A preliminary study on the heavy metal contents of two common fresh water marsh plants, Pistia *stratiotes* and *limnocharis flava* in Iriyawetiya wetland at Kelaniya

K G S Nirbadha[1], M D Amarasinghe[1] and J A Liyanage[2*]

[1] *Department of Botany, University of Kelaniya, Kelaniya*

[2] *Department of Chemistry, University of Kelaniya, Kelaniya*

Ability of freshwater marsh plants to absorb heavy metals from water column and sediment has long been used for purification of water. Two common marsh plants, floating *Pistia stratiotes* (Diya gowa S.) and *Limnocharis flava* which grow attached to sediment or other organic substrata in Iriyawetiya wetland at Kelaniya were analyzed for five heavy metals, I.e. Lead, Cadmium, Manganese, Iron and Chromium with a view of characterizing the two species for there capacity to absorb these metals, that may qualify them as candidate species for ecological engineering techniques for wastewater purification.

In both species, except for Manganese, all the other metal content in roots (*Limnocharis flava*: Site 2: Fe- 77.825 ± 0.341 g/kg , Pb- 15.236 ± 1.215 g/kg, Cd- 0.2545 ±.0037 g/kg, Cr- 4.292 ± 0.389 g/kg Site 3: Fe- 17.83 ± 0.1277 g/kg, Pb- 20.01 ± 0.384 g/kg, Cd- 3.0323 ± 0.0036 g/kg, Cr- 4.683 ± 0.701, Site 8: Fe- 21.265 ± 0.0428 g/kg, Pb- 5.961 ± 0.1366, Cr- 0.335 ± 0.0549 and *Pistia stratiotes* Site 3: Fe- 22.633 ± 0.0453 g/kg, Pb- 67.053 ± 3.9927 g/kg, Cd-0.8656 ± 0.067 g/kg. Cr were higher than that of 0.338 the shoots. Manganese content in shoots (0.2427 - 0.6984 g per kg of plant dry weight) was greater than that of the shoots. Plants of both species that were growing near the inlets have contained more metals than plants of the same species growing in the middle part and near the outlet. Greater availability of these metals in the inlet may have led to greater accumulation of them in the plants and hence indicates a reduction in these metal content along the passage through the wetland. However, a slight increase in Pb and Cr content at the outlet would have resulted due to local additions.

When compare the extent of metal accumulation in the two species, the content of Pb, Mn and Cr in *Limnocharis flava* was greater than that of *Pistia stratiotes*, indicate their relative efficiencies of accumulating these metals. Iron and Cadmium accumulation, on the contrary, was greater in *Pistia stratiotes*.

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* janitha@kln.ac.lk Tel 011 2914486