

# A Newly Recorded Species of the Genus *Botanophila* (Insecta: Diptera: Anthomyiidae) in Korea

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## ABSTRACT

*Botanophila tridentifera* Suwa, 1986 is newly added to Korean fauna. The keys to Korean species is given, and some illustrations of male genitalic features are included.

**Key words:** *Botanophila tridentifera*, Anthomyiidae, Calyptratae, Diptera, Korea

## INTRODUCTION

The genus *Botanophila* Lioy is widely distributed throughout the world, and comprises about 100 species throughout the palaearctic region (Soos and Papp, 1993). The characteristics of this genus are as follows: eyes holoptic in male; interfrontal seta present; fronto-orbital seta absent; arista pubescent; mid tibia often with 1 posterodorsal seta; prealar seta usually well developed; scutellum with two long marginal pairs of setae and a shorter discal pair, and with fine pubescence on ventral surface; propleuron, hypopleuron and pteropleuron bare; sixth tergite setose; gonocoxal lobe small, and with robust setulae; distiphallus tiny.

The first record of *Botanophila* from Korea was given by Suwa (1981) who described a new species, *Pegohylemyia shirozui* (= *Botanophila shirozui*), based on the specimens collected from 'Ryuzinkaku, Mt.Hanna' (=Hallasan Mt.). After then, Kwon and Suh (1982) added a species, *Pegohylemyia spinisternata* (= *B. spinisternata*), to Korean fauna. Suwa (1983) reported 3 newly species to Korean fauna: *Pegohylemyia lobata* (= *B. lobata*), *P. maculipedella* (= *B. maculipedella*), and *P. pseudomaculipes* (= *B. maculipes*). Suh and Kwon (1985, 1986) and Suh (1989) described three new species, *B. seungmoi*, *B. palgongsana*, and *B. peninsularis*, with two newly added species, *B. striolata* and *B. askoldica* to Korean fauna. Lastly, Suh et al. (1991) newly recorded two species, *B. nigrigenis* and *B. profuga*, from North Korea. A total of 12 species have been reported correctly in Korea to date.

## SYSTEMATIC ACCOUNTS

Order Diptera

Family Anthomyiidae Meigen, 1803

Genus *Botanophila* Lioy, 1864

### Key to the species of Korean *Botanophila*

1. Prebasal sclerite of hypopygium with a row of distinct setae on hind margin ..... *B. striolata*  
– Prebasal sclerite of hypopygium without seta on hind margin ..... 2
2. Eyes dichoptic ..... 3  
– Eyes holoptic ..... 4
3. Frons without interfrontal seta ..... *B. peninsularis*  
– Frons with interfrontal seta ..... *B. seungmoi*
4. Legs wholly black ..... 5  
– Legs at least partly yellow to brown ..... 10
5. Fronto-orbital seta present; prealar seta shorter than anterior notopleural seta ..... *B. lobata*  
– Fronto-orbital seta absent; prealar seta as long as or longer than anterior notopleural seta ..... 6
6. Notopleuron with some additional setae ..... 7  
– Notopleuron without additional seta ..... 8
7. Frons with 10-15 frontal setae; second posthumeral seta strong, as long as anterior notopleural seta .....  
..... *B. askoldica*  
– Frons with usually 4 frontal setae; second posthumeral seta weak, shorter than half of anterior notopleural seta .....  
..... *B. tridentifera*
8. Haustellum stout; some accessory setulae present between presutural acrostichal rows ..... *B. palgongsana*  
– Haustellum slender; some accessory setulae absent between presutural acrostichal rows ..... 9
9. Frons with 6-7 frontal setae; fore tibia with posteroventral

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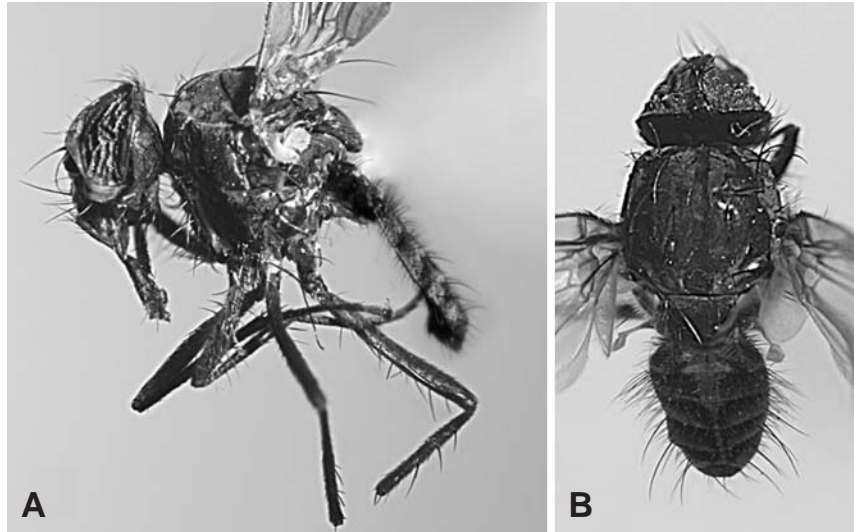


Fig. 1. *Botanophila tridentifera*, Male. A, habitus, lateral view; B, ditto, dorsal view.

