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Nouvelles espèces subfossiles de rongeurs du Nord-Ouest de Madagascar

New rodent subfossil species from the North-West of Madagascar

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RÉSUMÉ

Depuis le milieu du XIX[e] siècle, la macrofaune subfossile malgache a fait l'objet de nombreuses études et publications, contrairement à la microfaune. Depuis 2001, les prospections dans le Nord-Ouest de Madagascar (Province de Mahajanga) ont permis la découverte de nouveaux sites dont certains renferment des brèches fossilifères, riches en microfaune dont de nombreux restes de rongeurs. Deux nouvelles espèces subfossiles sont décrites dans cet article : *Brachytarsomys mahajambaensis* et *Nesomys narindaensis* sont respectivement le plus petit et le plus grand représentant de leurs genres. La très grande majorité des espèces actuelles de *Brachytarsomys* et de *Nesomys* vivent dans les forêts tropicales humides du Nord-Est et de l'Est de Madagascar, bien loin des forêts sèches déciduales du Nord-Ouest de l'île où ont été trouvés les spécimens sub-fossiles. La présence de ces deux nouvelles espèces dans le Nord-Ouest de Madagascar semble attester une humidité plus importante par le passé, dans cette région.

ABSTRACT

Since the mid-19th century, the Malagasy subfossil macrofauna has been the object of numerous studies and publications, contrary to the microfauna. New fieldwork, initiated in 2001, in the North West of Madagascar (Province of Mahajanga) led to the discovery of sites rich in fossiliferous breccias, containing micromammals. In this article, we describe two new subfossil species of rodent: *Brachytarsomys mahajambaensis*, the smallest within the genus and *Nesomys narindaensis*, the largest within the genus. Most of the extant species of these two genera live in the tropical rainforests of the eastern and north-eastern areas of Madagascar, far away from the north-western part of the island where a dry deciduous forest occurs. The presence of the two taxa in the subfossil record in the Northwest of the country suggests the occurrence of wetter conditions in the past in this region.

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Introduction

While the Malagasy subfossil and extant macrofauna is well studied, the micromammals (rodents, insectivores, bats) remain poorly known. In the last decade, numerous new extant species were discovered and the identification of the subfossils became more difficult (Garbutt, 2007, Goodman and Carleton, 1996). The last studies seem to indicate that the fossil microfauna was more diversified than previously thought. Only a few karstic sites, mainly from the southern and northwestern parts of Madagascar, yielded well identified subfossil microfauna (Burney et al., 1997; Goodman and Rakotondravony, 1996; Goodman et al., 2006; Sabatier and Legendre, 1985), contrasting with the old excavations where most of the subfossil micromammals have been found in surface sediments giving a high probability of contamination with modern material. During fieldwork initiated in 2001 in the North-West of Madagascar by the members of the ATIP Project (CNRS) *projet archéolémurs de Narinda* and of the m*ission archéologique et paléontologique dans la Province de Mahajanga* (Madagascar) (MAEE) new karstic sites endowed with subfossil micro- and macrofauna have been identified (Gommery et al., 2003). One of the main trends of the project concerns the rodents, especially the endemic sub-family Nesomyinae. As for now, only one subfossil rodent is considered extinct: *Hypogeomys australis* (Goodman and Rakotondravony, 1996). *Macrotarsomys petteri*, which rarely occurs today in the South-West, had a different distribution in the past as indicated by its presence as a subfossil in the South-East of Madagascar (Goodman et al., 2006). These new discoveries suggest that Madagascar underwent environmental and climatic changes during the last millennia. The North-West of Madagascar, and especially the North of the Province of Mahajanga, is a transitional area between several phytoecologic zones (Albrecht et al., 1990; Godfrey et al., 1990). If these zones changed during the Pleistocene and the Holo-

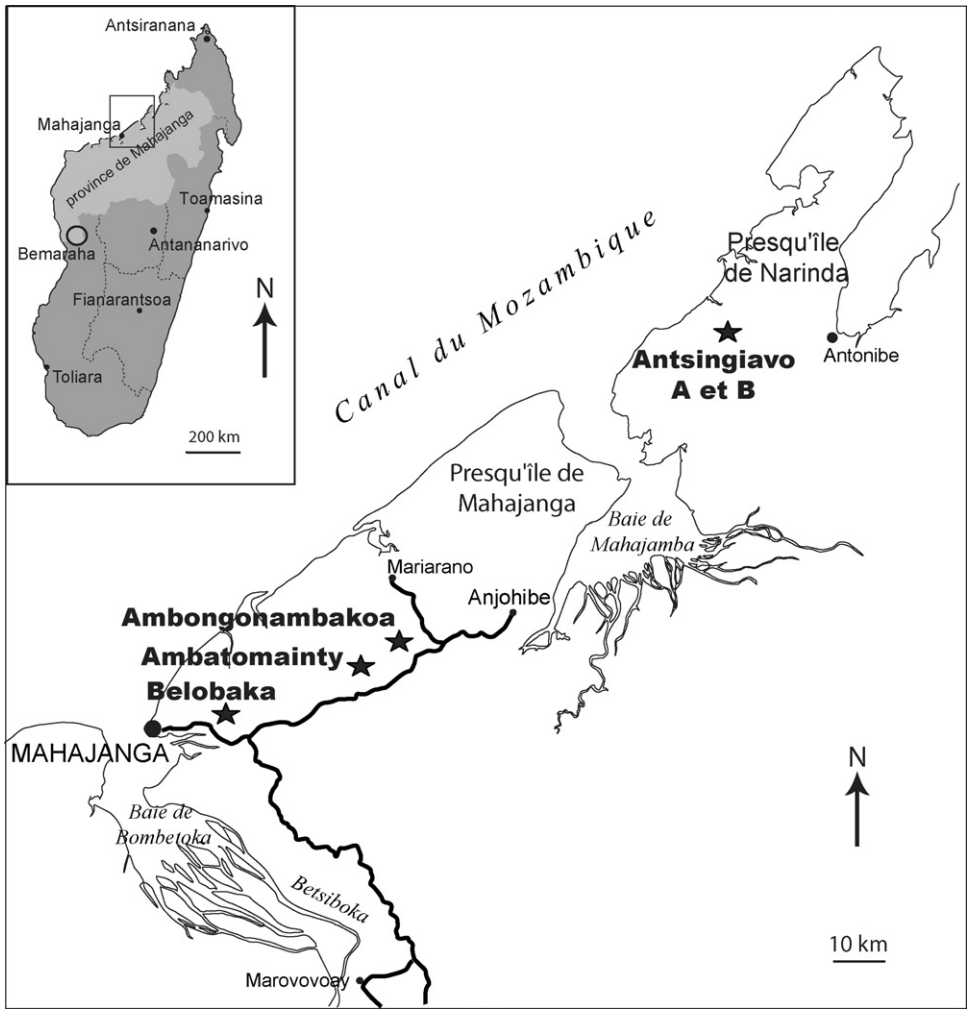

Fig. 1. Carte de localisation des sites fossilifères (indiqués par des étoiles).
Fig. 1. Map with the location of the fossiliferous sites (indicated by stars).