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STUDIES ON SOME ASPECTS OF ECOLOGY OF CERTAIN FISHPOND OF DARBHANGA

Dr. Digvijay Kumar ¹ and Dr. Md. Rahamtullah²

¹Assistant Professor , Dept. Of Zoology ,
R.B.J. College, Bela, Darbhanga .

² Principal , K.S. College, Laheriasarai, Darbhanga .

ABSTRACT:

The Darbhanga district in North Bihar, in the form of perennial rivers, tributaries, streams, lakes, ponds, pools or puddles, is characterised by thick alluvial soil, reasonably good rainfall, high humidity, adequate sunshine and numerous water supplies. Aquatic angiosperms contain approximately 79 families and 380 genera and are therefore a large part of the country's flora (Cook et.al 1974, Sardaret.al. 2013).The aquatic part may be in muddy substratum and perhaps

shallow water. These ecosystems are canal banks, channels, peripheries or bodies of water, most of which are in earthen dams and partially in masonry dams, irrigation ditches and near-pond water.

KEYWORDS: Seasonal Water, Fish Pond, Aquatic, Ecology, Fish plant.

INTRODUCTION:-

Bihar is renowned for its fine network of Himalayan rivers and many other natural human bodies made of water. Thousands of ponds, tanks, ruts and minus are the source of irrigation and pisciculture that constitute the lifelines of the region. The area is well known for its wetlands, fish and makhana varieties. North Bihar is a region vulnerable to flooding that recharges its water system every year. There are several water bodies perennial, for example river affluent, lake steam and wetlands. Again, strong monsoon precipitation allows wetlands, ditches, puddles, side road canals, river

paddy grounds and temporary depressions in the district. This paper provides proper research on various water bodies and various forms of aquatic angiospermic plants. Plants have been collected during all three seasons to bloom and bear fruit. Identification of plants obtained using regional flora (traditional and medicinal uses). Domestic sewage, sewage and agricultural effluents pollute many of the wetlands. The need for water in life from micro organisms to humans is today a serious issue, because due to unexpected urbanisation and industrialisation, all of water supplies have reached the point of crisis. The evaluation of the water quality typically requires the study of physicochemical, geological, microbiological parameters, and focuses on the ecosystem's abiotic and biotic

state. Zooplankton is one of the key biotic components in an ecologically important area that affects the functioning of an aquatic environment, for example food supply chains, webs, energy flow and matter cycling. Different factors, such as climate change, physical and chemical parameter, and coverage of vegetation, depend on the distribution of zooplankton in the population. The distribution of most plantonic species is cosmopolitan.

There have been a number of ecological studies of freshwater bodies in different areas in Bihar, but the ecological studies of a freshwater body in the southern part of Darbhanga are very poor. But the ratio of the physical and planktonic

parameters is very small (Ahmad and Siddiqui, 1995; Choudhary and Singh, 1999) [6, 7, 10]. This thesis therefore attempts to study the richness, diversity and evenness of zooplankton species in three permanent Darbhanga District ponds in the connexion of physicochemical parameters.

MATERIAL AND METHODS

Detailed study is conducted on the water bodies in Bihar (Darbhanga):

1. Perennial bodies: less or more water all year round.
2. Seasonal bodies of water: these dry up slowly in monsoon.
3. Linear water body stretch: local primary source of water. Water supply.
4. The body of water is subject to interference with human beings.
5. All types of household waste water bodies. Some wetlands were also studied in addition to these.

This paper is focused on water environments, including aquatic angiosperm plants in various seasons. The current paper provides detail. Plants are free floating, rooted, free floating, wetland and emerging plants. Both monocots and dicots are plants.

Fishes:

In Darbhanga district you find a wide range of freshwater fish. But the Indian major carps, namely Catla Catla, Rohu (*Labeo Rohita*) and Mrigal (*Cirrhinus mrigala*), are the supreme in the market sense. Nevertheless, they have considerable commercial value. They account for up to 60% of the market arrivals of fish in the area. A large number of species mingling have been identified as exotic carp varieties, e.g. silver carp (*Hypophthalmichthys Molitrix*) grass carp (*Ctenopharyngodon idella*) and common carp (*Cyprinus Carpio*). In comparison with Indian major carps, these exotic carps however enjoy the subdued market status in the region. The air respiratory fishes (*Heteropneustes fossilis*), especially Magur (*Cldria batrachus*) and the kabai (*Anabas testudineus*), which has high nutritional and therapeutic value in this area, are of particular importance. These peaches flourish in the district's extremely eutrophic and deserted waters. Murrels or snakeheads, four of which are commonly found in this region (*Channa marulius*, *C. striatus* and *C. punctatus*), also fall under the Air Respiratory Fish group, but do not attract consumers as magur, singhi or kabai do, respectively. Air-breathing fish are also the featherbacks (*Notopterus chitala* and *N. notopterus*). Nevertheless, N of both sexes. Chitala: bhunna is locally regarded as a fine food and has a strong market preference. Together the air-breathing fish make up 10 to 15 percent of the market arrival of fish in the regions.

In general, catches from the capture fisheries of natural waters are made from large catfishes, i.e., Buari (*Wallago attu*) and Tengra. *Mystus seenghala* alone is a large tengra species. *Ompok bimaculatus* is also a catfish of great commercial value, locally known as banspatta. These catfishes constitute approximately 15% of the landings in the region. Sweat (*Gadusia chapra*), gaincha (*Mastacembellus* sp.), mara, etc., are other fishes.

Fishermen store their makhana ponds with carp (rohu, catla and mrigal), but hardly any fish. The carps that are waterborne fish can not survive under such an ecological adversity, because for a considerable amount of the increasing time the surface of the water remains covered by makhana leaves. It is thus recommended that fish that are airborne and which are capable of resisting these adverse ecological conditions be grown with Makhana, such as magur (*Clarias batrachus*), singhi (*Heteropneustes Fossilis*) and Kawai (*Anabas testudineus*). Cultural studies of airborne fish have shown promising findings on makhana pools. Physical improvement, the prevention of the exhaust from the pond of fish stocks, increases the economic returns from makhana-cultivated water boards (Thakur, 1978 and 1996).

RESULTS & DISCUSSION

After an inspection of the water sources the results are registered. Under some conditions, broad Darbhanga areas remain for a long time swamped with water and may dry up only in extreme

situations of drought. This area supports a new form of vegetation, which can be developed in flooded and saturated conditions with plants.

CONCLUSION:

The following technologies could be used for designing location-specific packages and their subsequent transition to current users in order to allow use of usable aquacropes of Darbhanga for better economic returns.

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