



A revision of the South African katydid genus *Austrodontura* Fontana & Buzzetti (Orthoptera: Tettigoniidae: Phaneropterinae)

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Abstract

The South African genus *Austrodontura* Fontana & Buzzetti of brachypterous katydids is revised. *A. capensis* (Walker, 1869) is redescribed and *A. castletoni* sp. n. from the Eastern Cape Province is described, *A. raggei* Fontana & Buzzetti is considered a junior synonym of *A. capensis*. Acoustic behavior of *A. castletoni* is described.

Key words: South African katydids, Phaneropterinae, *Austrodontura*

Introduction

Wing reduction in the leaf katydids (Phaneropterinae) is a common trait that appears to have evolved independently multiple times within the Tettigoniidae (Naskrecki *et al.*, in prep.) Morphologically similar, brachypterous taxa of the Phaneropterinae are known from nearly all areas of the globe, but particularly in Mediterranean or subtropical climates with a strongly pronounced seasonality: in Eurasia genera *Poecilimon* Fischer-Waldheim, *Isophya* Brunner von Wattenwyl, *Leptophyes* Fieber and several others have undergone a remarkable radiation around the Mediterranean Basin; in North America genera *Dichopetala* Brunner von Wattenwyl and *Arachnitus* Hebard are comprised exclusively of brachypterous species, whereas *Arethaea* Stål and *Brachyinsara* Rehn & Hebard include both macropterous and brachypterous species; in South America genera *Angara* Brunner von Wattenwyl, *Dichopetala*, *Anisophya* Karabag, and *Xenicola* Uvarov are represented by a number of brachypterous species. However, in predominantly tropical Indo-Malaysia wing reduction is known only in *Letana* Walker, and no brachypterous species of the Phaneropterinae are known from Melanesia and Australia. In Sub-Saharan, tropical parts of Africa brachyptery among the Phaneropterinae has also appeared several times, primarily in high-elevation areas, and it is present in all known species of *Atlasacris* Rehn, *Peropyrrhicia* Brunner von Wattenwyl, *Monticolaria* Sjöstedt, and *Odonturoides* Ragge. Additionally, species with reduced wings are known in otherwise macropterous genera *Peronura* Karsch and *Ducetia* Stål.

In southern Africa genera *Brinckiella* Chopard (*B. aptera* Naskrecki & Bazelet is apterous), and *Austrodontura* Fontana & Buzzetti are restricted in their distribution to the Cape provinces of South Africa and both exhibit strong seasonality, apparently correlated with plant phenology. Species of *Brinckiella* reach maturity and their populations occur in largest densities around the time of mass flowering of herbaceous plants in the coastal fynbos and succulent karoo of Western and Northern Cape Provinces between September and November (Naskrecki and Bazelet 2009).

The genus *Austrodontura*, which was erected by Fontana and Buzzetti (2004) to accommodate the South African member of the genus *Odontura* Rambur, *O. capensis* Walker, 1869, and a new species, *A. raggei* Fontana & Buzzetti, 2004, has up to this point been known only from two holotype specimens. Recent fieldwork in the Eastern Cape province of South Africa has allowed us to shed new light on the biology and behavior of this genus. Below we provide a comprehensive diagnosis and description of *Austrodontura*, and describe its known species.