

## Scientific Note

### **First record of *Brachycaudus helichrysi* (Kaltenbach, 1843) (Hemiptera: Aphididae) occurring on *Nemosenecio nikoensis* (Asteraceae)**

The genus *Nemosenecio* (Kitamura) Bertil Nordenstam (Asteraceae) contains six species, five of which are found in China and one in Japan (Jeffrey & Chen 1984, The Plant List 2018). *Nemosenecio nikoensis* (Miquel) Bertil Nordenstam (Fig. 1A), commonly known as Sawagiku, is endemic to Japan (Kadoda 2011), where it grows in moist, mountain forests (Azegami *et al.* 2013). A yellow aphid species was found on this plant in Mie Prefecture, central Japan, in June 2017 (Fig. 1B). The aphids were colonizing the involucre, floral branches, and undersides of the upper leaves, and they were not accompanied by ants (Fig. 1C). The plant parts infested with aphids were curled or distorted (Fig. 1D).

Aphid specimens were collected and mounted on slides in Canada balsam following Martin (1983). Examination of the specimens (Fig. 2) revealed that they belonged to the tribe Macrosiphini based on the closely placed first and second abdominal spiracles and the absence of marginal tubercles on the first and seventh abdominal segments (Miyazaki 1971). The species was identified as *Brachycaudus* (*Brachycaudus*) *helichrysi* (Kaltenbach, 1843) based on the identification key of the tribe in Japan by Miyazaki (1971).

A potted *N. nikoensis* plant (plant height = 40 cm) in flowering stage was infested with adult apterous viviparous females collected from *N. nikoensis*. The aphids produced offspring on the involucre and floral branch, which developed into adults and produced next-generation nymphs on the same plant (Fig. 1E). These observations indicate that *B. helichrysi* can reproduce on *N. nikoensis*. Further studies are needed to reveal the detailed reproductive ability of the aphid on *N. nikoensis*.

*Brachycaudus helichrysi* is a polyphagous species with reported host plants belonging to 68 families and approximately 310 genera (Blackman & Eastop 2018). Nevertheless, *B. helichrysi* has not previously been recorded from any species of *Nemosenecio*, including the species previously placed in the genus *Senecio* Linnaeus (Asteraceae) (Blackman & Eastop 2018, Higuchi & Miyazaki 1969, Holman 2009). In fact, no aphid species have been recorded from *Nemosenecio* (Blackman & Eastop 2018, Higuchi & Miyazaki 1969, Holman 2009), making *B. helichrysi* the first aphid species to have been recorded from this genus.

*Specimens Examined.* Nine adult apterous viviparous females (specimens #00003092–00003100 in Daisuke Sasaki collection), Japan, Mie Prefecture, Inabe City, Fujiwara-chō, Ōgaito (35°10'01.2"N, 136°27'36.0"E), on *Nemosenecio nikoensis* (**new host record**), 3 June 2017, leg. D. Sasaki, Voucher specimens have been deposited at the Museum of Natural and Environmental History, Shizuoka, Japan.

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