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<th>Title</th>
<th>SUPPLEMENTARY NOTES ON THE FAMILY ANTHOMYIIDAE OF JAPAN (DIPTERA), 6</th>
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<td>Suwa, Masaaki</td>
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SUPPLEMENTARY NOTES ON THE FAMILY ANTHOMYIIDAE OF JAPAN (DIPTERA), VI.

By Masaaki Suwa

Abstract

Suwa, M. 2005. Supplementary notes on the family Anthomyiidae of Japan (Diptera), VI. Ins. matsum. n. s. 61: 87–106, 63 figs.

Twenty-six Japanese species of anthomyiid flies are dealt with. Four species are recorded as new to Japan: Delia coronariae (Hendel, 1925), Egle concomitans (Pandelle, 1900), Lasiomma monticola Suh & Kwon, 1985, and Pegomya notabilis (Zetterstedt, 1846). Some collection data are added to the other species. The previous records of “Lasiomma meadei (Kowarz, 1880)” or “Lasiomma seminitidum (Zetterstedt, 1845) (= meadei)” in Japan are mostly referred to Lasiomma craspedodontum (Hsue, 1980) and partly to L. monticola. The female of Pegomya latifrons Suwa, 1984, is described for the first time.

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Contents

Introduction ..................................................................................................................................... 89
Enumeration
  1. Botanophila betarum (Lintner, 1883) ............................................................................... 89
  2. Botanophila nigrodorsata Suwa, 1986 ............................................................................. 89
  3. Botanophila parvicornis (Malloch, 1920) ...................................................................... 89
  4. Botanophila profuga (Stein, 1916) ............................................................................... 90
  5. Botanophila tridentifera Suwa, 1986 ............................................................................. 90
  6. Botanophila trifida Suwa, 1986 ................................................................................ 90
  7. Chirosia asperistilata Suwa, 1974 ............................................................................. 91
  8. Chirosia griseifrons (Séguy, 1923) ............................................................................... 91
  9. Chirosia histricina (Rondani, 1866) ............................................................................. 91
 10. Chirosia sapporensis Suwa, 1974 ............................................................................. 91
 11. Delia coronariae (Hendel, 1925) ............................................................................... 91
 12. Delia lineariventris (Zetterstedt, 1845) ......................................................................... 91
 13. Delia pectinatar Suwa, 1984 ................................................................................ 93
 14. Egle concomitans (Pandellé, 1900) ........................................................................... 93
 15. Heterostylodes pilifera (Zetterstedt, 1845) ................................................................ 93
 16. Lasiomma craspedodontum (Hsue, 1980) .................................................................. 93
 17. Lasiomma monticola Suh & Kwon, 1985 .................................................................. 100
 18. Pegomya geniculata (Bochée, 1834) ......................................................................... 100
 19. Pegomya kusigemati Suwa, 1974 ........................................................................... 100
 20. Pegomya latifrons Suwa, 1984 ............................................................................. 101
 21. Pegomya maculata Stein, 1906 .............................................................................. 102
 22. Pegomya notabilis (Zetterstedt, 1846) ...................................................................... 102
 23. Pegomya seinestettensis (Strobl, 1880) .................................................................... 102
 24. Pegomya spiraculata Suwa, 1974 ........................................................................... 102
 25. Pegomya zonata (Zetterstedt, 1838) ........................................................................ 105
 26. Strobilomyia oriens (Suwa, 1983) ........................................................................... 105
Acknowledgements ....................................................................................................................... 105
References .................................................................................................................................... 105
INTRODUCTION

The anthomyiid fauna of Japan has been mainly investigated in Hokkaido and mountainous ranges of Honshu, and poorly known from other areas. Currently 217 species are recognized to occur in Japan. Information on their distribution should be enriched for better understanding of the faunal relation between Japan and the continental Asia.

In this paper 26 Japanese species of Anthomyiidae are dealt with. Four species are new to Japan: Delia coronariae (Hendel, 1925), Egle concomitans (Pandelle, 1900), Lasiomma monticola Suh & Kwon, 1985, and Pegomya notabilis (Zetterstedt, 1846). I have found that the previous records of “Lasiomma meadei (Kowarz, 1880)” or “Lasiomma seminitidum (Zetterstedt, 1845) (= meadei)” in Japan should be mostly referred to Lasiomma craspedodontum (Hsue, 1980) and partly to L. monticola. Pegomya latifrons Suwa, 1984, was originally described only from the male. Reared specimens of this species are available for the present study, and the female is here described for the first time. A record on its host plants is also given for the first time. The other species are given some additional collection data.

As a result of the present addition and revision, the Japanese Anthomyiidae are now represented by 221 species.

