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REVIEW OF RESEARCH

QUALITY OF FISH DIVERSITY IN JHANG - A WET LAND OF KUSHESHWAR STHAN CHAURAHA, DARBHANGA, BIHAR

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ABSTRACT :

From the point of view of biodiversity, fish are very significant. Thus, fish have been captured and named during the ongoing investigation. The aim of the study was to display the wildlife of this lake. In comparison to other lentic and lotic water bodies in Darbhanga, many fish from this lake are found to be common in 9 orders, 18 families, 27 genera and 50 species. The most numerous of the Cyprinidae family was found with 50 species, the Puntius genus dominant and Carp, Murrals and cat fishes. KusheshwarSthan is one of the special biodiversity and internationally significant countries in North Bihar. Since pre-relieving its large diverse congregation of birds, it is the second largest protected zone for birds. Bihar is the largest socioeconomic wetland of its kind. This study underlines the richness of decorative fish in Sthan wetlands in Kusheshwar.In Jhang regions in the northern and central wetlands during the study period the largest number of ornamental fish was identified. Over the course of the analysis.

KEYWORDS : *Diversity of fish, KusheshwarSthan, fishes, Jhang, wet land and biodiversity.*

INTRODUCTION :

The Biraul Station, which includes the Ghanshyampur block, is located inSthan Wetland of Kusheshwar 65 km from Darbhanga City (MSL 49 m). In the lower lying areas of these blocks are permanent lakes and ponds. The Kosi River flows through the moonsoon, fills the lake, over a flood of 10,000 ha. It is flooded and interconnected (yahya 1995) by SimryJheel and Kabar Taal (AN IBA). Many locals relied on that wetland, and certain aquatic crops, like Makhana, Ornamental have a wide range of colour schemas that keep the aquarium under pressures for materialistic life every day. The ornamental fish store is a common hobby that increasingly replaces outdoor leisure and is the second-largest in the world. Psychiatrists believe that some types of psychiatric illnesses may be healed Swain if aquariums are installed near ornamental fishes (2008).The colour pattern and beauty of ornamental fish regarded as living gems. Bihar is an obstructed situation in which no attention is paid to ornamental fish except for a few species. The northern Bihar wetlands are enriched with wild natural resources from indigenous plants, Bihar having natural resources such as wetlands, Maun rivers, tanks, Oxbow's lakes, etc. Bihar has a rich aquatic infrastructure, but only 40% of its water bodies are used for traditional aquaculture and 60% for poor management. KusheshwarSthan is the winter city of migratory birds, known for Lord Shivatemple, one of the best water owl habitats in India and an important religious tourist destination. Kusheshwar'sSthan wetlands are famous for their fresh water and ornamental fish. Most water pools are filled by water jacinths (Eichhornia Crassipes). The local fishing technique known as Jhangfishing links water jacinth to fishing in a small pocket

of water bodies. Jhang is an artificial wildfish assemblage for aggregation of fish for 10-20 days from formation of Jhangleft, which is then utilised by the press net to catch wildfish (chatty jaal). In particular, the North Bihar region of Darbhanga has considerable water in the shape of ponds , rivers, reservoirs, lakes and canals, wetlands and wetlands.

Wetland is one of the main marine resources of the district that maintains a wealth of water diversity. For wild ornamental fish, North Bihar continues to be a virgin area. In the aquatic climate, the government has rich flora and fauna. Some of the essential ornamental fish are compromised by the fish fauna.Colisaspp (Khesra / Khosti / kotri), Colisachunna (Honey gouramy),Botiaderio (Nekti loach),Lepidocephalusthermalis, (Sand loach/striped loach)Colisalalia (Khosti / stripped gourami), Botiaalmorhae(Tiger loach /striped loach), Noemochilus triangularis (Banded loach), Eresthistes triangularis (Galpuulani), Glossogobiusgiuris(Bulla), Alia coila(Banspatta), Esomusdanivica(Flying Barb), Chanda nama (Chanari), Chanda baculius (Chanari), Chanda ranga (Indian glass fish / chanari), Xenantodoncancila(Kawua), Mastacembelusoatesii(Gaichi), Mastecembeluspanculus (Katgaichi / Spiny eel), etc. It is normally accessible in local chains, manuscripts, natural deposits, oxbow lakes, etc. Fishermen have not realised their export potential and have listed it in weeds as an adornment. In northern Bihar, especially the Mithilanchal area, i. e. Darbhanga, Madhubani, Samastippur, and so on, large quantities of ornamental fish are available, Sells ornamental fish to the local market @ Rs. 90-110 / kg & eats local people as fish.

