

Acrida bara, synonymous with *A. sulphuripennis* (Orthoptera, Acrididae, Acridinae)

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Abstract

The male holotype of *Acrida bara* Steinmann, 1963 from the Budapest collection (HNHM) was studied and found to be identical to *Acrida sulphuripennis* (Gerstaecker, 1869). Consequently, *Acrida bara* *syn. nov.* is synonymized with *A. sulphuripennis*.

Keywords

East Africa, taxonomy, Tanzania

Introduction

The genus *Acrida* Linnaeus, 1758 is a species-rich genus of Acridinae widespread in the Mediterranean region, Africa, and Asia. In Africa, *A. turrita* (Linnaeus, 1758), *A. sulphuripennis*, and *A. bicolor* (Thunberg, 1815) are widely distributed, the latter two belonging to the most common species in East Africa. *Acrida* species are dwellers of grasslands, preferring disturbed habitats and very common in ruderal vegetation. *Acrida sulphuripennis* is a pioneer species that colonizes fallow lands and opened-up areas along roadsides. It is found from sea level up to the lower border of the montane forest at 1800 m on Mt. Kilimanjaro (Hemp 2009). *A. sulphuripennis* often occurs syntopically with *A. bicolor*. Both species are easily distinguished on the basis of wing color, with a matte yellow color in *A. bicolor* and vivid yellow to orange color in the hind wings in *A. sulphuripennis*. Gerstaecker (1869) described *A. sulphuripennis* from Zanzibar, giving only a very short description. Gerstaecker (1873) published a more detailed description of this species and compared it with *A. bicolor*. *Acrida bara* was described by Steinmann (1963) after a single male from Lushoto (Lushato in Steinmann 1963) in the West Usambara Mountains. The holotype is deposited in the Natural History Museum Budapest in Hungary (HNHM). Since its description, no further specimens have been reported.

The male holotype of *A. bara* from the Natural History Museum Budapest was studied and compared with a series of specimens of *A. sulphuripennis* from Zanzibar, the Tanzanian mainland, and some other African countries.

Material and methods

The type of *A. bara* was morphologically compared with specimens of *A. sulphuripennis* from eastern and southern Africa (from the Natural History Museum London, UK). Morphological characters compared include the shape and color of the wings, overall habitus, the shape of the head and the pronotum, and the shape of the last abdominal tergites in males.

Results

Steinmann did not directly compare his *A. bara* with *A. sulphuripennis* or, indeed, with any other species. The only reference to *A. sulphuripennis* in his paper is found in his key to species. He defines it there on the basis of three sets of characters: a) tip of tegmen straight and pointed, b) dorsal process of subgenital plate as large as the apex of that plate, and c) hind wing a matte yellow in color. In his description of *A. bara*, he states that its tegmen tip is parabolic, not straight and pointed, and he describes the dorsal projection of the subgenital plate as being “2.5 times shorter than then the length of the apex of the plate.” The photos of the holotype presented in this paper show that neither statement is correct. Steinmann gives no information about the color of the hind wing of *A. bara*—it is likely that he never examined it, as the holotype has folded wings and the hind wing is not visible.

Comparing the holotype with specimens coming from Zanzibar (type locality of *A. sulphuripennis*, Fig. 2C), the East and West Usambaras (the latter the type locality of *A. bara*; Fig. 1D), the vicinity of Kilimanjaro (Fig. 2A, B), and the foothills of the East Usambara Mountains (Fig. 2D), no differences in the morphology of the male apex (compare Fig. 1C and Fig. 2C–E), the shape of the wings, the pronotum (Fig. 1B), or coloration and venation could be detected. Additionally, *A. sulphuripennis* from other African countries, e.g., Zambia or KwaZulu Natal (Fig. 2E), were studied at the Natural History Museum in London, and no differences—besides some variation in size and coloration—could be detected.

