LabEx BCDiv: Biological and Cultural diversities

Open Post-doctoral position at the National Museum of Natural History UMR7205, Paris, France,

Integrative approach of the 6th extinction in Morocco: systematic and evolution of modern and fossil rodent biodiversity thanks to classic and geometric morphometrics

Duration: 12 month
Salary: 46800 € around (tax included) / year

The question of the 6th extinction represents today a major problem at a global scale, and especially in coastal areas much vulnerable to strong human pressure. Since the emergence of the Neolithic culture associated with the increasing impact of humans on their environment, animals such as rodents have experienced extinctions, and numerous cases of invasions are encountered in this group. In order to better characterize the impact of climatic changes and anthropic pressure that induce the current loss of biodiversity, we need to study at a populational scale the past and present evolution of the species. The phylogeographic lineages have to be linked to the morphologic ones through an integrative approach. The Morroccan littoral sites are subjected to strong anthropic pressure and landscape modifications.They have yielded good palaeontological records through time (Upper Pleistocene – Holocene), in a good stratigraphic context, with numerous rodent remains. Based on the ANR-PEX04 MOHMIE project and the important modern and fossil material collected during recent field works, classic and geometric morphometrics analysis (teeth outlines, landmarks on skulls and mandibles) will be performed 1) on sequenced (mtDNA) and karyotyped specimens of *Mus, Apodemus, Gerbillus* (and perhaps *Meriones*), incorporating as much as possible holotypes and reference specimens in museum collections, and 2) on Upper Pleistocene and Holocene fossil specimens (caves of Témara, Morocco). Refinements of the methodology to follow the lineages and populations through time by combining morphometric data with genetic (DNA microsatellites) and (palaeo) environmental data will allow a better understanding of the history of the studied species and the impact of climate change and human pressure on them. A good experience in both Geometric morphometrics and North African small mammals represents a clear advantage.

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CV must be sent to Christiane DENYS before the 31 March 2013.