

BIODIVERSITY IN AND AROUND SERAMPORE COLLEGE CAMPUS

Volume I. BIRDS



The Team

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(from left to right)

The book portrays the outcome of a year-long study on the occurrence of bird species in a semi-urban setup in and around the campus of Serampore College in the district of Hooghly, West Bengal. The semi-natural spot is just beside the river Ganges, mostly free from the deam and bustle of typical urban environment and also relatively free from human disturbances. The authors Shuchismita Das, Sankalita Sarkar, Ishita Chongder, Akash Dutta, Sohini Saha, Shreya Mukherjee and Meghma Ghosh undertook the study as a team of enthusiastic and dedicated post-graduate students under the guidance of Dr.Subhadeep Sarker, Associate Professor, Department of Zoology, Serampore College.

Biodiversity in & around Serampore College Campus

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[Volume I. BIRDS]

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FOREWORD

Birds evolved from reptiles through evolution about 150 million years ago. From the first moment of emergence birds were fortunate to have wings which helped them to spread in almost all habitats all over the world. Birds play an important role in maintaining ecosystems for posterity. Their contribution as pollinators, pest regulators, seed dispersers, apart from being part of a vital food chain are really invaluable. They are representative of environmental health and act as ecological litmus paper. These millions of birds are best known to appeal to our mind and soul with their beauty and songs.

At present nearly 11,000 species of birds have been documented in the world. Among them around 1300 species are known from India and about 806 species from West Bengal. It is unfortunate enough that over a hundred bird species have gone extinct in historical times, but in recent times human caused extinction and population decline of birds are a matter of great concern.

From the ancient times to present days people are much more interested in birds than any other animals and bird watching is a passion to many. But the need of the time is to educate people at large and inspire them to support the birds with their little green actions. The action would be started with field visit, bird watching, identification and finally preparation of an inventory of bird species present in the area studied. For such acts, besides expert guide in the field a ready to identify handbook is needed by the beginners for identification of bird species. In view of the fact, I am very happy to know that the eminent teacher and students of the department of Zoology, Serampore College, West Bengal, have prepared a handbook on birds recorded in more than two hundred years old college campus of about 12 acres. The book includes morphological characters essential for species level identification along with colored photographs of 62 bird species under 37 families. I am sure, this valuable book will be of great help to the budding naturalists, bird watchers and common people to identify the birds present in their locality. Finally, I would like to congratulate the authors for their tremendous effort in bringing out the useful book.



Dated: 12th April, 2022

Dr. Asok Kanti Sanyal

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BIRDS AND BIRDING: OUR EXPERIENCE

Subhadeep Sarker

Of all the planets of the solar system, our dear Earth is so far the only one to harbour life, which blossomed on the face of this blue planet for the first time millions of years back. Since then, life diversified into innumerable forms and explored all possible habitats and spaces. But very few could venture into air successfully and out of all such forms that have ever existed, birds probably are most fascinating in terms of forms and functions. Hence it is always rewarding to take a look at the incredible diversity of avian forms which not only inspires and enriches our cultural and aesthetic self but also offers new insights into marvels of evolutionary innovations and success. Squeezing out little bit of time far from the drudgeries of busy city life in pursuit of our winged friends can always produce a refreshing, rich and unique experience which remains ever-fresh in our memories.

THE IMPORTANCE OF BIRDS IN OUR ENVIRONMENT

The roles of birds in ecosystem are varied; for example, they are very efficient agents of pollination, seed dispersal and pest control. They are integral part of naturally occurring food webs. They are also important agents of immense conservation values. Often the appearance and presence of birds in certain areas and ecosystems indicates the health of concerned environment and thus they act as bio-indicators. These days we often talk about ecosystem services which are natural processes that benefit humans. Birds contribute the four types of services recognized by the UN Millennium Ecosystem Assessment? provisioning (for example food), regulating (for example, participating in the cycling of nutrients); cultural (for example, in our country, the peacock represents the beauty of nature); and supporting services (for example, birds serve as pollinators for crops and pest control agents). Characteristics of most birds make them quite special from the perspective of ecosystem services. Migratory species link ecosystem processes and fluxes that are separated by great distances and times. However, the economic value to humans contributed by most, if not all, of the supporting services is yet to be quantified.

