

Growth models and shell morphometrics of two populations of *Melanoides tuberculata* (Thiaridae) living in hot springs and freshwater pools

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ABSTRACT

*Two morphologically different populations of snail, *Melanoides tuberculata* (Muller, 1774), were observed at Azraq Oasis, Jordan. Snails at the hot spring, where water temperature is higher than ambient, looked larger than those at the pools. The purpose of this study is to find out if there are differences in morphometrics, age, and growth due to the variation in water temperature and to quantify these differences. Snails were randomly collected from both sites, measured and statistically and mathematically analyzed for age, growth, and shell morphometric. Results indicate that snails from hot spring and pools may survive for five and four years, respectively. Theoretically, snails from the hot springs may reach 56.0 and snails from the pools may reach 28.0 mm in length. However, observed lengths reached 30.0 and 19.6 mm, respectively. The relationships of the shell length to shell and dry weights are curvilinear. However, the relationships of the shell length to shell width, aperture length, and aperture width are linear. There is an indication of an effect due to temperature difference on the age, growth and the morphometrics of the two populations of *M. tuberculata*.*

*Key words: *Melanoides tuberculata*, Thiaridae, shell morphometrics, growth models, nonlinear models*
