

## **Survey of Seasonal Bird's Population at Amadhu Lake, Vadnagar of Mehsana District of Gujarat State**

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### **Abstract**

This study was conducted at Amadhu Lake, Vadnagar, estimates of the population of seasonal birds were made on November, 2014 to April, 2015. This study focuses on studying the distribution of seasonal bird populations in the habitat of the Amadhu Lake, a freshwater wetland habitat attracting a diversity of residential and migratory birds in Vadnagar, Mehsana district, Gujarat. Almost 45 species of migratory and residential bird's species were noted such as Goose, Ibis, Heron, Stork, Godwit, Stilt, Egret, Duck, Coot, Crane, Shank, Moorhen, Plover, Sandpiper, Snipe, Darter, Curlew, Spoon Bill, Thick-knee, Pelican, Flamingo, Cormorant, Grebe, Stint, Pintail, Shoveler, Jacana, Avocet, Lapwing, Tern, Swallow with a different numbers.

**Keywords:** Seasonal Birds Survey, Amadhu Lake

### **Introduction**

Our wealth of animals, insects and birds is truly great and varied. They are the gorgeous picture and poems on the earth. This diversity is a heritage of nature for the further generation. A terrestrial bird studied is well but no serious attempt has been made to study the population of wetland birds. Hence, it becomes essential to know the scenario about it at the local region, where small ponds, lakes, sewages, revering are present (with the goal of finding about its management and protection). Birds form one of the most fascinating colourful groups in the Animal kingdom, which have always been subject of interest of scientists, naturalist, bird watchers and even layman because of their intimate relationship with environment, agriculture, art, mythology and many other aspects of the human civilization. India has rich biodiversity. Out of 10.000 birds species of the world, the Indian subcontinent is home of about 1200 species (13% of the world) (Anonymous, 2004). India has habit of defense of all form of animals dating from as early as 3000 years ago, when Rig-Veda

mentioned the animal's right to live. Though the birds in our country are currently conformed to many threats, the most important of them are habitat loss and deterioration. Root cause of and damage of habitats are intricate, interlinked and often controversial. Wetland destruction and degradation in the regaining are reducing the diversity of wetlands and the population of many numbers of bird species. Major threats include over exploitation of wetland resources, as local demand. Agricultural practices have become significantly intensified in recent years. Pesticides leached from agricultural land, contaminate rivers, lake, sewage, canals etc. Gujarat Ecological Commission reported total 453 species of birds belonging to 65 families from Gujarat State (Anonymous, 1999). Recent recorded is 494 species. Birds constitute a very important component of agro-ecosystem. Agriculture provides a concentrated and highly predictable source of food to birds. Several bird species help in pollination of plants and dispersal of seeds, others are insectivorous and predate upon insect pests affecting natural biological control.

The great variety of different types of plants also makes Amadhu Lake an attracting place for birds to nesting and living. Some of the birds mainly nest at the woodland area while others are more active in Amadhu Lake with different allocations. Aquatic plants such as Water Hyacinth (*Eichhornia crassipes*), Hydrilla (*Hydrilla verticillata*), Water Spangle (*Salvinia molesta*), and Water Lily (*Nymphaea sp.*) are commonly seen in Amadhu Lake.

Given its unique start as a man-made freshwater zone that had been recolonized by freshwater plants, this Lake is a unique but fragile freshwater wetland that is a key part of Vadnagar's natural heritage. I feel that the Amadhu Lake is a neglected freshwater habitat that not many people are aware of.

### **Research Aims**

This study aims to provide an overview of the status of birds in Amadhu Lake, especially the frequency and variety of migratory birds and the residential birds also. It will also provide an update to the bird's surveys, add to the data collected in recent years and set up a baseline bird's survey for possible long-term research in Amadhu Lake. Furthermore, I plan to determine the distribution and roosting range in Amadhu Lake by observing bird behaviors and populations and the possible ways to contribute to birdlife conservation as well as improve the ecological status in Lake. I also want to raise public awareness of the fragile nature of this habitat.

## Materials and Methods

The survey of birds population was made by random sampling and point count method and frequent visit to Amadhu Lake of Vadnagar during November, 2014 to April, 2015. Birds observation carried out with the help of field binocular (8X40), during morning and evening hours viz. 06:00 to 10:00 am and 16:00 to 19:00 pm, respectively. And whole day observation also carried out for some days. Identification of different bird species was carried out by noting down the various characters and with the help of keynotes from the standard book (Richard *et al.*, 1999).

## Results

Observed birds species are shown in the table.

S.N.	Name of Birds	Average	S.N.	Name of Birds	Average
1.	Bar-headed Goose	8	24.	Grey Heron	1
2.	Black Ibis	5	25.	Kentish Plover	4
3.	Black-crowned Night Heron	2	26.	Large Cormorant	3
4.	Black-necked Stork	5	27.	Large Egret	2
5.	Black-tailed Godwit	3	28.	Little Cormorant	2
6.	Black-winged Stilt	16	29.	Little Egret	2
7.	Cattle Egret	3	30.	Little Grebe	26
8.	Comb Duck	3	31.	Little Ringed Plover	30
9.	Common Coot	2	32.	Little Stint	2
10.	Common Crane	14	33.	Marsh Sandpiper	3
11.	Common Greenshank	1	34.	Medium Egret	5
12.	Common Moorhen	4	35.	Norther Pintail	7
13.	Common Redshank	2	36.	Norther Shoveler	28
14.	Common Ringed Plover	3	37.	Painted Stork	3
15.	Common Sandpiper	10	38.	Pheasant-tailed Jacana	3
16.	Common Snipe	7	39.	Pied Avocet	17
17.	Curlew Darter	1	40.	Pond Heron	5
18.	Eurasian Curlew	4	41.	Purple Heron	3
19.	Eurasian Spoon Bill	8	42.	Red-wattled Lapwing	9
20.	Glossy Ibis	3	43.	River Tern	13
21.	Great Thick-knee	2	44.	Spotted Sandpiper	7
22.	Great White Pelican	1	45.	White Ibis	3
23.	Greater Flemingo	1	46.	Wire-tailed Swallow	6

**References**

Anonymous (2004). Report on Zoological survey of India. 226 : 5-46.

Anonymous (1999). Report on Biological diversity of Gujarat. Gujarat Ecological Commission, Vadodara, India. 7-9.

Richard G., Carol I., Tim I. (1999). Pocket Guide to the Birds of the INDIAN Subcontinent, Oxford University press, New Delhi 110001.