MATERIALS AND METHODS:

The waterspread size of KusheshwarSthanchaur is from 100 to 10,000 hectares in the summer (26 ° 10 ° N86 ° 02′E) and moonsun. A significant volume of freshwater and silt comes from Koshi River. Due to their characteristics, the Sthanchaurs in Kusheshwar are divided into two sectors. Fluvial waters in the northern area are released from rivers. The area is significantly smaller in the south. The fish are collected at intervals of 15 days with the assistance of local experts. A great part of the study took place in the morning. Fishermen's hyacinth of water binds for 15-30 days while the press net is used to pick fish. Around 100-500 kg of fish is collected per jhang. A single fish is caught and put into a bucket and taken with a battery-operated aerator into a laboratory. The environment of the tank is initially air-conditioned. Additional testing added healthy fish to the tank. Talwar et al. In addition, the traditional literature for classifying fishes was (1992), Talwar and Jhingran (1991), Fish Foundation (2003).

STUDY AREA:

It is situated at approximately 65 km distance from Kusheshwarsthanchaur. It comes under sthan block from Darbhangatown and Kusheshwar. However, the whole Kusheshwarsthanchaur area is divided into two blocks. Kusheshwarsthan and Birol. Theplace is no doubt connected with the district headquarters Darbhanga by a metallic road and some public transport facilities are available, but the condition of roads and age oldbridges are deplorable. It is evidence in itself of the deplorable state of the basic infrastructure for growth , especially of the road, that it needs more than four hours by jeep to travel 65 kms. It was an important pilgrimage in that part of the Kingdom. This place had added value.'

SIZE OF KUSHESHWAR STHAN

In the winter, the chaurs are around Kusheshwarsthan, which provide lucan fishing including W.attu, Eel, Cuchia, Carp, Murrels, food fish and ornamental peaches, as well as catching a number of resident migrants. The Kusheshwarsthanchaurs ranges from 50 to 700 hectares, with depth ranging from 1.0 to 3 metres waters in the rainy season of around 10,000 hectares. The area is rampant for fishing and bird trapping. Kamla Bagmati and Kareh are the main source of water in chaurs.

The Kusheshwarsthanchaurs varies ranges from 50 to 700 ha the depth of these water bodies ranges from 1.0 to 3meter water spread area at the rainy season is about more than 10,000ha During winter season (Months) the chaurs is around Kusheshwarsthan provide lucarative capture fishery such as W.attu, Eel,

Cuchia, carp, Murrels, food fish and ornamental A resident migratory bird's no fish as beside capture. The area is full of fishing and bird trapping. Kamla Bagmati and Kareh are the main source of water in chaurs. There is a great deal of variations in its composition, subject to the size and strength of water inflow from riverine sources, of the Kusheshwarchaur region and of the Kusheshwarcaur (Larailchaur) in particular. It is noticed that the water spread area ranges to 100 sq. From data available to local authorities. Kilometers. Monsoon (June-October) months. Only after October will the actual chaur area be seen, and 20 km2 of water remain before the next entrance in June. In winter the chaurs in Kusheshwarsthan and around them provide lucarative fish stocks, providing good habitats for many migratory and resident birds. The area is rampant in fishing and bird trapping. The local landowners, who own 21 percent of the entire water field, are boosting the large-scale bird killing.They hire bird trappers in the surrounding areas to either eat themselves or sell them. The major sources of water in the region are the moonsoons running and overflowing from rivers such as Kamala, Bagmati and Kareh. A wet resistant paddy variety is commonly used on the margins of these chaurs for cultivation. Interestingly, people in the preparation of seed beds for these forms of paddy known locally under the name "garmadhan" had found a system for the use of decomposed and semi-decomposed waste of water Hycinth(Eichornia crassipes). The scale of each chaur ranges from 40 ha to 600 ha. This ranges from 0.9 m to 2.5 m in depth (Table I). The jars have a range of uses such as fishing, farming, gardening, swimming, waterway etc.

