Determinants of the parasite community of clariid fishes from Lake Victoria, Tanzania

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Abstract

The factors that determine parasite assemblages among the clariid fishes of Lake Victoria, Tanzania were studied between August 2003 and February 2005. Six hundred and fifty-six fish belonging to seven species were necropsied and examined for parasites, from which 31 species of metazoan parasites were recorded. The community was dominated by the nematodes both in species and numbers. Most species were generalists with only two trematodes, *Diplostomum mashonense* and *Tylodelphys* species, being specialists of *Clarias gariepinus*. Ten species were considered core and predictable. Parasite species richness, number of individuals per host and Shannon–Wiener diversity indices were generally high. At the compound community level, a mean number of 7.8 parasites were shared among different species of fish and the maximum number of parasites species per fish at the infracommunity level was seven. Levels of similarity in parasite species richness at the component community level ranged from 29.6 to 61.5%. The study concludes that parasite communities in clariid fishes of Lake Victoria are structured by ecological factors. At the infracommunity level, host size, diet and vagility promoted a richer parasite community. At the compound level, two factors were crucial, namely the intermixing of the waters in the lake and the predominant and mobile C. *gariepinus*.