

Molluscicidal Effect of *Cassia occidentalis* and *Physalis angulata* Leaf Extract in the Elimination of Water Snail

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Abstract : The study describe the action of natural latex (extract) of two sub-aquatic macrophytes plants i.e., *Cassia occidentalis* and *Physalis angulata* which were tested against two water snail species; *Bulinus globus* and *Lymnaea natalensis*, the intermediate host of Bilharziasis (chistosomiasis) in the tropical countries. Bilharziasis is a disease prevalent and endemic to tropical Africa, seriously undermining health status of Nigerian youth. The easiest way to eradicate the disease is to eliminate the secondary host of the pathogen, chistosoma species. Therefore we carried out a research to investigate the molluscicidal effect of the leaf extract of *C. occidentalis* and *P. angulata* on mortality rate of *B. globus* and *L. natalensis* water snails using pond water in the laboratory of science laboratory department of Kano State Polytechnic, Nigeria. One hundred and fifty juveniles' snails were collected from Jakara Dam in the Northeastern part of Kano, Nigeria. The snails were put inside a plastic container and transported immediately to the laboratory where they were transferred into reservoir tank containing pond water and kept for 48 hours to get acclimatized with laboratory environment. Twelve water bathes 2/3 filled with pond water were prepared and kept in the laboratory. Leaf extract of the plants were obtained by blending and homogenizing the leaf tissue from which the extract were obtained and prepared in 10, 20, 30, 40 and 50 ppm, in addition to 0 ppm, which served as control. Ten snails were placed in each of the twelve water bathes. Six water bathes for the species of *C. occidentalis* extract and other six for *P. angulata*. The treatment combinations were maintained for 2 days after which the number of living snails present in each water bathes were counted and subsequently at 2 days intervals. The result indicated that extracts from both plants were lethal to the snails as concentration of the extract increases particularly mortality rate was highest at 40 and 50 ppm. Conclusively the toxicity of the extracts from these plants proven lethal to snails and hence can be used as molluscicides for cheap and easy method of eliminating water snails and therefore reducing the incidence of Bilharziasis.

Keywords : schistosomiasis, bilharziasis, *Bulinus globus*, *Lymnaea natalensis*, *Physalis angulata*, *Cassia occidentalis*, Kano

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