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A new genus and species of Old World Opsiini (Hemiptera: Cicadellidae: Deltocephalinae), with a key to genera and species checklist for the tribe

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Abstract

Introrsa, a new genus and species of the tribe Opsiini from southern China (Yunnan) is described. Diagnosis of the new genus together with information on the karyotype is given. *Introrsa* most closely resembles *Opsius* Fieber, but it is the first genus of the Opsiini with the body longer than 8 mm and can be distinguished from the latter by body not wedge-shaped, head as broad as pronotum and aedeagus with socle not bulbous. The sex determination system is XO/XX and the karyotype of the species is 2n=12(10+XO). The detailed morphology of the new genus is described; external habitus and line drawings of male and female gentalia of the new taxon are given. An annotated check-list and generic key to Old World members of the leafhopper tribe Opsiini are provided.

Key words: Homoptera, Auchenorrhyncha, leafhoppers, taxonomy, chromosome, *Introrsa*, new genus

Introduction

Deltocephalinae is the largest and most economically important subfamily of leafhoppers, including at least 6000 described species. These insects injure plants by direct feeding and also by transmitting plant pathogens (Nielson, 1968). Opsiini, a small tribe of the subfamily Deltocephalinae includes 251 species worldwide, including several of economic importance. The beet leafhopper *Neoaliturus (Circulifer) tenellus* (Baker) is a serious agricultural pest. Three species of *Hishimonoides*, *H. sellatiformis* Ishihara, *H. chinensis* Anufriev and *H. aurifascialis* Kuoh are known to transmit mulberry dwarf in Japan and jujube witches' broom disease in China. *Hishimonus phycitis* (Distant) vectors a pathogen of brinjal in India and *Hishimonus sellatus* transmits mulberry dwarf virus in Japan. *Orosius argentatus* is a vector of numerous plant diseases in Australia and Oceania.

Opsiini was described by Emeljanov (1962) and divided into three subtribes. Although paired aedeagal shafts are treated by Emeljanov (1962) as unique feature of the tribe, this character is also found in some genera (e.g., *Afrascius, Scaphytoceps, Japananus*) of the tribes Scaphytopiini (Webb & Godoy, 1993), some Nearctic genera (eg., *Lycioides*, *Dixianus*) of Athysanini, and of Mukariini (Linnavuori, 1979; Hayashi, 1996). Recently, Zahniser and Dietrich (2008) also found two opsiine genera, *Opsius* Fieber and *Neoaliturus* Distant, did not group together in phylogenetic analyses of Deltocephalinae. Dmitriev (2002) recognized four subtribes of Opsiini. Although Opsiini is well characterized morphologically, the Old World fauna is known only from smaller regional works (Viraktamath et al., 1987; Mitjaev, 2000).

Many undescribed species of Deltocephalinae are known to occur in China. In the course of an ongoing study on the phylogeny and biogeography of Opsiini, some specimens of the tribe were found in our institutional collection that could not be assigned to any known genera. During a month-long collecting expedition in Yunnan province in August 2008, the second author also collected many similar specimens at a different locality. Here a new genus is proposed for these specimens.

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