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Avian biodiversity of Pinjarat and Damka village of Surat district, Gujarat, India

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Abstract

The present Study was started with main aim for preparing a checklist of bird's biodiversity of the Pinjarat and Damka village of Surat District, Gujarat. Pinjarat and Damka villages are near to Surat city. There are so many paddy fields and some small to medium wetlands are located in both village. So, it is natural habitat for many local, residential migratory and migratory birds. During the study total 90 birds' species were noted with 42 families. The species abundance and diversity were maximum during monsoon and winter season.

Keywords: Avian Biodiversity, Pinjarat - Damka, Wetland, Aves

Introduction

The main aim of study was to find out the bird biodiversity of Pinjarat and Damka village of Surat District which will be helpful to know bird biodiversity of these villages. Birds are chordate belonging to class Aves. Aves is the Latin name for birds-feathered winged, bipedal, warm-blooded, egg laying vertebrate animal ^[1]. Aves act as a key indicator for assessing the status of ecosystem health. Birds are basic part of food chain and food web. Birds play a vital role in keeping balance of nature. They also help in pollination of flowers and dispersal of seeds. Richness, abundance and community composition of birds are also used by ecologists to understand the diversity of species in natural occurrence ^[2]. But the urban biodiversity has received very little attention from the biologist as compared to natural and protected ecosystem ^[3, 4]. In Gujarat, a total of 526 species and 76 families were listed from the state ^[5]. From the various localities of the Gujarat state listed 574 species of birds ^[6]. Population of birds is a sensitive indicator of pollution in both terrestrial and aquatic ecosystem ^[7]. Avifauna is an important constituent as well as an important link in the food chain of any ecosystem. Birds have been considered as useful biological indicators because they are ecologically versatile and inhabit all kinds of habitats ^[8].

Material and Methods

The study was carried out for a period of two years from July 2023 to June 2025. First of all general survey was conducted for birds diversity. Earlier study area was visited every day in early morning and at late evening for observation and survey then weekly visit was taken for study. Almost all places like paddy farms, wetlands, ponds and inner parts of village were observed time to time and some sites were noted which were mostly used by birds. The observation was carried out with the help of 10 x 40 fields Olympus binocular and tries to identify bird species. Bird photographs were taken with the help of Canon 1500D DSLR camera and identification was done with the help of books - Indian Birds by Ali ^[9], Birds of the Indian subcontinents by Grimmett *et al.*, ^[10], A pictorial field guide to Birds of India by Bikram Grewal ^[11], Urban Wings by Mukund Kumar ^[12] and My first flight with Widespread Birds of India By Rohan Arora ^[13]. The birds were also classified in to different categories on the basis of their feeding habit like frugivorous, carnivorous, insectivorous omnivorous, granivorous etc.

Results and Discussion

The study shows that total 90 bird species representing 42 avian families this survey data shows that The Pinjarat and Damka village and surrounding areas are rich about its avian

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diversity. Study shows that some birds are local some are resident migratory while some are migratory birds.

As per the food habit out of 90 birds maximum species are carnivorous or insectivorous while some are frugivorous or granivorous. The study site is also near to coastal line and Hazira port of Surat so there are some threats to aves like noise pollution, air pollution and some anthropogenic activities even it is rich site about avian diversity it may be due to some wetlands which provide habitat, water, food and proper climate condition to wetland birds as well other birds, but now a days the recent major threat is habitat loss so to

maintain and conserve these biodiversity we should aware the local public and informed them about the importance of these birds biodiversity because many birds which are insectivorous which play a vital role to control a different types of agricultural pest so indirectly it helps to save crops against pest. This study not only contributes scientific information but it is a little effort for the protection of bird diversity and its habitat.

