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Microbial load of fresh water snail (*Pila ovata*) from Nembe creek, Niger delta, Nigeria

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Microbiological assessment of one of the most common aquatic mollusc in the Niger Delta, *Pila ovata* was carried out. Fresh samples were collected from three locations from March to May. The samples were analyzed using microbiological techniques. The total viable count varied between 9.2×10^7 cfu/g and 9.5×10^7 cfu/g. The mean heterotrophic count for bacterial varied between 1.1×10^6 cfu/g to 6.3×10^7 cfu/g and mean heterotrophic fungi count varied between 2.7×10^5 cfu/g to 3.9×10^6 cfu/g. However, no significant differences ($P > 0.05$) was observed in the microbial counts between samples from the different locations. A total of 50 isolates characterized as *Proteus*, *Escherichia coli*, *Klebsiella*, *Streptococcus*, *Pseudomonas*, *Micrococcus*, *Staphylococcus*, *Serratia*, *Vibrio*, *Salmonella*, *Nisseria*, *Actinobacter*, *Citrobacter*, *Yersinia*, *Mycobacterium*, *Enterobacter*, *Providencia*, *Bacillus*, *Shigella*, *Aspergillus*, *Botrytis*, *Cladosporium*, *Cryptomonas*, *Curvularia*, *Fusarium*, *Geotrichum*, *Helminthosporium*, *Mucor*, *Neurospora*, *Penicillium*, *Rhodotorula*, *Trichodema* and *Yeast*, were isolated from the freshwater snails. *Proteus*, *E. coli*, *Klebsiella*, and *Streptococcus* 9(4.9%) were the most predominant bacteria species followed by *Pseudomonas*, *Micrococcus*, *Staphylococcus* and *Serratia* 8 (4.3%), *Vibrio* 7(3.8%), *Salmonella* 6 (3.2%), *Nisseria* 4 (2.1%), *Actinobacter*, *Citrobacter* and *Yersinia* 3 (1.61%), *Mycobacterium*, *Enterobacter* and *Providencia* 2 (1.1%), *Bacillus* and *Shigella* 1 (0.54%). *Aspergillus* 28 (15.0%) was the most predominant fungi species, followed by *Penicillium* 16 (8.6%), *Mucor* 8 (4.3%), *Cryptomonas*, *Rhodotorula* and *Trichodema* 5 (2.7%), *Cladosporium* 4 (2.2%), *Botrytis* and *Yeast* 3 (1.6%), *Curvularia*, *Helminthosporium* and *Neurospora* 1 (0.6%). The study revealed that freshwater snails (*Pila ovata*) samples from Nembe Creek, Niger Delta of Nigeria are heavily contaminated with diverse microorganisms and exceeded the acceptable standard limit for food recommended by FAO/WHO, making them unfit for human consumption. The higher concentration of these micro organisms on the River bank is suspected to be due to lots of activities carried out including disposal of faecal matters and untreated sewage. Consequently, *Pila ovata* from Nembe Creek, Niger delta are unfit for human consumption.

Biography

Akise O G is working in the Department of Fisheries and Aquaculture, Faculty of Agriculture and Life Science in Federal University Wukari, Nigeria.

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