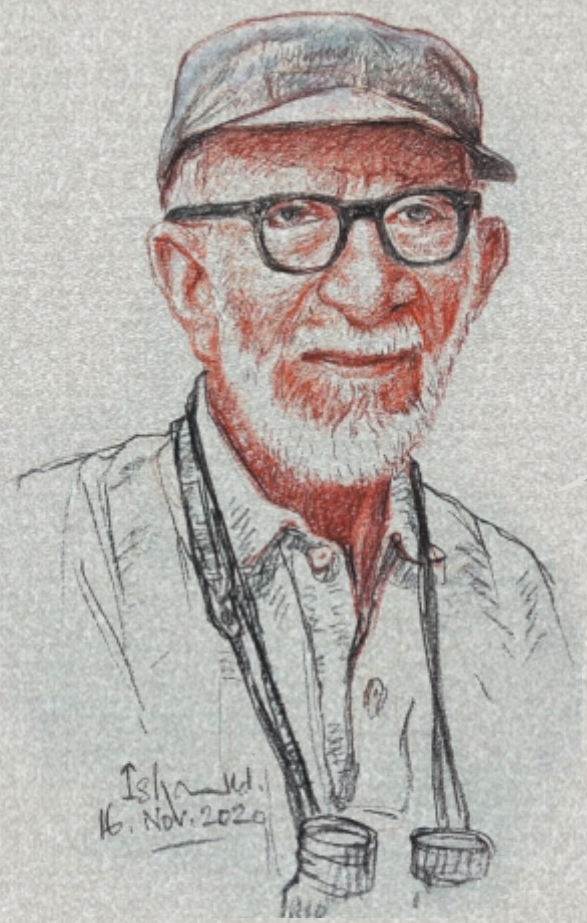
DECEMBER 2020

Monthly Bulletin

VOLUME XLIX, NO. 10



Birdman of India

THE ASIATIC SOCIETY
(AN INSTITUTION OF NATIONAL IMPORTANCE)
1 PARK STREET ● KOLKATA-700016

Contents

MONTHLY BULLETIN, DECEMBER 2020

AN ORDINARY MONTHLY GENERAL MEETING OF THE ASIATIC SOCIETY WILL BE HELD ON MONDAY, 7TH DECEMBER 2020 AT 5 PM THROUGH VIDEOCONFERENCING

MEMBERS ARE REQUESTED TO CLICK THE FOLLOWING LINK
TO ATTEND THE MEETING
https://meet.google.com/gwj-ycnt-nkb

Agenda

1. Confirmation of the Minutes of the Ordinary Monthly General Meeting held on 7th September 2020 at 5 PM.
2. Notice of Intended Motion, if any, under Regulation 49(d).
3. Matters of current business and routine matters for disposal under Regulation 49(f).
4. Consideration of Reports and Communications from the Council as per Regulation 49(g).

(S B Chakrabarti)
General Secretary

The Asiatic Society
1, Park Street
Kolkata 700016
Dated the 15th day of November 2020

The Asiatic Society

Founded in 1784

(An Institution of National Importance declared by an Act of Parliament)
and
(An Autonomous Organization under Ministry of Culture, Government of India)

Patron : Hon'ble Governor of West Bengal

Ref. No. : AS/Election/2020/63 Date : 23/11/2020

Notice of resumption of Election

In continuation to Election Committee's earlier Notification No AS/Election/2020/24 dated 12.03.2020, a further Notice is hereby given that:

(1) All the processes associated with the election of the Office-bearers and other Members of the Council of the Asiatic Society, Kolkata for 2020-22, which were put on hold in view of the extraordinary circumstances created by the threat posed by Novel Corona virus [COVID -19] vide Notification No AS/Election/2020/29 dated 20.03.2020 and Notification No AS/Election/2020/44 dated 06.07.2020 will resume with immediate effect following all the precautionary measures relating to COVID 19.

(2) Nomination Forms will be available from Shri Arupratan Bagchi, Administrative Officer of the Society or his representative at the Administration Section of the Asiatic Society at 1 Park Street, Kolkata -700016 on all working days from 24.11.2020 (Tuesday) to 04.12.2020 (Friday) between 12:00 hrs to 15:00 hrs and may be submitted by the candidate or his proposer to the Administrative Officer of the Society or his representative at the abovementioned place between 12:00 hrs to 15:00 hrs on any working day not later than the 04.12.2020 (Friday) up to 15:00 hrs.

(3) The Nomination forms received by the office of the Asiatic Society will be taken up for scrutiny at Humayun Kabir Hall of the Society at 1 Park Street, Kolkata -700016 on 05.12.2020 (Saturday) at 13:00 hrs.

(4) Notice of withdrawal of candidature may be delivered by a candidate or his Election Agent to the Administrative Officer of the Society specified or his representative at the Administration Section of the Asiatic Society at 1 Park Street, Kolkata -700016 on any working day before 15:00 hrs of 09.12. 2020 (Wednesday).

(5) List of validly nominated candidates as well as the final list of contesting candidates will be published in the Office Notice Board on 09.12. 2020 (Wednesday) after 15:00 hrs.

(6) The polling will take place on 19.12.2020 (Saturday) at the premises of the Asiatic Society, Kolkata at 1 Park Street, Kolkata -700016 from 10:00 hrs. to 16:00 hrs.

(7) The counting of votes will commence on 19.12.2020 (Saturday) from 18:00 hrs. onwards at the premises of the Asiatic Society, Kolkata at 1 Park Street, Kolkata -700016 and if necessary, the counting of votes will continue on 20.12.2020 (Sunday) from 11:00 hrs.

Date: 23rd November, 2020
Place: Kolkata

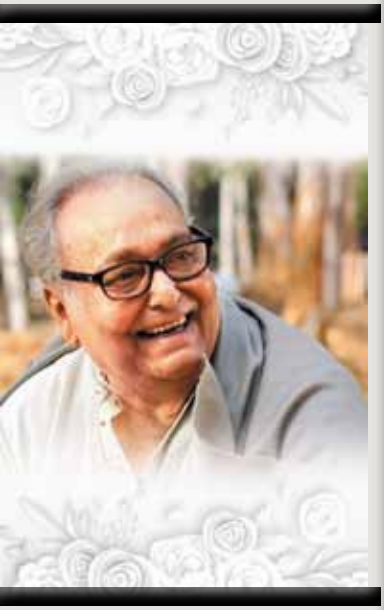
23/11/2020

Member, Election Committee
The Asiatic Society, Kolkata
& Authorized Signatory

1 Park Street | Kolkata-700016 | Phone : 2229-0779, 2249-7250, 2229-7251 | (D) 2229-3993 Fax : 91-033-2217-2355
website : www.asiaticsocietykolkata.org | e-mail : gs.asiatic@gmail.com / theasiaticsociety@gmail.com

From the Desk of the General Secretary

In Memoriam



Soumitra Chatterjee
(19.01.1935-15.11.2020)

Dear Members and Well-wishers,

Please accept our Greetings for all the major festivals of all communities during these autumn months. After an interregnum during October-November, the Monthly Bulletin of the Asiatic Society is back on its schedule still carrying the CORONA concussion. While the month of December is pregnant with birthdays of a number of celebrities in the field of Science, Literature and Humanities disciplines in our country as well as in other parts of the world, this is also a month to remember certain important occasions which had their far reaching socio-psychological impact on pan-human culture and civilization. We are not yet out of our wounds caused by the declaration of world war (08.12.1941) or Bhopal gas tragedy (02.12.1984) or demolition of Babri mosque (06.12.1992) on the one hand, we feel inclined to be stimulated by the historical decision of Viceroy Lord Bentinck to stop *sati* immolation (04.12.1829) or Kyoto Protocol to control emission of greenhouse gas by 150 countries of the world (11.12.1997). The World Human Rights Day (10th December) appeals to our conscience a sense of re-assured judgment for moral values.

Since this month's Bulletin highlights the context of human appreciation of Avian Culture, let me relate the Asiatic Society's historical contribution to this subject. The publication of the Centenary Review of the Asiatic Society (1784-1884) in its Chapter III, Section I, P.N. Bose writes, …."His (E. Blyth) Catalogue of Birds in the Asiatic Society's collection was published in 1849" (page 62). Again in page 64 he mentions about Colonel S.R. Tickell as "one of the pioneers of Indian Ornithology", and so on. Therefore, it seems that the archival source of our Society is still very rich to be explored even now. Of course, we cherish in our memory Ornithologist Salim Moizuddin Abdul Ali, popularly known as Salim Ali (12.11.1896 – 27.07.1987), who is remembered, among other achievements, for his auto-biographical account entitled *The Fall of a Sparrow* (Oxford University Press, 1985). I would like to share with you that our Society has very recently published *Flying Feathers: Colour Drawings of Birds in the collection of the Asiatic Society (1810-1815),* edited by Professor Asok Kanti Sanyal, the Biological Science Secretary of the Asiatic Society. This book was released in digital mode on 04.11.2020 by Shri Soumen Mitra, IPS.

Friends, you will feel happy to note that we inaugurated on 09.11.2020 the Digital Standee of the Society which will display our current academic programmes and other important events.

