

Environmental influence on infestation of the parasitic copepods, *Ergasilus latus* Fryer, 1960, in *Sarotherodon melanotheron* (Actinopterygii: Cichlidae), from coastal lagoons in Ghana

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The Ergasilidae is a large family of parasitic copepods belonging to the order Poecilostomatoida. Oldewage and van As (1988) presented list of 14 *Ergasilus* species parasitic on freshwater and estuarine fish of the African continent. *Ergasilus latus* is known from different species of fish mainly from the genus *Tilapia* distributed in central Africa.

The aim of the presently reported study was to to determine the infection rate of this parasite on *Sarotherodon melanotheron*, in six isolated lagoons along the coast of Ghana (Gulf of Guinea) and discuss a possible relation between the parasite presence and abundance with the environmental parameters of the individual lagoons.Fish samples were obtained from coastal lagoons of Ghana. Copepods parasites were carefully removed and preserved in 70% ethanol. Subsequent microscopic studies of the parasite were made in a drop of lactic acid. The body parts and appendages of the parasites were dissected and examined with a compound microscope with a series of magnifications up to 1500×.

The study area covered six coastal lagoons: Oyibi, Fosu, Apabaka, Kpeshie, Sakumo, and Keta. Three of the lagoons, Fosu, Kpeshie, and Sakumo are located close to urbanized settlements and receive both municipal and domestic sewage. Their Biochemical Oxygen Demand (BOD) levels are relatively higher as well as the nutrient levels. The three lagoons, heavily affected by the sewage, represented the highest levels of the infection parameters. Out of 323 examined fish 146 were infected by *Ergasilus latus*.

Ergasilus latus infection levels were also affected by the sex of the host fish: out of 88 females 47 were infected and out of 225 examined males, 99 were carriers of copepods. The smaller fish demonstrated the highest mean infection intensity amounting to 3.0 individuals, while the same parameter was slightly lower in bigger fish (2.4 individuals).