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STUDIES ON AVIFAUNAL DIVERSITY OF BRAMHAPURI TEHSIL IN ADYAL LAKE AND SAKHARA LAKE DIST: CHANDRAPUR (M.S.) INDIA.

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Abstract

The current investigation was conceded in the year of March 2023-February 2024. It deals with the avifaunal Diversity in Sakhara and Adyal Lake in Bramhapuri Tehsil. It deals with the study of avifaunal diversity in lakes of Bramhapuri tehsil. Birds observation were carried out at regular intervals of the two lakes of three main seasons at regular interval of the study period The present study based on the identification of residential bird, Birds are classified under the categories of wetland, earthly and lentic ecosystem avian species. Observations done with the help of Olympus binocular 8X40 DPS. Photographs were taken by with appropriate zoom lens of digital camera Nikon. Photos were clicked by visiting twice a day .four visits per month during morning 7:30 -10:30 AM and at a evening 4:00 – 6:00 PM. Birds diversity has been an enteric factor in maintenance of ecological balance of any given ecosystem .During the study a total number of 43 birds species lake 10 different orders 25 different families among which order Passeriformes were dominant by contributing 13 followed by order Ciconiformes with 08 species orders Anasiformes and Corcariformes represented by 05 species each order Charadriformes represented by 03 species, Order Galliformes represented by 03 species and Order Pelacaniformes And Psittaciformes represented by 02 species each and Order Columbiformes and Falconiformes represented by 01 species each.The number of birds species may however vary accordingly based on parameters such as availability of food ,water ,expansion of human populations; seasonal impacts etc.

Keywords: Avifaunal diversity, Adyal, Sakhara Lakes, Ecosystem, Bramhapuri Introduction:

Introduction:

Birds have ecological value as important elements of natural systems. Birds provide insect and rodent control, plant pollination and seed dispersal which results in tangible benefits to people.Birds play a critical role in reducing and maintaining populations of insects in natural system birds are important to continue to ecological circles sequentially, especially in food chain .Many birds species rely on the lakes as their primary source of food ,this illustrates the need of protecting every area within them(Bansod *et al.*, 2024) Birds play many important roles to maintain health of ecosystem through their actions as pollinators, seed dispersal, predators, scavenger and as a prey for others species(Gregary, *et, al.*, 2003;Sotb,2020).Water birds includes ,waders like ducks, goose, shanks, herons, egrets, plovers, sandpipers and waterfowls like water hens, water cocks, cormorants, etc which are water body associated birds (Boere, *et al.*, 2006; Ramsar convention, 2016).Many conservations studies highlighted an importance of agro-forest ecosystem in reducing the impact of natural habitat loss ,and its major role in the conservation of water birds.(Boere, *et al.*, 2003; Parmesh Kumar & Sharmila Sahu, 2020).

STUDY AREA – ADYAL LAKE AND SAKHARA LAKE

Present study on habitat utilization would be carried in and around two ponds, Adyal pond (Lattitude 20°35'12"N and longitude 79°47'03"E) and Sakhara pond (Lattitude 20°55'92"22N and longitude 79°78'72"91E), situated in Bramahpuri taluka of Chandrapur district of Maharashtra, India. Adyal pond site is spread over an area of 2, 36, 748m^2 and Sakhra pond spread over an area of 3, 21, 061m^2. It presents unique geographical site surrounded by forest having mixed vegetations of both tropical dry and moist semideciduous forest, dominated by teak Tectona grandis,Terminalia arjuna, T. tormentosa, and Butea monosperma interspersed with patches of tropical moist rainforest Syzigiumcumini, Terminalia chebula, Emblica officianalis and bamboo Dendrocalamusstrictus. The forest area interspersed with paddy fields, which provides nocturnal roosting ground for many winter migratory water bird species. The shallow water reservoir with surrounding deep semi-deciduous tropical forest presents unique agroforest ecosystem which provides suitable feeding and nesting ground for wetland avifauna.

a) Satellite Image of Sakhara lake b) Satellite image of Adyal Lake

MATERIAL AND METHODS:

The present work carried out from (March 2023- February 2024). The survey carried out by using a field binoculars Olympus (8 x 40) magnification and photographed by Nikon D700 using lenses 70-300 mm .The survey from this area was undertaken during morning 7:30 -10:30 am and evening 4:00-6:00 pm visiting each sides (North ,East, West And South) by visiting twice a day four visits per month. Identification of species was done with the help of standard field guide book of Richard Grimmett and Inskipp, Woodcock (1980), Ali, S. and Ripley, S. D. (1995).