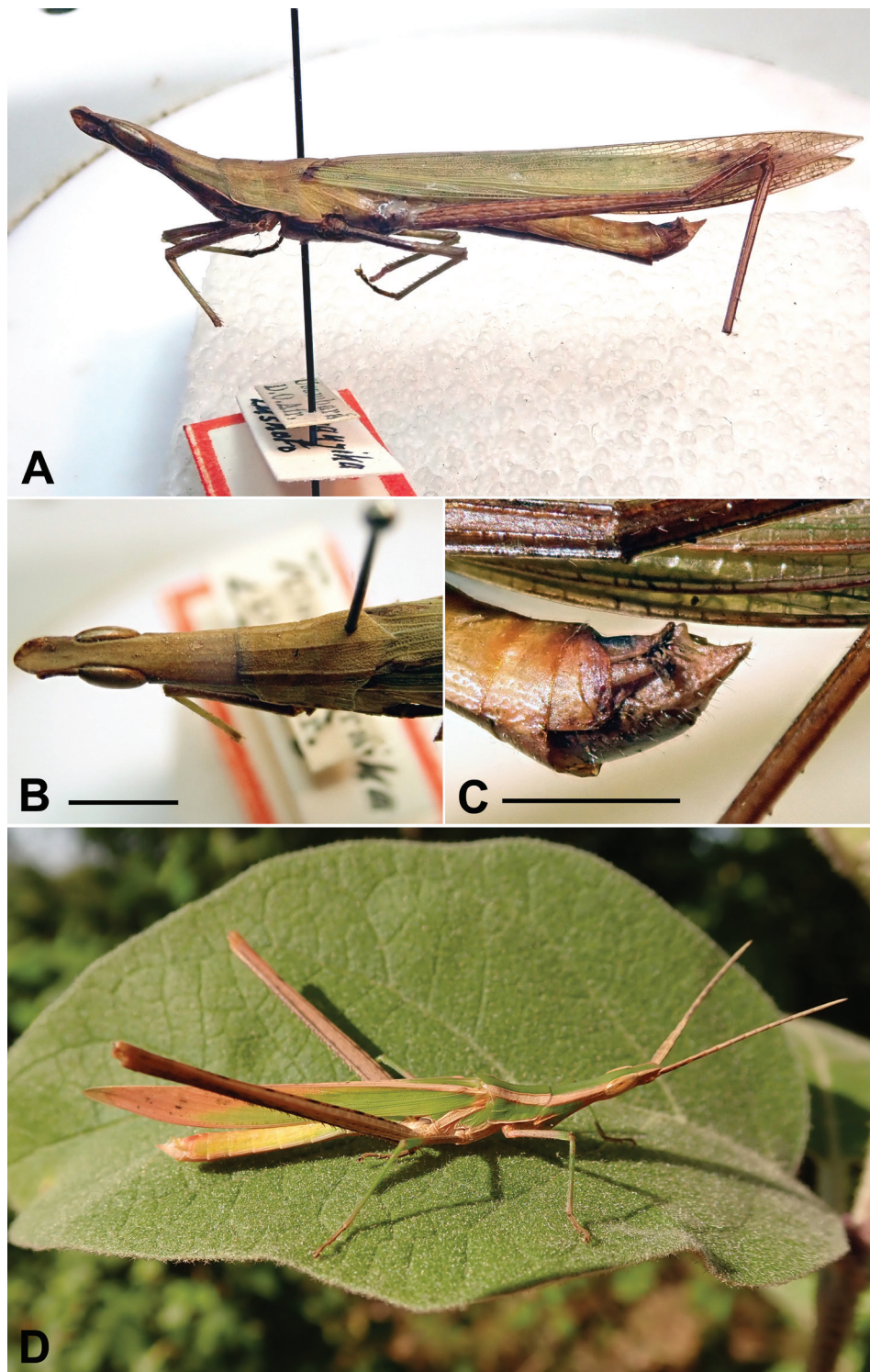


Fig. 1. Male holotype of *Acrida bara* (A–C) and male specimen of *Acrida sulphuripennis* (D) photographed near the type locality in the West Usambara Mountains of Tanzania A. Lateral habitus; B. Head and pronotum; C. Lateral view of apex. Scale bars 5 mm.

Discussion

In widespread species, variation in external morphology, coloration, and body size is common (e.g., Ibrahim 1974; Bai et al. 2016; Rosetti and Remis 2018), and if the species are only known from a few widely separated localities, this could well lead to the description of separate taxa. When more specimens are collected

from intermediate localities, taxa described from widely separated localities often turn out to be identical. In various Oedipodinae, such as *Acrotylus* Fieber, 1853 or *Gastrimargus* Saussure, 1884, differences in color or body size were found to be simply variations of populations from different localities (Cigliano et al. 2022).