The Election Committee is initiating to complete the pending election process for the new Council for 2020-2022. This month's Ordinary Monthly General Meeting will be organized in virtual mode on 07.12.2020 at 5 p.m.

Friends when the manuscripts of this Bulletin were nearly ready for press we received the utmost shocking news of passing away of Soumitra Chatterjee. No word is matching enough to express our collective grief for the loss of this iconic cultural vanguard of Bengal in particular. The Asiatic Society awarded Soumitra Chatterjee with Priya Brata Roy Gold Medal in 2010 for his achievements in the field of drama. We pay our respectful homage to the departed soul and remain in sympathy with the members of the bereaved family.

Let us hope for the best time to come soon. Please keep well and safe.

With regards to you all.

(S. B. Chakrabarti)
General Secretary

Tulika Sen

(08 May 1926 -18 October 2020)

Distinguished Physical Anthropologist Dr Mrs Tulika Sen passed away at 20:00 hours on 18 of October 2020 at her Kolkata residence, *Saptaparni.* She was 94+ years old and was suffering from complications mainly due to aging for the last few months. She was born on the 8 of May 1926 in Dhaka District of pre-independence India and was the youngest of seven siblings. Dr Sen's mother's name is Late Charubala Sen; and father Late Surendra Nath Sen was a judge during British period. She was married to Late Dr Dilip K. Sen, former Director of Anthropological Survey of India on 14 June 1951. Her husband always encouraged her studies and Professoressional life. Though she did not have any child of her own, she left behind her countless children who really enjoyed her motherly affection and now miss her badly.

Dr Tulika Sen finished her schooling from Sir Ramesh Mitter Girls' High School in Kolkata and graduation from the University of Calcutta in 1946. After finishing her post-graduation from the same university in 1948, the next year she joined as a junior technical assistant in the Anthropological Survey of India. She served there till 1951 and got admission at the Harvard University with scholarship and finished her masters in 1955. She was the gold medallist in both BSc and MSc examinations in the University of Calcutta. She earned the distinction of being the first Indian lady graduate from Radcliffe College, Harvard. She returned to India and during 1956-58 she worked in one ICMR project on growth and development of children at Lucknow centre. From 1958-63 she was a lecturer in Anthropology in Loreto College, Lucknow.

During July 1965 and July 1968 she had a fellowship from the University Grants Commission and carried out research on growth and development. She received her PhD degree in Anthropology from the University of Calcutta in 1971 for her work on Growth and Development of Bengalee Girls under the guidance and supervision of Professor Dr M N Basu. This piece of work is published as a book by the Anthropological Survey of India.

Dr Sen was appointed as a lecturer in Anthropology in the University of Calcutta in 1972 and retired as Reader in 1991. She was closely associated with the Indian Anthropological Society, The Asiatic Society, Indian Institute of Bio-Social Research And Development (IBRAD) and the Association of Gerontology (India).

Her field of research was demography; biosocial Anthropology, growth, development and nutrition of children; fertility and associated factors; Physiological and Physical Changes in Male and Female Populations in Different Environmental Setting (ICSSR Project) etc.

Dr Tulika Sen has several papers presented in national and international seminars and published by the organisers. She had authored two books and edited three books. She attended various seminars and conferences; she also visited several countries for her Professoression. She had very close working relation with Biological Anthropologist Professor DF Robert and Eleanor Kathleen Gough Aberle (British Anthropologist).

My association with her began in the year 1974, when our undergraduate classes started in the month of January at the University Colleges of Science at Ballygunge Campus. We became more close during our MSc classes, especially at the time of dissertation, and our

intimacy continued till the last days of her life. I was out of West Bengal almost throughout my service life — she used to miss me a lot. I used to see her whenever I came home. She felt very happy to meet her students. March this year my visiting her became infrequent due to the recent pandemic. These days a few of her students and I used to talk to her maid, Sachi, who was with her for about 50 years, as Dr Sen was not in a position to talk over telephone. I could manage a visit to meet her a few weeks before her ultimate departure.

Besides being a Proficient Anthropologist and a great teacher; she was a good human being with a great soul, pleasant behaviour, affectionate attitude towards all she knew. She was a kind-hearted, straightforward and courageous personality. Her love for animals, especially cat, was well known, even she cared for the plants deeply. She used to nurture her students with motherly affection. Feelings of a few individuals are worth mentioning here-

I remember we - four students went for dissertation work with her to Medinipur District and put up in a bungalow under fishery department. One day it was the birthday of Sangeeta - we wished her and left for field work. On our return, to our great astonishment, we found Dr Sen in the morning ordered for prawns and then started preparing a great recipe for celebrating her birthday. I still remember the size of those prawns, our happiness and above all Dr Sen's motherly affection.

Rumjhum Ray Chaudhuri
Independent Consultant

Homage

When people succeed, it is because of hard work. Luck has nothing to do with success.

Diego Maradona
(30.10.1960-25.11.2020)

Bird's-eye view of an Artist and Art Historian

Indian concept of fine arts like Drawing, Painting and Sculpture which broadly can be called Visual arts is based on idealism of "Sadanga" elucidated in booklets by Abanindranath Tagore. Against this, the approach to Western Visual Art is basically naturalistic & realistic which started in Greek-Art, proliferated in different country and came to India through Gandhara in Afghanistan creating a new visual language, making a corss-cultural fertilisation of naturalistic and at the same time idealistic.

Falcon on Perch
painted by Nadir-ul-Asr Mansūr,1618-19.

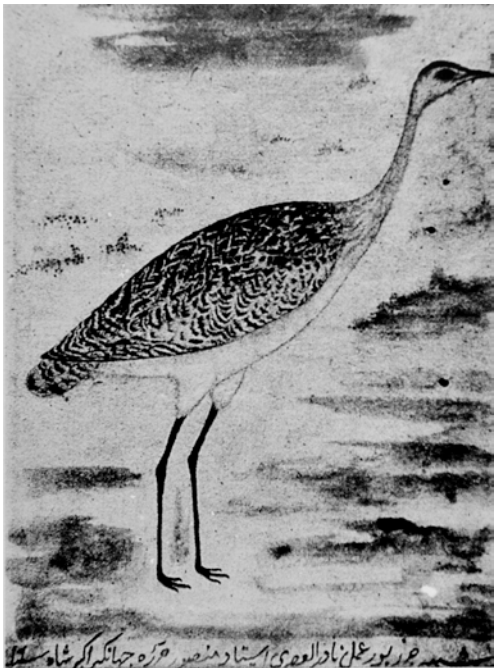
The tradition went on, balancing naturalism and idealism side by side. We do not have ample example of pictorial art save and except the high standard of Ajanta-paintings and the other sculptural art of the time. We have very sensitive example of near-realistic sculptures in the south, starting from Amarabati's Salavanjika to Chola-bronzes of free-standing sculptures, very realistic and sensuous in character, ultimately dwindled away under various foreign invasion and internal squabbles to acquire greater hegemony and power. The Mughal traditions were driven towards the East in Bihar and Bengal. The artists carried on the same Mughal tradition and depicted pictures of Nawabs and their concubines, flowers and foliages, their pets, elephants and horses with similar refinement in colour and compositional arrangements.

However, the Naturalistic approach towards drawing and painting in India, actually started by Mughal Monarchs from 15th century onwards, specially by the Mughal Monarch Akbar the Great, who personally took special interests to visit the Royal Atelier (Studios) frequently to encourage indigenous artists to work together with the artists from Iran in Persia. They painted mostly portraits of royal personalities along with different animals, birds, flora and fauna with utmost dexterity and details along with *Hamzanama*, an illustrated story book of Persian origin. They had naturally made a lot of give and take that evolved a distinct style which is called and adorned by the nomenclature as Mughal School of Paiting or Mughal art. On the other hand, Rajasthan and the surrounding Hill stated flourished

A Pair Of Wild Fowls, painted by Mansūr, 1600-25.

and produced incomparable miniature in Jodhpur, Kishanganj, Kangra, Bikanir, Kota and so on after Aurangzeb closed down the Mughal Atelier. Under the circumstances the tradition of Mughal miniature paintings were going on. But during the prime period of Mughal miniature painting, Ustad Mansūr appeared in the stage who specialised in drawing & painting of the birds and animals, has left behind some excellent works like pet-Falcon, Turkey-cock, Mynas, White-Heron, Vultures and pigeons, specially falcons chained on a bird-stand are unique and unparallel. Every small details of feathers, legs, claws, beaks and keen-eyes are depicted with nimble touches of extra-fine brushes, which are yet to be surpassed by any artist of the East and the West till today. Some of them are kept in the World-famous Museums with much adorn and care. This high pictorial style percolated and degenerated to Popular Mughal Art.

Now under the changed socio-political situation under British Rule, many artists from London came to India for painting the exotic people & Nature, having formal training in Europe, of course, for earning sumptuous living. Under such circumstances, Indian artists under the dictates of their masters worked together with their European counterparts, drew and painted Indian Birds and Animals and also various flora and fauna for different survey offices. At this point of time, The Asiatic Society started to study and search everything Asian as per the view of



Red Bustard, painted by Nadir-ul-Asra Alstad Mansur (inscribed in Jahāṇgīr's hand), 1619.

Himalayan blue throated barbet, painted by Nadir-ul-Asr Ustad Mansūr, 1615-20

Forktail *(Enicurus scouleri),* painted by Nadir-ul-Zaman Abul Hasan, 1610-15.

