460D

Investigations on bioaccumulation of heavy metals in *Pseudarius jella* (Munro, 1951) (Cypriniformes, Trachysuridae), small-eyed cat-fish in Koggala lagoon

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Pseudarius jella is a common food fish in Koggala lagoon. It feeds on zoobenthos, other benthic invertebrates and fish. Fish (n=38) were obtained from Koggala lagoon and their muscle, liver and gonad samples were analysed three times for cadmium, copper, lead and zinc (AAS Varian 220).

Zinc showed the highest accumulation in the three types of fish tissue and cadmium was the lowest. Metal concentration in liver of fish was higher than muscle and gonads. Mean concentration of cadmium, copper, lead and zinc in muscle were 1.67 ±0.87, 1.84±0.83, 22.68±8.3 and 39.68±11.3 μg g^{-1} dry weight respectively (mean± SD). The concentrations of the four elements in liver were 3.46±2.22, 26.63±11.06, 32.89±14.74 and 210.73±152.17 μg g^{-1} dry weight respectively. The mean concentration of the same elements in gonads was 3.37±2.7, 4.01±1.86, 6.18±4.72 and 128.49±99.2 μg g^{-1} dry weight respectively.

There was no difference ($P>0.05$) between length classes of the fish and metal concentration in the organs except for lead concentration in gonads and cadmium in liver. Lead concentrations in gonads and cadmium concentration in liver were significantly higher in small length classes of the fish. Higher accumulation of Pb in gonads and Cd in muscle in lower length groups could be due to their high metabolic rate. Cd, Pb and Zn in muscle of the fish exceed the limits set by the United States Environmental Protection Agency (for Cd: 0.3, for Pb: 2.0, for Zn: 45.0 μg g^{-1} wet weight) (Liang et al., 1998) for human health risk. Therefore consumption of *Pseudarius jella* in Koggala lagoon may cause health hazards. Higher accumulation of Pb in gonads and Cd in muscle in lower length groups could be due to their high metabolic rate.

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