Dispersion factors in the arboreal snail Sitala jenynsi (Gastropoda: Ariophantidae)

Author(s)
Peter F. Kasigwa

Abstract
Sitala jenynsi snails from the University and Wazo populations of Dar es Salaam, Tanzania, were released on grass, and on forest terrain, in both regions during the dry (February, March) and the rainy seasons (April). Snail dispersion was assessed as weekly quadratic means and as the overall Diffusion Coefficient 0.423 m2/week. The coefficient was enhanced by grassy habitats, continuous vegetation cover, absence of edible plants and rainy weather; conversely, dispersion was retarded by shrubs, vegetation discontinuities, presence of edible plants and dry weather. There were differences in the rate of dispersion between populations, snails from the University Campus being faster. In each release a broadly unidirectional dispersion was recorded. The populations in question, seasons and the direction of origin of the snails seemed immaterial to directionality of dispersion. The dispersion rates of Sitala jenynsi exceeded those of the helicids Cepaea nemoralis and Theba pisana and of the partulid Partula taeniata. While observed dispersion rates of S. jenynsi may warrant the mixing of individuals in a population, they seem insufficient to facilitate appreciable migration of snails between neighboring populations.