



## Article

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### The genus *Bactrothrips* in China (Thysanoptera: Idolothripinae): morphological and molecular data, and a key with two new species

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#### Abstract

Seven species of *Bactrothrips* Karny are recognized from China, based on morphological and molecular data, including *Bactrothrips elongatus* n. sp. and *B. furvescra* n. sp. *Meiothrips baishanzuensis* Duan & Li is a new synonym of *B. brevitubus* Takahashi, and *Bactrothrips brevitubus zhamanus* Han & Zhang is a new synonym of *B. pictipes* Haga & Okajima. Molecular evidence provides clear relationships in the N-J tree among species studied here. A generic diagnosis and key to Chinese *Bactrothrips* species are also given.

**Key words:** Thysanoptera, Phlaeothripidae, Idolothripinae, *Bactrothrips*, morphology, COI, new species, China

#### Introduction

Karny (1912) erected the genus *Bactrothrips* for a single species, *longiventris*. The main diagnostic characters are: large body, abdominal tergites V–VIII of male with or without lateral tubercles, tube longer than head or slightly shorter, and tube surface with numerous fine setae. However, these character states do not satisfactorily distinguish *Bactrothrips* from two other genera of Idolothripinae, *Megathrips* Targioni-Tozzetti and *Meiothrips* Priesner. On present evidence these genera are distinguished as follows:

*Megathrips*—pelta lateral lobes narrowly joined to, or separated from, median lobe; postocular setae widely spaced, the distance between them about half of head width behind eyes, and located closer to outer margins of cheeks; macropterae with anterior pair of wing retaining setae reduced on each tergite; antennal segment III much shorter than head width across eyes.

*Bactrothrips*—pelta lateral lobes broadly joined to median lobe; postocular setae narrowly spaced, closer to each other than half of head width behind eyes, and posterior to inner margins of eyes; both pairs of tergal wing retaining setae equally well developed (except in *pitkini*); segment III longer than head width across eyes (excluding most Australian species).

*Meiothrips*—antennal segment III much longer than twice width across eyes; pelta with lateral lobes broadly joined to median lobe, joint between median part and lateral lobes slightly shorter than length of lateral lobe.

*Bactrothrips*—antennal segment III length less than twice width across eyes; pelta with lateral lobes less broadly joined to median lobe, joint between median part and lateral lobes slightly shorter than or as long as a half of the length of lateral lobe.

Some characters, such as antennal segment III and the pelta, have a gradient in changes through these three genera, and the genera are thus distinguished weakly from each other based on morphological characters. Some Australian *Bactrothrips* species have shorter antennae including segment III, and the stylets are deeply retracted into the head as in *Megathrips* (Mound & Tree, 2011). Moreover, in at least four species the males lack lateral abdominal tubercles (*B. alicae* and *perplexus* from Australia, and *B. inermis* and *pitkini* from Africa). Thus a broader systematic revision of the genus based on worldwide species is needed.