

## Cercarial Diversity in Freshwater Snails from Selected Freshwater Bodies and Its Implication for Veterinary and Public Health in Kaduna State, Nigeria

**Authors :** Fatima Muhammad Abdulkadir, D. B. Maikaje, Y. A. Umar

**Abstract :** A study conducted to determine cercariae diversity and prevalence of trematode infection in freshwater snails from six freshwater bodies selected by systematic random sampling in Kaduna State was carried from January 2013 to December 2013. Freshwater snails and cercariae harvested from the study sites were morphologically identified. A total of 23,823 freshwater snails were collected from the six freshwater bodies: Bagoma dam, Gimbawa dam, Kangimi dam, Kubacha dam, Manchok water intake and Saminaka water intake. The observed freshwater snail species were: *Melanoides tuberculata*, *Biomphalaria pfeifferi*, *Bulinus globosus*, *Lymnaea natalensis*, *Physa* sp., *Cleopatra bulimoides*, *Bellamya unicolor* and *Lanistes varicus*. The freshwater snails were exposed to artificial bright light from a 100 Watt electric bulb in the laboratory to induce cercarial shedding. Of the total freshwater snails collected, 10.55% released one or more types of cercariae. Seven morphological types of cercariae were shed by six freshwater snail species namely: Brevifurcate-apharyngeate distome, Amphistome, Gymnocephalus, Longifurcate-pharyngeate monostome, Longifurcate-pharyngeate distome, Echinostome and Xiphidio cercariae. Infection was monotype in most of the freshwater snails collected; however, *Physa* species presented a mixed infection with *Gymnocephalus* and Longifurcate-pharyngeate distome cercariae. *B. globosus* and *B. pfeifferi* were the most preferred intermediate hosts with the prevalence of 13.48% and 13.46%, respectively. The diversity and prevalence of cercariae varied among the six freshwater bodies with Manchok water intake having the highest infestation (14.3%) and the least recorded in Kangimi dam (3.9%). There was a correlation trend between the number of freshwater snails and trematode infection with Manchok exhibiting the highest and Bagoma none. The highest cercarial diversity was observed in *B. pfeifferi* and *B. globosus* with four morphotypes each, and the lowest was in *M. tuberculata* with one morphotype. The general distribution of freshwater snails and the trematode cercariae they shed suggests the risk of human and animals to trematodiasis in Manchok community. Public health education to raise awareness on individual and communal action that may control snail breeding sites, prevent transmission and provide access to treatment should be intensified.

**Keywords :** Cercariae, diversity, freshwater snails, prevalence, trematodiasis

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