韓應昆誌 37(1): 1~7 (1998)
Korean J. Appl. Entomol.

Notes on Korean Chloropidae (Diptera)

한국산 노랑굴파리과(파리목)에 대하여

John Waland Ismay and Seung Hwan Lee[1]
존 와랜드 이스메이 · 이승환[1]

Abstract - 34 species of Chloropidae are recorded from South Korea, 22 (*Aphanotrigonum occultivirgatum, Calamoncosis duinensis, Conioscinella gallarum, Dicraeus stackelbergi, Elachiptera biculiminata, Elachiptera tuberculifera, Gampsocera* sp., *Meijerella inaequalis, Psilacrum* sp., *Rhodesiella nitidifrons, Rhopalopterum anthracinum, Scoliophthalmus japonensis, Siphunculina sharmani, Speccafrons pallidiventris, Togeciphus katoi, Chloropsina* sp., *Cryptonevra diadema, Cryptonevra inquilina, Lasiosina orientalis, Meromyza sororcula, Pseudopachychaeta* sp. and *Steleocerellus ensifer*) for the first time, bringing the total to 45 in Korea.

Key words - Chloropidae, Diptera, South Korea, species list, new records

초 록 - 남한지역의 노랑굴파리아과 정리결과 미기록종 22종(*Aphanotrigonum occultivirgatum, Calamoncosis duinensis, Conioscinella gallarum, Dicraeus stackelbergi, Elachiptera biculiminata, Elachiptera tuberculifera, Gampsocera* sp., *Meijerella inaequalis, Psilacrum* sp., *Rhodesiella nitidifrons, Rhopalopterum anthracinum, Scoliophthalmus japonensis, Siphunculina sharmani, Speccafrons pallidiventris, Togeciphus katoi, Chloropsina* sp., *Cryptonevra diadema, Cryptonevra inquilina, Lasiosina orientalis, Meromyza ?sororcula, Pseudopachychaeta* sp. and *Steleocerellus ensifer*)을 포함한 34종을 보고한다. 지금까지 보고된 종을 포함하면 한국산 노랑굴파리아과는 총 45종이 된다.

검색어 - 노랑굴파리과, 파리목, 한국, 종 목록, 미기록

Introduction

The family Chloropidae has been little studied in Korea, although Kanmiya & Slovak (1991) listed 22 species of 14 genera as the result of examination of the material which was collected from North Korea by M. Slovak and M. Kozanek of the Institute of Experimental Phytopathology and Entomology, Czechoslovakia. And Kor. Soc. Ent. & Kor. Soc. Appl. Ent. (1994) listed 22 species including the species of Kanmiya & Slovak (1991) from South Korea. In addition, Central Committee of Natural Conservation (1996) listed one more species, *Siphunculina aenea* to Korean fauna. Kanmiya's (1983) revision of Japanese fauna is most useful for the identification of Korean Chloropidae. Considering the large size of the group and economic importance of Chloropidae, however, very little is known in Korea.

Materials and Methods

The senior author visited South Korea in May 1996 and the following account is based on examination of existing collections and new material. The specimens are

Hope Entomological Collections, University Museum of Natural History, Parks Road, Oxford, OX1 3PW, UK. (옥스퍼드대 호프곤충박물관)
[1] Department of Entomology, National Institute of Agricultural Sciences & Technology. Seodundong, Suwon 441-707, Korea. (농업과학기술원 곤충과)

mainly deposited in the collection of the National Institute of Agricultural Science and Technology (NIAST), Suwon, the Hope Entomological Collections (HEC), University Museum, Oxford and the senior author's collection (ISMAY).

The following abbreviations are used for collectors; SBA, S.B. Ahn; KRC, K.R. Choe; HTC, H.T. Choi; KYC, K.Y. Choi; KMC, K.M. Choe; HGG, H.G. Goh; YYH; Y.Y. Ha; MJH, M.J. Han; CYH; C.Y. Hwang; DJI, D.J. Im; JWI, J.W. Ismay; YDJ, Y.D. Jang; MHL, M.H. Lee; SGL, S.G. Lee; SHL, S.H. Lee; YBL, Y.B. Lee; YIL, Y.I. Lee; JCP, J.C. Paik; KTP, K.T. Park; KBU, K.B. Uhm.

