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Study on Aquatic Birds of Moradabad City, Uttar Pradesh, India

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Abstract

Aquatic birds are those birds, which live in and around water medium or on shores. They feed on mud, sand for aquatic insects, arthropods. Moradabad city is well surrounded by riverine systems (Ramganga River, Gagan River, Dhela River) and has multiple wetlands with a long stretch of shoreline around Ramganga River. Waders are found in these aquatic bodies and shores. The species of different families were found in the study period.

Keywords: Aquatic avian fauna, Moradabad city, waders and shorebirds

Introduction

Waders or shorebirds are birds that are found wading along shorelines and feed on small aquatic insects and crustaceans. They mainly come under the order Charadriiformes. The term wader and shorebirds are used for aquatic birds which comprise Herons and Storks. Wetlands and coastlines support around 210 species of wading birds. Waders are ecologically dependent on wetlands for their feeding and breeding ^[1].

These birds help in maintaining the nutrient flow through the food chain and food web, seed dispersal and they act as scavengers also. There are many beautiful birds which add beauty to the habitat where they live. These birds also have economic value as they are also used as food ^[2].

The present study reports on the diversity of waders in Moradabad and nearby areas, following a 12-month survey (2023-2024). Moradabad city lies between 28°21' to 28°16' North Latitudes and 78°4' to 79° East Longitude. This district of western Uttar Pradesh occupies a geographical area of 3493 Sq. km. Though an important agrarian market, Moradabad is famous worldwide for glassware & metal (brass, Iron, Aluminium) works, handicrafts, electroplating, and sugar industry.

Moradabad is well surrounded by riverine systems (Ramganga River, Gagan River, Dhela River) ^[3] and has multiple wetlands with a long stretch of shoreline around Ramganga River (Fig-1). Waders are found in these aquatic bodies and shores of different families were found in the study period.

Materials and Methods

Observations of waders of Moradabad city were wetland and shoreline of rivers were found was done by using transect method and point count method ^[4]. Observations were made with the aid of binoculars and data was recorded along with photography using DSLR camera during 2023-24 ^[5]. The birds were identified using standard field guide books of Ali & Ripley ^[6].

Results and Discussion

Approachable areas of Moradabad city were visited for finding waders and aquatic birds. Birds were found in abandoned land, wetlands, agricultural lands, river shores, ponds, waterbodies even in drainage and sewage systems. These birds were found in quiet numbers ranging from one to flock of 20-25.

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Fig 1: River system of Moradabad

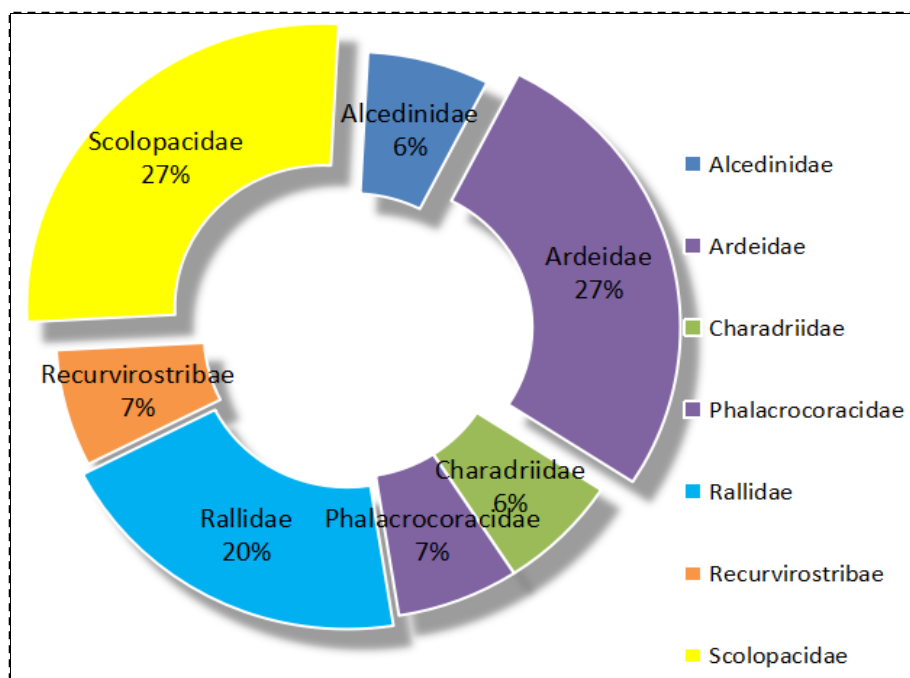


Fig 2: Pie Chart showing the Species of different Families

Table 1: Urban Waders of Moradabad City found during 2023-24

Sr. No.	Name of Wader	Zoological Name	IUCN	Family
1	Black Winged Stilt	<i>Himantopus</i>	LC	Recurvirostridae
2	Cattle Egret	<i>Bubulcus ibis</i>	LC	Ardeidae
3	Common Kingfisher	<i>Alcedo atthis</i>	LC	Alcedinidae
4	Common Moorhen	<i>Gallinula chloropus</i>	LC	Rallidae
5	Common redshank	<i>Tringa totanus</i>	LC	Scolopacidae
6	Common Sandpiper	<i>Actitis hypoleucos</i>	LC	Scolopacidae
7	Indian Pond Heron	<i>Ardeola grayii</i>	LC	Ardeidae
8	Eurasian Moorhen	<i>Gallinula Cholorpus</i>	LC	Rallidae
9	Little Egret	<i>Egretta garzetta</i>	LC	Ardeidae
10	Little stint	<i>Calidris minuta</i>	LC	Scolopacidae
11	Little/Indian Cormorant	<i>Microcarbo niger</i>	LC	Phalacrocoracidae
12	Red Wattled Lapwing	<i>Vanellus Indicus</i>	LC	Charadriidae
13	Western Egret	<i>Ardear Ibis</i>	LC	Ardeidae
14	White Breasted Waterhen	<i>Amouornis Phoenicurus</i>	LC	Rallidae
15	Wood Sandpiper	<i>Tringa glareola</i>	LC	Scolopacidae

From pie chart (Fig-2) total 15 Species of waders representing 7 families were recorded from different sites of Moradabad City. Out of these 15 Species, Scolopacidae & Ardeidae family has maximum species, while two families i.e. Alcedinidae & Charadriidae has minimum species respectively. There were many species which are seen in flocks like stilts, egrets, lapwing but some species are seen in pairs or alone like kingfisher, waterhen, moorhens, cormorants [7, 8]. These waders make a panoramic view to watch in Ramganga River of different sites of Moradabad city. These birds were also found tamed for domestic and economic purpose. They are utilised as food and their byproducts in the form of eggs preferably.

No such research work was observed from perusal of literature from the city. However, e- bird have also reported above waders in the checklist. It is advisable to prevent crouching of aquatic water bodies and turning them to land fills for urbanisation, which affects their habitat and thus total ecosystem. These wetlands should be conserved for free feeding, breeding by these waders. Pollution free environment is also a prime requisite for making their ecosystem favourable for their living [9, 10]. Ill practice like over mining should not be encouraged much to make their habitat disturbance free.

Conclusion

The study of wader diversity in Moradabad highlights the importance of wetland ecosystems for these birds. Fifteen species across seven families were recorded, with many observed in flocks, contributing to the region's ecological balance. Conservation of these habitats is essential for maintaining the feeding, breeding, and overall well-being of waders, while also protecting their role in the environment and local economy. Urbanization and pollution pose significant threats to their habitat, necessitating sustainable practices.

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