William Jones, collected a catalogue of Bird Study compiled and drawn by the English Artist Hodgeson, which is now kept in the Museum of the Society.

The largest extant of Mansūr's nature studies covers a wide variety of avifauna from the tiny Oriental White-eye to the majestic Barbary Falcon, from the humble common Myna to the rare Siberian Crane and not excluding domesticated birds like the pigeon, hen or turkey. His skill in capturing their characteristic poses as well as the finer details of their plumage and other features places him among the greatest ornithological artists of all times.

The common Myna is a familiar perky, well-groomed dark brown bird with bright yellow bill, legs and bare skin around eyes. A large white patch in wing is conspicuous in flight. In this picture present a wonderful study of two birds closely observed by the artist. They are lively and animated, both looking keenly at something or someone to the right, the upper one tuming its head back and the lower one looking straight.

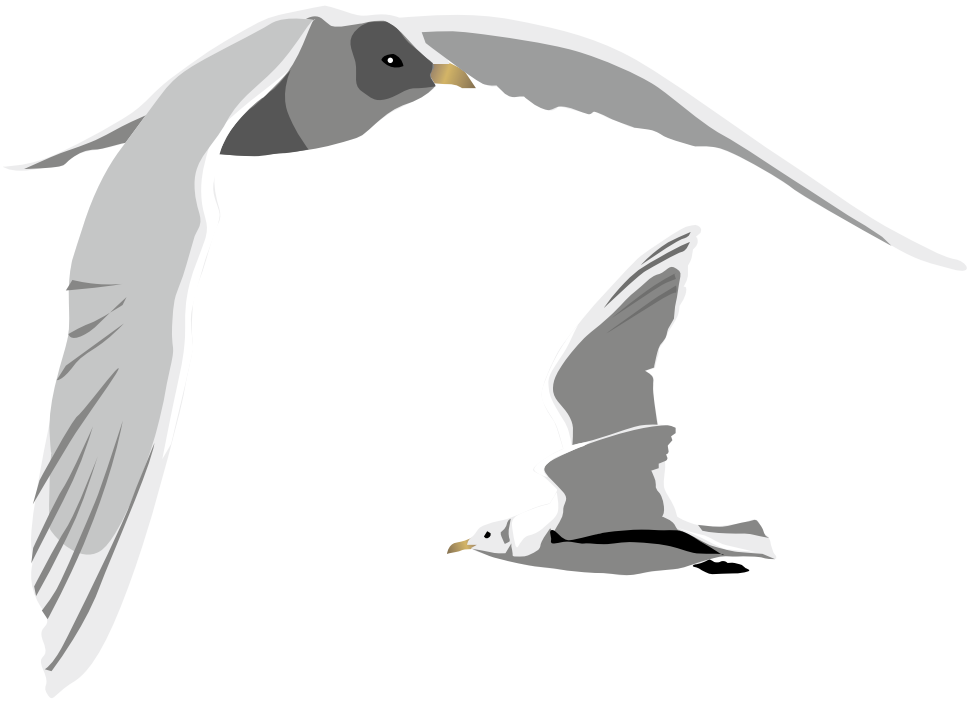
It is quite reasonable to think that the tradition of ustad Mansūr still existed in our country, the indigenous artists worked together with European artists to prepare this wonderful catalogue of Hodgeson, now under review.

Somnath Mukherjee

Somnath Mukherjee

Isha Mahammad.

Isha Mahammad



Sir William Jones on the Study of Birds

Arun Bandopadhyay
Historical & Archaeological Secretary, The Asiatic Society

Sir William Jones

Sir William Jones (1746-1794), the founder of the Asiatic Society in Calcutta, is most well-known as the leading oriental scholar, linguist and jurist of the time. Indeed, it was he who paved the way for many discourses which were stay put within the academic circles of the Society for many years to come. However, very few people know that his intervention in the studies of history of Nature, particularly the studies of the evolution of animals, birds, geological features and minerals, was of seminal significance. It also often touched on the history of relevant thought and ideas as reflected in the emergence and development of an academic discipline as such.

The tenth lecture of Sir William Jones as given at the Asiatic Society in 1793, a year before his death, may serve as an illustration of the point. We are here concerned about the second section of the lecture covering the history of Nature, particularly Sir William's comments on history of the study of birds as included in the first paragraph of the second section of the lecture. Here very briefly Jones was discussing the ornithological studies prevalent in his time. Naturally, he referred to the studies of two leading experts at the global level, and made certain observations about their works, and significantly on the future directions of research on the subject.

Georges-Louis Leclerc, Comte de Buffon

The first of the two global experts cited by Sir William was Georges-Louis Leclerc, Comte de Buffon (1707-1788), who was a French naturalist and famous for his multi-volume natural history called *Histoire naturelle, generale et particuliere* published over a long period from 1749 to 1804. The volumes have been a precious possession of the Library of the Asiatic Society since inception, as they constitute the first modern attempt to systematically present all existing knowledge in the fields of natural history, geology and anthropology. Buffon was able to publish only 36 of the proposed 50 volumes of *Histoire naturalle* before his death, of which nine volumes were exclusively on birds (1770-83). An important section of the other volumes published during 1774-89 was *Epoques de la nature* (1778), containing the geological history of the Earth. As regards birds, Buffon did not make the scientific discussions monotonous, and interspersed them with philosophic discussions on the nature of birds and other related things.

The most important thing is that Jones was quite familiar with Buffon's arguments, as he knew French very well.

The second expert named was no less a person than Carl Linnaeus (1707-1778), the famous Swedish naturalist, who was the first to frame principles for defining natural *genera* and *species* of organisms, creating a uniform system of naming them. Thus Linnaeus's most lasting achievement was the creation of the binomial nomenclature, the system of formally classifying and naming organisms according to their genus and species. In contrast to earlier names that were made up of diagnostic phrases, binomial names conferred no bias about the quality or value of plant or any other species named. It seems that Sir William was also aware of the main tenets of Linnaeus's classification.

Three things immediately come to our mind when we read Sir William Jones's brief observation on the subject as reflected in his tenth lecture. First, though being convinced of the significance of the universal classification of species and promotion of research on the subject, he was prone to applying various ethical or 'humanistic' standards in scientific research. He particularly referred to the fact in which "a naturalist can occasion the misery of an innocent bird and leave its young, perhaps, to perish in a cold nest" in the name of research. Second, he was quick to take recourse to literary imageries to grasp the whole aspects of animal hardships because of human interference, and illustrated it by quoting an apt couplet of the tenth century Persian poet Firdausi, as cited by another Persian poet Saadi of Shiraz (1210-1291) about the life cycles of ants in the midst of hoarded grain. Finally, he was decidedly opposed to scientific examination of birds under artificial conditions, and a consistent proponent of leaving them "as far as possible, in a state of natural freedom". We know how the very lives of birds in their natural habitats and their migration have become a subject of very serious discussion in the history of ornithological studies in later years. We are now also concerned about the ecological aspects of their entire story, and their respective impact on the lives of birds or humans. It is really surprising that Sir William almost pre-supposed some of these arguments and feelings in an early stage of the development of the discipline.

Extracts from 10th Anniversary Discourse delivered by Sir William Jones on 28th February, 1793

COULD the figure, instincts, and qualities of birds, beasts, insects reptiles, and fish, be ascertained, either on the plan of BUFFON or on that of LINNEUS, without giving pain to the objects of our examination, few studies would afford us more solid instruction or more exquisite delight; but I never could learn by what right nor conceive with what feelings, a naturalist can occasion the misery of an innocent bird and leave its young, perhaps to perish in a cold nest, because it has gay plumage and has never been accurately delineated, or deprive even a butterfly of its natural enjoyments, because it has the misfortune

বাফনের (Buffon) কিংবা লিনিয়াস (Linnaeus) -এর পরিকল্পনা অনুসারে পশু, পাখি, পতঙ্গ, সরীসৃপ ও মাছের আকার, প্রবৃত্তি এবং গুণাগুণ নির্ণয় করতে পারলে আমাদের নিরীক্ষার বস্তুগুলিকে কোনো যন্ত্রণা না দিয়েই আমরা যতখানি নির্ভরযোগ্য নির্দেশ ও গভীরতর আনন্দ উপভোগ করব, অন্য কোনোরকম পদ্ধতিতে তা সম্ভব নয়। তবে আমি এই বিষয়টি কখনো বুঝিতে পারিনি যে, একজন প্রকৃতবাদী কোন অধিকারে এবং কোন অনুভূতি থেকে একটি অসহায় পাখিকে যন্ত্রনা দেয় এবং তার শাবকদের হয়তো বা একটি শীতল নীড়ে ফেলে রেখে বিনষ্ট করে। কারণ, পাখিটির এমন উজ্জ্বল পালক আছে যা যথাযথভাবে বর্ণিত হয়নি; এমনকি সে একটি প্রজাপতিকেও তার স্বাভাবিক আনন্দ থেকে বঞ্চিত

to be rare or beautiful; nor shall I ever forget the couplet of FIRDAUSI, for which SADI, who cites it with applause, pours blessings on his departed spirit :

Ah! spare yon emmet rich in hoarded grain:
He lives with pleasure, and he dies with pain.