Results

Subfamily Siphonellopsinae 섭노랑굴파리아과

1. *Apotropina japonica* Kanmiya 일본섭노랑굴파리

Specimens examined: 1♂ 1♀, Kanggyong, 25.V. 1996, JWI (NIAST, HEC); 1♂ 1♀, Yongin, 24.V. 1996, JWI & SHL (NIAST, ISMAY); 1♂, Yongmun-sa, 24.V.1996, JWI & SHL(NIAST).

Distribution: Japan, North Korea, new to South Korea.

Remarks: The life-history is unknown.

Subfamily Oscinellinae 애노랑굴파리아과

2. *Aphanotrigonum occultivirgatum* Kanmiya 꼬마잿빛노랑굴파리 (신칭)

Specimens examined: 1♀, Mt Yeogi, 13.IX.1987, YIL (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.

Remarks: The life-history is unknown.

3. *Calamoncosis duinensis* (Strobl) 갈대흑노랑굴파리 (신칭)

Specimens examined: 1♀, Yeoju, 24.V.1996, JWI & SHL (NIAST).

Distribution: Japan, new to South Korea.

Remarks: The larvae have been recorded as inquilines in galls of *Lipara japonica* Kanmiya in Japan (Kanmiya, 1983) but the species is also found in western Europe, where *L. japonica* does not occur.

4. *Conioscinella gallarum* (Duda) 상수리혹노랑굴파리 (신칭)

Specimens examined: 1♀, Cheju, 29.V.1992, SBA (NIAST).

Distribution: Japan, new to South Korea.

Remarks: The larva is found in galls of *Andricus* and *Biorrhiza* (Hymenoptera, Cynipidae) on oak.

5. *Dicraeus stackelbergi* Nartshuk 풀씨노랑굴파리 (신칭)

Specimens examined: 1♂, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST).

Distribution: Japan (Kanmiya, 1983) and the Maritime Provinces of Russia, new to South Korea.

Remarks: It may be the *Dicraeus* species recorded by Kanmiya & Slovak (1991), but there may be further species of *Dicraeus* in Korea. The larvae of *Dicraeus* feed in the developing grains of grasses at the milky grain stage, but the host plant of *D. stackelbergi* appears to be unknown.

6. *Elachiptera biculiminata* Nishijima 두줄별노랑굴파리 (신칭)

Specimens examined: 1♂, Cheju, 29.V.1992, SBA (NIAST); 1♂, Suwon, 18.IV.1983, YIL (NIAST); 7♂♂ 3♀♀, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST, HEC, ISMAY).

Distribution: Japan, new to South Korea.

Remarks: The larva is recorded from the decayed tissue of *Sasa kurilensis* (Rupr.) Makino and Shibata (Nartshuk, 1972b, 1974a).

7. *Elachiptera insignis* (Thomson) 별노랑굴파리

Specimens examined: 1♀, Jinju, 9.IV.1977, MHL (NIAST); 1♂, Kanggyong, 25.V.1996, JWI (ISMAY); 3♂♂ 3♀♀, Kwangyang, 28.IV.1995, HTC (NIAST); 7♂♂ 4♀♀, Kwangyang, 29.V.1995, HTC (NIAST); 10♂♂ 4♀♀, Kyounggi Do, 24.IX.1995, HTC (NIAST); 23♂♂ 27♀♀, Kyounggi Do, 25.IX.1994, HTC (NIAST); 1♂, Mt. Paeckun, 24.VI.1995, HTC (NIAST); 1♂, Suwon, 25.IV.1983, YIL; 1♀, Suwon, 19.VI.1995, HTC (NIAST); 1♀, Yesan, 25.V.1976, CYH (NIAST).

