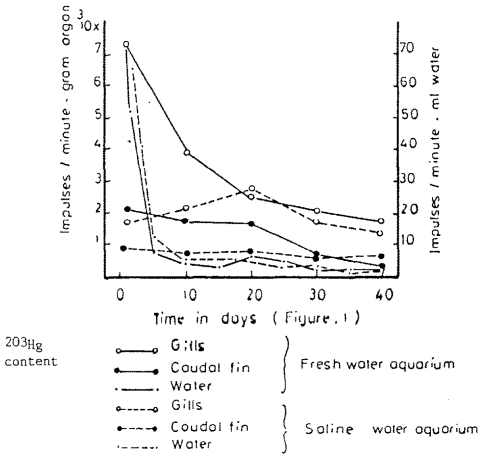
Effect of Environmental Water Salinity on Toxicity and Bioaccumulation of Mercury in *Tilapia zillii* Gerv.

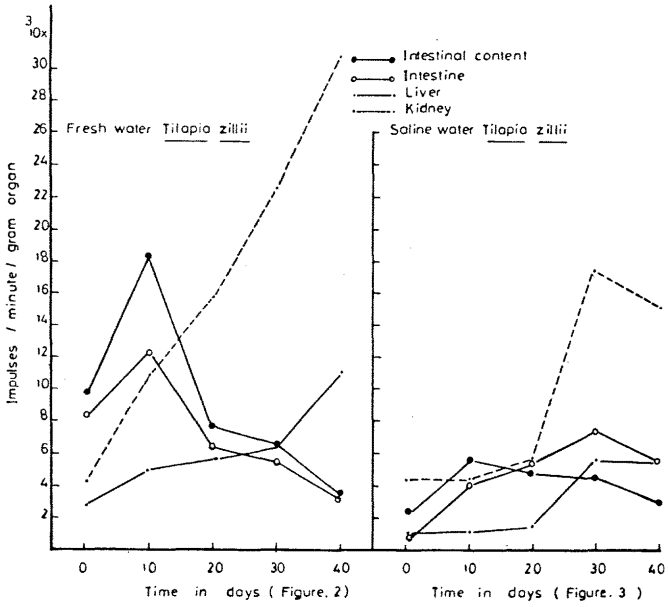
Hamed Hamed SALEH

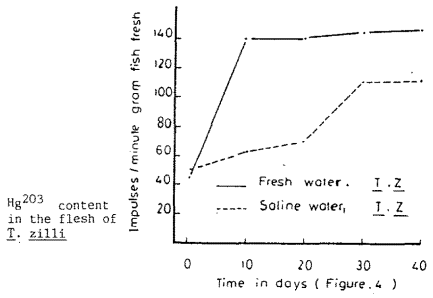
National Institute of Oceanography and Fisheries, Alexandria (Egypt)

Laboratory experiments using the euryhaline fish Tilapia zillii Gerv living in fresh and saline water (30‰) aquaria, polluted with high and low concentrations of mercury (as $Hg^{203}Cl_2$), showed that the toxicity of mercury is mainly due to its bioaccumulation on the gills, whether on the short or long term and this bioaccumulation of mercury on the gills is higher for the fish living in saline water



than that in fresh water as shown in figure 1 (Hg^{203} was measured by Gigar counter and calculated as impulses/minute). However, the mortality of the fishes living in fresh water polluted with mercury was low, but its body contains more mercury than that living in saline water (Figures 2, 3 and 4). The danger of mercury is





probably due to its high adsorption and permeability into water organisms and so its quick disappearance form the water environment during few time which means that its concentration in the water is small and negligible while its content in the water organisms and sediments is considerably high (Figures 1,2,3 and 4) mainly when the aquatic environment is shallow and stagnant.