



## Trigonidiinae crickets from Rodrigues island: from widespread pantropical species to critically endangered endemic species

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### Abstract

The Trigonidiinae crickets of Rodrigues are examined. Two species widespread in South Western Indian Ocean islands are recorded in Rodrigues for the first time: *Trigonidium cicindeloides* Rambur, 1839 and *Natula longipennis* (Serville, 1839). *Nemobius luteolus* Butler, 1876 is a Trigonidiinae and not a Nemobiinae, it is transferred to *Metioche* Stål, 1877 as *Metioche luteolus* (Butler, 1876), **n. comb.** Two new species are described from the restored areas of the island. These new species are tentatively considered as *Metioche* and included in the new subgenus *Superstes* **n. subgen.**: *Metioche (Superstes) superbus* **n. subgen., n. sp.** and *Metioche (Superstes) payendeei* **n. subgen., n. sp.** This new subgenus is characterized by the male genitalia asymmetry and the striking hyperthely of the left pseudepiphallic lophi and paramere. Elements of the ecology of endemic Trigonidiinae of Rodrigues are given, and their conservation status is assessed.

**Key words:** Orthoptera, Mascarene, endemism, conservation, asymmetry, sword-tail cricket

### Introduction

The Orthoptera fauna of Rodrigues has first been examined by Butler (1876, 1879) using samples collected by Gulliver and Slater during the transit of Venus expeditions in 1874 and 1875. This fauna was examined a second time by Uvarov (1929) using samples collected by Thomasset and Snell between August and November 1918. Interestingly, whereas the first expedition has allowed collection of specimens belonging to two endemic species, the second one has only revealed the record of species widespread in South Western Indian Ocean islands. This may be due to the dramatic devastation of Rodrigues natural habitats that have occurred at the beginning of the last century (Strahm, 1993, Cheke & Hume 2008).

Fieldwork in Rodrigues led to the discovery of the two endemic species described by Butler (1876, 1879): *Rodriguesiophis spinifera* (Butler, 1876) (see Hugel, 2010) and *Nemobius luteolus* Butler, 1876. The latter species, described on one shrunken female, does not belong to Nemobiinae but to Trigonidiinae subfamily: it is transferred to *Metioche* Stål, 1877 in the present article **n. comb.** This species also displays strong color variation that might correspond to distinct taxa.

In addition, recent fieldwork have resulted in the first records of four other Trigonidiinae species. Two of the recorded species are widespread in South Western Indian Ocean islands: *Trigonidium cicindeloides* Rambur, 1839 and *Natula longipennis* (Serville, 1839). The other two are new and are tentatively assigned to *Metioche* Stål, 1877 under the new subgenus *Superstes* **n. subgen.**: *Metioche (Superstes) superbus* **n. subgen., n. sp.** and *Metioche (Superstes) payendeei* **n. subgen., n. sp.** These new species are mostly found in Grande Montagne Nature Reserve where restoration has allowed the increase of the density of endemic Orthoptera (Hugel, submitted). The generic position *Superstes* **n. subgen.** is discussed, together with the conservation status of all Rodrigues Trigonidiinae.

### Material and methods

**Specimens examined.** New taxa are described from specimens recently collected in Rodrigues. Day collecting was either performed mechanically by shaking plants above a large plastic sheet, or by sight. Night collecting was performed by sight using a halogen headlamp and a net.