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Species of Thripinae (Thysanoptera) from bamboo in Malaysia, with one new species and six new records

Y.F. NG¹ & L.A. MOUND²

¹Centre for Insect Systematics, Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor, Malaysia. E-mail: ng_yf@ukm.edu.my

²Australian National Insect Collection, CSIRO, Canberra, ACT 2601, Australia. E-mail: laurence.mound@csiro.au

Abstract

Nine species of Thripinae that inhabit bamboo are recorded from Malaysia. *Clypeothrips idrisi* sp.n. is described as a second species in the genus, and *Trichromothrips bruncurum* Reyes is considered a **syn.n.** of *Neocorynothrips asiaticus* Ramakrishna & Margabandhu. Six species are newly recorded from Malaysia: *N. asiaticus*, *Okajimaella tubercula*, *Simulothrips banpoti*, *Stenchaetothrips bambusicola*, *S. bambusae* and *S. spinalis*. Seven species of *Stenchaetothrips* are now known from Malaysia. Illustrations and descriptions of each species are provided.

Key words: Poaceae, bamboo, new species, *Clypeothrips*, *Neocorynothrips*, *Okajimaella*, *Simulothrips*, *Stenchaetothrips*

Introduction

Bamboo is a common term that is applied to the species of more than 40 genera of plants in the family Poaceae, the same plant family as grasses and cereal crops such as rice, maize, wheat, oats, and barley. Bamboo is thus not a single botanical group, but represents a series of relatively unrelated, large woody grasses found widely throughout the tropics. Some species of Thysanoptera that are found on bamboo exhibit high specificity to these plants, although entomologists commonly do not identify the genus or species of “bamboo” from which they collect insects. A number of Thripinae and Phlaeothripinae are quite commonly collected from bamboo plants, including species of *Stenchaetothrips*, *Trichromothrips* and *Podothrips*, but these thrips genera are also found on other Poaceae. However, the five Asian Thripidae genera, *Clypeothrips*, *Simulothrips*, *Paithrips*, *Okajimaella*, and *Takethrips*, also one Phlaeothripidae genus, *Veerabahuthrips*, are recorded exclusively from bamboo plants (Nonaka & Jangvitaya 1993, 1994; Masumoto & Okajima 2012). Five of these genera seem likely to represent a single lineage within the Thripinae that has radiated on Asian bamboo plants of several genera.

Unrelated Thysanoptera species that are associated with grass leaves often have bicoloured bodies, such as *Anaphothrips sudanensis*, *Podothrips bicolor*, and *Trichromothrips dorsalis*. However, the Asian Thysanoptera that are specific to bamboo plants exhibit an unusual range of structural features. For example, *Clypeothrips* species have an unusually short and weak ovipositor, several species in other genera bear an additional spur on the fore tibia, and some species of *Veerabahuthrips* have grotesquely modified fore femora. There is little information on the biology of these species, although these structural features raise testable hypotheses. The ovipositor of *Clypeothrips* species appears to be too weak to cut into leaf tissues and insert an egg, as is normal among Thripidae species. Presumably the eggs of *Clypeothrips* species are deposited superficially or in a groove on the plant. The armed fore legs suggest that these species might be predatory, or alternatively the armature may be important in sexual combat. Preliminary field observations on *Veerabahuthrips simplex* by the first author suggested that the sharp femoral teeth are used to grip a leaf vein in windy conditions. However, further observations in captivity are needed to understand the behaviour and life history of these thrips.

All of the genera of bamboo-associated thrips that are considered here can be identified by using the key to Thripinae genera from South East Asia (Mound & Ng 2009), together with the key to species of *Thrips* and related genera from Japan (Masumoto & Okajima 2013). Here we record nine species of Thripinae that have been

***Thrips parvispinus* Karny, 1922**

This polyphagous thrips is widespread in Peninsular Malaysia, and large numbers have been collected on a wide range of flowers, but especially from *Chrysanthemum* in Cameron Highlands, Pahang. A few specimens are here recorded from a bamboo species, and although adults can sometimes be collected from Poaceae there is no evidence that this thrips breeds on these plants.

Material studied. Malaysia, Terengganu, Kerteh, 3 females from *Schizostachyum zollingeri* (Poaceae), 24.ii.2014 (Syarifah, Z.), in CISUKM.

***Trichromothrips dorsalis* Masumoto & Okajima, 2011**

Female macroptera. Body bicoloured; head brown, pronotum brown laterally but median area white; abdominal segments III–VII yellow laterally with brown median area, VIII–IX uniformly brown, X light brown; all legs pale; antennal segments I–II brown, III–IV light brown apically, V pale, VI–VII light brown, VIII pale; fore wing uniformly brown. Head about as long as wide; ocellar setae III longer than side of ocellar triangle, arising close together in line with anterior margin of posterior ocelli; 5 pairs of subequal post-ocular setae. Pronotum smooth on median area, laterally with irregular transverse lines; with 2 pairs of long posteroangular setae, inner pair slightly longer; 2 pairs of subequal posteromarginal setae. Mesonotum sculpture smooth, without anterior campaniform sensilla; median setae arising medially, far from posterior margin. Metanotum smooth, campaniform sensilla absent, median setae arising at anterior margin. Mesofurca with spinula, metafurca without. Abdominal tergite VIII posterior margin without comb of microtrichia.

Material studied. Malaysia, Terengganu, Kerteh, 2 females from *Dendrocalamus asper*, 4.iii.2014 (Syarifah, Z.), in CISUKM and ANIC.

Comments. This species was described from Thailand and recorded from Vietnam, with one female reported from bamboo in West Malaysia, Tapah (Masumoto & Okajima 2011).

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