Distribution: North and South Korea and Japan.

Remarks: The larva is a secondary invader of damaged stems of gramineous plants (Kanmiya, 1983).

8. *Elachiptera sibirica* (Loew) 동쪽별노랑굴파리

Synonym list: *pectoralis* (Bezzi, 1895)

flavescens Duda, 1932
insignis Nartshuk, 1962, misidentification

Specimens examined: 1♀, Cheju, 23.V.1995, HTC (NIAST); 4♂♂ 14♀♀, Kyounggi - Do, 24.IX.1994, HTC (NIAST); 16♂♂ 27♀♀, Kyounggi - Do, 25. IX.1994, HTC (NIAST); 1♂, Mt. Paeckun, 24.VI. 1995, HTC (NIAST); 1♀, Suwon, 16.IX.1976, KBU (NIAST); 2♂♂, Suwon, 21.IX.1976, KBU (NIAST); 18♂♂ 10♀♀, Suwon, 19.V.1995, HTC (NIAST); 2♂♂, Suwon, 21.V.1996, JWI (ISMAY, HEC).

Distribution: North and South Korea and Japan.

Remarks: The larva is a secondary invader of damaged stems of gramineous plants (Kanmiya, 1983). *E. insignis* and *E. sibirica* are among the most common chloropid flies in Korea, often occur together and are difficult to separate. Kanmiya (1983) provided a reliable key, illustrations of the male genitalia and details of the synonymy.

9. *Elachiptera tuberculifera* (Corti) 뿔노랑굴파리 (신칭)

Specimens examined: 1♀, Mt Yeogi, 22.IV.1995, HGG (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.

Remarks: The larva is probably saprophagous in gramineous plants.

10. *Gampsocera* sp. 긴수염노랑굴파리 (신칭)

Specimen examined: 1♂, Suwon, 11.VIII.1992, JCP (NIAST).

Remarks: The specimen is similar to *G. curvinervis* Becker and *G. magnisinuosa* Kanmiya. The wing markings are similar but vein R_{2+3} has no sinuosity and the associated mark is small. It is included here so the genus can be recorded from Korea.

11. *Meijerella inaequalis* (Becker) 흰배노랑굴파리 (신칭)

Synonym list: *paenultima* (Becker, 1911)

Specimens examined: 3♀♀, Kwangyang, 28.IV.1995, HTC (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.

Remarks: The species is widely distributed in the Oriental and Australasian Regions and has been reared from rotting *Amaranthus* stem tissue and damaged rice; it is probably saprophagous (Sabrosky, 1976).

12. *Polyodaspis ruficornis* (Macquart) 가시노랑굴파리

Synonym list: *nucis* (Perris, 1839)
marginata (Loew, 1858)

Specimens examined: 4♀♀, Kanggyong, 25.V.1996, JWI (NIAST, ISMAY, HEC); 1♂, Kyounggi Do, 25.IX. 1994, HTC (NIAST).

Distribution: North and South Korea and Japan.

Remarks: The larva is found in a wide variety of media and can be saprophagous, phytophagous or parasitic (Nartshuk, 1972).

13. *Psilacrum* sp. 긴맥노랑굴파리 (신칭)

Specimen examined: 1♀, Youngmun-sa, 24.V.1996, JWI & SHL (NIAST).

Remarks: The single female specimen is teneral and damaged, but is included here because the genus has not been recorded from Korea or the Palaearctic Region. Kanmiya (1987) described *P. sabroskyi* from Iriomote Island, Japan, but his species belongs to the *P. milichioides* species group of Ismay (1986) while the Korean specimen belongs to the *P. glabrum* species group. The life-histories of species in this genus are unknown.

14. *Rhodesiella nitidifrons* (Becker) 광채머리노랑굴파리 (신칭)

Specimen examined: 1♂, Suwon, 5.VII.1976, KBU (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.

Remarks: The life-history is unknown.

