



***Macromyzus* Takahashi (Hemiptera, Aphididae), a generic account, description of one new species, and keys to species**

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Abstract

The aphid genus *Macromyzus* Takahashi is reviewed, and keys to known species provided. *Macromyzus spinosus* **sp. nov.** is described from *Plagiogyria japonica* in Hunan, China. *Macromyzus* (*Anthracosiphoniella*) *maculatus* (Basu) is recorded for the first time in China. The type specimens are deposited in the National Zoological Museum of China, Institute of Zoology, Chinese Academy of Sciences, Beijing, China.

Key words: *Macromyzus*, Hemiptera, Aphididae, new species, new record, key, China

Introduction

Species of the aphid genus *Macromyzus* are specialized fern feeders. Ferns have often been thought to have a relatively small associated fauna of phytophagous insects. Hendrix (1980) concluded that the small fern-feeding insect fauna is due to ineffectual adaptive radiation on ferns. Amongst all insects orders that feed on ferns, the sucking insects of Hemiptera, especially aphids, are far better represented than chewing insects. Jensen and Holman (2000) listed 44 truly fern-feeding aphids world-wide.

Takahashi (1960) recognised *Macromyzus* as a genus with *Myzus woodwardiae* Takahashi as type-species, collected from *Woodwardia* sp. and *Polystichum* sp. in Taiwan (China). Later Takahashi (1963) hesitantly included *Myzus polypodicola* Takahashi in this genus, although he considered that it differs significantly from *Macromyzus woodwardiae*. Ghosh, Basu and Raychaudhuri (1977) thought that *Macromyzus polypodicola* (Takahashi) did not fit well into *Macromyzus*, and erected a new genus, *Macromyzella* to accommodate it. Basu (1969) erected a new genus *Anthracosiphoniella* for *Anthracosiphoniella maculatum*, but Raychaudhuri, Ghosh and Basu (1980) placed *Anthracosiphoniella* as a subgenus of *Macromyzus*. Until now, this genus consists of two subgenera and four species, i.e., *M.* (*Macromyzus*) *indicus* David & Narayanan, *M.* (*Macromyzus*) *manoji* Raha & Raychaudhuri, *M.* (*Macromyzus*) *woodwardiae* (Takahashi) and *M.* (*Anthracosiphoniella*) *maculatus* (Basu) (Remaudière & Remaudière, 1997).

In China, *Macromyzus* has been poorly studied with only one recorded species, *Macromyzus woodwardiae* (Takahashi) (Tao, 1990, 1999). Amongst aphid samples collected from South China, as part of an ongoing survey of Aphidinae in Hunan, were two samples of an undescribed species of *Macromyzus*. The new species is from *Plagiogyria japonica*, and is described here with a key to species of the genus.

Material and methods

Aphid terminology in this paper generally follows Heie (1994) and Qiao (2004). The unit of measurements in this paper is millimeters (mm).