

A NOTE ON LENTIC WATER BODIES IN TRIPURA WITH REFERENCE TO SESSILE ROTIFERS

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The present study has been carried out in nine ponds of Tripura (West district, latitude 23°50'15" N and longitude 91°15'45" E; South district, latitude 30°15'00" N and longitude 91°27'00" E; North district, latitude 24°28'00" N and longitude 92°15'00" E), which have been used as Carp rearing freshwater ecosystems. The present data is the observations of August 1994 to July 1996.

These waterbodies supported a number plant species such as *Eichhornia crassipes*, *Salvinia* sp., *Lemna minor*, *Trapa bispinosa*, *Nymphaea* sp., *Utricularia vulgaris*, *Myriophyllum tuberculatum*, etc., which serve as substrata for the sessile rotifer fauna.

As many as 29 species of sessile rotifers were identified from the littoral water region. The most common occurrence of those species were *Ptygura melicerta* (EHRENBERG), *Collotheca ornata* (EHRENBERG), *C. tenuilobata* (ANDERSON), *C. trilobata* (COLLINS), *C. mutabilis* (HUDSON), *P. tacita* (EDMONDSON), *Lacinularia flosculosa* (MULLER), *L. elliptica* (SHEPHARD), *Sinantherina semibullata* (THORPE), *S. procera* (THORPE) and *S. spinosa* (THORPE).

Their mode of reproduction has been found to be correlated with certain physical as well as chemical parameters of freshwater. A temperature of 18-30°C and higher amount of dissolved oxygen (6-10 ppm) are found to be helpful for their parthenogenic reproduction (P<0.01). However, very high temperature (30.73°-34.1°C), shorter photoperiod (6 hrs), higher transparency (50-77cm) and poor content of dissolved oxygen (2.3 ppm) (P<0.001) are correlated with their sexual mode of reproduction. At this stage they showed production of relatively large sized resting eggs, the glycogen content of which was found to be rich. The parthenogenic eggs produced by them are quantitatively more but the amount of glycogen in those amictic eggs are relatively very less. Under laboratory experiment, it was understood that besides physico-chemical parameters of freshwater, some other parameters (such as over population, predators, lower food abundance) also play key role behind sexual reproduction in the sessile rotifers. The hatching of amictic and resting eggs exhibited strong correlation with the suitable limnological conditions such as greater photoperiod, lower concentration of dissolved organic matter, higher phosphate value etc. The physico-chemical parameters of the studied water bodies are presented in table, pooling all the data together into mean value, in order to understand the limnological feature very clearly.

Table: Physico-chemical conditions of the studied ponds during August 1994 to July 1996.

Parameters	Range	Mean
Water temperature (°C)	117.03-34.1	22.03
Transparency (cm)	5.06-77.0	19.01
pH	6.02- 6.9	6.41
Bi-carbonate (ppm)	46.19-108.1	73.33
Dissolved oxygen (ppm)	4.00-14.00	6.79
Free carbondioxide (ppm)	1.10-4.60	2.31
Dissolved organic matter (ppm)	0.86-13.00	4.67
Chlorinity (ppm)	25.00-40.00	30.00
Salinity (ppt)	0.07-0.10	0.07
Silicate (ppt)	0.80-13.76	6.12
Phosphate-P (ppm)	0.02-0.34	0.23
Nitrate-N (ppm)	0.09-0.39	0.26
Calcium (ppm)	1.20-30.04	12.01
Magnesium (ppm)	2.02-10.00	4.10