15. *Rhopalopterum anthracinum* (Meigen) 황다리노랑굴파리 (신칭)

Specimens examined: 1♂, Kanggyong, 25.V.1996, JWI (NIAST); 5♂♂ 2♀♀, Yongin, 24.V.1996, JWI & SHL (NIAST, ISMAY, HEC); 1♂ 2♀♀, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST).

Distribution: New to South Korea.

Remarks: The species is widely distributed in the Palaearctic Region and Nartshuk (1984) recorded it as far east as Mongolia. Adults were associated with a species of *Carex*.

16. *Scoliophthalmus japonensis* Kanmiya 왜납작노랑굴파리 (신칭)

Specimen examined: 1♂, Ipho, Yang pyong, 24.V. 1996, JWI & SHL (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.
Remarks: The larvae have been recorded from decaying shoots of *Phragmites communis* (Kanmiya, 1983).

17. *Siphunculina sharmani* Cherian
눈티노랑굴파리 (신칭)
Specimen examined: 1♂, Suwon, 27.IV.1983, YIL (NIAST).
Distribution: New to South Korea.
Remarks: The genus has been associated with dung.

18. *Speccafrons pallidinervis* (Becker)
거미알살이노랑굴파리 (신칭)
Specimen examined: 1♀, Yesan, 25.V.1976, KTP (NIAST).
Distribution: Japan (Kanmiya, 1983), new to South Korea.
Remarks: The larvae feed on egg masses of spiders.

19. *Togeciphus katoi* (Nishijima)
가토노랑굴파리 (신칭)
Specimens examined: 1♀, Kwanggyang, 28.IV.1995, HTC (NIAST); 1♀, Kyounggi Do, 24.IX.1994, HTC (NIAST); 1♀, Kyounggi Do, 25.IX.1994, HTC (NIAST); 3♂♂ 1♀, Suwon, 19.V.1995, HTC (NIAST); 1♀, Suwon, 15.V.1996, JWI (NIAST); 1♀, Yongin, 24.V. 1996, JWI & SHL (NIAST); 1♂ 1♀, Yongmun-sa, 24. V.1996, JWI & SHL (NIAST, HEC).
Distribution: Japan, new to South Korea.
Remarks: The life-history is unknown but the larvae may be saprophagous.

Subfamily Chloropinae 노랑굴파리아과

20. *Chlorops brevimanus* Loew 꼭지노랑굴파리
Specimens examined: 1♂, Kanggyong, 25.V.1996, JWI (NIAST); 3♂♂ 2♀♀, Yongin, 24.V.1996, JWI & SHL (NIAST); 8♂♂ 2♀♀, Yongmun-sa, 24.V. 1996, JWI & SHL (NIAST, ISMAY, HEC).
Distribution: Japan (Kanmiya, 1983), North Korea (Kanmiya & Slovak, 1991), new to South Korea.
Remarks: The larva feeds in the stems of *Phalaris arundinacea*.

21. Chlorops mugivorus Nishijima & Kanmiya
보리노랑굴파리
Specimens examined: 1♀, Suwon, 27.IV.1983, YIL (NIAST); 1♀, Yongin, 24.V.1996, JWI & SHL (NIAST); 3♀♀, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST, ISMAY, HEC).
Distribution: North Korea (Kanmiya & Slovak, 1991), Japan, new to South Korea.
Remarks: The larva is known to feed in the stems of wheat, barley, oats and rye (Kanmiya, 1983).

22. *Chlorops oryzae* Matsumura 벼줄기굴파리
Specimens examined: 1♀, Andong, 16.XI.1976, KMC (NIAST); 1♂, Goesan, VI.1977, YDJ (NIAST); 1♀, Suwon, 29.V. 1976, MHL (NIAST); 1♀, Suwon, 9.VI. 1976, MHL (NIAST); 1♀, Suwon, 28.IX.1976, KTP (NIAST); 1♀, Suwon, 8.VII.1980, YBL (NIAST); 1?, Suwon, 21.V.1982, YBL (NIAST); 1♀, Suwon, 28.V. 1982, CYH (NIAST); 1♀, Suwon, 9.V.1983, YIL (NIAST).
Distribution: North and South Korea and Japan.
Remarks: The larva is a major pest of rice in the area and is also known from other grasses (19 species in Japan (Kanmiya, 1983)).

