On the specific status of *Hedotettix cristatus* Karny, 1915 (Tetrigidae: Tetriginae)

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Abstract

Hedotettix cristatus Karny, 1915 is a species described from a single male specimen from Taiwan. Wagan & Kevan in 1992 synonymised the species with *Hedotettix punctatus* Hancock, 1909. We re-evaluated the specific status of *H. cristatus* and made a detailed comparison between valuable diagnostic characters. Females of *H. cristatus* are reported and new localities for the species, found on amateur photos from Taiwan, are presented. *H. cristatus* **stat.rev**. is a valid species, endemic to Taiwan, while *H. punctatus* is a species with a disjunctive distribution, partly in India and partly in China (Hainan, Guangdong, Hubei). The main diagnostic differences between two species are: 1) antennal grooves position: in *H. cristatus* antennal grooves are situated at the level of the lower margin of the compound eyes or slightly below it, while in *H. punctatus,* however, antennal grooves are situated slightly above the lower margin of the compound eyes, never at its level or below, 2) scutellum morphology: in *H. cristatus,* frontal costa bifurcation starts in about upper ¼ of the compound eye height, while in *H. punctatus* it starts at the level of upper margin of compound eyes or slightly below (with rare exceptions), 3) ratio of femora length/width: *H. cristatus* is species of robust femora, while *H. punctatus* has slender femora and 4) prozonal carinae: indistinguishable in *H. cristatus*, clear and elevated in *H. punctatus*. *H. cristitergus* Hancock, 1915 **syn.nov**. is synonymized with *H. punctatus,* as already proposed in some old papers.

Key words: *Hedotettix cristatus, Hedotettix punctatus,* Taiwan, India, pygmy grasshoppers, taxonomy

Introduction

On the genus *Hedotettix* Bolívar, 1887

The genus *Hedotettix* Bolívar, 1887 was erected by Bolívar (1887) for a Tetriginae species with antennae inserted between the compound eyes, originally including *H. gracilis* (Haan, 1842), *H. exsultans* (Stål, 1861) (= syn. of *H. gracilis), H. affinis* Bolívar, 1887*, H. guibelondoi* Bolívar, 1887*, H. coactus* Bolívar, 1887*, H. sobrinus* Bolívar, 1887*, H. rusticus* Bolívar, 1887*, H. festivus* Bolívar, 1887 (= syn. of *H. gracilis), H. angustifrons* Bolívar, 1887, and *H. pulchellus* Bolívar, 1887. Today, the genus includes 46 species, of which five are found in Africa, 25 species in temperate Asia (of which 21 in PR China—18 described in last 20 years), 17 species in tropical Asia (of which 7 in India (Shishodia *et al.* 2010), and a single species in Australia (*H. affinis*, also inhabiting the Philippines) (Eades *et al.* 2015).

Taxonomy of the genus has been quite chaotic. *Hedotettix gracilis* (Haan, 1842) can serve as a good example. It is a species with 11 synonyms (of which five have Walker (1871) as name authority). A large number of synonyms could be attributed to species descriptions based on a small series, wrong diagnostic characters, and the lack of studying intraspecific variability. Hancock (1915) listed 47 species of Tetrigidae from India. He worked on the material determined by Kirby (1914), and from the nine specimens Kirby labeled *H. gracilis,* Hancock (1915) recognized six species in four genera, none of them being *Hedotettix*. These discrepancies suggest that Tetrigidae are not only a taxonomically complicated group, but also that one of the difficulties is the wide disparity between one worker's appreciation of specific variation and others (Blackith & Blackith 1987).