3♀♀, Ilwŏlsan, GB, S.Korea, 28-29, V, 1984 (T.H. Jo).

37. *Delia robustiseta* Judin, 1974

극동고자리꽃파리

Material examined 2♂♂, P'algongsan, GB, S. Korea, 1, V, 1984 (T.H. Jo).

38. *Phorbia fascicularis* Tiensuu, 1935

긴털꽃파리

Material examined 1♂, Ch'ŏnggok, GN, S. Korea, 8, IV, 1973 (S.H. Park).

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