Commentary

Title: ***Talpa aquitania* sp. nov. (Talpidae, Soricomorpha), a new mole species from SW France and N Spain**

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Introduction

We recently published the diagnosis and the name of a new mammal species: *Talpa aquitania* Nicolas, Martínez-Vargas *et* Hugot 2015. Unfortunately, it happened that the editors of the *Bulletin de l'Académie Vétérinaire de France*, the selected journal, decided to stop the paper edition for their publication. An attentive examination of the corresponding articles of the *International Code on Zoological Nomenclature* (Art. 8) shows that, to be valid, a new name must be published on a paper support or electronically after being pre-registered in the Official Register of Zoological Nomenclature (ZooBank) before publication. Thus, in this situation we have a risk that our work will not be considered published, and therefore our new taxon considered not available. This is the reason why we publish the present article in a periodical printed on paper, distributed simultaneously to all subscribers and accessible online after its paper distribution, which makes our new name available under the traditional rules of zoological nomenclature. In the following we are giving the essentials of the diagnosis of the new taxon. For the details of the molecular phylogenetic, morphological and biogeographical information, we refer to our previous original works (Nicolas et al. 2015, 2017).

Talpa aquitania

Holotype

MNHN-ZM-2016-471 (VN1789). Collected in 2013. France-86280, Saint-Benoît, 46.546°N-0.348°W. Adult female: whole body preserved in ethanol.

Paratypes

Tissues preserved in ethanol and RnaLater; skulls extracted (national collection number, field number, date of collect, locality and district of collection, geographic

coordinates, name of collector, age and sex). *MNHN-ZM-2016-472* (YA0346). 06/10/2013, France-63320, Creste, Issoire, 45.550°N-3.043°W, Bernard Pradier, adult female. *MNHN-ZM-2016-473* (YA0386). 13/04/2014, France-63190, Lezoux, alt. 833 m, 45.828°N-3.380°W, J-Michel Georgeon, adult female.

Diagnosis and distribution

Talpa aquitania can unambiguously be distinguished from its sister-related species, *Talpa europaea* Linnaeus 1758 and *Talpa occidentalis* Cabrera 1907, by a unique combination of characters:

The eyelids are fused together. As observed in *Talpa occidentalis*, the eye is completely covered by membranes. This characteristic differs from what is observed in *Talpa europaea*, which has open eyes.

Weight, head, body and hind-foot lengths are significantly greater in *Talpa aquitania* (weight: 89 ± 17 g, head and body: 149 ± 7 mm, foot: 21.5 ± 1.5 mm) than in *Talpa europaea* and *Talpa occidentalis* (Nicolas et al. 2015).

The mesostyle of the upper first molar (M1) is simple in *Talpa aquitania* and *Talpa europaea*, while it is double in *Talpa occidentalis*. In *T. occidentalis* and *T. europaea*, the mesostyles of the upper second molar (M2) and the upper third molar (M3) are divided into two cusps. The two cusps are of subequal size, and they are aligned on a plane that extends parallel to the parastyle and the metastyle. Some *T. aquitania* specimens have a simple mesostyle in M2, and other specimens show an additional minute cusp. Unlike in *T. europaea* and *T. occidentalis*, this cusp is much smaller than the main cusp of the mesostyle and is located in the crest that connects the mesostyle to the metacone of M2 that is in a more lingual position than the mesostyle itself. In the M3 of some *T. aquitania* specimens, the mesostyle is composed of a main anterior cusp and a slightly smaller posterior cusp (see figure 4 in Nicolas et al. 2015, figure 6 in Nicolas et al. 2017). In other specimens, this posterior cusp is not clearly discernible because its posterior border is fused to the crest that runs from the mesostyle to the metacone of M3. Despite interindividual variability, the mesostyle condition of M2

and M3 of *T. aquitania* specimens differs from that found in *T. europaea* and *T. occidentalis*.

Base composition of 16 positions of the cytochrome b gene differ between *Talpa aquitania* and the two other species (based on 216 specimens of *Talpa europaea*, 118 specimens of *T. aquitania* and 26 specimens of *Talpa occidentalis*; Nicolas et al. 2017). Base composition at positions 87, 171, 176, 282, 309, 328, 351, 369, 465, 492, 745, 813, 828, 981, 1047 and 1074 is C, G, C, G, T, T, A, A, T, C, T, G, C, A, T, T in *T. aquitania*, and it is A, A, T, A, C, A, G, G, C, T, C, A, T, T, C, C in both *T. europaea* and *T. occidentalis*.

Talpa aquitania is present in France southward and westward of the Loire River, and in Northern Spain.

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References

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