

TAXONOMIC STATUS AND ORIGIN OF THE SHREWS (SORICIDAE) FROM THE CANARY ISLANDS INFERRED FROM A MTDNA COMPARISON WITH THE EUROPEAN CROCIDURA SPECIES

Vogel, P.^a, Cosson, J.F.^{bcd}, López Jurado, L.F.^e

a Institute of Ecology, University of Lausanne, 1015 Lausanne, Switzerland

b Lab. Genome, Pop./Interactions, Université de Montpellier II, CNRS UMR 5000, Eugène Bataillon C.C. 63, France

c Lab. de Biol. des Pop. d'Altitude, CNRS UMR 5553, Université Joseph Fourier, BP 53, F-38041 Grenoble Cedex 9, France

d Ctr. de Biol. et Gestion des Pop., INRA UMR 1062, Campus International de Baillarguet, 34988 Montferrier/Lez Cedex, France

e Department of Biology, Univ. of Las Palmas de Gran Canaria, 35017 Las Palmas, Canary Islands, France

ABSTRACT

European island shrews are either relicts of the endemic Pleistocene fauna, e.g., *Crocidura zimmermanni*, or were introduced from continental source populations. In order to clarify the taxonomic status and the origin of the two shrew species from the Canary Islands, a 981 bp fragment of cytochrome b gene was investigated in all European *Crocidura* species and compared with the Canary shrew (*Crocidura canariensis*) and the Osorio shrew (*Crocidura osorio*). The first shares its karyotype with the Sicilian shrew *Crocidura sicula* ($2N = 36$), the second with the Greater white-toothed shrew *Crocidura russula* ($2N = 42$), suggesting possible sister species relationships. Results confirm the monophyly of taxa sharing the same karyotype. Genetic distances between *C. sicula* and *C. canariensis* suggest a separation since 5 Myr. The first was probably isolated from the North African ancestor after the Messinian desiccation; the second arrived on the Canary Islands by natural jump dispersal. Within the $2N = 42$ cluster, a first split separated an Eastern line (Tunisia) from a western line (Morocco/Europe) of *C. russula*. *C. osorio* clusters together with *C. russula* from Spain, indicating conspecificity. This suggests a recent introduction from Spain by human.