23. *Chloropsina* sp. 제주노랑굴파리 (신칭)
Specimens examined: 1♀, Cheju, 23.V.1995, HTC (NIAST); 2♀♀, Cheju, 24.V.1995, HTC (NIAST, ISMAY).
Remarks: The species cannot be identified and is probably new to science. It is included so that the genus can be recorded from Korea.

24. *Cryptonevra diadema* (Meigen)
발노랑굴파리 (신칭)
Specimens examined: 2♂♂ 2♀♀, Kanggyong, 25.V. 1996, JWI (NIAST, ISMAY).
Distribution: Japan (Kanmiya, 1983), new to South Korea.
Remarks: The early stages are associated with stems or galls on *Phragmites*.

25. *Cryptonevra inquilina* Kanmiya
검정발노랑굴파리 (신칭)
Specimens examined: 18♂♂ 4♀♀, Kanggyong, 25.V. 1996, JWI (NIAST, ISMAY, HEC); 1♂, Suwon, 23.V. 1996, JWI (NIAST).
Distribution: Japan (Kanmiya, 1983), new to South Korea.
Remarks: This species is very close to the western European *C. nigritarsis* (Duda) and most of the Korean speci-

mens had partly darkened apical tarsal segments like *C. nigritarsis*, but the male gentialia show differences. The early stages are associated with stems of or galls on *Phragmites*.

26. *Lasiosina orientalis* Nartshuk
긴털노랑굴파리 (신칭)

Specimen examined: 1♂, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST).

Distribution: Japan (Kanmiya, 1983), new to South Korea.

Remarks: This may be the Lasiosina sp. recorded by Kanmiya & Slovak (1991) from North Korea, but the species can only be identified from the male genitalia and the North Korean material was female. The larval stages are unknown but other *Lasiosina* are saprophagous.

27. *Meromyza orientalis* Fedoseeva
동양줄기노랑굴파리

Specimens examined: 1♂, Mt Halla, 22.VIII.1981, SGL (NIAST); 1♂, Suwon, 21.V.1996, JWI (NIAST); 2♂♂, Suwon, 23.V.1996, JWI (NIAST, ISMAY).

Distribution: North and South Korea and Japan.

Remarks: The larvae of Meromyza are primary stem borers in grasses and Kanmiya (1983) records *M. orientalis* from *Elymus mollis* Trinius. An earlier record (Kanmiya, 1978) from wheat is erroneous.

28. *Meromyza sororcula* Fedoseeva 줄기노랑굴파리

Specimens examined: 2♂♂, Suwon, 29.VII.1983, YIL (NIAST).

Remarks: Records of *M. pratorum* Meigen from South Korea (Anon., 1994), may refer to this species, which differs from western European *M. pratorum* and appears to be closest to *M. sororcula*. The species group requires further taxonomic study.

29. *Pachylophus rufescens* (de Meijere)
맵시노랑굴파리

Specimens examined: 1♀, Chuncheon, 25.VI.1983, JCP (NIAST); 1♀, Cheju, 23.V.1995, HTC (NIAST); 5♂♂ 8♀♀, Kwangyang, 21.VI.1994, HTC (NIAST); 4♂♂ 4♀♀, Kwangyang, 28.VI.1995, HTC (NIAST); 4 ♀♀, Suwon, 15.V.1996, JWI (NIAST, ISMAY); 1♂ 1♀, Suwon, 21.V.1996, JWI (NIAST).

Distribution: Japan, North Korea and South Korea.

Remarks: The life-history is unknown.

30. *Pseudopachychaeta* sp. 십자맥노랑굴파리 (신칭)

Specimens examined: 1♀, Kwangyang, 28.iv.1995, HTC (NIAST); 1♀, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST).