This may be only a confession of weakness, and it certainly is not meant as a boast of peculiar sensibility; but, whatever name may be given to my opinion, it has such an effect on my conduct, that I never would suffer the *Cócila,* whose *wild native wood notes* announce the approach of spring, to be caught in my garden for the sake of comparing it with BUFFON'S description; though I have often examined the domestick and engaging *Mayanā,* which *bids us goodmorrow at our windows,* and expects, as its reward, little more than security: even when a fine young *Manis* or *Pangolin was* brought me against my wish, from the mountains, I solicited his restoration to his beloved rocks, because *I* found it impossible to preserve him in comfort at a distance from them. There are several treatises on Animals in *Arabick* and very particular accounts of them in *Chinese* with elegant outlines *of* their external appearance; but I met with nothing valuable concerning them in *Persian,* except what may be gleaned from the medical dictionaries; nor have I yet seen a book in *Sanscrit,* that expressly treats of them: on the whole, though rare animals may be found in all *Asia,* yet I can only recommend an examination of them with this condition, that they be left, as much as possible, in a state of natural freedom ; or made as happy as possible, if it be necessary to keep them confined.

Man and Nature, Sir William Jones
The Asiatic Society, pp. 134-5

করে, কারণ দুর্ভাগ্যক্রমে প্রাণীটি বিরল অথবা সুন্দর। আমি ফিরদৌসি'র এই যুগ্মটি কখন ভুলব না, সাদি যেটির উচ্চ প্রশংসা করে তাঁর প্রয়াত আত্মার উদ্দেশে আশীর্বাদ জানিয়েছিলেন।

আঃ সঞ্চিত শস্যে সমৃদ্ধ পিপীলিকাকে অব্যাহিত দাও
সে বেঁচে থাকে আনন্দ নিয়ে, আর যন্ত্রণায় তার মৃত্যু।

এটি হতে পারে একটি দুর্বল চিত্তের স্বীকারোক্তি এবং অবশ্যই এটিকে এক অদ্ভুত সংবেদনশীল দম্ভোক্তি বলে ভাবা হবে না। কিন্তু আমার এই মতামতের যে নামই দেওয়া হোক না কেন, আমার স্বভাবের উপর এর এমন প্রভাব আছে যে, জোরদার সুরেলা স্বরে বসন্তের আগমন বার্তা ঘোষণাকারী কোকিলকে 'বাফনের' বর্ণনার সঙ্গে তুলনা করার জন্য তাকে আমার বাগানে ধরে রাখা হবে, তা আমি সহ্য করতে পারব না। যদিও আমি মাঝে মাঝেই পোষা সুন্দর ময়নাপাখিকে নিরীক্ষণ করে থাকি, যে পাখিটি আমাদের জানালায় এসে নতুন দিনের আমন্ত্রণ জানায়, সে নিশ্চয় পুরস্কাররূপে শুধু নিরাপত্তার চেয়ে আরও কিছু বেশি প্রত্যাশা করতে পারে। এমনকি যখন একটি সুন্দর মনিস (Manis) অথবা প্যাঙ্গোলিন (Pangolin)কে পাহাড় থেকে আমার কাছে আনা হয়েছিল আমার ইচ্ছার বিরুদ্ধেই, তখন আমি তার প্রিয় পাহাড়েই তাকে ফিরিয়ে দেওয়ার সনির্বন্ধ অনুরোধ জানিয়েছিলাম, কারণ আমি বুঝেছিলাম, তার জায়গা থেকে দূরে তাকে কোনোভাবেই আরামের সঙ্গে রাখা যাবে না। আরবি ভাষায় প্রাণীদের সম্বন্ধে বহু রচনা আছে এবং এদের বাহ্য আকৃতির সুন্দর রেখাচিত্রসহ বিশেষ বর্ণনা আছে চৈনিক ভাষায়। কিন্তু চিকিৎসা অভিধান থেকে কোনোমতে খুঁটে নেওয়া কিছু অংশ ছাড়া পারসিক ভাষায় এই বিষয়ে কোনো মূল্যবান লেখা আমি পাইনি। এমনকি এদের সম্বন্ধে স্পষ্টভাবে আলোচনা আছে, এমন কোনো সংস্কৃত গ্রন্থও আমি পাইনি। শেষ পর্যন্ত বলা যায়, সমগ্র এশিয়ার বিরল প্রজাতির প্রাণীদের পাওয়া গেলেও তাদের নিয়ে গবেষণা একটি শর্তেই হতে পারে যে, তাদের যতটা সম্ভব মুক্ত পরিবেশে রাখতে হবে এবং যদি তাদের বদ্ধ রাখার প্রয়োজনও হয়, তাহলে তারা যেন যতটা সম্ভব খুশিতে থাকে।

এশিয়াঃ মানব ও প্রকৃতি, স্যার উইলিয়াম জোন্স, অনুবাদঃ অমিতা চক্রবর্তী,
দি এশিয়াটিক সোসাইটি, পৃঃ ১৯৪-৫

Birds and their Connoisseurs, as Revealed in the Annals of the *Journal of The Asiatic Society of Bengal* (1832 -1843)

Tapati Mukherjee
Library Secretary, The Asiatic Society

It is indeed a significant coincidence that the profound reverence and admiration, nurtured by the ancient Indian seers for flora and fauna, urging them to utter a note of caution against violation of environmental balance has found some semblance in a subtle form in a Alfred Hitchcock film "The Birds" (1963), which describes a fierce attack by birds on humanity arguably as a retaliation for endangering their lives through environmental pollution. It is a fact that birds had always captured imagination of our predecessors so much so that in *Muṇḍakopaniṣad* (3/1), an intricate philosophical tenet had been exemplified through a metaphor involving two birds. The first verse of the world emanated from Vālmīki, the first poet (*ādi kavi*) at the sight of a *Kraunca* bird, being slain by a hunter (*yat kraunca mithunād ekam avadhiḥkāmamohitam*). As a matter of fact, ancient Indian literature excels in picturesque description of various species of birds and their bonding with human world. Stringent punishment has been prescribed in the legal texts for any violence towards birds. The leading poets like Kālidāsa had referred to various kinds of birds like *Cakravāka, Sārasa* and many others. In medieval Indian literature and paintings too, the birds occupy an enviable status. Despite this general appreciation and curiosity about birds as a significant part of biodiversity, there is hardly a detailed list of various kinds of birds and their generic classification etc. As such Ornithology had not taken a proper shape in India. This lacuna has been made up with from a rather unexpected quarter — The Asiatic Society of Bengal, considered as the earliest centre of Indological research and scientific enterprises, established by British in India. Established in 1784 by Sir William Jones, a Supreme Court Judge and a scholar of profound depth, The Asiatic Society of Bengal assumed the cudgel of unraveling the hitherto unexplored treasures of India — in language, literature, legal treatises and technical sciences. Side by side, a critical and penetrating study of geographical, botanical and zoological marvels of India became a favorite topic of discussion among the pioneers of The Asiatic Society. Naturally the diversity of birds in India, covering Nepal and other peripheral areas drew attention of the European naturalists, which found expression in the annals of the Journal of The Asiatic Society of Bengal. As early as in 1833, we come across essays and reports on birds in the Journal of The Asiatic Society of Bengal. The first is a report from Dr. W. Warlow, titled "Systematically arranged Catalogue of the Mammalia and Birds belonging to the Museum

of The Asiatic Society, Calcutta", published in February Volume of the Journal of the Society. Details of birds including their families, scientific and local names had been categorized systematically in this report. A few examples : "Tribus 1. Fissirostres, 1. Fam. Meropidae. Gen. Merops *Merope viridis*. Indian Bee-eater. Gen. Alcedo *Alcedo bengalensis* Indian Kingfisher". Incidentally it may be mentioned here that the Museum of The Asiatic Society was set up in 1814. The next we come across an interesting article, decked with pictures, titled "On the nest of the Tailor Bird", by Lieut. T. Hutton, 37th Regiment, N. I. published in the October issue of the Journal of The Asiatic Society of Bengal. At the outset, Hutton explained the circumstances which induced him to write this essay— "In Professor RENNIE's work on the Architecture of Birds, he gives two accounts of the manner in which the Tailor Bird constructs the nest, and as neither of these appear exactly to coincide with facts which have lately fallen under my observation, I have been induced to offer the following remarks for insertion in the Journal of the As. Soc.". After discussing the opinions of both Rennie and another naturalist Darwin about the construction of the nest by the Tailor Bird, Hutton suggests— "...the bird neither makes use of a dead leaf in the construction of the nest, nor does it stitch it with fibers, but with strong cotton threads". Another illuminating article, titled "List of Birds, collected in the jungles of Borabhum and Dhalbhum", by Lieut. S. R. Tickell, 31st Regiment, N. T, published in the November volume of the Journal of The Asiatic Society of Bengal (JASB) draws the attention of the inquisitive readers. Along with meticulous description of various species of birds, found in the aforementioned places, the author tried to connect the species with local names and inhabitants of the region. As such, Kohee Falcon has been described as "They are called by the Hindus inhabiting those regions 'Shahin' and 'Kohi' and are much prized by the Coles for their hawking qualifications". Similarly Bengal has been mentioned as the place where Jungle Owls are to be found in great number and "Little baned Owl" is "very common in the thickly wooded parts of the Jungle Mahals, selecting the larger trees for its abode, from whence it keeps up its clamorous cries the greater part of the day". Similarly about the song of the Shahmour bird, it has been observed— "The Shahmour is well known and justly prized in India for its song, which in its native jungles is heard in a degree of perfection, to which the notes when encaged, can bear little comparison". The song of Shahmour has been compared to that of the Nightingale. Towards the end of the essay, the author has made an interesting comment. He felt that despite much progress in ornithological research in America, Africa and Australia, birds of India are yet to receive due attention from the naturalists. In his words "... there yet would be left a wide blank in our acquisitions, so long as the extensive, unknown and unvisited portion of the Jungle terry districts remained shut out from the inquiries of the naturalist". In the December volume of the JASB, there is another essay "Notes on the Tailor Birds nest" by Lieut. Gifford. In the November issue of the very next year i.e. 1834, we come across another "Catalogue of Birds, (systematically arranged) of the Rasorial, Grallatorial and Natatorial orders, observed in the Dukhun" by Lieut. Colonel W. H. Sykes. In the December issue of the journal, the concluding part of the essay was published. Several species of birds like Pigeon, Brown and Chestnut Dove, Jungle Cock are described along with their scientific names, characteristics and other salient features. Occasionally we come across comments from the author about a particular bird— "The wild Pea-fowl is abundant in the dense woods of