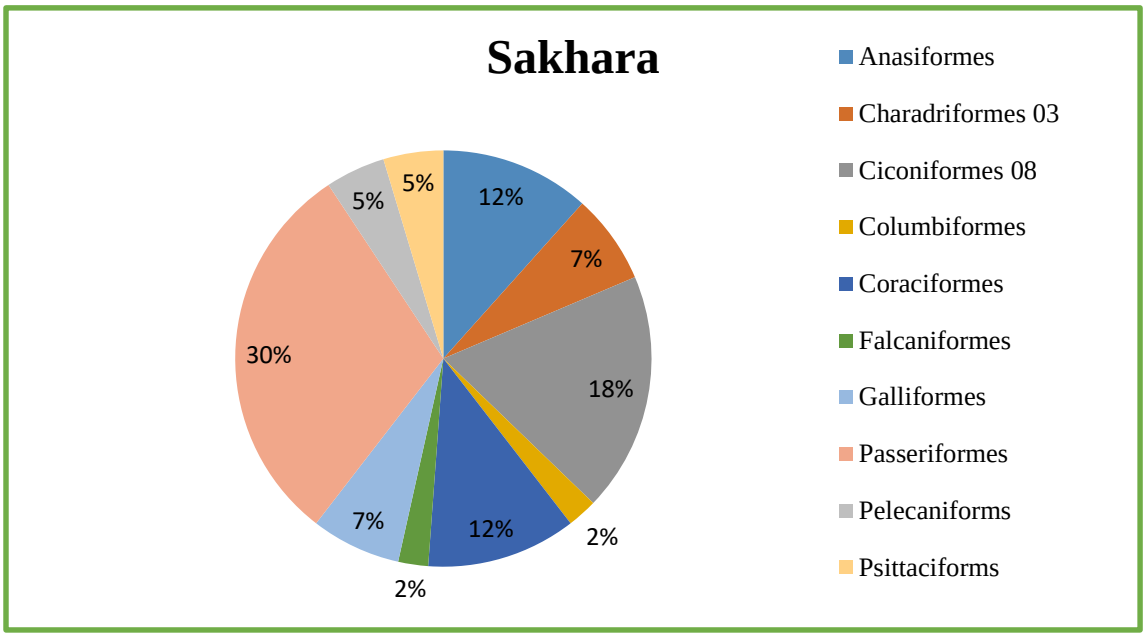
Observation:

