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Taxonomic study of the genus *Kapsa* Dworakowska with a new subgenus, and new combinations and records for *Tautoneura* Anufriev (Hemiptera: Cicadellidae: Typhlocybinae: Erythroneurini)

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Abstract

The genus *Kapsa* Dworakowska is redescribed and a new subgenus *Kapsa* (*Rigida*) Cao & Zhang is established to include thirteen species, a key to males of the subgenus is provided, and eight new species from China are described and illustrated: *Kapsa aculeiformis*, *K. apicispina*, *K. brevis*, *K. explanata*, *K. furcata*, *K. imminuta*, *K. megaprocessa* and *K. serrata* **spp. nov.**. Based on detailed study of previously described species, *Kapsa yanheensis* Song & Li, 2012 is considered a synonym of *Tautoneura albida* (Dworakowska, 1970). Four species previously placed in *Kapsa* are transferred to *Tautoneura* Anufriev: *Tautoneura decorata* (Dworakowska, 1981), *T. diasonica* (Chiang & Knight, 1990), *T. elscinta* (Chiang & Knight, 1990) and *T. puerensis* (Song & Li, 2012). *K. alba* Dworakowska, 1981 and *T. ahmedi* Dworakowska, 1977 are reported for the first time from China.

Key words: Hemiptera, Auchenorrhyncha**,** leafhopper, taxonomy, morphology

Introduction

The leafhopper genus *Kapsa* was established by Dworakowska (1972) with *Typhlocyba furcifrons* Jacobi as its type species. Until now, twenty-eight species were included in the genus, with nearly half recorded from India. This genus also occurs in China, Sri Lanka, Vietnam and other Oriental countries.

Based on the few available host records, these leafhoppers mainly feed on herbaceous plants, such as *Solanum tuberosum*, *Tagetes erecta*, *Fragaris* sp., etc. Trees are also potential hosts, with *Alnus nepalensis* and *Butea monosperma* recorded as the hosts of *K. minuta* and *K. vana* respectively.

Species of *Kapsa* are usually pale to yellow-whitish, rarely light brownish or with color patterns. No particular external character makes this genus stand out, so that it can be easily confused with some other pale or yellowish erythroneurine genera. Dworakowska (1972) established this genus with a very simple description (head narrow and pronotum large, face long and narrow with indistinct lateral frontal sutures; paramere with "second extension"), but subsequently Dworakowska *et at.* (1978) enhanced the diagnosis with a very important character of the connective (connective lamellate with sclerotization at apex of central lobe). However, many species have been placed in *Kapsa* simply based on their plain appearance and the shape of the subgenital plate, regardless of the structure of the connective.

In this work, both external and genitalia characters of all known *Kapsa* were studied, and indicated that a compressed aedeagal shaft with dorsoapical denticuli is usually present in species having the apically sclerotized part of the connective central lobe. The group of species with these characters also has other stable features, such as at least four macrosetae on the subgenital plate that increase in size distally; thus, they are placed in a new subgenus of *Kapsa*. Based on available descriptions and illustrations, five known species and eight new species are here placed in *Kapsa* (*Rigida*) Cao & Zhang sgen. n., with a key for their identification. Five species are excluded

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