



Research Highlight

SNAILS: IMPORTANT INTERMEDIATE HOSTS OF BLOOD-DWELLING TREMATODE PARASITES

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Snails which belong to the genus *Biomphalaria*, *Bulinus* and *Lymnaea* act as an intermediate host for blood dwelling trematode parasites and has a deleterious impact on human health and animals all over the world especially in many tropical and sub-tropical countries.

Snail-borne parasitic diseases (SBPDs) are a potential threat for public health worldwide¹. Millions of people in approximately 90 countries have suffered from SBPDs, in which snails serve as the transmitting vectors and intermediate hosts. Fascioliasis is a disease caused by the liver trematode, *F. hepatica*. This disease reduced the production in agriculture causing global losses which are in the billions, approximately, with an estimated 17 million infected and 180 million at risk of infection in endemic areas. Schisto-somiasis possesses global occurrence of 207 million people typically from Sub-Saharan Africa², where the disease pressure is maximum.

Some of the snails including *Biomphalaria pfeifferi* and *Bulinus globosus* are reported to transmit *Schistosoma* parasites to man which cause human Schistosomiasis³ whereas,

Lymnaea natalensis transmits *Fasciola* parasites to animals as well as man, leading to fascioliasis⁴.

In Nigeria, these three snails have huge medical importance found in Nigeria⁵. However, in spite of the fact that these snails are extensively distributed in Nigeria, their morpho-logical variations are still poorly understood that make their precise identification difficult. This situation ultimately hinders control efforts to restrict disease transmission through vector control. Shell morphometric is useful tool in this regard and first step in identification in mollusca taxonomy as well as ecological studies⁶.

Considering these facts, scientists⁷ carried out a new study to identify three snail vectors from five water bodies in South-Western Nigeria by using 7 morphological parameters of snail shells. For this purpose, snails were sampled for 14 months and consequently, 718 snails were collected including 204 *B. pfeifferi*, 316 *B. globosus* as well as 198 *L. natalensis*⁷.

During this research, Eleyele Lake was found to have maximum number of snails i.e., 278 followed by Osun River with 64 snails.

Key words:

Freshwater snails trematode parasites

fascioliasis public health

snail identification medical importance

shell morphometric

morphological variations

These results showed that *B. globosus* is the dominant species of snail in all the five sites, while *B. pfeifferi* and *L. natalensis* were present in only three sites. The existence of these snails in uninfected water bodies can be helpful to control transmission and disease management programs in these areas.

Conclusively, this study is useful for enhanced snail identification and information which will be precious for vector control in affected communities.

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