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STUDY OF PISCIOVOROUS BIRDS AND ITS IMPACT ON FISH FAUNA OF BORI DAM NEAR NALDURG TA. TULJAPUR, DIST. OSMANABAD (M.S) INDIA.

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ABSTRACT:

Fish diversity in The study area was Bori Dam, at Naldurg District Osmanabad (Maharashtra State) in India. This dam has not got much consideration by limnologist and this prompted me to test the fishes during the time to evaluate the Icthyodiversity. Fishes were gathered from the catch of nearby angler at various stations of dam, from June 2012 to May 2013 on a month to month premise. At first fishes were recognized by nearby name as educated by neighborhood anglers and after that the investigative distinguishing proof and characterization were made up to the species level. In the present study, 39 fish species were discovered, having a place with 24 genera and 12 families were gathered under seven requests. Among all above fish species the request Cypriniformes was observed to be predominant.

Bori water reservoir is one of the largest man made water reservoir. It provides the nutrient rich flora and fauna which attracts the birds. It contains the assorted gathering of green growth, aquatic weeds, phytoplankton, zooplankton which encourage the development of fishes like Labeo rohita, catla and other sea-going creatures. The water from Bori water tank is presently utilized for water system and drinking. As a result of less human unsettling influence, slightest contamination and rich nourishment numerous flying creatures are pulled in towards this supply. The lake and its encompassing territory goes about as the best winter house for some nearby and transitory feathered creatures. The present examination was led from March 2014 to February 2015. Add up to 18 piscivorous winged creatures were seen in the investigation time frame. Add up to 18 piscivorous winged creatures were seen in the investigation time frame. Out of 18 species 10 flying creatures were inhabitant, 4 were neighborhood transients, 2 were vagrants and 2 was winter migrant.

KEYWORDS: *Fish diversity, Bori dam,Naldurg District.*

INTRODUCTION

India is rich in biodiversity. India underpins around 10% of the world's natural differing qualities, with only 2% of world area zone. Thusly India is the seventh wealthiest biodiversity on the planet. The loss of organic differing qualities is a worldwide emergency. There is not really any locale on the earth that is not confronting environmental disasters. The rate of eradication went up to one animal categories at regular intervals. At present it is one animal categories consistently. To preserve all local and presented fish species This data would be useful in the environmental observing of this biological community in the present and future.

The Country is blessed with endless and changed water assets and rich biodiversity. Freshwater fishery locales are fluctuated; like 45,000 km of waterways, 1,26,334 km. of trenches, lakes and tanks 2.36 million hectares of repositories. The fish fauna is isolated into two classes, viz., Chondrichthyes (cartilagenous fishes) and Osteichthyes (hard fishes). The endemic fish families structure 2.21 percent of the aggregate hard fish groups of the Indian locale. There are around 450 groups of freshwater fishes all inclusive. Around 40 are spoken to in India. Around 25 of these families contain monetarily vital species. Number of endemic species in warm water is around 544. Freshwater fishes are an ineffectively considered gathering since data with respect to conveyance, populace flow and dangers are inadequate, and a large portion of the data is accessible from a couple all around concentrated on areas as it were. Biodiversity is key for the adjustment of biological community, assurance of general natural quality, for comprehension inborn worth of all species on the earth.

In India, there are 2,500 types of freshwater fishes that have been perceived in the Indian subcontinent, of which 930 are classified as freshwater species by Day,(1878) Jayaram(1981), Talwar and Jhingran (1991) and Rao et al.(1999), Sahare and Joshi(2002), Dutta et al.(2003), Sakhare and Joshi(2004), Yadav (2005), Battul et al.(2007), Ashashree et al .(2008). Investigations of spatial and fleeting example of differences, conveyance and species sythesis of freshwater fishes are valuable to look at elements impacting the structure of the fish group. The conveyance and creation of the fish species in every natural surroundings were nearly connected with different variables, for example, the accessibility of nourishment, rearing destinations, water ebb and flow, profundity, geology and physico-concoction properties of water (Harris, 1995). In this manner an endeavor has been made to highlight the fish assorted qualities of Bori Dam. The work will give future techniques to improvement of accessibility and satisfy the interest of fish nourishment.