Table 1: Checklist of bird's biodiversity of the Pinjarat and Damka village of Surat District during study period










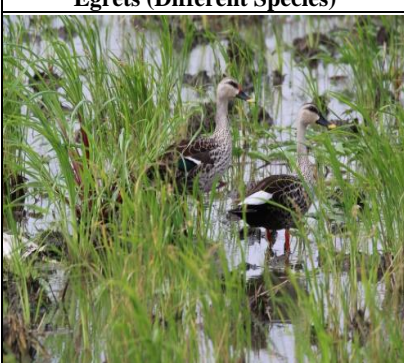


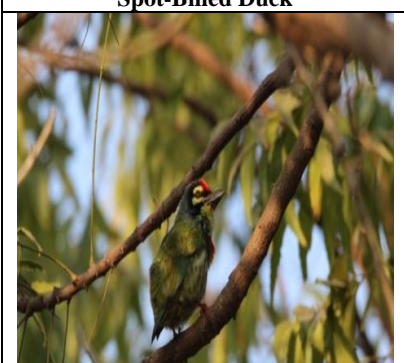
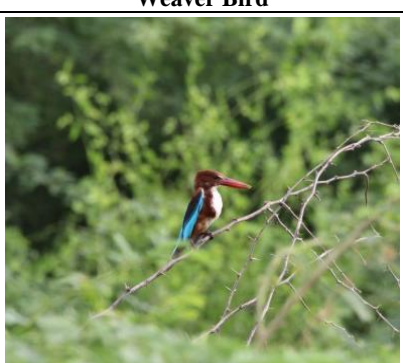
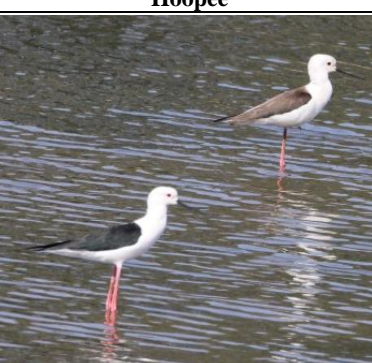
Sr. No.	Common Name	Scientific Name	Family	Status (IUCN)
1	Shikra	<i>Accipiter badius</i>	Accipitridae	LC
2	Black Winged Kite	<i>Elanus caeruleus</i>		LC
3	Marsh Harrier	<i>Circus aeruginosus</i>		LC
4	Ashy Crowned Sparrow Lark	<i>Eremopterix griseus</i>	Alaudidae	LC
5	White Throated King fisher	<i>Halcyon smyrnensis</i>	Alcedinidae	LC
6	Common Kingfisher	<i>Alcedo atthis</i>		LC
7	Pied Kingfisher	<i>Ceryle rudis</i>		LC
8	Indian Spot - billed Duck	<i>Anas poecilorhyncha</i>	Amidae	LC
9	Knob - Billed Duck	<i>Sarkidiornis melanotos</i>		LC
10	Lesser Whistling Duck	<i>Dendrocygna</i>		LC
11	Darter	<i>Anhinga melanogaster</i>	Anhingidae	NT
12	Common Swift	<i>Apus apus</i>	Apodidae	LC
13	Great Egret	<i>Ardea alba</i>	Ardeidae	LC
14	Intermediate Egret	<i>Ardea intermedia</i>		LC
15	Little Egret	<i>Egretta garzetta</i>		LC
16	Cattle Egret	<i>Bubulcus ibis</i>		LC
17	Indian Pond Heron	<i>Ardeola grayii</i>		LC
18	Black Crowned Night Heron	<i>Nycticorax nycticorax</i>		LC
19	Purple Heron	<i>Ardea purpurea</i>		LC
20	Grey Heron	<i>Ardea cinerea</i>		LC
21	Red Wattled Lapwing	<i>Vanellus indicus</i>	Charadriidae	LC
22	Painted Stork	<i>Mycteria leucocephala</i>	Ciconiidae	NT
23	Asian Openbill Stork	<i>Anastomus Oscitans</i>		LC
