

Article

A new *Fusohericia* (Acari: Astigmata: Algophagidae) from Costa Rica

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Abstract

A new species, *Fusohericia heliconiae*, is described and illustrated from adults and phoretic deutonymphs collected from *Heliconia imbricata* flower bracts at La Selva Biological Station and Reserve, Heredia Province, Costa Rica. Notes on the biology of *F. heliconiae* are also presented.

Key words: Acari, Algophagidae, *Fusohericia*, *Heliconia*, Costa Rica

Introduction

The genus *Fusohericia* was established by Vitzthum (1931) to accommodate a unique species, *F. incredibilis*, collected from strongly fermenting, sour, milk-white liquid in a cut-off bamboo stump in Sumatra, Indonesia. Baker and Crossley (1964) described a second species, *F. lawrencei*, collected from an artificial treehole in the trunk of a tulip tree (*Liriodendron tulipifera* L.) in Rhone County, Tennessee, U.S.A. Naeem (1990) recorded a third species while investigating the arthropod community found in the fluid-filled flower bracts of *Heliconia imbricata* (Kuntze) Baker at La Selva Biological Station and Reserve, Heredia Province, Costa Rica, and referred to it as *Fusohericia* (n. sp). The present paper provides a formal description of that species and provides notes on its biology.

Materials and methods

Inflorescences of *H. imbricata* were collected in the field, brought back to the laboratory, and their fluid-filled bracts examined for mites under a dissecting microscope. Mites collected from the bracts were transferred to vials of 70% ETOH for storage and later prepared for examination under the compound microscope and scanning electron microscope (SEM).

For observation under phase contrast and interference microscopy, specimens were cleared in Nesbitt's solution and mounted in Hoyer's medium on microscope slides (Krantz 1978; Evans 1992). Relative shapes and positions of setae and other structures are as figured. Nomenclature for idiosomal setae follows Griffiths *et al.* (1990) and for leg setae Grandjean (1939).

Measurements, reported in micrometers (μm), were taken on 10 each of females, males and deutonymphs. For idiosomal characters, measurements are reported for the mean and range (in parentheses). For legs, the length from the base of the trochanter to the tip of the tarsus (mean, followed by range and mean percentage of idiosomal length in parentheses) is given first followed by the length of each leg segment as well as the pretarsus minus the claw (mean followed by the range in parentheses). Measurements used for statistical comparisons also include the standard error of the mean (s.e.). Independent sample t-tests were used for statistical comparisons within *F.*