Remarks: The species cannot be identified and is probably new to science. It most closely resembles *P. fulgens* (Nartshuk) (from the Maritime Provinces of Russia) and *P. regularis* Kanmiya (from Japan), but differs in the colour pattern on the scutum. Species in this group can be identified most easily by examination of the male genitalia. It is included so that the genus can be recorded from Korea.

31. *Steleocerellus cornifer* (Becker) 침노랑굴파리

Specimens examined: 1♀, Cheju, 24.V.1995, HTC (NIAST); 1♀, Suwon, 15.V.1996, JWI (NIAST); 1♂ 1♀, Youngmun-sa, 24.V.1996, JWI & SHL (NIAST).

Distribution: North and South Korea and Japan.

Remarks: The larvae are saprophagous and have been recorded from decayed grasses and rice (Kanmiya, 1983).

32. *Steleocerellus ensifer* (Thomson)
목검은침노랑굴파리 (신칭)

Specimens examined: 1♂ 6♀♀, Chuncheon, 18.vi. 1976, KTP (NIAST); 1♂, Ipho, Yangpyong, 24.V. 1996, JWI (NIAST); 1♀, Kyounggi-Do, 25.IX.1994, HTC (NIAST); 2♀♀, Suwon, 7.VI.1976, MHL (NIAST); 1♀, Suwon, 7-8.IX.1976, KTP (NIAST); 1♂, Suwon, 10.V.1977, YYH (NIAST); 1♂, Suwon, 18.IV.1983, YIL (NIAST); 1♂, Suwon, 27.IV.1983, YIL (NIAST); 1♂, Suwon, 30.V.1983, YIL (NIAST); 3♀♀, Suwon, 29. VIII.1983, YIL (NIAST); 2♀♀, Suwon, 16.IX.1987, YIL (NIAST); 1♀, Yangju, 18.x.1973, KYC (NIAST); 1♂, Yesan, V.1976, CYH (NIAST); 1♂, Yeoju, 24.V. 1996, JWI & SHL (NIAST); 2♂♂ 3♀♀, Yongin, 24. V.1996, JWI & SHL (NIAST, ISMAY, HEC); 1♀, Youngmun-sa, 24.V. 1996, JWI & SHL (NIAST).

Distribution: Known widely in Japan and South-East Asia, new to South Korea.

Remarks: The larvae are scavengers and have been recorded from decayed tissue of *Phragmites communis* (Kanmiya, 1983).

33. *Thaumatomyia notata* (Meigen)
산각시노랑굴파리

Specimens examined: 1♀, Dae gwen, 9.VI.1983, YIL (NIAST); 1♀, Kyounggi Do, 2.vi.1995, HTC (NIAST);

1♂, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST).
Distribution: North and South Korea and Japan.
Remarks: The larvae are predacious on root aphids (Homoptera).

34. *Thaumatomyia ?rufa* (Macquart)
각시노랑굴파리

Specimens examined: 3♂♂ 3♀♀, Kanggyong, 25.V. 1996, JWI (NIAST, ISMAY, HEC); 4♂♂ 3♀♀, Kangwon-Do, 2.V.1995, HTC (NIAST); 1♂, Mt. Paeckun, 24.VI.1995, HTC (NIAST); 2♂♂ 13♀♀, Suwon, 21.V.1996, SHL (NIAST); 2♀♀, Suwon, 21.V.1996, JWI (NIAST); 1♂ 1♀, Yongmun-sa, 24.V.1996, JWI & SHL (NIAST, ISMAY).
Distribution: North and South Korea and Japan.
Remarks: The South Korean specimens seen differ from western European specimens in some details. In European *T. rufa* the ocellar triangle is yellow with darkened ocellar tubercle and apex of triangle while in the Korean material the apical marking is less distinct; the scutal stripes and katepisternal mark are entirely black in European *T. rufa* but orange with more or less extensive darker markings on the scutal stripes in the Korean specimens. The first flagellomere of the antenna is longer and narrower in the European specimens and there is a distinct inner vertical seta, half as long as the outer vertical seta; this seta is not longer than the frons setulae in the Korean material. Examination of the male genitalia showed slight differences. In the European specimens the projection on the surstylus is small in apical views of the epandrium, the surstylus is short and tear-shaped in surface view and the postgonites are broader and convex on the outer margin. In the Korean material the projection on the surstylus is long and pointed in apical view of the epandrium, in surface view the surstylus is elongate and the postgonites are narrower, only slightly convex on the outer margin. Further research is needed to determine whether they are separate species or forms, as in the case of *Thaumatomyia glabra* in North America reported by Sabrosky (1943).

