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STUDIES ON ICHTHYOFAUNAL DIVERSITY OF LANJI LAKE

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ABSTRACT :

The present investigation deals with the fish diversity of Lanji Lake Tq. Ahmedpur Dist. Latur, India. This paper deals with the survey of freshwater fishes. The study was carried out during the year 2010-2011. The nutritive and medicinal value of fish has been recognized form time immemorial. Fresh fish flesh provides an excellent source of animal protein for human diet. This protein is relatively of high digestibility, biological and growth promoting value for human being. From the recent few years,"Blue revolution" has emerged to fulfill the essential animal protein diet need for the under nourished people in India by inland fisheries development.The results of present investigation reveal the occurrence of 12 fish species belonging to six orders and four families. The order cyprinifernes found dominate followed by siluriformes.

Keyword: *Ichthyofauna, Diversity, Commercial value of fish, Lanjilake*

INTRODUCTION

India has a vast, varied and rich freshwater resources and it contributes the richest resources in the world. However the Principle Rivers in India including their main tributaries have a total length about 27355km thus about 6.0 million hector area is available for undertaking fishery acitivites.

In India inland water bodies are the sources of fish productions lakes and ponds are mainly constructed for irrigation, storage of water, seepage water, water for drinking purpose.

In India lake, ponds and reservoirs is important from socio-economic point of view as it has the potential of providing employment to about 2.0 million people Khan (1991). The Maharashtra has a area of lakes and ponds under fish culture actively and produces more than 523 tones of fish productions.

In the present investigation reported the diversity of fish fauna from Lanji Lake. This lake is constructed on the route of small stream or nala, called as lendinala which flows near to the village lanji. Tq. Ahmedpur Dist. Latur (M.S.) India. The fish diversity of different water bodies have been reported by Banarjee and Roy 1979, Sarkar and Banarjee(2000)&Shastri and Pendse(2001).

Fishes of the inland water bodies have been studied since last century by various workers as Day (1994), Jayram (1991), Rao et. al (1999), Sakhare and Joshi (2002), Pawar et al (2006), Pathak (2008).

MATERIAL AND METHODS:

The Lanjilake is constructed in the year 2003-2004 on the rute of Lendi Stream near Lanji Village. It is constructed for the purpose of seepageing the water and increase the water level in nearby area. The latitude of the Lake 18'42'30" and Longitude as 76'58'32".

The Department of fisheries Latur district has leased out this lake to AhmedpurMacchiyasayic Co-operative society, Ahmedpur during the study period 2010-2011. Near this lake Lanji village is situated around its catchment area. The fishermen goes for daily fishing on this lake.

During the study period 2010-2011 the data of fish catch and fish fauna has taken on the basis of interviews of members of fisheries co-operatives society and individual fishermens, and fish fauna is collected.

The fishermen were fishing throughout the year on this lake but occasionally and when they required large and definite catch. They operate gal net, cast net on large scale. Drag net is also used locally it is called as wadap. Captured fishes were taken out and brought to the laboratory and assed for faunic study, collected fish species are kept in 4% formal in solution and classified them by using K.C. Jayarams"Thefreshwater fishes of India" and F-Day 1889, The fauna of British India, including cyclone &berma, fishes Vol. I & II.

Different fish species were identified in following orders,families,genus and species.

RESULT AND DISCUSSION

Following orders,families,genus and species were found in Lanji lake waters:

1) Order –Cypriniformes	Genus- Amblypharyngodon
Family – Cyprinidae	Species - A.mola
Genus–Catla	Genus – Chela
Species – C. catla	Species - C. phulo
Genus – Labeo	**ii)** Family – Rasborinae
Species – L.rohita	Genus-Rasbora
Genus –Labeo	Species - R. danicorinus
Species – L.calbasu	**iii)** Family- Cobitidae
Genus- Labeo	Genus- Nomacheilus
Species –L. bata	Species - N. botia
Genus–Carrhina	**3) Order- Mastacembeliformes**
Species - C.mrigala	Family-Mastacembelidae
Genus–Barbus	Genus- Mastacembealus
Species -B.ticto	Species - M. armatus
Genus- Cyprinus	**4) Order- Channiformes**
Species - C.carpio	Family- Channidae
Genus - Ctenopharyngodon	Genus- Channa
Species- C. idella	Species – C. maurillus
Genus–Discognathus	C. punctatus
Species -D.modestus	**5) Order- Clupeiformes**
2) Order – Siluriformes	Family- Notopteridae
Family- Siluridae	Genus- Notopterus
Genus- wallago	Species - N. notopterus(capirat)
Species - O. bimaculatus	N. Chitala
Family – Bagridae	
Genus- Rita	
Species - R. rita	

On the interviews and visiting of members of fisheries co-operative societies and individual fishermens. Fish fauna which was so for studied during the year Oct-2010 to May-2011.

