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On the taxonomic status of the harvest mouse *Micromys minutus* (Rodentia: Muridae) from Vietnam

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Abstract

The taxonomic status of the harvest mouse *Micromys minutus* from Vietnam is re-evaluated. The mtDNA analysis shows that the harvest mice from Lao Cai Province of northern Vietnam belongs to a distinct phylogenetic lineage, previously known only from a haplotype from Chengdu, Sichuan Province, southern China (Yasuda *et al*. 2005). The mtDNA analysis shows a strong genetic divergence among this lineage and all the other known haplotypes of *Micromys minutus* (11.68% for cytochrome *b* gene sequences). Canonical discriminant analysis of cranial and dental data, as well as of some external characters, also separate the Vietnam – South China group (also including an Indian specimen) from other Palaearctic populations. The skull of southern populations is relatively large, with a longer and broader palatine. The dorsal pelage of the Vietnamese specimens is grey, tinged with brown in comparison with the red-brown dorsal colouration sharply contrasting with the white underside in the majority of Euro-Siberian adults. The harvest mice of the Vietnam – South China group are distinguished from the typical European ones by their rather long tail that is about 120% of the body length (82 to 95% in the Palaearctic populations). Both genetic and morphological data suggest the existence of a second *Micromys* species, occurring at least in North Vietnam and South China. The available name for this species is *Micromys erythrotis* (Blyth, 1856).

Key words: mitochondrial DNA, cytochrome *b*, control region, skull, morphology, phylogeography, *Micromys erythrotis*

Introduction

The harvest mouse *Micromys minutus* (Pallas, 1771) is the smallest rodent of the subfamily Murinae and is widely distributed in the Old World. The species' range covers the temperate forest zone of Europe and North Asia, from the British Isles and the North of the Iberian Peninsula in the West, to the Japanese Islands and Taiwan in the East, and from Scandinavia and the North Urals in the North, to the North Caucasus and North Mongolia in the South (Musser & Carleton 2005). There are also isolated populations in North-West China and throughout South and North-eastern China (see Zhang *et al*. 1997), South to northern Vietnam, North Myanmar, and North-East India. The collection data from the last three localities are very scarce. The currently known southernmost records of the species originate from Lao Cai Province (Sapa and Ngai Tio) in North Vietnam (Osgood 1932; Dang Huy Huynh *et al*. 1994; 2008; present data).

As yet, the taxonomic status of this species remains unclear. Many taxonomic forms have been described across the species range (see Musser & Carleton 2005). The colour of the pelage plays the main role in taxonomic groupings of the harvest mouse (see Miller 1912; Ellerman & Morrison-Scott 1951). Nevertheless, there is known to be moderate geographic variation of the craniological and external sizes in Palaearctic

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