



Article

urn:lsid:zoobank.org:pub:9B3B1EE8-A911-4DF5-AE2F-34DA4C64297C

A review of the genus *Antonina* Signoret in China (Hemiptera: Coccoidea: Pseudococcidae), with description of a new species

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Abstract

The mealybug genus *Antonina* Signoret (Coccoidea: Pseudococcidae) in China is reviewed and 12 species are recognized. Of these, *Antonina nanlingensis* Wu & Lu sp. nov. is a new species, collected from Ruyuan county, Guangdong Province, under the leaf sheaths of *Indocalamus longianritus* (Poaceae). The adult female and first- and second-instar nymphs of *A. nanlingensis* are described and illustrated. Additionally, *A. sandakanae* Williams is recorded from China for the first time, but all previous records of *A. zonata* Green from China are believed to be misidentifications of *A. milleri* Williams. A key to the adult females of *Antonina* species from China is included, as are keys to the first- and second-instar nymphs where these stages are known.

Key words: *Antonina*, China, new species, keys, *Antonina nanlingensis*, *A. zonata*

Introduction

Mealybugs are members of the family Pseudococcidae (Hemiptera: Coccoidea). They are so named because the bodies of the immature stages and adult female are covered by powdery wax. There are approximately 2247 species in over 280 genera worldwide, occurring in all zoogeographic areas except the polar regions (Ben-Dov, 2012). Mealybugs are one of the most economically important groups of insects known to mankind because they attack many cultivated foods as well as ornamental and household plants. They damage the plant either by direct removal of plant fluids and nutrients, by the excretion of honeydew that covers the leaves, reducing photosynthetic efficiency, or/and as a vector of plant diseases. Of over 150 species known on mainland China, about 40 species are considered as pests (Wu, 2009). For example, *Nesticoccus sinensis* Tang is an important bamboo pest (Xie & Yan, 1983), *Phenacoccus azaleae* Kuwana causes heavy damage to *Zanthoxylum bungeanum* (Xie, 1998), and *Pseudococcus comstocki* (Kuwana) is polyphagous and damages many fruit crops such as apple, pear and *Punica granatum*, and ornamental plants such as *Clivia miniata* (Tang, 1992).

The genus *Antonina* (Pseudococcidae: Pseudococcinae (Hardy *et al.*, 2008)) was established by Signoret (1875) with *Antonia purpurea* Signoret as the type species. It is the largest genus of the legless mealybug group. The Chinese species of *Antonina* have been studied by many authors. Maskell (1897) described a new species *Sphaerococcus graminis* (= *Antonina graminis*) from Hong Kong; Ferris (1921) and Takahashi (1928) recorded *A. crawi* Cockerell and *A. indica* Green (= *Antonina graminis*) from Taiwan; Wang (1982) and Yang (1982) recorded *A. pretiosa* Ferris and *A. zonata* Green for the first time from China; Tang (1992) described a new species, *A. elongata* Tang, and two new records from China, namely *A. tesquorum* Danzig and *A. vera* Borchsenius, but placed *A. zonata* in the genus *Chaetococcus* as *Ch. zonatus*; Hendricks and Kosztarab (1999) dealt with four *Antonina* species (*A. crawi*, *A. graminis*, *A. pretiosa* and *A. zonata*) in their monograph *Revision of the tribe Serrolecaniini*; Wu (2001) described a new species, *A. hubeiana*; Williams and Miller (2002) described a new species, *A. maai*, and recorded *A. nakaharai* Williams & Miller and *A. socialis* Newstead from China, whereas Williams (2004) described another new species, *A. milleri*, based on specimens collected from Guangdong, China. However, *A. elongata* Tang is the nymph of a species in the *A. crawi* group (Hendricks & Kosztarab, 1999; Wu, 2001). At