Water bodies and wetlands help humanity from multiple points of view, for example, agribusiness, angling, sewage transfer, touching, stockpiling of ground water, tourism, birding, and so on. Other than above said actualities, they go about as the best stage for nearby and transitory flying creatures for various purposes like reproducing, nourishing and stopover site. Vast number of transient and inhabitant winged animals relies upon such water bodies and wetlands for their survival. The present investigation means to make an agenda of piscivorous winged animals.

Piscivorous feathered creatures feast upon angle fauna. They can make harm the fish culture by diminishing the yield. Piscivorous winged animals have been before contemplated by piscivorous feathered creatures of Madras were examined by Ghazi (1962), Kulkarni, et.al. (2006), piscivorous winged creatures of minor water system dam, Kalamanuri were considered by Waghmare, et.al., Piscivorous feathered creatures of HinganiPangaon supply, Barshi (M.S.) was contemplated by Gavhane and Babare (2013). The present research paper reports the check rundown of piscivorous feathered creatures of Bori water repository (Hipparaga Lake) of North Solapur Tahsil of Solapur District. (M.S.).

MATERIALS AND METHODS:

The Bori water reservoir is located at Vasant Nagar close to Naldurg city. Bori water reservoir is one of the man made water reservoirs constructed very close to Naldurg city in Maharashtra. Bori water reservoir is a historical man made water body. The water from Bori water reservoir is utilized for the purpose of irrigation, drinking and farming. The lake and its surrounding area acts as the best winter house for many local and migratory birds. The water body contains a diverse assemblage of resident and migratory birds. Till now, different researchers have studied fauna of piscivorous birds.

The regular survey camps were arranged at morning and evening time of every month, scheduled from March 2014 to February 2015 to find out relative abundance of the birds at study site. For this survey, Olympus binocular was used for bird watching. Photography was done with the help of SLR camera (Canon 1100D) and zoom lenses (55-210mm and 70- 300). The observed birds were identified with the help of field guides, local bird watchers and pictorial literature. The record of observed birds is maintained by basic bird count and point count method.

This study was conducted at in the Bori dam. Testing was finished with the assistance of neighborhood anglers utilizing diverse sort of nets specifically gill nets, cast nets, trawls, jhel net(Arial net) and custom net. In stormy session the gill net fluctuates in cross section sizes, The examples were assessed quantitatively, and the species were recognized from gathered specimens. All examples gathered were protected in 4 % formalin before long. The fishes amid the study time frame between June 2011 to May 2013 on a month to month premise were at first distinguished by neighborhood name and normal name as named by nearby anglers. The Meristic and morphometric characters were measured. The experimental recognizable proof and characterization were made up to species level, with the assistance of standard keys and books (Day, 1978; Jayaram, 1999 and Talwar and Jhingran 1991).

OBJECTIVE OF THE RESEARCH

Though the dam is very small but the biodiversity of this small body is recognizable in all regards. Especially its differences of fish is exceptionally aid to the neighborhood towns and in addition subjects of Parola. As it is much beneficial and additionally imperative asset and supply of the water subsequent to 1977. Principle target of this study is to take note of the accessible types of fishes. Along these lines the present study will give the required data on species organization, longitudinal, latitudinal and altitudinal dispersion and assorted qualities of fishes. This data would be useful in the environmental checking of this biological community later on.

TOPOGRAPHY AND MORPHOMETRY:

The fresh water fish tests were gathered from Bori water way at near by Bori dam at Naldurg District Osmanabad (Maharashtra State) in India. The land circulation being Northern half of the globe : Lattitude : 200 31' to 210 15' and Longitude : 74045' to 750. Bori waterway's beginning is water ways from bori village near Tuljapur Dist - Osmanabad, Maharashtra State. The opening date of the dam is 1977. It's ability is around 25020 km2. The surface region is around 8,460 km2. The tallness of the dam is 20 m, length is 3,365 m and volume is 5,534 km3. It is worked over Bori stream close Naldurg town, locale Osmanabad, Maharashtra.