This study is mainly based on specimens borrowed from National Institute of Agro-Environmental Sciences, Tsukuba (NIAES), and on those preserved in Hokkaido University.

ENUMERATION

1. Botanophila betarum (Lintner, 1883)
   Distribution. Japan; China; Irkutsuk; Eastern Turkestan; Finland; N. America.
   Remarks. B. betarum is widely distributed in the Holarctic region. It seems, however, to be rather rare at least in Japan. Only 4 male specimens were previously recorded from Hokkaido (Hamatombetsu), South Kuriles (Etorofu), and Honshu (Mt. Hodaka and Mt. Shirouma).

2. Botanophila nigrodorsata Suwa, 1986
   Botanophila nigrodorsata: Suwa, 1999: 210; Wei et al., 1999: 691.
   Distribution. Japan; China; Irkutsuk; Eastern Turkestan; Finland; N. America.
   Remarks. This species has recently been recorded from some localities in China.

3. Botanophila parvicornis (Malloch, 1920)
Distribution. Japan; NE China; N America.
Remarks. This species has been known to occur in Japan on the basis of 3 male specimens collected at Mt. Yatsugatake, Nagano-ken.


*Botanophila profuga*: Suwa, 1999: 211; Wei et al., 1999: 693.
 Distribution. Japan; China; Europe; N America.
Remarks. In Japan this species has been recorded from some localities in Hokkaido and Honshu.

5. *Botanophila tridentifera* Suwa, 1986

*Botanophila tridentifera*: Suwa, 1999: 212; Wei et al., 1999: 698.
 Distribution. Japan; China.
Remarks. *B. tridentifera* is widely distributed in Japan and China.

6. *Botanophila trifida* Suwa, 1986 (Fig. 1)

Remarks. *B. trifida* was originally described from a single male specimen collected in Saitama-ken, Honshu. Additional records are here given.

![Image of Botanophila trifida](image_url)

Fig. 1. *Botanophila trifida* Suwa, 1986, ♂. Mt. Hijiri-yama, Nagano-ken.


Remarks. This is the first record of *C. asperistilata* from Shikoku. This species is widely distributed in Japan, and known as a leaf-miner of *Dryopteris* ferns.

8. *Chirosia griseifrons* (Seguy, 1923)


*Meliniella griseifrons*: Wei et al., 1999: 666.


Distribution. Japan; Korea; NE China; Ussuri; Europe.

Remarks. In Japan this species is known from Hokkaido and Honshu, and is not rare.

9. *Chirosia histricina* (Rondani, 1866)


*Chirosia hystricina* [sic]: Wei et al., 1999: 656.


Distribution. Japan; NE China; Europe; N America.

Remarks. In Japan *C. histricina* has been recorded from some localities in Honshu and Kyushu.

10. *Chirosia sapporensis* Suwa, 1974


Remarks. This species has been known only from a single male specimen collected at Sapporo.

11. *Delia coronariae* (Hendel, 1925) (Figs. 2–7)


Distribution. Japan; NE China; Europe. New to Japan.

Remarks. Hendel (1925) described this species as a leaf-miner of *Coronaria (= Lychnis) flos-cuculi* L. (Caryophyllaceae).

12. *Delia lineariventris* (Zetterstedt, 1845)


Distribution. Japan; NE China; Kamchatka; Europe; N America.
Figs. 2–7. *Delia coronariae* (Hendel, 1925), ♂. 2, head, lateral view; 3, 3rd to 5th sternites; 4, hypopygium, dorsal view; 5, ditto, dorsolateral view; 6, ditto, lateral view; 7, aedeagus. Hakusan, Kanagawa-ken.
Remarks. *D. lineariventris* is widely distributed in the Holarctic region. In Japan it has been recorded from mountainous ranges of central Honshu.

13. *Delia pectinator* Suwa, 1984


*Delia pectinator fuscilateralis* Fan, 1993: 1131.


Distribution. Japan; China; N America.

Remarks. This species is widely distributed in northern North America. In Japan it has been known only from the type material (2 ♂). Another specimen collected near the type locality is here recorded. The Chinese subspecies *D. pectinator fuscilateralis* was described from a male specimen collected at a place with an altitude of 3600 m in Sichuan. *D. pectinator* may have a wide range also in eastern Asia.

14. *Egle concomitans* (Pandelle, 1900) (Figs. 8–17)


Distribution. Japan; China; Mongolia; NE Burma; Europe; N America. New to Japan.

Remarks. This species seems to be uncommon except in North America, where it is a widespread and often abundant species in the boreal forest and in floodplain forests of the northern prairies (Griffiths, 2003).

