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Distribution and abundance of Dunhevedia serrata (Cladocera: Chydoridae) inrelation to some environmental factors at Neeraviady Pillaiyar Kovil Pond, Jaffna

Cladocerans are economically important aquatic faunal group. *Dunhevedia serrata* was identified in Neeraviady Pillaiyar Kovil Pond as the one and only abundant Cladoceran that was found with various fauna as arthropods, nematodes, platyhelminthes worms, snails, snakes and toad in co- habitation during July, 2000 to January 2001.

The morphological distribution, in size groups A and B with respective size ranges <1 mm and >1 mm and the mean numerical abundance of *Dunhevedia serrata* with various abiotic factors were estimated during this study. Aquatic Temperature, depth, pH, conductivity were measured and Biological Oxygen Demand (BOD5) at 5 days incubation and Chemical Oxygen Demand (COD) were estimated abiotic factors in this study.

Monthly mean numerical abundance of size group A of *Dunhevedia serrata* ranged zero to 36200 individuals/L that of size group B varies from zero to 2800 individuals/L. Aquatic depth varies from zero to 127.5 cm while solar angle varies from 9.09099.10-5 - 1.003.10-5 degree air temperature 25 – 31 0C water temperature 25 – 32 0C, Chemical Oxygen Demand (COD) -1.2 - 10 mg Oxygen/L and pH 6.73 - 9.27 influenced the numerical abundance of *Dunhevedia serrata* in all morphological stages at all geodirectional sites north, east, south and west along the periphery of the pond. At all sites the aquatic depth and COD positively and negatively correlated with size groups A and B of *Dunhevedia serrata* respectively; the solar angle positively and negatively correlated with size groups A and B of *Dunhevedia serrata* respectively.

Thus, the mean numerical abundance of size groups A of *Dunhevedia serrata* greater than that of size group B of it. Both size groups of *Dunhevedia serrata* need high aquatic level and minimum oxygen demanding organic material in their habitat and increment of light intensity preferable to size group A and unpreferable to size group B.