ABSTRACT

Land use changes on riparian zones of streams have profound impacts on water quality and fish diversity. Sampling took place in 17 streams and in two dams along the streams in central Kenya and Nairobi which join up to form the three major rivers Tana, Athi and Ewaso ngiro. The physico-chemical parameters which contribute to the quality of water studied were temperature, dissolved oxygen, turbidity, flow rate, depth and width, conductivity and nutrients (Phosphates and Nitrates). Land use patterns included National park, ranches, built-up areas, flower farms, vegetable gardening areas and natural vegetation. Temperatures ranged from 13.4 °C to 22.4 °C and dissolved oxygen concentration ranged between 4.47 mg/l to 1.76 mg/l. Turbidity varied according to soil types and activities in the areas surrounding the streams. Kinania stream on Athi river had the highest conductivity of 71 µs and high nutrient concentrations, being in a vegetable gardening area. Most other streams had low nutrient concentrations. Fish species obtained were Poecilia reticulata, Garra dembeensis, Chiloglanis brevibarbis, Barbussp., Clarias gariepinus Amphilius uranoscopus, Labeocylindricus, Oreochromissp., Neobola fluviatilis and Mormyrus sp. The genus Barbushad more diversity than any other fish. Clarias gariepinus was the biggest fish and was found in lower parts of Athi river and in more turbid steam waters. Most of the fishes were small in total length (TL).The head water streams were dominated with species like Garra, Amphilius, and Neobolasp. At Hippo point dam on Ewaso ngiro, Labeo cylindricuswas the largest fish obtained while at Karen on Athi river, Micropterus salmoides was the largest fish. The head water stream fishes were indicators of high water quality