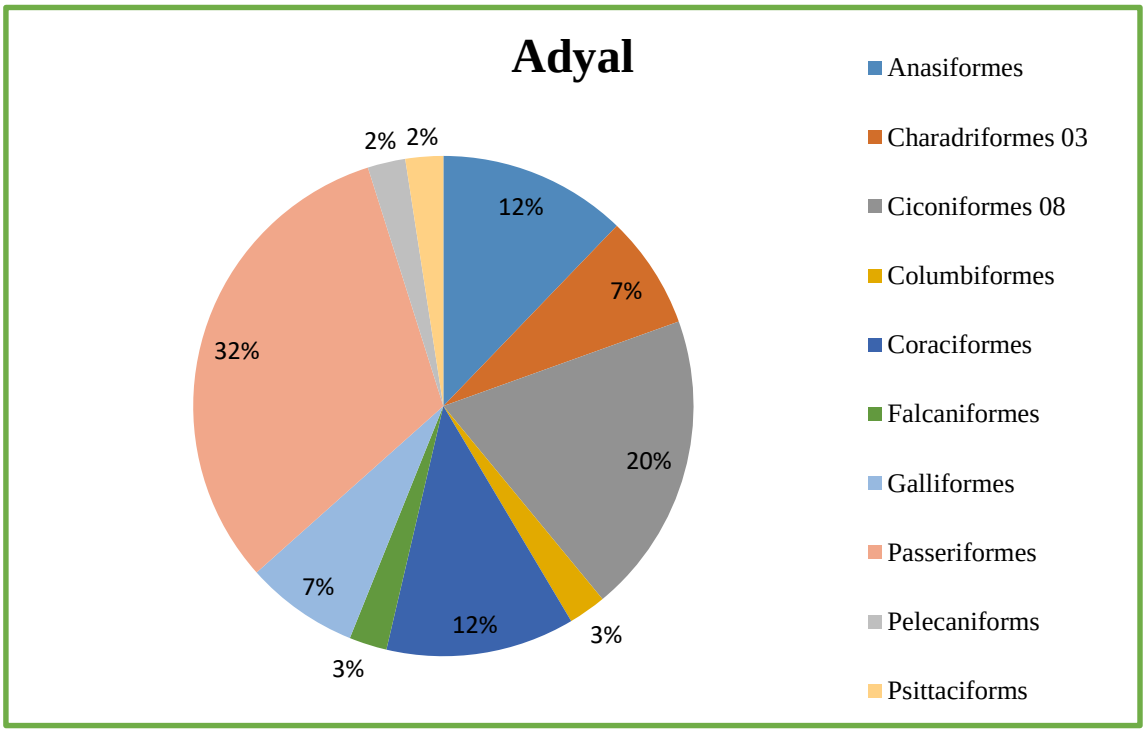
Table -1. Checklist of Avifauna in Sakhara and Adyal Lakes in Bramhapuri Tehsil

Sr. No.	Orders/Family	Scientific name	Common name	Habit	Sakhra lake	Adyal lake
1.	Anasiformes/ Anatidae	*Anas poecilorhynca*	Spot Bill Duck	**WV**	+	+
2.	Anasiformes/ Anatidae	*Todorna ferruginea*	Bramhiny Shelduck	**WV**	+	+
3.	Anasiformes/ Anatidae	*Anas clypeata*	Northern pintail	**WV**	+	+
4.	Anasiformes/ Anatidae	*Sarkidornis melanotos*	Comb Duck	**WV**	+	+
5.	Anasiformes/ Anatidae	*Nettapus coromandelianus*	Cotton teal	**R**	+	+
6.	Charadriformes /charadridae	*Vanellus indicus*	Red wattled lapwig	**R**	+	+
7	Charadriformes /Recurvirostridae	*Himantopus himantopus*	Black winged stilt	**R**	+	+
8.	Charadriformes /Scolopacidae	*Actitishypo leucos*	Common sandpiper	**RM**	+	+
9.	Ciconiformes /Ardeidae	*Bubulcus ibis*	Cattle egret	**RM**	+	+
10.	Ciconiformes /Ardeidae	*Ardea cineria*	Grey heron	**RM**	+	+
11.	Ciconiformes /Ciconidae	*Ephippiorhyrichos asiaticus*	Black necked stork	**WV**	+	+
12.	Ciconiformes /Ardeidae	*Casmerodilus albus*	Large Egret	**RM**	+	+
13.	Ciconiformes /Ciconidae	*Anastomus osciatans*	Asian open bill stork	**R**	+	+
14.	Ciconiformes /Ciconidae	*Mycteria leucocephala*	Painted stork	**WV**	+	+
15.	Ciconiformes/Threskiornithidae	*Pseudibis papillosa*	Black ibis	**RM**	+	+
16.	Ciconiformes /Ardeidae	*Aredeola grayii*	Indian pond heron	**R**	+	+
17.	Columbiformes /Columbidiae	*Strepto peliachinensis*	Spotted dove	**R**	+	+
18.	Coraciformes /Alcedinidae	*Alcedo attkis*	Small bluekingfisher	**RM**	+	+
19.	Coraciformes/Coraciidae	*Coracias beghalensis*	Indian roller	**RM**	+	+

