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CONTENTS OF ENGLISH PART - I

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28. Phytoplankton Diversity and Larval Stages of Fishers from Benitura Lake in Osmanabad District

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Introduction

India is the second largest producer of fish and the second largest producer of fresh water fish in the world. Fish production has increased from 41.57 lakh tones (24.47 lakh tones for Marine and 17.10 lakh tones for Inland Fisheries) in 1993-94 to 86.66 lakh tones (33.71 lakh tones for Marine and 52.95 lakh tones for Inland Fisheries) in 2012-13. While the Inland Fisheries production has registered robust growth during this period, the growth in marine fisheries has been slower.

During 2012-13, an additional area of 4,406 hectare was brought under fish culture and fishers were trained in improved practices. Due to introduction of improved technology of fish farming and the efforts of FFDA the national average productivity of ponds and tanks covered under the programme has reached a figure of 3000 Kg/ha/annum.

In the present investigation zooplanktons are collected from the Some Rivers and Reservoirs of Osmanabad Region. Phytoplankton's qualitative and quantitative analysis is done. The zooplanktons are the main feed of larval stages of fishes. The fish seed stocking and production from the water bodies is depend on the availability of the natural food i.e. Phytoplankton's it enhances the survival of early stages of fish if it is available in water bodies.

Material and Methods

The qualitative and quantitative samples were collected seasonally during the period of April 2013 to March 2014. Phytoplankton's samples are collected with the Phytoplankton's net of 30 cm diameter and 50 [tm mesh size. The samples are collected using standardized method. The • concentrated samples are collected in small 100 ml container that is labeled. The collected samples are preserved in 5 % Formalin. The samples are then carried to the Laboratory of Department of Zoology, Jawahar College Anadur, for further analysis. Standard method of

staining is used for the collected zooplanktons and Rose Bengal Stain is used for the staining. Taxa are identified and counted under a Microscope Labomed CXL and photographs of the various species of zooplanktons taken by using a digital camera SONY DSC WX 300.These collected Phytoplankton's species are identified by using the standard identification keys.

Study Area

Maharashtra is the third largest state in India with an area of 308 lakh hectares. The highly variable rainfall in Maharashtra ranges from 400 to 6000 mm occurs in a d.C11.4).0Y four month period between June to October with the number of rainy days varying between 40 to 90.

The lake in Marathwada region is seasonal flowing so the samples are collected in the rainy season. In Marathwada region the total number of Reservoirs 850 Osmanabad and below.

Result and Discussion

Phytoplankton's important to larval fish are classified as Rotifers, Cladocerans and Copepods. The ability of Rotifers and Cladocerans to reproduce asexually (Parthenogenetically) enables them to react quickly to unfaV6fable and favorable environmental conditions (PenAk1989).Rotifers have the shortest life span (12 days) and can reach their peak reproductive level in about 4 to 6 days (Allan1976), the egg to egg span is 3 to 4 days and 15 to 25 young are produced by an adult throughout its life span.

Bentura Lake in Osmanabad the fry and fingerling of Indian major carps and exotic carps are stocked during June to September every year at the time of stoking proper timing is also an important for optimum growth of the fry. The reservoir water must contain the appropriate type and size of food when fry are stocked. Large number of fry is stocked in to reservoir waters. Most fry 6 mm long or less fall into this category. If the fry are stoked when rotifer populations are rapidly rising there will be plenty of food and the fry should grow rapidly and be large enough to eat copepod naupli and larger Phytoplankton's when those organisms appear. Fingerling fishes will be consuming Phytoplankton's faster than Wean be produced in water. But no anyone cheek the availability of the qualitative and quantitative Phytoplankton's the time of stocking fry and fingerling, to there is a record of establishment of field laboratory at the reservoir site for the analysis of Phytoplankton's. It helps in the survival of larval stages of fishes and enhances the fish production because in reservoir waters, the supplementary food is not given to the fishes it will grow on available of natural food i.e. Phytoplankton's in reservoir

waters. There is a need of scientifically and technological culture practices in reservoir waters for growing of fresh water fishes and increase in fish production.

Conclusion

Larval 'fish culture is one of the riskiest phases of freshwater fish culture, but it can be one of the most profitable, Special planning is required to overcome the risk of high mortality during fry culture, Producers must have a dependable larvae supply a facility appropriate for fry and fingerling, the rip size fry, the right kinds and quantity of food Phytoplankton's is available in water bodies, But no one can see the available food i.e. Phytoplankton's in water bodies, simply, they stock the fish seed (Fry and. Fingerlings) during the month of July to Septethber every year. If they see the available food i.e. Phytoplankton's and quantity in that water bodies means scientifically management of fish 'culture in reservoir water it helps in the survival of fish fry and fingerling stage of the fish and it enhances the fish production from these water bodies. Phytoplankton's is required as a first food for many cultured fish, it contributes to faster growth and higher survival.

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