

Distribution and habitats of *Melanoides tuberculata* (Müller, 1774) and *M. victoriae* (Dohrn, 1865) (Mollusca: Prosobranchia: Thiaridae) in South Africa

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Abstract

An account is given of the geographical distribution and habitats of *Melanoides tuberculata* (Müller, 1774) and *M. victoriae* (Dohrn, 1865) as reflected by the samples on record in the database of the National Freshwater Snail Collection (NFSC) of South Africa. About 30 species of *Melanoides* occur in Africa of which only *M. tuberculata* is widespread. *Melanoides tuberculata* is also indigenous to India and the south-east Asian mainland to northern Australia and was widespread in the present-day Sahara during the late Pleistocene-Holocene, but *M. victoriae* seems to be restricted to Southern Africa. Details of the habitats on record for each species, as well as mean altitude and mean annual air temperature and rainfall for each locality, were processed to determine chi-square and effect-size values. An integrated decision-tree analysis indicated that temperature, altitude and type of substratum were the most important factors of those investigated that played a significant role in establishing the geographical distribution of these species in South Africa. In view of the fact that *M. tuberculata* can serve as intermediate host for a number of trematode species elsewhere in the world, it is recommended that the ability of the 2 local *Melanoides* species to act as intermediate hosts should be investigated. Due to the fact that the majority of sites from which these species were recovered were not since revisited, it is recommended that efforts should be made to update their geographical distribution and the results compared with the data in the database. The conservation status of these 2 species and the possible influence of global warming and climatic changes on their geographical distribution are briefly discussed.

Keywords: *Melanoides tuberculata*, *Melanoides victoriae*, geographical distribution, habitat preferences, biological control, Trematoda, freshwater Mollusca, South Africa