A Study on Avian Species Diversity in Chupi Lake, Purbasthali, West Bengal

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Abstract: The present study highlights the diversity, different variations of bird species in Purbasthali, Chupi Lake, west Bengal India. In this area, there is a lot of birds living place, such as migratory birds and local birds. According to the present report, there are 108 bird species present in this area, and also, 16 orders and 39 families are present based on the year 2017-2018 record. Among the record, 51 bird species were resident, 15 were local migrants, and 42 were winter migrants. Others were Indian birds. The winter migratory birds were Brant Birds, Canada goose, spot Billed Duck, Pintail Birds, Ruddy Duck, and local birds were sparrow, Drongo, Kite, Crow, Dove, etc.

Keywords: Purbasthali Chupi Lake, Avian Diversity, Threat, Birds Checklist, Conservation

1. Introduction

Birds are Heart of the Wetlands. It is important for our environment, it’s protect Diversity. Avifaunal plays a significant role, its help and control the aquatic ecosystem. But due to the environmental changes, pollution, food capacity, Birds catcher and other problems decrease the bird’s number in present day.

Chupi Lake is created by the Ganges River on its western bank, in PurbaBurdwan District, West Bengal, India. This lake is home of different types of Birds, Fishes, Arthropods, and Reptiles. This lake harbor large populations of migratory water birds during the winter season. The present study highlights the bird’s diversity and analyze the number of birds in Chupi Lake and also identify them.

1.1 Object of the Study

The present study highlights the following objects:
- Know about present status of avian faunal biodiversity in Chupi Lake.
- Count the number of species.
- How to conserve bird’s diversity in future.

1.2 Data Source

The study is mainly based on primary and secondary data sources. Such as different Research Paper, Wikipedia, different Book, internet access, and many reports. For picture capturing canon-EOS 1300D and single lens, sjcam4000 Wi-Fi action camera use.

2. Methodology

2.1 Study Area

The study area is purbasthaliChupi Lake (88°19’45” to 88°22’ E longitude 23°26’ to 23°26’45” N latitude). which is lies close on the Tropic of cancer. Purbasthali is a large Block with a number of lake, created by the river Ganga, on its western Bank in PurbaBurdwandistrict of west Bengal.

Chupi lake of purbasthali sprawls over an area 3.50 km²; this lake is famous here for thousands of migratory birds coming here from far off places including Siberia in winters. Hundreds of bird species can be seen here, people from for off places come here for Birding.

![Figure 1: Geographical localization of Chupi Lake (Purbasthali)](image-url)
3. Results and Discussion

3.1 Avian Diversity of Purbasthali Chupi Lake

Generally a huge amount of migratory Birds comes in to winter session so, the survey start on November 24th 2017 and observation complete 10th February 2018. The following checklist based on birds species, family and their order. Generally in this session 108 bird’s species observed, it can totally depend on weather. Out of total 108 species of birds- 52.8% were resident 42% were winter migrant, in this checklist.

The following checklist highlights some birds are common, Rare, occasional, some are local birds and local migrant, winter migrant, near threatened. Birds were categorized as

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**Figure 2:** Last Six Years Birds Species Record Analysis