Panoramic view of Kusheshwar sthan *chaur*

Marginal area of Larail *chaur* with *Eichhornia* infestation

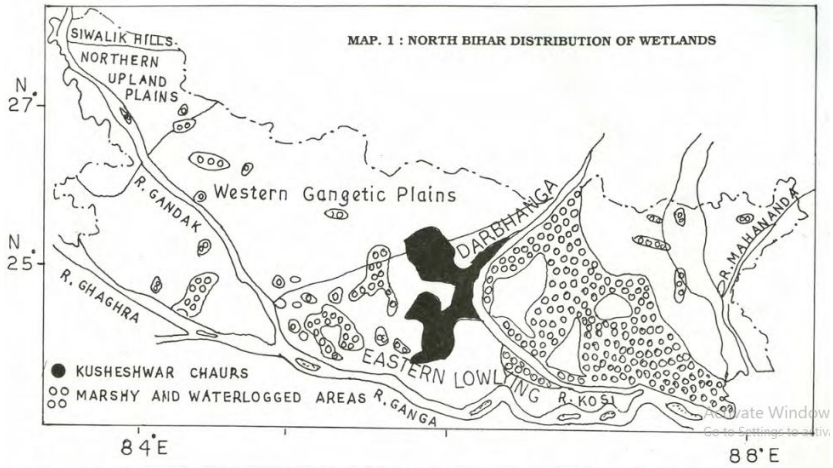

Table I : Kusheshwar sthan chaurs at a glance

Total nos. of chaurs	No. of chaurs studied	Details of Investigated chaurs				
		Name of chaur	Area(ha)	Depth range(m)	Coverage of weed(%)	Major fishery
16	4	Larail	600	1.0-2.5	35-50	Misc.+Major carps
		Mahisath	40	0.9-1.8	50-65	Misc. +catfish
		Dabadih	100	1.1-1.9	60-70	-do-
		Kamaldha	300	1.0-2.1	80-90	-do-

FISH SAMPLES COLLECTION

During the study period November 2005-October 2006, fish samples were collected from several selected localities using different kinds of nets: gill nets, cast net and dragnets. Fish were collected from various locations. Photographs have been taken shortly before restoration because formalin shades the colour of the fish for long periods of care. For the preservation of fish samples, 10% formalin solution has been prepared. Fish brought to the laboratory in different pots according to the species size have been fixed in this solution. The solution for formalin was put directly into smaller fishes when, before being fixed, bigger fish were given an incision on the abdomen.

DIVERSITY INDICES

As species abundance or evenness or diversity as a whole, species diversity can be assessed separately. Richness of organisms has been calculated by Margalef (1958) Richness Index. Equality of species was calculated by the Hill (1973) Equality index. The species diversity is measured directly with a number of indices, two of which are widely used as Shannon Wine Index, or simply as the H's or Shannon Index, 1963, and the Simpson's Dominance Index, 1949. The index of shannons has a direct relation with the diversity of species, while the index of dominance has a reverse relation.

FISH AND FISHERIES

The Chaurs of Kusheshwarsthan have icthyo faunal diversity refers to variety of species, Notopteruschitala ,Labeocalbasu, Puntius ticto, Puntius conchonius, Puntius Sarana, Esomusdanricus, Glossogobiusgiuris, Chela laubuca, Cirrihinusmrigala, Chanda ranga, Cirrihinusreba, Catlacatla, AmphipnousCuchia.Oxygasterbacaila, Amblypharyngodon mola, LabeorohitaBotiaDario,Nemacheilusbotia,

lepidocephalychithysguntea ,Somileptesgongota ,Bagariusbagarius ,Siloniasilondia , Wallago attu, Ompakbimaculatus, Cirrihinusreba, Aorichthysseenghala,Gonialosamanmina, Mystusvittatus, Ailiacoila, Heteropneustesfossilis, Clariasbatrachus, Channa punctatus, Channastriatus, Oxygasterbacaila Channagachua, Channamarulius, Macrognathus aculeatus, Mastacembeluspancalus, Mastacembelusarmatus, Anabas testudineus, Colisa fasciatus, Chanda nama, Tetradoncutcutia, Chanda ranga, Colisachunna, Nandus nandus,Channamarulius, Puntius ticto, Glossogobiusgiuris, Gonialosamanmina,Gudusiachapra,Setipinnaphasa,Notopterusnotopterus, Notopteruschitala, Tetradoncutcutia, Xenentodoncancila , Amphipnous Cuchia. Dominate in the catch and Cyprinus carp and Ctenopharyngodonidella, the two main Exotic carp. On average, the fish composition is based on observations and the interview of the local wild catcher, trader and commissioner. The stock is composed of many different fish groups.

Fishes of Kuseswarsthan Chaur

RESULT AND DISCUSSION:

A total of 35 species were reported in the study period of KusheshwarSthan Wet Land (Laril, Machisath, Dabadih and Kamaldhachaur). Among these numerous colourful fish groups, the order of Perciformes and Cypriniforms emerged as the dominant species and next to Siluriform. The maximum numbers have been registered in the pre- and postmonsoon era of the SthanChaur Wetland in Kusheshwar.

CONCLUSIONS

Results from this survey reveal that the KusheshwarSthanchaurs are highly diverse and efficient in fish, but the lack and use of too many fish toxins now leads to decreases in fish production if caged farming is carried out by KuzheshwarAsthan. Scientific methods of fish growing and proper care are important to upgrade this chaur. This is not only advantageous but also promotes a system that meets the malnutrition and non-privileged community requirements of Kusheshwarsta and Dubhanga district protein. The culture and aquaculture of cages is capable of providing nutritious food and improving the food security and income of fishing communities in this region.

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