the Ghauts; it is readily domesticated and many Hindoo temples in the Dukhun have considerable flocks of them. On a comparison with the bird as domesticated in Europe, the latter is found, both male and female, to be absolutely identical with the wild bird of India". Needless to say, this observation reflects the deep insight of the essayist into the minute details of the nature of birds. In 1835, we come across a series of articles on birds by B. H. Hodgson, resident in Nepal. In an article "Description of the Bearded Vulture of the Himalayas", Hodgson furnished an elaborate description of the Bearded Vulture along with the generic name, species, synonym, dimension and observed— "The general structure and aspect of the Himalayan variety of this specimen, by their compound character, made up of Eagle and of Vulture, indicate the excellence of Storr's generic title of Gyperatos of Vulture Eagle... the general semblance pertakes more of the eagle than of the vulture". Another paper "Red-billed Erolia" by Hodgson was published in the August issue of JASB, 1835. Hodgson considered this Erolia as a "remarkable bird" and "is entitled to a full and minute description". A detailed description of this rare bird along with dimensions and weight had been incorporated in the paper. From the editorial comment, it is evident that some "beautiful drawings" were part of the paper, which was finally excluded. In another paper "Note on the Red-billed Oralia" by the same author, published in the December issue of the JASB, 1835, Hodgson suggested a new generic character "Genus Clorhyncus" of the species. It is evident that during his stay in Nepal, Hodgson continued his exploration of various rather unfamiliar kinds of birds. His keen interest in birds is evident from another paper, authored by him and published in the Journal of The Asiatic Society in February, 1836. In this paper, titled "Description of a New Species of Columba", Hodgson stated that this elegant species is found in the woods of the valley of Nepal and he further elaborated special features of this bird; "Comparing for the sake of further illustration, our bird with the Columba Livia, or common pigeon, it differs in being large, in having the soft membrane at the base of the bill less tumid and meaty, in having a somewhat longer tail, and shorter and more lowly feathered tarsi...". In another essay "Summary Description of some new species of Falconidae", published in April volume of the JASB, 1836, Hodgson described "Genus Aquila, Species New, Aquila Pernigra, Jetty Eagle". It was noted by Hodgson that the habitat of these species was the central and northern regions of Nepal. Two new species of birds had been described in another paper "Description of two new species belonging to a new form of the Meruline group of Birds, with indication of their generic character", published in the JASB, June, 1836. In another interesting paper "On a New Genus of the Meropidae", published in the June volume of the Journal in 1836, Hodgson introduced a Genus new "Bucia", which in the authors opinion, differs from the "bee-eaters proper". Apart from generic and scientific disposition, Hodgson placed this new species in Indian context— "In the Raja's shooting excursions, they are frequently taken alive by the clamorous multitude of sportsmen, some two or more of whom single out a bird and presently make him captive, disconcerted as he is by the noise". Two other interesting papers "On a new Piscatory Genus of the Strigine Family" and "Additions to the Ornithology of Nepal", by Hodgson were published in the December issue of the Journal of 1836. In 1837, we notice a flurry of essays on birds by Hodgson, published in the JASB. In the February issue, we come across three papers on birds by Hodgson—

1. On three new genera or sub-genera of long-legged Thrushes, with description of their species.

2. Description of three new species of Wood-pecker
3. Indication of new Genus of Incessorial Birds.

While describing three new species of Woodpeckers, Hodgson eulogized zoological diversity of India and abundance of rare species of birds in India— "The zoological treasures of India may be less celebrated than those of America...but it is by no means probable that they are less worthy of celebration... My collection of Nepalese Woodpeckers already embraces 16 species, which exhibits every known modification of form". He elaborated these new species," Species New Picus Sultaneikis, Royal Indian Woodpecker, nobis". In another article "Nest of the Bengal Vulture (*Vulture bengalensis*) with the observation on the power of scent, ascribed to the vulture tribe" by Lieutenant J. Hutton, published in February, 1937 issue of the JASB, we find an interesting episode which described how the author had nurtured a young vulture to observe its nature and finally came to the conclusion that the nature of "American Vulture is much different as compared to Indian or Bengal Vultures, both of which are gregarious, both feed on fresh as well as putrid substances, and both discover their prey by the combine faculties of scent and sight".

Another article "Note on the black and brown Floriken of Gujerat" by Lieutenant George Fulljames, published in the February issue of the JASB, 1937 asserted that the *Otis fulva* or Brown Floriken is found in large numbers in Gujerat during monsoon. He also pointed out the migratory nature of the bird.

Hodgson continued to write informative articles about various species of birds in the JASB. In October issue of the Journal in 1938, Hodgson wrote "On a new species of Pheasant of Tibet" and in January issue of the Journal in 1839, another essay "Two New Species of Meruline Birds" elicited attention of the naturalists. European Birds too were not excluded from the domain of discussion as was evident from an article "On the distribution of the European Birds", authored by W. Jameson, Bengal Medical Service in the JASB, in 1839.

In 1841, we come across "Catalogue of the Birds in the Museum of the Asiatic Society", by J. T. Pearson, Surgeon, formerly Curator of the Museum in the ASB. While mentioning the scientific names side by side with names pronounced in common usage like *Haliaetus ponticerianus* –– Pondicherry Eagle and Genus Hallaeetus, Pearson referred to the Brahminy Kite, a handsome bird with an elegant form, common in Calcutta. He had also pointed out the migratory nature of the particular type of this bird.

The year 1842 was remarkable in the discussion about essays on birds, published in the JASB as two illuminating articles, authored by Edward Blyth, Curator to the Museum of The Asiatic Society were published. In "Notes on various Indian and Malayan Birds, with description of some presumed new Species", the author Blyth described several Indian and Malayan Species of Birds which came to his notice along with their generic names and details. For instance he mentioned— "Heterophasia, Nobis n.g.?–– a curious Meruline form, exhibiting affinity for various distinct genera, but which can not be immediately approximated to any with which I am acquainted". In another article "A monograph of the Indian and Malayan Species of Cuculidae or Birds of the Cuckoo family" Blyth remarked— "in the present state of Indian Ornithology, there is nothing so much required as a series of carefully prepared monographs of various groups, in which the object should be less to describe new species than to attempt an analysis of those which have been already made known…". Blyth himself expressed his desire to compose such a monograph,

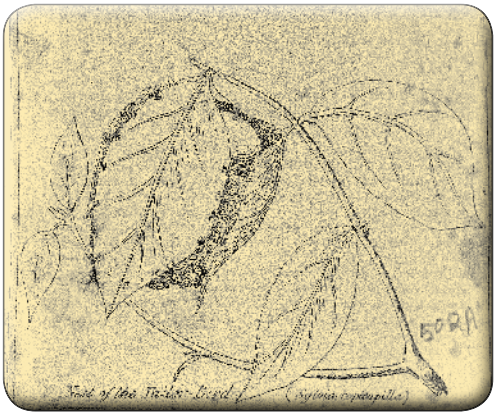
incorporating all information about various species of Birds. That Indian Cuckoo is the main focus of the essay has been made clear at the outset — "The Species of Indian Cuckoos are rather numerous, and to these I shall first invite the attention of our Zoologist, commencing with these numbers of restricted Cuculus which, like the included European Cuckoo, have short and half feathered tarsi — alone a sufficient indication of this particular group". The Cuckoo is very common in Bengal and Blyth substantiated his knowledge of the indigenous practice when he said — "This Bird is the *Choke-dello* of the Bengalee, a name meant to be imitative of its note, but which is not very expressive of it".

