First Record of the Marsh Fly Genus *Ditaeniella* (Diptera: Sciomyzidae) from Korea

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ABSTRACT

Members of this family Sciomyzidae are known as marsh flies and snail-killing flies because most of the known larvae are obligate predators of Mollusca, especially freshwater and terrestrial Gastropoda. Most species are found in the shallow ephemeral aquatic habitats with rich organic substrates, such as the hard-water streams, small ponds and lakes in mountain valleys. To date, a total of 8 marsh fly species in 4 genera have been known in Korea. During a taxonomic survey of the family Sciomyzidae in Korea, the authors have found the genus *Ditaeniella* Sack, 1939; thus, it was discovered for the first time in Korea. This genus can be distinguished by the other related taxa with hairs over much of the mesopleuri, hairs on the prosternum and one orbital seta. In addition, the nominate species, *Ditaeniella grisescens* Meigen, 1830 was also firstly recorded in the Korean fauna.

Keywords: new record, Diptera, Sciomyzidae, *Ditaeniella grisescens*, Korea

INTRODUCTION

The family Sciomyzidae has more than 540 species comprising 61 genera across the world’s biogeographical regions (Rozkošný, 1995; Elberg et al., 2009). Members of this family are known as marsh flies and snail-killing flies because most of the known larvae are obligate predators of Mollusca, especially freshwater and terrestrial Gastropoda. The marsh fly habitat consists of hard-water streams, small ponds, lakes in mountain valleys, and they also thrive in shallow ephemeral aquatic habitats with rich organic substrates (Knutson and Vala, 2011).

Until now, 4 species of the genus *Ditaeniella* have been known in the world. Of that, 2 species, *D. parallela* (Walker, 1852) and *D. trivittata* (Cresson, 1920) are recorded in Nearctic region. And *D. patagonesis* (Macquart, 1851) is only recorded in Neotropical region. Also, only one species, *D. grisescens* (Meigen, 1830) is known to be occurred in Palearctic region (Knutson and Vala, 2011).

The family Sciomyzidae is very poorly studied and documented in the Korean peninsula. The first record of this genus from Korea was given by Steyskal (1951), who described a new species, *Tetanocera chosenica*, from Seoul. Subsequently, Steyskal (1956) also described a new species, *Pherbellia ditoma*, from Andong. Park (1967) recorded *Sepedon aenescens* Wiedemann that was misidentified as *S. sphegea* (Fabricius). Knutson (1977) mentioned *Pherbellia nana reticulata* (Thomson). Rozkošný and Kozánek (1989) described a new species, *Pherbellia koreana*, from North Korea, with a newly record species in the Korean fauna, *Sepedon noteoi* Steyskal misidentified as *S. spinipes* (Scopoli). Rozkošný et al. (2010) added two species to the Korean fauna, *Colobaea eos* Rozkosny and *Tetanocera elata* (Fabricius), while reviewing the Korean Sciomyzidae. Until now, eight species in four genera were known to occur in the Korean fauna.

During a taxonomic survey on the family Sciomyzidae in Korea, the authors found an additional genus, *Ditaeniella* Sack, 1939; thus, it was discovered for the first time in Korea. This genus can be distinguished by the other related taxa with hairs over much of the mesopleuri, hairs on the prosternum and one orbital seta. In addition, the nominate species, *Ditaeniella grisescens* Meigen, 1830 was also firstly recorded in the Korean fauna.
SYSTEMATICS ACCOUNTS

Order Diptera Linnaeus, 1758
Family Sciomyzidae Fallen, 1820

1* Genus Ditaeniella Sack, 1939
Ditaeniella Sack, 1939: 37. Type species: Sciomyza grisescens Meigen, 1830.

Diagnosis. Frons mainly matt; mid-frontal stripe elongated

Korean name: 1*동글들파리속 (신칭)

Fig. 1. Ditaeniella grisescens. A, Male, lateral view; B, Female, lateral view; C, Male head, lateral view; D, Female head, lateral view; E, Male gonostyli. Scale bars: A, B = 1 mm, C, D = 0.5 mm, E = 0.01 mm.
Genus Ditaeniella from Korea

Ditaeniella grisescens (Meigen, 1830) (Fig. 1)
Sciomyza grisescens Meigen, 1830: 20. Type-locality: Versailles in France.

Diagnosis. Male: Head: curved in lateral view; cheeks broad; arista short-pubescent; 3rd antennal segment darkened in apical half; one orbital seta present (Fig. 1C). Thorax: mainly yellow to yellowish-grey and matt; mesonotum with darker stripes; one propleural seta; prosternum with a few haired; scutellum with two pairs of setae; 2 anepimeral setae. Legs: yellowish brown and grey; tarsus mainly dark; fore femur 6 dorsal setae; fore tibia with one preapical seta; mid tibia several setae on edge; hind tibia one posterior seta (Fig. 1A). Wing: slightly infuscate without pattern; R4 + 5 and M1 + 2 parallel; anal vein reaching posterior wing margin; posterior cross-veins cloudy and almost straight (Fig. 1A). Abdomen: yellowish-grey; gonostyli postgonites develop and have spines; 5th tergite asymmetry (Fig. 1E).

Female: Entirely similar to male, but more darken; body mainly brown to brownish-grey (Fig. 1B, D). Body Length: Male, 3.9–4.2 mm; female: 4.1–4.3 mm. Wing Length: Male, 3.7–4.2 mm; female: 3.7–4.1 mm.


Distribution. Korea (new record), Japan, China, Mongolia, Russia, Egypt, Turkey, Cyprus, Israel, Lebanon, Iran, Afghanistan, Europe.

Remarks. This species has asymmetry 5th tergite with the right side larger than the left. They have over half darken third antennal segment and body color darker in female than male. The genus Ditaeniella has been recorded only one species D. grisescens in Palaearctic region.

REFERENCES


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