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Little Magpie Robin  Copsychus saularis  Musciicapidae  Passeriformes  RE  LC
Jungle Babbler  Turdoides striata  Leiothrichidae  Passeriformes  RE  LC
Ashy Prinia  Prinia socialis  Cisticolidae  Passeriformes  RE  LC
Zitting Cisticola  Cisticola juncidis  Cisticolidae  Passeriformes  RE  LC
Common Tailorbird  Orthotomus sutorius  Cisticolidae  Passeriformes  RE  LC
Plain Prinia  Prinia inornata  Cisticolidae  Passeriformes  RE  LC
Red-Vented Bulbul  Pycnonotus sinensis  Pycnonotidae  Passeriformes  RE  LC
Brown Shrike  Lanius cristatus  Laniidae  Passeriformes  RE  LC
Long Tailed Shrike  Lanius schach  Laniidae  Passeriformes  RE  LC
Brant Bird  Branta bernicla  Anatidae  Anseriformes  WM  LC
Ruddy Duck  Oxyura jamaicensis  Anatidae  Anseriformes  WM  LC
Mute Swan  Cygnus olor  Anatidae  Anseriformes  WM  LC
King Eider  Somateria spectabilis  Anatidae  Anseriformes  WM  LC
Eurasian wigeon  Anas penelope  Anatidae  Anseriformes  WM  LC
Knob-billed duck  Sarkidiornis melanotos  Anatidae  Anseriformes  WM  LC
Lesser Whistling Duck  Dendrocygna javanica  Anatidae  Anseriformes  WM  LC
Red crested pochard  Netta rufina  Anatidae  Anseriformes  WM  LC
Spot billed duck  Anas poecilorhyncha  Anatidae  Anseriformes  WM  LC
Northern Pintail  Anas acuta  Anatidae  Anseriformes  WM  LC
Northern Shoveler  Anas clypeata  Anatidae  Anseriformes  WM  LC
Common Pochard  Aythya ferina  Anatidae  Anseriformes  WM  LC
Tufted duck  Aythya fuligula  Anatidae  Anseriformes  WM  LC
Ferruginous duck  Aythya nyroca  Anatidae  Anseriformes  WM  LC
Garganey  Anas querquedula  Anatidae  Anseriformes  WM  LC
Gadwall  Anas strepera  Anatidae  Anseriformes  WM  LC
Cotton pigmy goose  Nettapus coromandelianus  Anatidae  Anseriformes  WM  LC
Eurasian Teal  Anas crecca  Anatidae  Anseriformes  WM  LC
Ruddy Shelduck  Tadorna ferruginea  Anatidae  Anseriformes  WM  LC
Common Kingfisher  Alcedo atthis  Alcedinidae  Coraciiformes  RE  LC
Green Bee Eater  Merops orientalis  Meropidae  Coraciiformes  RE  LC
Spotted Dove  Spilopelia chinensis  Columbidae  Columbiformes  RE  LC
Rock Pigeon  Columba livia  Columbidae  Columbiformes  RE  LC
Rose-ringed parakeet  Psittacula krameri  Psittaculidae  Columbiformes  RE  LC
Bronze winged parrot  Pionus chalcolophus  Psittacidae  Columbiformes  RE  LC
Asian Koel  Eudynamys scolopaceus  Cuculidae  Cuculiformes  RE  LC
Greater Coucal  Centropus sinensis  Cuculidae  Cuculiformes  RE  LC
Indian Cuckoo  Cuculus micropterus  Cuculidae  Cuculiformes  RE  LC
Copper smith Barbet  Megalaima haemacephala  Megalaimidae  Piciformes  RE  LC
Blue throated Barbet  Megalaima asiatica  Megalaimidae  Piciformes  RE  LC
Common Hoopoe  Upupa epops  Upupidae  Piciformes  RE  LC
Common kestrel  Falco tinnunculus  Falconidae  Falconiformes  LM  LC
Little grebe  Tachybaptus ruficollis  Podicipedidae  Podicipediformes  WM  LC
Great crested grebe  Podiceps cristatus  Podicipedidae  Podicipediformes  WM  LC
Little Cormorant  Phalacrocorax acutus  Phalacrocoracidae  Suliformes  RE  LC
Indian Cormorant  Phalacrocorax carbo  Phalacrocoracidae  Suliformes  RE  LC
Double crested Cormorant  Phalacrocorax auritus  Phalacrocoracidae  Suliformes  WM  LC
Osprey  Pandion haliaetus  Pandionidae  Accipitriformes  LM  LC
Black-shouldered kite  Elanus caeruleus  Accipitriformes  Accipitridae  RE  LC
Black kite  Milvus migrans  Accipitriformes  Accipitridae  RE  LC
Red tailed Hawk  Buteo jamaicensis  Accipitriformes  Accipitridae  RE  LC
White Breasted Waterhen  Amaurornis phoenicurus  Rallidae  Gruiformes  RE  LC
Purple moorhen  Porphyrio porphyrio  Rallidae  Gruiformes  RE  LC
Common Moorhen  Gallinula chloropus  Rallidae  Gruiformes  RE  LC
Eurasian coot  Fulica atra  Rallidae  Gruiformes  WM  LC
Bailon's crane  Porzana bailonii  Rallidae  Gruiformes  WM  LC
Virginia Rail  Rallus limicola  Rallidae  Gruiformes  WM  LC
Black Rail  Laterallus jamaicensis  Rallidae  Gruiformes  WM  NT
Black headed ibis  Threskiornis melanocephalus  Threskiornithidae  Pelecaniformes  WM  NT
Glossy Ibis  Plegadis falcinellus  Threskiornithidae  Pelecaniformes  WM  LC
Purple Heron  Ardea purpurea  Ardeidae  Pelecaniformes  RE  LC
Yellow Bittern Ixobrychus sinensis  Ardeidae  Pelecaniformes  WM  LC
Cattle Egret  Bubulcus ibis  Ardeidae  Pelecaniformes  RE  LC
Little Egret  Egretta garzetta  Ardeidae  Pelecaniformes  RE  LC
Great Egret  Ardea alba  Ardeidae  Pelecaniformes  RE  LC
Indian Pond Heron  Ardeola grayii  Ardeidae  Pelecaniformes  RE  LC
Intermediate egret  Mesophoyx intermedia  Ardeidae  Pelecaniformes  RE  LC
Asian Openbill  Anastomus oscitans  Ciconiidae  Ciconiiformes  RE  LC
The lakes are covered lots of local Birds and Residential Bird Species like Bronze Winged jacana, common Redshank, cotton Pigmy goose, Black winged stilt are found in PurbasthaliChupi Lake.