The JASB, 1843 included three essays by Hodgson —

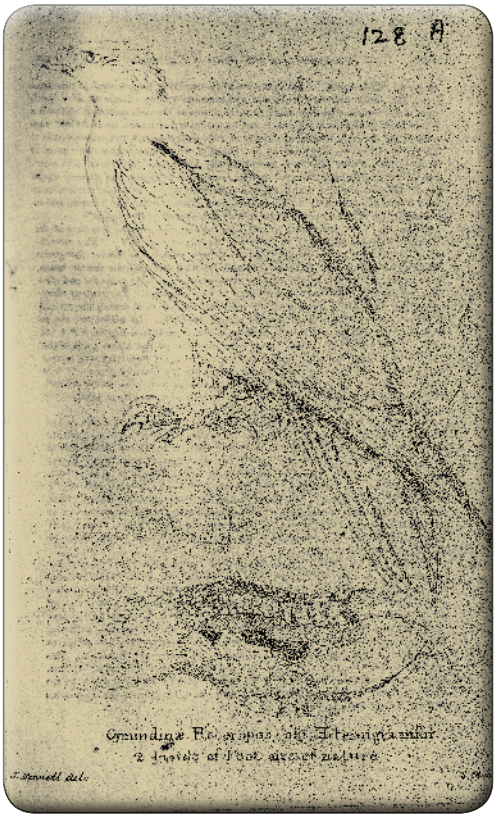
1. "Description of New Genus Falconidae",
2. "Catalogue of Nepalese Birds, presented to The Asiatic Society, duly named and classified by the donor, Mr. Hodgson (and revised by the Society's Curator)",
3. "Additions to the Catalogue of the Nepal Birds".

Apart from this, we have "Mr. Blyth's monthly report for December meeting 1842, with addenda subsequently appended".

In tune with its founders, declaration that The Asiatic Society's objective will be to explore Man and Nature, the Society intended to reflect its inquisitiveness about Nature and its components in its Journal. The birds therefore became an object of serious study and research in the Society circle. It is a fact that a sound knowledge about resources of India was a desideratum to consolidate imperialist grip over this subcontinent, but that apart, purely academic interest motivated the stalwarts of The Asiatic Society of Bengal in perusing study and research about flora and fauna of this country. The series of articles on birds, published in the JASB bear testimony to this quest for knowledge of the European scholars who gave formal shape to Indian Ornithology.



Nest of the Tailor Bird



Description of a New Genus of Falconidae, by B. H. Hodgson

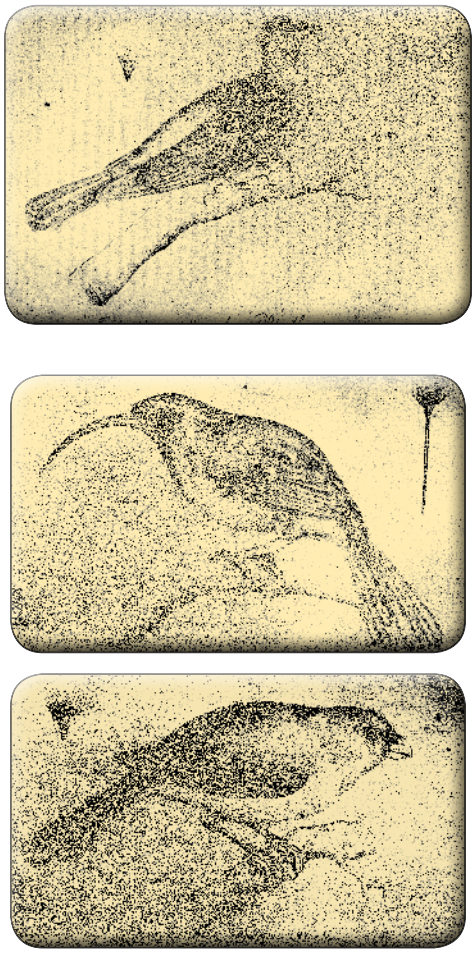
Edward Blyth: The Unrivalled Ornithologist and Curator of The Asiatic Society

Nibedita Ganguly
Deputy Librarian (Retd.), Indian Statistical Institute & Life Member, The Asiatic Society

Edward Blyth

Edward Blyth (b. 23 December 1810 – d. 27 December 1873) was an English Zoologist who worked for most of his life in India as a Curator of Zoology at the museum of the Asiatic Society of Bengal in Calcutta. In India during the colonial period of early 19th century, the British scientists did not take much interest in Zoological research. Blyth wrote one letter on 30th March 1841 expressing his obligations for conferring upon him the appointment of Curator to the Museum of the Asiatic Society of Bengal. He stayed as the salaried Curator from 6 September 1841 to 1862. The appointment of Edward Blyth as the Society's Curator for the next 22 years put the Museum on a firm footing in 1841.

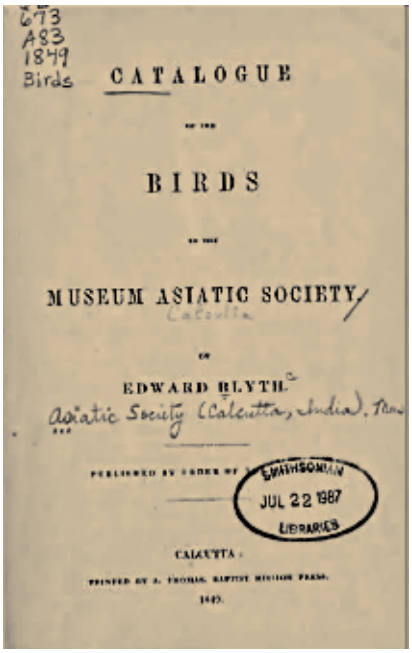
Edward Blyth who took over from H. Piddington got an opportunity of properly arranging the Society's collection of living Mammalia of India, numbering 147 specimens, in two large and double glazed cabinets. The elaborate notes in his monthly reports on the specimens of the Museum laid the foundation of Indian Zoology. After



Three Pictures of Birds from the article "Blyth's monthly report for December Meeting

assuming this duty Blyth was free to pursue his zoological researches. Blyth's acquirements in Zoology and other branches of Natural knowledge had been of a very high order and his zeal in the pursuit of sciences, equaled only by his judgment.

In a letter dated 26 February, 1842, Mr. G A Bushey, Secretary to the Government of Bengal, Fort William, wrote "The Curator, the Society has recently obtained from Europe, Mr. Blyth, is eminent in all departments of Zoology, and his indefatigable exertions in this line, have already increased largely the value of the Museum, as well by the addition of an infinity of new specimens excellently set up, as by the discovery amongst our neglected stores of objects valuable to science which had escaped the less accurate investigation of his predecessors in this line. But Mr. Blyth's whole time is occupied in this very extensive branch of the Museum…" (Ref: *Journal of the Asiatic Society of Bengal,* 1842)



Title page of the 1st Edition (1849)

Mr. Blyth, prepared the MS. of the descriptive drawings which the Committee proposed to issue the whole in a Portfolio to the members of the Society. (Ref: *JASB* and *Proceedings*, 1847) "Ever saddled with his official work, he yet found time for carrying out a most noble object. His 'Nest and Eggs', 'Scrap Book', and numerous articles on birds of various parts of India, Andamans and the Malay Peninsula, are standing monuments of his fame, throughout the length and breadth of the civilized world." (Murray, 1880) He published fifty papers in the Journal of the Asiatic Society which contained all aspects of birds like cuckoo, pigeon etc. Catalogues of birds in portfolios were prepared by him and were duly published in Asiatic Journal. Later Blyth set about updating the museum's catalogues, publishing a *Catalogue of the Birds of the Asiatic Society* in 1849. He remained as Curator until 1862, when ill-health forced his return to England. His *Natural History of the Cranes* was published posthumously in 1881.

James A Murray rightly observed when he commented on Blyth as the 'Father of Indian Ornithology'. He wrote that Blyth "was by far the most important contributor to our knowledge of the Birds of India". Seated, as the head of the Asiatic Society's Museum, he, by intercourse and through correspondents, not only formed a large collection for the Asiatic Society, and thus did more for "the extension of the study of the Avifauna of India than all previous writers. There can be no work on Indian Ornithology without reference to his voluminous contributions." (Murray, 1880)

During 1843-48 Blyth sent several papers for the Annals of Natural History. In 1843-44 he published a long paper on birds of Calcutta. Calcutta Review was then a prestigious journal of British India. Here he published his essay on British birds in India.

Blyth had regular contact with Charles Darwin. Darwin remarked, "Mr. Blyth, whose opinion from his large and varied stores of knowledge, I should value more than that of almost anyone"(Basu, 2017).

Blyth retired from the Asiatic Society in 1862 and returned to England. He continued to write on zoology and on the question of origin of species. His health deteriorated due to mental depression and alcoholism. At this

time Darwin helped Blyth by influencing the authorities for the sanction of pension against his service in the Asiatic Society. After Blyth retired prematurely in 1862 due to ill-health and went back to England, the Society passed a resolution unanimously praising the service of Blyth towards the Society. The resolution runs as—

"On the eve of transferring the zoological collections of the Society to Government, to form the nucleus of an Imperial Museum of Natural History, the Society wishes to record its sense of the important services rendered by its curator, Mr. Blyth, in the formation of those collections. In the period of twenty-two years during which Mr. Blyth was Curator of the Society's Museum, he has formed a large and valuable series of specimens richly illustrative of the ornithology of India and the Burmese Peninsula, and has added largely to the Mammalian and other vertebrate collections of the Museum; while by his numerous descriptive papers and catalogues of the Museum specimens, he has made the materials thus amassed by him subservient to zoological science at large, and especially valuable to those engaged in the study of the vertebrate fauna of India and its adjoining countries". (*Journal of the Asiatic Society of Bengal*, 1864)

Among the Avian species bearing his name include *Blyth's hornbill*, *Blyth's leaf warbler*, *Blyth's hawk-eagle*, *Blyth's olive bulbul*, *Blyth's parakeet*, *Blyth's frogmouth*, *Blyth's reed warbler*, *Blyth's rosefinch*, *Blyth's shrike-babbler*, *Blyth's tragopan*, *Blyth's pipit* and *Blyth's kingfisher*.