Fishermen operate different mesh sized nets during fishing. The data is comprised in seasonal conditions. The captured fishes were grouped intothree category for our convenience of study as majorcarp, cat fishes and miscellaneous. The catch was grouped into group wise so far collected fishes were studied.There have been about five orders and seven families are recorded. Among which cypriniformes orders is major order and dominant peak landings throughout the year but specially catches were more

dominant during the summer months. Followed to cypriniformes cat fishes and last the miscellaneous groups which are very poor landings.

As per as catch data is concerned there is no any government policy to regular fish production. There is no confirmed record of fish catch available so we adapted the method on the interview of the local fishermen and data will be collected and computed.

During study period groupwise fish catch is given in thetable. Monthly fish catch data will not be available because fish catching is done in irregular way as the fishermen want to catch the fish into lake.Maximum and minimum fish catch of major carp tabulated into table-1.

During the study period the mean average lowest fish catch production is in winter season and maximum fish catch was recorded in summer season where as from June to September there is no fish catching. In these month there is ban on catching of fishes.

During study period major carp production were at peak in April month and low during October month. Local measures were more in April months where as miscellaneous or local minor were abundance during march.

During winter fish catch production is less,this might be due to low temperature range and cold water condition and growth is slows down the same result was observed form Ingole – 2008, Popatwar – 2002.

Fish seed will release in July last in the lake there after three months fish catching is strictly avoided and fish give chance to grow and increase. After three months fish catching is occur in this lake. In rainy season July to September the inflow from the catchment area in the form of foliage, dung, decay matters, basin soil runoff and lake area should be dried in summer months. It might be effect the water quality of the lake and therefore the fish production will be growing faster in this lake.

Generally major carps grow faster as compared to other fish species. Among which Catla is faster growth and average Catla production is more as compared to other fishes. From the study it is interesting to note that the major carp production in this lake are forming an important group as they yield highest production and without any culture practices this lake give tremendousproduction within six months period. It could be because of the favorable physic-chemical nature of the water as well as biological factor as food. It indicate that this lake will give within six month fish seed stocking it gives maximum yield and it is a good for fish farmers.

Table1: GroupWise fish catches from lake -2010-2011

Month	Major carp	Local major	Miscellaneous
Oct-2010	30kg	20kg	10kg
Nov-2010	45kg	32kg	17kg
Dec-2010	42kg	35kg	30kg
Jan-2011	97kh	71kg	65kg
Feb-2011	155kg	122kg	92kg
Mar-2011	187kg	131kg	152kg
April-2011	277kg	171kg	78kg
May-2011	73kg	56kg	43kg

Table – 2 Showing fish catch during study period.

Groups	Oct-2010	Nov-2010	Dec-2010	Jan-2011	Feb-2010	March-2011	April-2011	May-2011	Total in Kg.
Major carps	30kg	45kg	43kg	97kg	155kg	187kg	277kg	73kg	907kg
Local major	20kg	32kg	35kg	71kg	122kg	131kg	171kg	56kg	638kg
Miscellaneous	10kg	17kg	30kg	65kg	72kg	152kg	78kg	43kg	487kg
Total in Kg	60kg	94kg	108 kg	233kg	369kg	470kg	526kg	172kg	2032kg

From the study of the fish fauna in this lake there is great fish production within six months for fish culturist and fish farmers.

As possible as these small lakes in this area will be stocked at fingerlings in early monsoon and harvested in summer season. It will be good opportunity to produce the high fish production within short period. It is the best example in this area. And farmers should adopt this techniques definitely fish production will be increased and it is used to upliftment of socio economic condition of fishermen's.

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