Birds maintain a symbiotic relationship with many species of trees and shrubs within an ecosystem in which each partner gets benefited from the other. In the case of birds, they nest or perch on and eat the fruits and berries of the trees and shrubs, and in turn help the tree to propagate by spreading the seeds throughout a large area in their droppings. In some forest ecosystems, tall flowering trees are exclusively dependent on the intervention of birds for their propagation. Thus birds play important roles as agents of seed dispersal in many different ecosystems. Sunbirds pollinate various nectar-producing plants, transporting pollen on their beaks and feathers from one flower to the next.

Birds, like bees and other insects, greatly help in the process of pollination. A number of flowering plants have flowers that are structurally modified for bird pollination. These flowers are typically bright-colored (often red) which is visible to birds, and produce large quantities of sugar-rich nectar on which the visiting birds feed. Nectar sippers help pollinate flowers they visit for nectar.

A number of species of birds consume huge quantity of insects, many of which are considered pests. To feed their young, birds catch huge quantities of adult and larval insects, which are high in protein

চিল

BLACK KITE (*Milvus migrans*)



Order: Accipitriformes **Family:** Accipitridae

Description: Large brown hawk with fork tail, particularly observed while in flight. Variable whitish crescent at primary bases on underwing, and a pale band across the median coverts on the upperwing. Head and upper parts in juvenile has broad whitish or buffish streaking. Extremely agile in flight with frequent turning, twisting of tail, manoeuvring of arched wings and stooping.

Sexual dimorphism: Not observed

Food Habit: Omnivorous; garbage, dead rats and mice, earthworms, insects, lizards, nestlings of smaller birds, disabled or young birds.

Nesting Behaviour: Build untidy nests in a large tree or on roof of a building by sticks, iron wire, tow, rags and twigs which in turn lined with moss.

Breeding Season: January and February in winter.

Occurrence: Open woodland, gardens and cultivation. They keep concealed when not feeding and found in treetop in early mornings.

Status: Least Concern (IUCN Red List)

Observed on the trees and also soaring in the sky,
in and around college main campus and surroundings.

মোহনচূড়া

EURASIAN HOOPOE (*Upupa epops*)



Order: Bucerotiformes **Family:** Upapidae

Description: Mainly rufous-orange to orange-buff, with black and white markings on back, wings and tail. Presence of black-tipped fan-shaped crest which is usually held flat but occasionally spread like a fan. Bill long, slender and gently curved downward.

Sexual Dimorphism: Not Observed

Food Habit: Insects, grubs and pupae.

Nesting Behavior: Builds nest in natural tree-hollow or hole in wall or ceiling of a building, often lined with straw, rags and rubbish in an untidy fashion.

Breeding Season: February to May.

Occurrence: Singly or pairs, usually on the ground in lightly-wooded country. Open country, cultivation and villages.

Status: Least Concern (IUCN Red List)

Observed on the trees beside Ganga, adjacent to college campus and also on ground inside the main campus of the college.

লালঠেঙি

BLACK WINGED STILT (*Himantopus himantopus*)



Order: Charadriiformes **Family:** Recurvirostridae

Description: Adult has slender body with white head, neck and underside, contrasting with black upperparts. Juvenile has browner upperparts with buff fringes. The bill is straight and slender. Legs are disproportionately long and pinkish-red in colour. Summer and winter plumage differ somewhat in colour.

Sexual Dimorphism: Not very prominent but there is a difference in colouration.

Food Habit: Aquatic insects, mollusks, tadpoles and small fish.

Nesting Behaviour: The nest is a depression or shallow scrape positioned on hard ground near water bodies or a raised platform of pebbles in shallow water lined with grass.

Breeding Season: April to August

Occurrence: Marshes, salt-pans, tidal creeks, village ponds, also riverside.

Observed along the bank of Ganga, adjacent to college campus.
They are winter visitors in this region.