In the following paragraph of Obituary note delivered on 4 March 1874 after Blyth's expiry, the President of the Asiatic Society, Mr H Hyde read it and justified Blyth's contribution in his last sentence that Blyth had "the greatest knowledge of Indian birds and Mammals of any naturalist of his time".

"Edward Blyth's name is familiar to every naturalist in India, and to every working member of this Society. I feel that not being

a naturalist, I am unable to do adequate justice to his work. Mr. Blyth came out to India in 1841. He was the first Curator of the Museum of this Society, and in that year took over the office which had previously been honorary. This office he retained till 1863 when he retired on a small pension granted by the Government of India for his excellent service. His works were — before he came to India, an English translation of Cuvier's Eegne Animale," in which the Mammals, Birds, and Reptiles were edited by him; many of his own notes suggesting modifications in the then existing systems of classification, have been subsequently fully substantiated and adopted. After his arrival in India, most of his works appeared in the Society's Journal, where these papers are so numerous, and their value so well known, that there can be no necessity for me to do more than refer to them. Mr. Blyth was an enthusiastic zoologist; he lived for his science and probably had the greatest knowledge of Indian Birds and Mammals of any naturalist of his time." (*Proceedings of the Asiatic Society of Bengal*, 1874)

References

Murray, James A. - *The avifauna of British India and its dependencies,* Volume- I. London: Truebner, 1888. (Printed at Bombay: The Education Society's Press, Byculla) (E-book)

Basu, Aparajita - Edward Blyth and the Asiatic Society, *Indian Journal of History of Science*, 52.2 (2017) 148-160

Preview of Articles Published on Ornithological Studies in the *Journal of The Asiatic Society of Bengal* from 1870 to 1879 *

Basabdutta Chanda
Assistant Professor & Head, Department of History, Sukanta College

A good number of notes and monographs published in the *Journal of the Asiatic Society of Bengal* (*JASB*) on ornithological observations in India from 1870 to 1879 depict a keen interest of the authors in describing in minute details the landscape along with the flora and fauna found in the regions they traversed. These authors mainly focused on a study of the physical features of the birds, e.g. colouration of plumage, length and height of the different parts of the birds' body, differences in the sexes of the species and the like as also their habits, especially mating, breeding, nesting, migratory patterns, their eggs and other things. In most of the articles the birds have been identified with reference to those found in Thomas Caverhill Jerdon's *Birds of India* written in three volumes in the 1860s.

The authors who have submitted their observations on the subject for the *JASB* during this period include William Thomas Blanford (October 7, 1832-June 23, 1905), an English geologist and naturalist; Lt. Col. Henry H. Godwin-Austen (July 6, 1834-December 2, 1923), an English topographer, geologist and surveyor; Edward Blyth (December 23, 1810-December 27, 1873), an English zoologist and pharmacist; Valentine Ball (July 14, 1843-June 15, 1894), an Irish geologist; William Edwin Brooks (July 30, 1828-January 18, 1899), a civil engineer in India and an ornithologist; Dr. Ferdinand Stoliczka (June 7,1838-June 19, 1874), a Moravian palaeontologist; Lt. Col. A.C. McMaster; and Allan Octavian Hume (June 6, 1829-July 31, 1912), who is more well known for being a protagonist of the Indian National

Suthora Daflaensis

* The references and study materials utilized for this note was solely obtained from the library of The Asiatic Society, while I was working there as a Research Fellow from 2010 to 2013.

Congress than an ornithologist. They were mostly writing from the mid-nineteenth to the early twentieth century. Most of them were either Fellows or Members of the Royal Geographical Society or the Zoological Society of England. Although they were primarily dedicated towards ensconcing the pillars of imperialism in India, they had a penchant for the study of the natural history of the subcontinent. However, this scientific study could not emerge from the over-arching paradigm of imperialist ideology. This is evident from the nomenclature of the newly discovered bird species in India, which mostly bore Victorian and Edwardian names. Apparently, everything that was recorded was done so as a colonial accomplishment. Indigenous writings on this subject were practically non-present during the period, mostly because there was hardly any evidence of it being recorded.

Though little attention has been paid to the north-western part of India in these monographs, the north-east has been well projected along with Cashmir (Kashmir) in the north and other parts of western, central and southern India, including the Andaman and Nicobar Islands, as well as Burma and the Malayan archipelago.

Garrulax Nuchalis

Actidotheres Albocincta

Valentine Ball, during his short stay in the Nicobar Islands, had little leisure in making a collection of birds, since he mostly spent his time on long boat trips. Though he observed two new species of birds which had not been recorded earlier, he did not procure specimens of either. The two new species were one of a small Quail belonging to *Turnix sp*. (?) and a species of *Ægialitis*, possibly *Æ. minutus*. Again, in another monograph, he only provides brief notes upon some of the birds he had observed in the vicinity of Port Blair while staying there for a few days in August 1869. However, he did not prepare any complete list of birds in the region, since it had already been done by Captain Beavan in a paper in *The Ibis* for 1869. In yet another monograph, Ball writes that Dr. Anderson had placed in his hands for determination of a collection of birds made in the Andamans by Dr. Dobson, who visited the region to collect for the Indian Museum, along with Mr. Wood-Mason. Subsequently, two more were received from Mr. Homfray. The collection contained 184 specimens belonging to 62 different species of which 18 were new, but most of them were migratory birds from the Bay of Bengal and

to some extent from Malayana. However, according to the contemporary records, the avifauna of the Andamans included 109 species approximately. He gave full description of the collection of the species that has been made, especially which had only been partially described.

On the other hand, Major H.H. Godwin-Austen mainly directed his attention to the north-east region including the Khasi and North Cachar Hills, the Garo Hills, Tipperah hills, Naga Hills, Munipur and the Dafla Hills (Assam). He writes in a monograph included in the *JASB* 1870 volume, that though the researches of Blyth, Jerdon et al. has left little opportunity to supplement the knowledge of Indian birds in general, the Burrail Range of the north-eastern region of India has been little explored by the naturalists and therefore there was still some hope of finding some new species. He acknowledges the immense help that he received from Jerdon's *Book of Indian Birds*. The list provided in the monograph contains 207 birds, to which he added many more in subsequent notes and monographs. In the same volume of the *JASB*, Godwin-Austen has added another 148 species to his list of birds in the north-east, which he collected during the field season of 1869-70 from the southern base of the Khasi and Garo Hills. However, only the birds shot by him and his assistants and collectors have been recorded, and therefore many common birds have been left out of the list. For a few birds obtained on North Cachar side, he was indebted to Mr. W. Robert, an Assistant Surveyor. Godwin-Austen remarked in this regard that a surveyor has fine opportunities of forming a collection in any section of Natural History, since he visits every kind of ground at successive elevations. In his third list of birds of the north-east, Godwin-Austen provides a list of 33 birds found in the region, of which he briefly describes 9 species. In the fourth list of birds of the north-east, he writes about 112 species more, which he obtained in the winter of 1872-73. Here he notes that the north-east region is one of the finest fields for ornithologists. In another list of birds, Godwin-Austen writes about the collection of birds made during the survey operations under the command of Brigadier-General W.J.F. Stafford, into the Dafla Hills of Assam during the winter of 1874-75. Its significance lay in the fact that it was expected to fill certain lacunae of knowledge regarding many interesting or little known Himalayan forms, which extended towards the east into the Indo-Burman and West China fauna and also in discovering new forms in the world of fauna. Unfortunately, since the survey party did not penetrate beyond an elevation of 4000-8000 feet, the opportunity of obtaining greater varieties was missed.

In his fifth list of birds of the north-east, Godwin-Austen includes birds obtained principally from the Munipur Hills by Messrs. Ogle and Robert in the field season of 1873-74; by Mr. A.W. Chennell in the Eastern Naga Hills; and by himself in the Khasi Hills in 1875. He expresses special gratitude to the members of the survey party for showing an interest in ornithology, devoting much of their leisure in this direction. Albeit all the new forms were described in a joint paper by Viscount Walder and Godwin-Austen published in *The Ibis* in 1875, he has once more given full descriptions of the collection. During the winter of 1875-76, Messrs. Ogle and Chennell made some more collections in the Naga Hills. However, the hostility of the Nagas made it almost impossible for the *shikaris* to make a large collection. Nonetheless, 36 species were added to the previously existing list and with so many zealous collectors in the party, the author was optimistic about further collections before the completion of the survey. In another brief note, Godwin-Austen describes only 3 species – *Pellorneum pectoralis*, *Actinura Oglei* and *Pomatorhinus stenorhynchus* – out of several other new and interesting species collected by Mr. Ogle, which he hoped to describe in more details in his next list of birds from the North-East Frontier. His sixth list was the

result of a survey exploration in the Eastern Naga Hills by Mr. A.W. Chennell and of the low hills near Sadiya and the neighbourhood of the Bráhmakhúnd by Mr. M.T. Ogle in two seasons. He was extremely grateful to these two gentlemen for taking careful measurements in the flesh and recording the colour of the soft parts of the large collection. Up till this, the total collection numbered 585. Having left the services, however, he feared this to be his last contribution to the list of avi-fauna of the Eastern Districts. After completion of this paper, Mr. Chennell arrived in England with another collection of 800 skins from the North Khasi Hills, which enabled him to add a few more species to the list, although there were still some more which he failed to identify.

