

## Chapter 5

### A rapid survey of katydids (Insecta: Orthoptera: Tettigoniidae) in northwestern Guinea's Boké Préfecture

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#### SUMMARY

- 15 species of Tettigoniidae were collected, of which one is possibly new to science, and three are new to Guinea
- Species richness and abundance of individual species were extremely low due to unfavorable climatic conditions (the end of the dry season) combined with heavy anthropogenic impact on the surveyed habitats

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#### INTRODUCTION

The third survey of katydids (Tettigoniidae) of Guinea, a part of a rapid assessment of the biotic diversity of selected parts of the country, was conducted in April and May 2005 in northwestern Boké Préfecture of Guinée Maritime. This survey followed two previous surveys conducted in 2002 (Naskrecki 2004) and 2003 (Naskrecki in prep.) at a number of sites within Guinée Forestière. Combined with previously published records of the Tettigoniidae of Guinea (principally Chopard 1954), they resulted in confirmed records of 102 species of these insects. The present survey, which recorded only 15 species, adds three additional species to the list of katydids of Guinea, bringing the total number of species known from this country to 105. This number must be considered very preliminary, and representing but a fraction of the actual species diversity, which may include as many as 200-250 species. Large portions of the country still remain unexplored in terms of their insect faunal composition, and high elevation areas in the western and central parts of the country are undoubtedly home to many species not yet recorded from Guinea. Upper levels of the rainforest canopies in the eastern part of Guinea have also never been sampled, and it is expected that numerous canopy species of Phaneropterinae and Pseudophyllinae are to be found there.

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#### METHODS AND SITES

Three standard methods were used to collect katydids during the current survey: visual search at dusk and night, attraction to ultraviolet (UV) and fluorescent lights, and listening to calls of acoustically active males. In addition, random net sweeping was used during the day in grassy habitats, with repeated sweeps of 10-15 m long and 2 m wide transects. Representatives of all encountered species were collected and voucher specimens were preserved in 95% alcohol. These specimens will be deposited in the collections of the Museum of Comparative Zoology, Harvard University and the Academy of Natural Sciences of Philadelphia (the latter will also become the official repository of the holotype of a possible new species encountered during the present survey upon its formal description.)

In addition to physical collection of specimens, stridulation of acoustic species was recorded using the Sony Digital Disc recorder, with Senheizer directional microphone. These recordings are essential to establish the identity of cryptic species of the genera *Ruspolia* and *Anoedopoda*, where morphological characters alone may not be sufficient for positive species identification. Virtually all encountered species were photographed, and these images will