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A new species of *Deutonura* (Collembola: Neanuridae: Neanurinae) from north-eastern Algeria, and characterisation of two intraspecific lineages by their barcodes

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Abstract

A new species of *Deutonura*, *D. zana* **sp. nov.**, is described from north-eastern Algeria. It is morphologically similar in most characters to *D. deficiens meridionalis* and to *D. luberonensis,* both members of the *D. phlegraea* group*,* differing from the former by the absence of chaeta O on head, and from the later by the separation of tubercles Di and De on Th. I. The muscular insertion pattern of the new species is figured, and suggested as a potential new character for the taxonomy of Neanurinae. *Deutonura zana* **sp. nov.** is well characterised by its barcode sequence. Within the new species as morphologically defined, two groups of COI haplotypes, in individuals indistinguishable morphologically, are reported from two distinct mountain ranges. The need of a morphological assessment of demes diverging at significant infra-specific level in their barcodes is stressed.

Key words: *Deutonura zana* **sp. nov**., taxonomy, muscular insertion areas, pseudopores, infra-specific divergence, geographic differentiation

Introduction

The genus *Deutonura* Cassagnau, 1979 is most diversified in the northern Mediterranean region where 45 species are known, while a single species, *Deutonura betica* Deharveng, 1979, was cited from the southern Mediterranean region (in Morocco after Deharveng 1979). A second species, *Deutonura conjuncta* Stach, 1926 was recorded by Thibaud & Massoud (1980) from Morocco (misspelt as *D. conjoncta*), but it is probably an undescribed species of the genus, as *D. conjuncta* is limited to central Europe.

During recent investigations in the massifs of Collo and Edough, along the Mediterranean coast of northeastern Algeria, *Deutonura* was unexpectedly found to be the dominant genus of Neanurini together with *Protanura* (Hamra-Kroua & Deharveng 2010). The most abundant of its species, *Deutonura zana* **sp. nov.**, is described in this paper, and characterised molecularly by its COI sequence. A clear genetic difference was found between the populations of Collo and those of Edough, the two mountains of northeast Algeria where the species is present, which is not supported so far by morphology.

Material and methods

Terminology and abbreviations. The terminology used in the text and Table 2 are derived from that of Deharveng (1983, including the rationale for naming types of chaetae), Deharveng & Weiner (1984), Smolis & Deharveng (2006) and Smolis (2008).

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be commonplace among Collembola, would be useful to understand more fully their evolutionary and taxonomic status. The present study on *Deutonura zana* **sp. nov.** is but a first step in this direction.

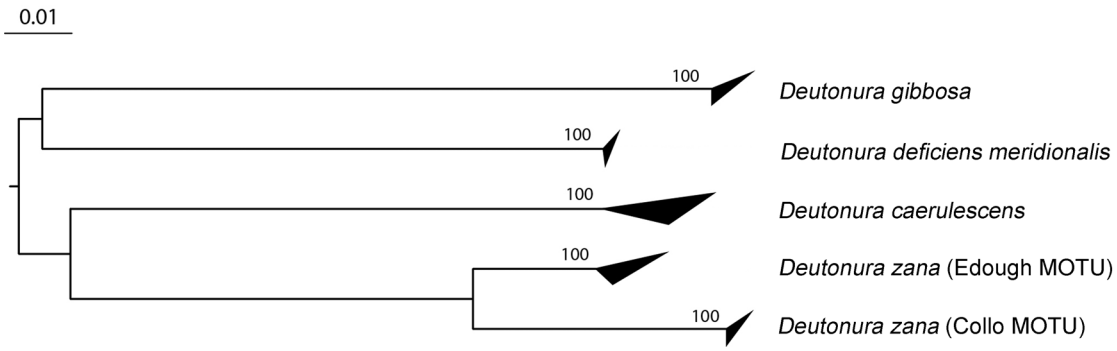

FIGURE 10. NJ tree of MOTUs. See material and methods for details of tree reconstruction.

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