



A new species of *Furculanurida* (Collembola: Neanuridae) from Ivory Coast, with comments on related genera

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Abstract

A new species of Pseudachorutinae, *Furculanurida emucronata* **sp. nov.**, is described from Lamto in the Ivory Coast. It differs from all known Pseudachorutinae species by the presence of a strong lateral tooth on the claw of leg I, and from other species of the genus *Furculanurida* by the absence of a mucro. It is provisionally assigned to the genus *Furculanurida* which is redefined accordingly. The heterogeneity of the genus is stressed, and its relationships with *Arlesiella*, *Kenyura*, *Pseudachorutes* and *Stachorutes* are discussed.

Key words: labium, Africa, *Arlesiella*, *Kenyura*, Pseudachorutinae, *Pseudachorutes*, *Stachorutes*

Introduction

The Ivory Coast has an exceptionally rich fauna of Pseudachorutinae even though its Collembolan fauna has only been unevenly surveyed (Zon *et al.* 2013). Most described species have been collected from the 3000 ha lowland Banco rainforest in Abidjan (6 genera and 14 species which is the largest number of species in this subfamily found in any other region of the world of similar size. The savannah woodland and semi-deciduous forest of Lamto, a less humid area located 180 km north-west of Abidjan, have been intensively sampled for Collembola over the last four years. Pseudachorutinae were well represented, with more than 10 species which are currently under study. In this paper, we describe one new species, *Furculanurida emucronata* **sp. nov.**, and justify its assignment to *Furculanurida* Massoud, 1967. The genus is redefined, its heterogeneity is stressed, and its relationships to other genera of Pseudachorutinae (*Arlesiella* Delamare-Deboutteville, 1951, *Kenyura* Salmon, 1954, *Pseudachorutes* Tullberg, 1871 and *Stachorutes* Dallai, 1973) are discussed.

Material and methods

In the context of a project examining the impact of agriculture on soil Collembolan communities in the Lamto area (Ivory Coast), the main types of local land-use (secondary semi-deciduous forest, savannah, fallow ground, mixed cultures, yam culture and cocoa culture) were sampled using a standardised method (3 sites per land-use, 6 sample points by site). At each sample-point, fauna was obtained by extraction of one sample of litter, one of underlying soil in Berlese/Tullgren funnels and by using pitfall traps. Animals were collected and stored in 95% ethanol. Collembola were sorted, cleared in lactic acid and mounted in Marc-André II for observations with a Leitz DMLB microscope, using phase and DIC contrast. Photographs were taken with a Jenoptik ProgRes camera mounted on this microscope and on a Leica MZ12 stereomicroscope.

Terminology. The terminology used follows Deharveng (1983a) for antennae and chaetal types and Massoud (1967) for labial chaetae.

A second taxonomical problem is the close relationships between *F. emucronata* **sp. nov.** and species of the genera *Arlesiella* and *Kenyura*. The new species differs unambiguously of these two genera by the presence of a PAO, but it also shares with them original characters of mouthparts, antennae and ventral tube. The head of mandible is externally swollen in *F. emucronata* **sp. nov.**, *F. furculata* (Salmon, 1956) and *F. grandcolasorum* Weiner & Najt, 1998, but also in all species of *Arlesiella* and in African species of *Kenyura*. The presence of spines distally on labium, is only known so far in *Arlesiella* and *F. emucronata* **sp. nov.** However, this character may have been overlooked in species description of *Furculanurida* and *Kenyura*, which do not include details of the labial distal edge. Where known, the absence of ms on Ant. IV (Queiroz & Fernandes 2011) and the presence of only 3+3 chaetae on ventral tube are also shared between *Arlesiella* and African species of *Furculanurida*, although both characters remain unknown in the type species of the latter genus. A redescription of this type species is needed to redefine the genus *Furculanurida* and to check its relationships with *Arlesiella* and *Kenyura*. The single type specimen of *F. africana* (Massoud, 1963) preserved in the MNHN, is in a poor condition, with only mandibles clearly observable. Recent sampling in the Banco forest did not provide any *F. africana* so without fresh topotypic specimens, the assignment of the species *emucronata* **sp. nov.** to *Furculanurida* has to be considered provisional. The same holds for all species of the genus with the exception of the type species.

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