RESULTS

Total 18 piscivorous birds were observed in the study period. Out of 18 species 10 feathered creatures were occupant, 4 were neighborhood transients, 2 were vagrants and 2 was winter transient. As the investigation time frame incorporates storm, winter and summer season, the fluctuation in the atmosphere is watched which brought about the distinctive feathered creature tally at the examination site. The recorded flying creatures are classified into inhabitant, neighborhood and transient winged creatures. The accessibility of assortment of nourishment and the settling conduct of numerous winged creatures was additionally contemplated.

Key to abbreviations:

First suffix: (Status)
R: Resident
M: Migrant
LM: Local Migrant

Table 1: Checklist of piscivorous fauna of Bori water reservoir

Family	Common Name	Scientific Name	Status
Anhingidae	Oriental darter	Anhinga Melamogaster	LM
Phalacrocoracidae	Great cormorant Little cormorant	Phalacrocorax carbo Phalacrocorax niger	R R
Ardeidae	Indian pond heron	Ardeola grayii	R

	Grey heron Little egret Large egret	Ardea cinerea Egretta garzetta Egretta alba	LM LM LM
Ciconidae	Medium egret Medium egret Open bill stork Painted stork	Egretta intermedia Ardea purpurea Anastomus oscitans Mycteria leucocephala	M M R R
Anatidae	Ruddy shell duck Bar headed goose	Tadorna ferruginea Anser indicus	WM WM
Accipitridae	Brahminy kite	Haliastur indis	R
Laridae	River tern	Sterna aurantia	R
Alcedinidae	Small kingfisher Pied kingfisher White breasted kingfisher	Alcedo atthis Ceryl erudis Halcyon smyrnensis	R R R

Family wise no. of bird species

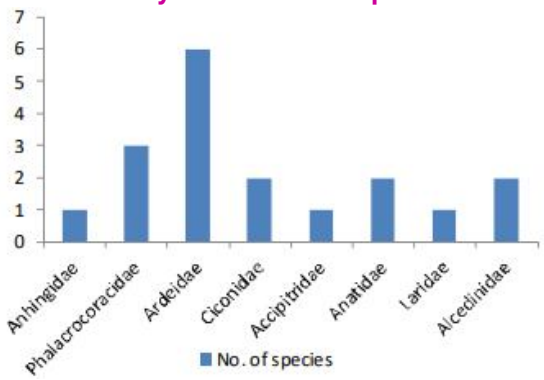
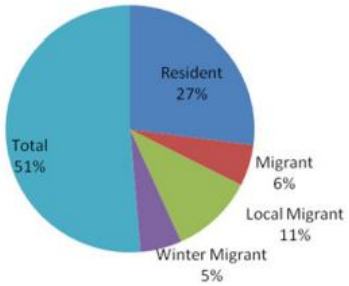


Chart: 1: Chart showing the family wise number of piscivorous birds

Residential status of birds



Piscivorous birds

CONCLUSION:

Total 18 piscivorous birds were observed in the study period. Out of 18 species 10 birds were resident, 4 were local migrants, 2 were migrants and 2 was winter migrant. During the study period, water level on the store was fluctuated occasionally. No poaching of Chart: 2: Chart demonstrating the status of watched the feathered creature was seen amid the examination time frame. The supply was with less human obstruction and minimum contamination was seen at the investigation site. Every one of these parameters make the supply the brilliant place for some types of flying creatures. This natural beauty of the reservoir must be saved and the territory ought to be kept free pollution and human disturbances.


Fig. 1.1 Grey heron


Fig. 1.2 Large egret


Fig. 1.3 White breasted kingfisher


Fig. 1.4 River tern


Fig. 1.5 Open bill stork

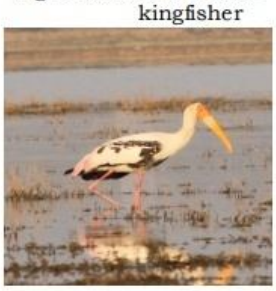


Fig. 1.6 Painted stork


Fig. 1.7 Spoon bills


Fig. 1.8 Great cormorants


Fig. 1.9 Bar headed goose

Fig : Photographs of the piscivorous birds found at Bori Lake

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