20.	Coraciformes /Alcedinidae	*Halyconus myrnesis*	White breasted kingfisher	**R**	+	+
21.	Coraciformes /Meropidae	*Merops orientalis*	Small green bee eater	**R**	+	+
22.	Coraciformes /Upupidae	*Upupa epops*	Common Hoopoe	**R**	+	+
23.	Falcaniformes /Anatidae	*Milvus migrans*	Black kite	**R**	+	-
24.	Galliformes /Gruidae	*Amauromis phoenicurus*	White breasted water hen	**R**	+	+
25.	Galliformes /Gruidae	*Porphyrio porphyrio*	Purple swampheae	**R**	+	+
26.	Galliformes /Gruidae	*Fulica atra*	Common coot	**RM**	+	+
27.	Passeriformes /Necatarinidae	*Cinnyris asiaticus*	Purple sunbird	**R**	+	+
28.	Passeriformes /Passeridae	*Hydrophaslanus chirurgus*	Pheasant tailed jacana	**R**	+	+
29.	Passeriformes /Muscicapidae	*Soxicolodies fulicatus*	Indian robin	**R**	+	+
30.	Passeriformes /Sturnidae	*Acridothere stristis*	Common myna	**R**	+	+
31.	Passeriformes /Pycnonotidiae	*Pycnomotus cafer*	Red vented bulbul	**R**	+	+
32.	Passeriformes /Dicrudidae	*Dicrurus macrocercus*	Black drongo	**R**	+	+
33.	Passeriformes /Sturnidae	*Starnia pagodarum*	Bramhiny starling	**R**	+	+
34.	Passeriformes /Hirudinidae	*Hirundo rustica*	Common swallow	**R**	+	+
35.	Passeriformes /Corvidae	*Corvus macrorhyncous*	Jungal crow	**R**	+	+
36.	Passeriformes /Motacillidae	*Motacilla alba*	White wagtail	**WV**	+	+
37.	Passeriformes /Motacillidae	*Motacillacinerea*	Grey wagtail	**WV**	+	+
38.	Passeriformes /Sturnidae	*Sturmus contra*	Pied myna	**R**	+	+
39.	Passeriformes /Corvidae	*Corvus splendens*	House crow	**R**	+	+
40.	Pelecaniformes /Phalecrocoracidae	*Phalacrocoraxniger*	Little cormorant	**R**	+	+
41.	Pelecaniformes /Phalecrocoracidae	*Phalacro coraxfusicollis*	Indian cormorant	**R**	+	+

42.	Psittaciformes /Cuculidae	*Eudynamys scolopaceus*	Asian koel	**R**	+	+
43.	Psittaciformes /Cuculidae	*Centropus sinensis*	Greater coucul	**R**	+	-





Great Egret

Chinese Pond Heron

Open billed stork

Indian Pond Heron

Indian roller

Little cormorant

Green bee eater

Oriental white ibis

Black drongo

RESULT AND DISCUSSION:

In the present study 43 species of birds were recorded from Sakhara lake and 41 species of birds were recorded from Adyal lake.

Birds were recorded from Sakhara lake 10 different orders 25 different families among which order Passeriformes were dominant by contributing 13 followed by order Ciconiformes with 08 species orders Anasiformes and Corcariformes represented by 05 species each order Charadriformes represented by 03 species, Order Galliformes represented by 03 species and Order Pelacaniformes And Psittaciformes represented by 02 species each and Order Columbiformes and Falconiformes represented by 01 species each. Birds were recorded from Adyal lake 10 different orders 25 different families among which order Passeriformes were dominant by contributing 13 followed by order Ciconiformes with 08 species orders Anasiformes and Corcariformes represented by 05 species each order Charadriformes represented by 03 species, Order Galliformes represented by 03 species and Order Pelacaniformes , Psittaciformes and Columbiformes represented by 01 species each.

CONCLUSION:

This is preliminary survey of avifaunal diversity of these lakes which shows diversity of birds due to more variety of plants which gives more choice for food, preference of the bird's species as well as nesting and breeding place. Occurrences of winter visitor's birds shows favorable environment for avifauna.

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