



Studies in Australian Tettigoniidae: The Phyllophorinae (Orthoptera: Tettigoniidae; Phyllophorinae)

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Abstract

A survey of Australian Phyllophorinae is presented. The entire fauna is represented by two species in two genera. *Siliquofera grandis* Blanchard, a species widely distributed in Papua New Guinea, is recorded from Iron Range, Queensland. *Phyllophorella queenslandica* Rentz, Su, Ueshima **sp. nov.** is described from Kuranda, Queensland and recorded from several localities on the Cape York peninsula. The unusual habits of the subfamily are discussed and the equally unusual karyotype of *Phyllophorella queenslandica* Rentz, Su, Ueshima **sp. nov.** is presented.

Key words: Phyllophorinae; katydid biology; chromosomes of Phyllophorinae

Introduction

The Phyllophorinae is a peculiar group of tettigoniids confined mainly to the Indo-Malaysian or East Asian region. They are highly distinctive in the following characters: the absence of typical tettigoniid tegminal stridulatory apparatus in males; pronotum extended hood-like over the base of the tegmina, the margins dentate, spinose or crenulate; tarsi depressed; fore tibiae with open linear or slit-like foramen; first and second tarsal segments longitudinally sulcate laterally and the hind tibiae armed with spurs on both sides of the dorsal surface. The prosternum is either unarmed or armed with a pair of spines or tubercles, depending upon the genus. Where known, sound is produced in the Phyllophorinae by the movement of the hind coxae against the outer margin of the metasternal lobes. The coxae bear a series of parallel transverse plates that produce sound (Fig. 1) when rubbed against a series of minute tubercles on the hind coxa. Carl (1906) was the first to describe this feature. The sound has been recorded for the Australian species described herein (Rentz 1996b; track 83.1).

Aside from the above, little is known of the life histories of any of the twelve genera recorded in Eades and Otte (2008). From a taxonomic standpoint, as with many tettigoniid higher taxa, the group needs a considerable amount of attention.

The Australian complement of the Phyllophorinae is known to comprise only two species. *Siliquofera grandis* (Blanchard) is among the largest of Tettigoniidae (Table 1). This species is recorded from New Guinea and northern Cape York Peninsula, Queensland. It is known in Australia from very few specimens. It is spectacularly large (Fig. 2) and usually attracts attention when discovered. It probably lives high in rainforest trees and does not often come to ground. The other species was noted by Rentz (1996a) and is in the related genus *Phyllophorella*. It is known from the northern tropical rainforests from northern Cape York Peninsula region south to Kuranda (Map 1). It is much smaller than *S. grandis* based on the number of individuals that turn up in collections and probably lives in understorey vegetation. Neither species appears to be attracted to lights. Specimens are placed in collections identified with the following codes: Australian