Local Birds such as common myna, spot wild dove, sarker falcon, kingfisher, yellow-footed Green Pigeon, Rose Ringed Parrot, Greater Coucal, Black Drongo, Asin-koel, Blue Kingfisher, Laughing dove, Red vented Bulbul, Babbler, and Black kites, common Tailor Birds can observe in chupi area. Residential Birds species like Pheasant Tailed Jacana, purple moorhen, purple Heron etc.

3.2 Threat

Birds are often considered to be outstanding indicators of the Health of the overall environment. But present day birds are Threatened due to the-

a) Climate change- climate change is one of the most publicized conservation issues of our time. Due to the climate changes migratory birds are not come to proper time in this area.

b) Area Protection- The total area of chupi lake is unprotectable.in this area totally gurdless, no monitoring system. This are suitable for Birds Catcher.

c) Hybridization- Hybridization may also endanger Birds, damaging the gene stock.

d) Pollution- pollution has led to serious declines in some Birds Species. The Pesticide DDT was Responsible for Thinning egg shells in nesting birds.

e) Other Problems- Chupi Lake also use as a picnic spot.in picnic session a huge amount of sound vibration are created this is harmful for bird’s diversity. Now a day’s Human population slowly increase on that area, it’s harmful for bird’s species.

3.3 Conservation

Chupi Lake plays important role to maintain the ecological and environmental Balance. But, in present Day Chupi lake has threat for this causes Birds diversity goes to lost.so, conservation is necessary for Chupi Lake.

a) Chupi Lake is unprotected so it is very suitable place for bird catcher. For this purpose the local police have to more active to solve the problem.
b) Chupi Lake is used as bathing, agriculture purpose so quickly stop this.

c) To improve the quality of wetland and more Govt.allowance for its development.

d) In picnic session stop the High Decibel Sound.

4. Conclusion

The present study highlight that the importance of chupi Lake. Winter migratory Birds and local Birds totally depend on Chupi Lake. But, in present day there are lot of problem in chupi char for this problem chupi avian diversity are loss. If we can maintain one species diversity then others are survive easily. Avian diversity loss always Harmful for our environment. There are several conservation Way to protect the Chupi Lake and also a sustainable and dependable management planning is necessary for conservation of purbasthali Chupi Lake. And also build up well developed system such as watch tower, monitoring system, forest guard and also a Birds Research Team.

5. Authors’ Contributions

This work was carried out in collaboration between the authors. Authors KS designed the study area and collect the data and Author RM collect the Picture and analysis the Birds Record. Author KS and RM wrote the paper. Both authors read and approved the final manuscript.

References