15. *Heterostylodes pilifera* (Zetterstedt, 1845)


Distribution. Japan; NE China; Europe; N America.

Remarks. In Japan this species has been known only from Mt. Shirouma situated on the borders of three prefectures, Nagano-, Toyama- and Niigata-ken.

16. *Lasiomma craspedodontum* (Hsue, 1980) (Figs. 18–30)

"*Lasiomma meadei* (Kowarz, 1880)": Suwa, 1974: 85, partim (excluding 1 ♂ from Sapporo referred to *L. monticola*).


Figs. 8–17. *Egle concomitans* (Pandelle, 1900), ♂. 8, 5th sternite, ventral view; 9, ditto, inside view, posterior half; 10, ditto, lateral view; 11, hypopygium, dorsal view; 12, ditto, dorsolateral view; 13, ditto, lateral view; 14, basiphallus and distiphallus; 15, basiphallus, dorsal view; 16, distiphallus, dorsal view; 17, pregonite and postgonite. Sapporo, Hokkaido.
Figs. 18–21. *Lasiomma craspedodontum* (Hsue, 1980), ♀. 18, head, lateral view; 19, ditto, showing genal setae, macerated; 20–21, abdomen, dorsocaudal view. Fig. 18, Mt. Keichō-san, Tochigi-ken; 19–21, Mt. Yatsugatake, Nagano-ken (19, 21, same specimen; 20, another specimen).

Figs. 22–30. *Lasiomma craspedodontum* (Hsue, 1980), ♂. 22, 5th sternite, ventral view; 23, ditto, ventrolateral view; 24, hypopygium, dorsal view; 25, ditto, dorsolateral view; 26, ditto, lateral view; 27, pregonite and postgonite; 28, basiphallus and distiphallus, lateral view; 29, ditto, ventrolateral view; 30, ditto, ventral view. Mt. Yatsugatake.
Figs. 31–40. *Lasiomma seminitidum* (Zetterstedt, 1845), ♂. 31, head, lateral view; 32, 5th sternite, ventral view; 33, ditto, ventrolateral view; 34, hypopygium, dorsal view; 35, ditto, dorsolateral view; 36, ditto, lateral view; 37, pregonite and postgonite; 38, basiphallus and distiphallus, lateral view; 39, ditto, ventrolateral view; 40, ditto, ventral view. England.
L. craspedodontum differs from L. seminitidum (Zetterstedt, 1845) (=Lasiops meadei Kowarz, 1880) in the male as follows: eyes with hairs discernible by careful examination; orbits at parafrontal angle distinctly narrower than A₃, usually about two-thirds as wide as the latter; genae distinctly lower than A₃-width; distiphallus with

Figs. 41–44. Lasionmma monticola Suh & Kwon, 1985, ♂. 41, head, lateral view; 42, ditto, showing genal setae, macerated; 43–44, abdomen, dorsocaudal view. Fig. 41, Nopporo, Hokkaido; 42, Mt. Yatsugatake; 43, Sapporo; 44, Mt. Daibosatsu, Yamanashi-ken.
Figs. 45–53. *Lasiomma monticola* Suh & Kwon, 1985, ♂. 45, 5th sternite, ventral view; 46, ditto, ventrolateral view; 47, hypopygium, dorsal view; 48, ditto, dorsolateral view; 49, ditto, lateral view; 50, pregonite and postgonite; 51, basiphallus and distiphallus, lateral view; 52, ditto, ventrolateral view; 53, ditto, ventral view. Sapporo.
a pair of long divergent apical arms. In the male of *seminitidum* (one British specimen available, Figs. 31–40): eyes densely haired; orbits at parafrontal angle only a little narrower than A₃, about 0.9 times as wide as the latter; genae about as high as A₃-width; distiphallus not divergent apically.

17. *Lasiomma monticola* Suh & Kwon, 1985 (Figs. 41–53)

"*Lasiomma meadei* (Kowarz, 1880)"; Suwa, 1974: 85, partim (1 ♂ from Sapporo).


"*Lasiomma seminitidum* (Zetterstedt, 1845)"; Suwa, 1999: 228, partim.


Distribution. Japan; Korea; China. New to Japan.

