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ABSTRACT APPLICATION FORM

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Preliminary data on the parasitofauna of wild and cultured fish from Kenya and Uganda

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Aquaculture activities can provide sources of supplementary high protein food and additional income to rural communities in developing countries. The BOMOSA Project (*Integrating BOMOSA cage fish farming systems in reservoirs, ponds and temporary water bodies in Eastern Africa*) intends to establish small scale fish farming in marginal water bodies in Kenya, Uganda and Ethiopia, creating rural aquaculture networks in order to economically integrate aquaculture with agriculture. As diseases can affect the economic development of this sector, monitoring, prophylaxis and control of fish pathology are among the most important actions in the productive system. In order to undertake the monitoring activities on the sanitary status of fish to be cultured in BOMOSA systems, a parasitological survey has been carried out during the first months of 2007. A total of 116 tilapias (*Oreochromis niloticus niloticus*) (67 farmed and 49 wild specimens) and 15 sharptooth catfish (*Clarias gariepinus*) were sampled in Uganda and Kenya from three water bodies selected as farming sites and two earth pond-based farms producing fry for restocking. Protozoan parasites were identified directly in fresh mounts, while helminths were fixed in ethanol 70° for further studies both by light microscope and SEM.

Parasites were detected in 85.3% of tilapias (87.7% of wild and 83.6% of farmed individuals) and 93.3% of sharptooth catfish. Concerning wild tilapias, the following parasites were observed: dactylogyrid monogeneans (59.2%), diplostomatid metacercariae (36.7%), clinostomatid metacercariae (18.4%), black spots (4.1%) of not identified metacercariae from liver (8.2%) and intestine (12.2%), dilepidid larval cestodes (6.1%) and larval nematodes (4.1%). In the cage-farmed tilapias, diplostomatid metacercariae (87.5%), black spots (12.5%) of not identified metacercariae from kidney (12.5%) and Acanthocephalans owing to *Acanthosentis* genus (37.5%) were found. The earth pond farmed tilapias showed the presence of protozoans (*Trichodina* sp.-28.8%, *Trichodinella* sp.-20.3%, Sessiline Peritrichs-20.3%), myxozoans (*Myxobolus* sp.-8.5%), dactylogyrid monogeneans (6.7%), diplostomatid metacercariae (40.7%), clinostomatid metacercariae (13.5%) and Acanthocephalans owing to *Acanthosentis* genus (5.1%). The sharptooth catfish, all farmed, resulted positive for *Trichodinella* sp. (6.7%), coccidian (46.7%), dactylogyrid (87.7%) and gyrodactylid (6.7%) monogeneans. Intensity of infection and abundance have been calculated for all the parasites found in relation to fish species and sampling sites. In parallel abiotic and biotic aspects have been monitored to assess the risk factors influencing the presence/distribution of these parasites and evaluate their role as potential threat to production and public health.

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