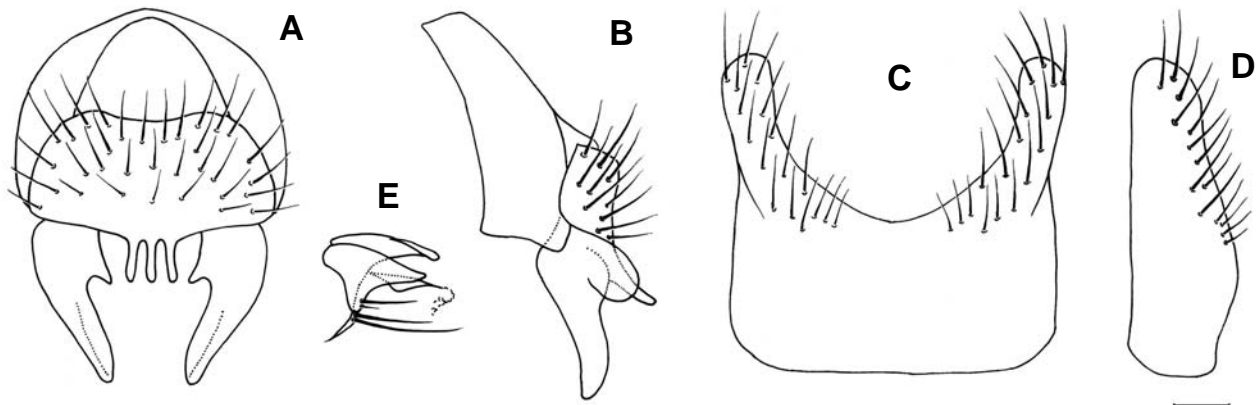


Fig. 2. *Botanophila tridentifera*, Male. A, hypopygium, dorsal view; B, ditto, lateral view; C, fifth sternite, ventral view; D, ditto, lateral view; E, gonocoxal lobe, gonostylus and phallus, lateral view. Scale bar=0.05 mm.

- tral setae ..... *B. spinisternata*
- Frons with 4-5 frontal setae; fore tibia without posteroventral seta ..... *B. profuga*
- 10. Mid tibia with 6 anterodorsal setae; second posthumeral seta longer than 2/3 of anterior notopleural seta .....  
..... *B. shirozui*
- Mid tibia with 1 anterodorsal seta; second posthumeral seta as long as 1/2 of anterior notopleural seta ..... 11
- 11. Mid tibia with 4 posterodorsal setae, and without posteroventral seta ..... *B. nigrigenesis*
- Mid tibia with 2-3 posterodorsal and 1-2 posteroventral setae ..... 12
- 12. Arista more shortly pubescent, the longest hair as long

- as basal diameter of arista; hind tibia with weak apical posterodorsal seta, much shorter and weaker than apical anterodorsal seta ..... *B. maculipedella*
- Arista shortly pubescent, the longest hair 1.5 times as long as basal diameter of arista; hind tibia with strong apical posterodorsal seta at least about as long as apical anterodorsal seta ..... *B. maculipes*

<sup>1</sup>\**Botanophila tridentifera* Suwa, 1986 (Figs. 1, 2)

*Botanophila tridentifera* Suwa, 1986: 39-41 (type-locality: Japan, Hokkaido, Nopporo).

*Material examined.* 2♂♂, Gyeongsangbuk-do, Sobaeksan

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*Male.* General coloration black with brownish gray pollinose. Head about 1.2-1.3 times as high as long in profile. Frons at narrowest part more or less than anterior ocellus; interfrontalia dull tinged with brown near lunule, a pair of proclinate cruciate interfrontal seta; parafacialia faintly brown with 4 frontal setae. Parafacialia and cheek brownish black. Antenna black, with arista minutely pubescent; third antennal segment 1.6-1.8 times as long as wide. Palpus brownish black. Haustellum slightly fuscous with sparsely pollen, and slender.

Thorax black in ground color, with gray pollen, and patches of brown pollen, especially on dorsum. Mesonotum with a paler grayish median vitta presuturally in anterior view; 3 pairs of presutural acrostichal setae and without irregular hair between rows, the distance of presutural acrostichal rows about as wide as distance between presutural acrostichal and dorsocentral rows. Second posthumeral seta weak, about one third as long as anterior notopleural seta. Prealar seta strong, about as long as or slightly shorter than anterior notopleural seta. Notopleuron with a few accessory setulae; posterior notopleural seta about as long as or slightly longer than anterior notopleural seta. Propleuron with 2 propleural setae. Mesopleuron with 2 strong and 2 additional prostigmatal setae.

Legs black; fore tibia with 1 anteroventral and 1 posterodorsal setae; mid tibia with 1 anterodorsal, 1 posterodorsal and 2 posteroventral setae; hind tibia with 4 anterodorsal, 3-4 anteroventral, 3-4 posterodorsal and 2 weak posteroventral setae.

Wing dark brownish tinged; m-m nearly straight; calypter and knob of halter yellowish tinged.

Length: Body 3.8-3.9 mm, wing 3.7-3.9 mm.

*Distribution.* Korea (new record), Japan.

*Remarks.* This species can be distinguished from the other members of *Botanophila* by the combination of the following characteristics: frons at narrowest part more or less than anterior ocellus and with 4 frontal setae; irregular hair between presutural acrostichal rows absent; second posthumeral seta weak, shorter than half of anterior notopleural seta; notopleuron with a few additional setulae.

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