

RESEARCH NOTE

Ecology of Benthic communities of two fresh water habitats in Saran

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ABSTRACT : The present paper aims at evaluating the distribution and abundance of Benthic communities of two different ponds in Saran, a washing pond Bishen Singh pond and a irrigational pond, Govardhan Das pond at Naini. The seasonal distribution of benthic communities along with qualitative and quantitative abundances are discussed. The total numbers of benthic communities showed definite seasonality at Bishen Singh pond site-I. It started gradually increasing from Oct. 2009 and the peak population was observed in Dec., 2011 (7086 ind/m²) then the largest number was observed in Aug., 2010 (408 ind/m²). At Govardhan Das pond (site 2), the total abundance of benthic communities showed seasonality, showing consistently higher number with minimum variations during the entire study period.

Key words : Fresh water, Insecta, Species

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The benthic communities often occur in enormous numbers and form an important component of the food web vital to the existence of higher life forms such as fish. Thus, extensive work has been done on the distribution and abundance of the benthic communities of freshwater environment. Previously, Hora (1930), Srivastava (1956) Michael (1968), Patnaik (1971), Mandal and Moitra (1975), Mathew (1979) had done extensive work on aquatic environment.

It is obvious that informations regarding seasonal variations in benthic communities in freshwater ponds are very scanty. In view of the above, the present investigation was conducted in two ecologically different ponds in Saran, Bihar and observations made on benthic communities are discussed.

Present study was conducted from October 2009 to September 2010. Samples of benthic communities were collected by means of Ekman dredge of 22 X 22 cm size. The contents were washed in a grade 40 sieve. The samples were preserved in 5 per cent formaldehyde. The abundance of organism was expressed as number per square metre.

The benthic communities collected during the study period are presented in Table 1 and Table 2. The benthic communities consisted mainly of Polychaeta, Oligochaeta, Hirudina, crustacea, Insecta, Pelecypoda, and Gastropoda,

representing 24 species.

The total number of benthic communities showed definite fluctuation at Bishen Singh pond *i.e.* Site -I. It started gradually increasing from October 2009 and the maximum number was observed in December 2010 (6086 ind/m²). The minimum number of individuals were observed during Aug. 2010 (480 ind/m²), in the annual cycle.

At the Govardhan Das pond (site 2), the total abundance of benthic communities depicted a different seasonality. The maximum number was observed in November 2009 (10140 ind/m²) and minimum in July, 2010 (1561 ind/m²).

During present investigation, 17 species of macro benthic organisms were obtained from two different habitats. Among them, 4 species of Oligochaeta, one species of Hirudinea, 5 species of insects, 1 species of Pelecypoda, and 4 species of Gastropoda have been collected from site I. While, the second habitat constituted 3 species of Oligochaeta, five species of Insecta, and 3 species of Gastropoda. Several investigations have revealed seasonal variations of benthic organism to different factors and causes such as availability of food and life cycle pattern.