

Evolutionary organ pipes in full blast: Do snails dance to the Hutchinson tune?

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One of the most compelling topics in biology is the origin of biodiversity and species diversification. In this context George Evelyn Hutchinson (1959) proposed that species sharing the same habitat and niche differ in body size averaging at a ratio of 1.3, suggesting that competition is minimized by differences in body size, as it has been approved for many different taxa. Unfortunately, the Hutchinson rule has never been tested extensively and has been treated as evolutionary biology's orphan, though it might hold crucial information about speciation. Especially closely related taxa in adaptive radiations are most suitable models that promise deeper insight into evolutionary processes. Prominently known, is for example African's Lake Tanganyika, mostly for its cichlid radiation. In addition, it also harbors an even larger species flock of paludomid gastropods. These lacustrine and "thalassoid" (i.e. marine-like) paludomids exhibit, next to most distinct radula morphologies potentially indicating trophic specialization, a striking array of shell sizes. Based on the biometry of 50 named species of these thalassoid paludomids we tested the Hutchinson 1.3 rule for size-related parameters and discuss here our findings in context of species diversification and the question of a truly "adaptive" radiation.