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Aleurocyperus humus gen. et sp. n. (Hemiptera: Aleyrodidae) from Taiwan, with interesting feeding behaviour

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Abstract

Aleurocyperus humus **gen. et sp. n.** is described from Taiwan, feeding on *Cyperus rotundus*, *Kyllinga brevifolia* and *Torulinium odoratum* (Cyperaceae), also *Eleusine indica* (Poaceae), with illustrations of the egg, immature stages, adult male and female. The new genus is defined through a combination of tracheal furrows, marginal characters, placement of dorsal setae, and absence of first abdominal setae. Observations are also presented on feeding behaviour.

Key words: Whiteflies, new genus, new species, Cyperaceae, Poaceae, Taiwan

Introduction

The new species of whitefly described in this paper has been found breeding on cosmopolitan monocotyledonous weeds of the families Cyperaceae and Poaceae in Taiwan. Grass-feeding whitefly species do not usually feed on dicotyledonous plants, and so this species is probably restricted to feeding on these families. Detailed descriptions are provided of the egg, immatures (II, III & IV instars), and adults of both sexes. The new taxon shows similarities to *Aleuromarginatus* Cockerell (known to be specific to leguminous host plants), to *Aleuropteridis* Mound (known from ferns), and to *Extensaleyrodes* Bink-Moenen (known from Caesalpiniaceae). Prior to this investigation 45 genera of whitefly were on recorded from Taiwan.

The feeding behavior of this species is unusual. The immature stages are usually found feeding on the basal leaves of the host, very close to the ground. This is so, even when the upper leaves provide enough space for a colony. Puparia are sometimes hidden among sand particles that have settled over them. A few immatures are also found feeding on the inflorescences of these Cyperaceae, although the tissue appears to be harder than the leaf cuticle, and there is sufficient feeding space on the leaves. The immatures always orientate on the leaf surface with their anterior end upward and their posterior end downward. This behavior remains constant even when the population is high. The pattern of egg laying is also of interest, as the eggs are laid in a linear series mostly near the leaf margins. Sometimes a single egg may be laid on the ventral median area of a leaf, but eggs were not observed on the inflorescences. The orientation of the puparia on the inflorescences was the same as that on the basal parts.

Material and methods

Grass blades with nymphal whitefly were collected (Fig. 1) into A4 size polythene zip covers along with the plant inflorescence and fruits to confirm the host identity. A colony of whitefly was established in the labora-

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