24	Tailor Bird	<i>Orthotomus sutorius</i>	Cisticolidae	LC
25	Plain Prinia	<i>Prinia inornata</i>		LC
26	Yellow Bellied Prinia	<i>Prinia flaviventris</i>		LC
27	Ashy Prinia	<i>Prinia socialis</i>		LC
28	Little Spotted Dove	<i>Spilopelia chinensis</i>	Columbidae	LC
29	Laughing Dove	<i>Spilopelia senegalensis</i>		LC
30	Blue Rock Pigeon	<i>Columba livia</i>		LC
31	Indian Roller Bird	<i>Coracias benghalensis</i>	Coraciidae	LC
32	House Crow	<i>Corvus splendens</i>	Corvidae	LC
33	Jungle crow	<i>Corvus macrorhynchos</i>		LC
34	Asian cuckoo	<i>Eudynamis colapaceus</i>	Cuculidae	LC
35	Jacobin Cuckoo	<i>Clamator jacobinus</i>		LC
36	Greater Coucal	<i>Centropus sinensis</i>		LC
37	Black Drongo	<i>Dicrurus macrocerus</i>	Dicrucidae	LC
38	Ashy Drongo	<i>Dicrurus leucophaeus</i>		LC
39	Indian Silver Bill Munia	<i>Euodice malabarica</i>	Estrilididae	LC
40	Scally Breasted Munia	<i>Lonchura punctulata</i>		LC
41	Tricolor Munia	<i>Lonchura Malacca</i>		LC
42	Sarus Crane	<i>Antigone Antigone</i>	Guidae	VU
43	Wired Tailed Swallow	<i>Hirundo smithii</i>	Hirundinidae	LC
44	Bronze Winged Jacana	<i>Metopidius indicus</i>	Jacanidae	LC
45	Pheasant Tailed Jacana	<i>Hydrophasianus chirurgus</i>		LC
46	Long Tailed Shrike	<i>Lanius schach</i>	Laniidae	LC
47	Bay Backed Shrike	<i>Lanius vittatus</i>		LC
48	River Tern	<i>Sterna aurantia</i>	Laridae	VU
49	Common Tern	<i>Sterna hirundo</i>		LC
50	Jungle Babbler	<i>Turdoides striata</i>	Leiothrichidae	LC
51	Green Bee Eater	<i>Merops orientalis</i>	Meropidae	LC
52	Coppersmith Barbet	<i>Megalaima haemacephalus</i>	Megalaimidae	LC