In the genus *Acrida*, a number of widespread species were described as different taxa but later united under a single taxon,

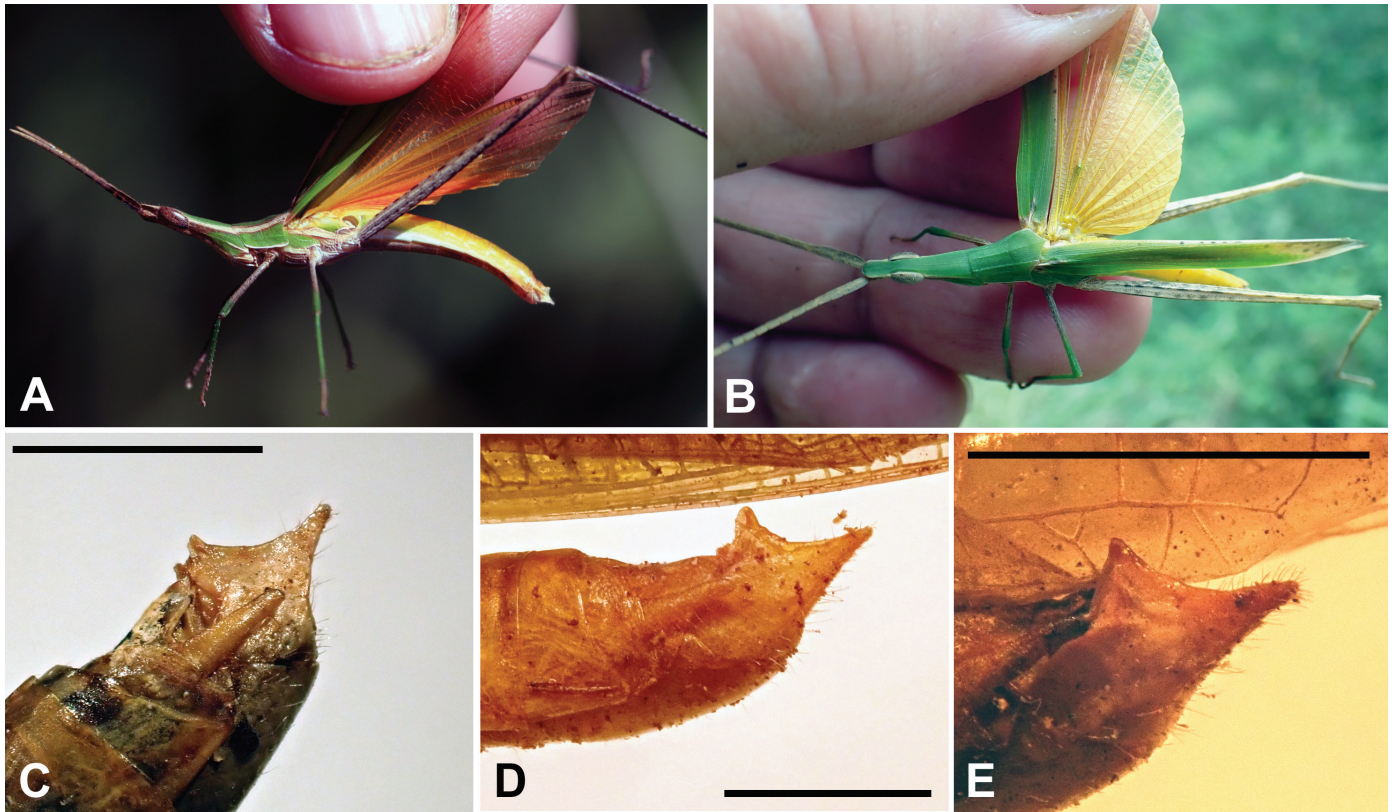


Fig. 2. Male *Acrida sulphuripennis*. A, B. Habitus (Kilimanjaro) C–D. Lateral view on male apex of specimens from Zanzibar near Jozani (C), from Muhesa at the foothills of the East Usambara Mountains (D), and from KwaZulu Natal (E). Scale bars: 5 mm.

e.g., *A. bicolor* (8 synonyms), *A. cinerea* (Thunberg, 1815) (6 synonyms), *A. exaltata* (Walker, 1859) (4 synonyms), and *A. turrita* (7 synonyms) (Cigliano et al. 2022). Museum collections serve as an indispensable base for understanding the biogeography of species, enabling taxonomists to compare larger series of any given species and to decide on its species status.

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