Discussion

The above list includes 34 species but there are more unidentified species. Both Kanmiya & Slovak (1991) and Kor. Soc. Ent. & Kor. Soc. Appl. Ent. (1994) recorded 22 species, but their combined list is 24 species. Including the newly reporting species in this paper, the total number of species, which has been reported in Korea, are 46. There are several other unidentified species in the material from South Korea. At least 3 species of *Conioscinella* and 1 of *Incertella* were also found but not identified to species level.

Acknowledgments – The senior author thanks Dr J.O. Lee, Head of Entomology, National Institute of Agricultural Sciences and Technology, Suwon for his kindnesses during the visit and help with the work. Mr K.S. Cho helped arrange the work. Dr S.L. Simpson, Curator of the Hope Entomological Collections provided facilities for research and Ms S.M. Brecknell (Hope Librarian) assisted with references. Finance for the visit to South Korea was provided by the Rural Development Administration, Suwon.

Literature Cited

Kor. Soc. Ent. & Kor. Soc. Appl. Ent. 1994. *Check List of Insects from Korea*. The Entomological Society of Korea, Korean Society of Applied Entomology.

The Central Committee of Natural Conservation. 1996. Literature Survey on the Biological Species in Korea. III. Inveterbrate 2-(5). (Insects and Spiders).

Ismay, J.W. 1986. New *Psilacrum* from the Old World (Diptera, Chloropidae). Esakia 24: 19~35.

Kanmiya, K. 1978. Revision of the genus *Meromyza* Mg. (Diptera. Chloropidae) in Japan, with three newly recorded species. *Applied Entomology and Zoology* 13: 321~242.

Kanmiya, K. 1983. A systematic study of the Japanese Chloropidae (Diptera). Memoirs of the Entomological Society of Washington 11: 1~370.

Kanmiya, K. 1987. Records of three Chloropidae genera new to Japan with descriptions of two new species (Diptera). *Kontyu #* 55: 80~89.

Kanmiya, K. & Slovak, M. 1991. A list of North Korean Chloropidae (Diptera). *Japanese Journal of Entomology* 59: 623~625.

Nartshuk, E.P. 1972. Phytopathy in grass flies (Diptera, Chloropidae) and its evolution. *Reports from the 23rd meeting to the memory of N.A. Cholodchovsky in 1970.* Akad. Nauk, USSR. pp.3~49. (In Russian.)

Nartshuk, E.P. 1973. Chloropidae (Diptera) of bamboo genus Sasa Makino et Shibata from Sakhalin and Kuril Islands. Report I. Descriptions of new species. *Entomologicheskoe Obozrenie* 52: 935~943. (In Russian with English sum-

mary.)
Nartshuk, E.P. 1984. Family Chloropidae. *In*: Soos, A. & L. Papp, eds, *Catalogue of Palaearctic Diptera*, Volume 10 pp.222~298. Clusiidae - Chloropidae. Akademiai Kiado Budapest.
Sabrosky, C.W. 1943. A revised synopsis of Nearctic Thaumatomyia (=*Chloropisca*). (Diptera, Chloropidae). *Canadian Entomologist* 75: 109~117.
Sabrosky, C.W. 1976. A new genus and two new species of Chloropidae from Hawaii (Diptera). *Pacific Insects* 17: 91~97.

(Received February 3, 1997; Accepted April 15, 1998)