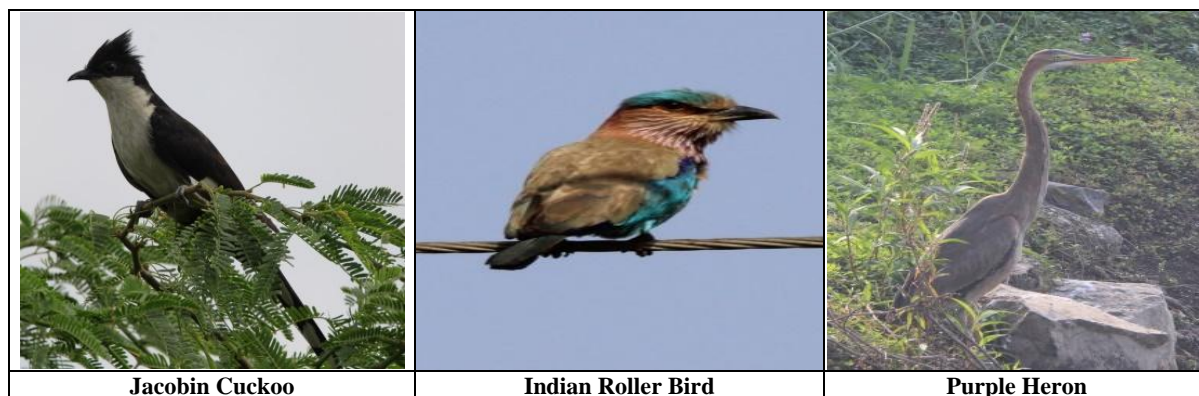
53	Indian Paradise Fly catcher	<i>Terpsiphone paradisi</i>	Monarchidae	LC
54	Yellow Wagtail	<i>Motacilla flava</i>	Motacillidae	LC
55	White Wagtail	<i>Motacilla alba</i>		LC
56	Paddy field Pipit	<i>Anthus rufulus</i>		LC
57	Asian Stonechat	<i>Saxicola maurus</i>	Muscicapidae	LC
58	Pied Bush Chat	<i>Saxicola caprata</i>		LC
59	Indian Robin	<i>Saxicoloides fulicatus</i>		LC
60	Oriental Magpie Robin	<i>Copsychus saularis</i>		LC
61	Purple Sunbird	<i>Cinnyris asiaticus</i>	Nectariniidae	LC
62	Purple Rumped Sunbird	<i>Leptocoma zeylonica</i>		LC
63	Indian Golden Oriole	<i>Oriolus oriolus</i>	Oriolidae	LC
64	Black Hooded Oriole	<i>Oriolus xanthornus</i>		LC
65	House Sparrow	<i>Passer domesticus</i>	Passeridae	LC
66	Little Cormorant	<i>Microcarbo niger</i>	Phalacrocoracidae	LC
67	Grey Francolin	<i>Francolinus pondicerianus</i>	Phasianidae	LC
68	Indian Peafowl	<i>Pavo cristatus</i>		LC
69	Baya Weaver Bird	<i>Ploceus philippinus</i>	Ploceidae	LC
70	Black Breasted Weaver Bird	<i>Ploceus benghalensis</i>		LC
71	Rose - Ringed Parakeet	<i>Psittacula krameri</i>	Psittacidae	LC
72	Alexandrine Parakeet	<i>Psittacula eupatria</i>		NT
73	Red Vented Bul Bul	<i>Pycnonotus cafer</i>	Pycnonotidae	LC
74	Red Whiskered Bul Bul	<i>Pycnonotus jocosus</i>		LC
75	Grey Headed Swamp hen	<i>Porphyrio poliocephalus</i>	Rallidae	LC
76	White Breasted Water hen	<i>Amaurornis phoenicurus</i>		LC
77	Back Winged Stilt	<i>Himantopus himantopus</i>	Recurvirotridae	LC
78	Common Sandpiper	<i>Actitis hypoleucos</i>	Scolopacidae	LC
79	Marsh Sandpiper	<i>Tringa stagnatilis</i>		LC
80	Wood Sandpiper	<i>Tringa glareola</i>		LC
81	Common Myna	<i>Acridotheres tristis</i>	Sturnidae	LC
82	Bank Myna	<i>Acridotheres ginginianus</i>		LC
83	Brahminy Starling	<i>Sturnia pagodarum</i>		LC
84	Rosy Starling	<i>Pastor roseus</i>		LC
85	Eurasian Spoonbill	<i>Platalea leucorodia</i>	Therskiornithidae	LC
86	Glossy Ibis	<i>Plegadis falcinellus</i>		LC
87	Black Headed Ibis	<i>Threskiornis melanocephalus</i>		NT
88	Red Napped Ibis	<i>Pseudibis papillosa</i>		LC
89	Grey Francolin	<i>Francolinus pondicerianus</i>	Turnicidae	LC
90	Hoopoe	<i>Upupa epops</i>	Upupidae	LC

Key for the table: LC - Least Concern, NT - Near Threatened, VU - Vulnerable
(Table - I Reference - [9, 10, 11, 12, 13, 14])

Photo Plate: 01 Photographs of some bird's species clicked during study period



		
Wired Tailed Swallow	Bronze Winged Jacana	Sarus Crane
		
Glossy Ibis	Black Headed Ibis	Brahmny Myna
		
Egrets (Different Species)	Green Bee eater	Shikra
		
Spot-Billed Duck	Weaver Bird	Hoopee
		
Coppersmith Barbet	White Throated Kingfisher	Black Winged Stilt



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