Remarks. *L. monticola* is different from *L. eraspedodontum* in the male terminalia as follows: 5th sternite with processes longer than basal plate; surstylus sinuate in profile, and a little longer than epandrium; distiphallus with apical arms fused with dorsal sclerotization and curved downwards; pregonite with apical setae situated before distal margin on outside. In the male of *L. craspedodontum*: 5th sternite with processes as long as or shorter than basal plate; surstylus not sinuate in profile, and a little shorter than epandrium; distiphallus with apical arms not fused with dorsal sclerotization and not curved downwards; pregonite with apical setae situated on distal margin. In the external general appearance, the following features may be useful to distinguish these two species: orι 3 in *monticola*, 4 or 5, rarely 3 in *craspedodontum*; genae with 1 row of genal setae in *monticola*, 2 rows in *craspedodontum*; abdomen with median vitta narrow, at most as wide as tibial diameter in *monticola*, usually wide, at least as wide as tibial diameter in *craspedodontum*.

18. *Pegomya geniculata* (Bouché, 1834)


Distribution. Japan; China; Europe; N America.

Remarks. This is a common species in Europe and North America. Also in Japan it is abundant in Hokkaido and Honshu.

19. *Pegomya kusigemati* Suwa, 1974


Distribution. Japan

Remarks. *P. kusigemati* is known from some localities in Hokkaido, Honshu and Kyushu.
Figs. 54–56. *Pegomya latifrons* Suwa, 1984. 54, head, dorsal view, ♂; 55, ditto, ♀; 56, ovipositor, arrows indicating spiracles. Bikuni, Hokkaido (Figs. 55 and 56 based on different specimens).

20. *Pegomya latifrons* Suwa, 1984 (Figs. 54–56)


Host plants. *Oxalis stricta* L.; *Oxalis* sp.

♂. Parafrontals with 2–4 ori (mingled with a few fine or minute setulae), often with 1 weak or rather strong proclinate ors and usually with 1 strong reclinate ors (absent only in holotype among the specimens examined), rarely with 1 weak reclinate ors above the strong one. Mesonotum with 4–7 (usually 5–6) pairs of pre-acr, 1 or a few setulae often discernible between the rows.

♀. Frons 0.36–0.37 times as wide as head; parafrontals with 2–3 ori (mingled with a few fine or minute setulae), and with 1 strong proclinate and 1 or 2 reclinate ors, the lower reclinate being strong, and the upper one weak to rather strong, sometimes only on left or right parafrontal. Ovipositor short; 6th and 7th spiracles on membrane just near anterolateral and posterolateral corners of 6th tergite, respectively; 8th sternite represented by an entire setulose plate.

Remarks. This species is remarkable for the wide frons in the male and the entire 8th sternite in the female. In the original description this species was regarded as closely related to *Pegomya bieolor* (Wiedemann, 1817). Judging from the resemblance in the surstyli of male terminalia, *P. latifrons* may belong to the *Pegomya nigritarsis* superspecies in the sense of Griffiths (1982). *Pegomya seitensettensis* (Strobl, 1880), a member of the superspecies, is knwon as a leaf-miner of *Oxalis acetosella* L. in Europe. In the genus *Pegomya*, *P. latifrons* is a second species feeding on *Oxalis* plants in the larval stage.


Distribution. Japan; Europe; N America.

Remarks. In Japan this species has been recorded only from Mt. Kamihorokanettoku-yama in Hokkaido and Mt. Yatsugatake in Honshu.

22. *Pegomya notabilis* (Zetterstedt, 1846) (Figs. 57–63)


Remarks. This species is widely distributed in Europe and North America. On the basis of the present specimen it is recorded from Japan for the first time.

23. *Pegomya seitensettensis* (Strobl, 1880)


Distribution. Japan; NE China; Europe.

Remarks. *Oxalis acetosella* L. has been recorded as a host plant of *P. seitensettensis* in Europe. No host record is available in Japan.

24. *Pegomya spiraculata* Suwa, 1974

Figs. 60–63. Pegomya notabilis (Zetterstedt, 1846), ♂. 60, hypopygium, dorsal view; 61, ditto, lateral view; 62, basiphallus and distiphallus; 63, pregonite and postgonite. Mt. Ontake.
Distribution. Japan; Korea; NE China.
Remarks. This species seems to be uncommon in Japan though recorded from Hokkaido, Honshu and Kyushu.

25. Pegomya zonata (Zetterstedt, 1838)
Distribution. Japan; Europe; N America.
Remarks. P. zonata is widely distributed in Europe and North America. In Japan, however, it has only a few collection records from mountains of central Honshu.

26. Strobilomyia oriens (Suwa, 1983)
"Lasiomma abietis [sic] (Huckett, 1953)": Hsue, 1983: 52.
Distribution. Japan; Korea; NE China.
Remarks. In Japan S. oriens has been known only from Hokkaido. The species recorded as "Lasiomma abietis [sic]" from Liaoning, China, may be referred to the present species. Strobilomyia abietis (Huckett, 1953) is exclusively Nearctic in distribution (Michelsen, 1988).

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