Of all these notes and monographs, only a brief one has been found written by Allan Octavian Hume, who is otherwise known as 'The Father of Indian Ornithology', since his collections, with the assistance of his numerous correspondents and protégés between 1870 and 1885, numbered more than 60,000 bird-skins in addition to a very large number of nests and over 16,000 eggs, all of which he later presented to the British Museum. He also founded and edited a journal of Indian ornithology titled *Stray Feathers* between 1872 and 1888, whose 11 volumes contained papers by some of the more upcoming ornithologists of the time as also by himself.

During a short visit to the Malayan Peninsula, in the latter part of 1869, Dr. Stoliczka got the opportunity to observe a portion of the fauna of that country. He noticed at Penang and the Wellesley Province that many birds seemed to possess great affinities to Indian forms, but simultaneously exhibited some peculiarities. Though this part of the Malayan country was very little explored, he was not being able to prolong his stay there. Therefore, he engaged a collector for about a month and sent him into the interior of the province, instructing him to direct his attention especially to the smaller kinds of birds. This proved to be successful since he met his collector with more than 300 specimens of bird-skins, belonging to nearly 100 species. In another monograph, Dr. Stoliczka recognizes the importance of conducting a micro-level study of the local fauna, to enable a better understanding of Indian Zoology and it is with this view that he attempted to conduct a study of the zoology of the Kachh. However, he has included only those birds of which he procured specimens and of the identity of which he had been able to satisfy himself.

We also find only one note published by Lt. Col. A.C. McMaster in this decade. He took some rough notes during the hunting and shooting trips from Kamptee. Chikalda also has an interesting natural history, since some of the birds and beasts of that region, supposedly restricted to particular localities, meet each other on the neutral ground of these hills.

Of W.T. Blanford, we find quite a number of monographs published during the period. In the 1871 volume of the *JASB*, he writes a brief note on the monograph published by Lt. Col. A.C. McMaster. In another monograph of the same volume, Blanford notes his observations made during the greater part of two cold seasons and one hot season spent in the Wardha Valley and its neighbourhood. He provides a more or less detailed description of the territory. He has included all the birds found in the Chánda district between the Wardha and Wain Ganga. While giving an account of a visit to Sikkim, along with the description of the landscape, he provides brief notes about its flora and fauna. With regard to the area of a glacial lake of the region, Bidan-Tso, he gives an account of the interesting avi-fauna there, the majority of which are migratory birds which visit the plains of India during winter. These birds cross the Himalayas and breed in Tibet and Sikkim during summer. This phenomenon has also been lately confirmed by the discovery of several Indian *Phylloscopinae* in Siberia. Blanford continues the account of his visit to Sikkim in an additional monograph in the next volume of the *JASB*.

Here too, he attempts to study the migratory patterns of the birds of this region. Here he notes that the specimens collected by him and his companion Elwes were procured under great disadvantages, especially due to unfavourable weather, since in wet and misty weather birds are silent and they skulk among the bushes, where it is most difficult to see them. Thereafter, he goes on to describe the various species of avi-fauna of the region. In one more monograph on the birds of Sikkim, Blanford mentions that Mr. L. Mandelli of Darjileeng had sent him a most interesting collection of Sikkim birds, together with a few obtained from the plains near the base of the Himalayas. It is quite interesting, that even after much exploration of the avi-fauna of the region by the eminent ornithologists like Hodgson, Jerdon, Tickell, et al, it yielded novelties to an energetic collector like Mr. Mandelli. To his notes on Mr. Mandelli's collection, he had added some notes on birds that he himself collected at low elevations in Sikkim.

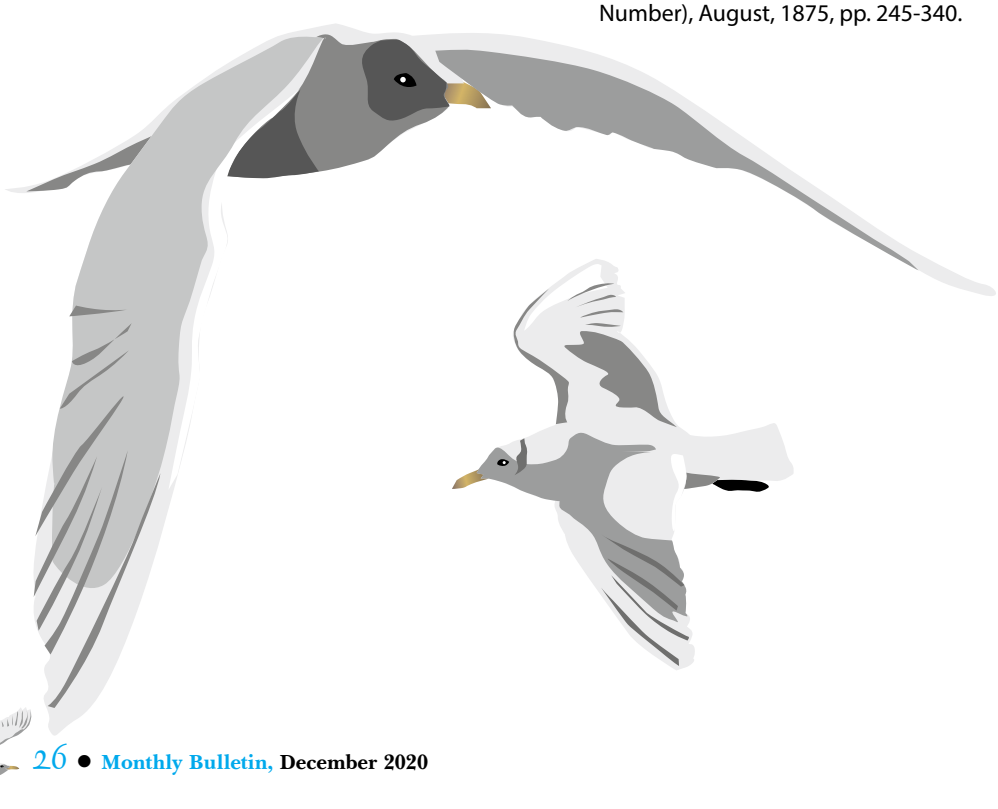
In a monograph on the birds of Cashmir, W.E. Brooks provides short notes on some birds he saw in Cashmir during May and June 1871. In another brief note, Brooks describes two species of birds, *Accentor Jerdoni* and *Troglodytes neglectus*, which have not been described previously. In yet another monograph, he presents some short notes about various birds and also contests the identity of some previously noted birds, e.g. in the *JASB* volume of 1870, *p.162*, Blanford's identification of *Phylloscopus pallidipes* is, according to Brooks, a true *Horeites*.

An extra number of the *JASB* that was published in August 1875 along with the main volume, contained a catalogue of the birds and mammals of Burma, compiled by Edward Blyth, which was the result of the work of the last three years of his life. In this scientifically organized catalogue, published posthumously, he provides us with the description of all the mammals and birds of Burma that he knew of.

References

1. Ball, V., Brief notes on the Geology and on the fauna in the neighbourhood of Nancowry harbour, Nicobar islands, *JASB*, Vol. XXXIX, Part II, (No. I), 1870, p. 29.
2. Ball, V., Notes on Birds observed in the neighbourhood of Port Blair, Andaman Islands, during the month of August, 1869, *JASB*, Vol. XXXIX, Part II, (No. III), 1870, p. 240.
3. Ball, V., Notes on a collection of Birds made in the Andaman Islands by Assistant Surgeon G.E. Dobson, M.B., during the months of April and May, *JASB*, Vol. XLI, Part II, (No. IV), 1872, p. 273.
4. Godwin-Austen, Major H.H., A List of Birds obtained in the Khasi and North Cachar Hills, *JASB*, Vol. XXXIX, Part II, (No. II), 1870, pp. 91-2.
5. Godwin-Austen, Major H.H., Second List of Birds obtained in the Khasi and North Cachar Hill ranges, including the Garo Hills and Country at their base in the Mymensing and Sylhet Districts, *JASB*, Vol. XXXIX, Part II, (No. III), 1870, p. 264.
6. Godwin-Austen, Major H.H., Third List of Birds obtained in the Khasi and Garo Hill ranges with some corrections and additions to the former lists, *JASB*, Vol. XLI, Part II, (No. II), 1872, pp. 142-3.
7. Godwin-Austen, Major H.H., Fourth list of birds principally from the Naga Hills and Munipur, including others from the Khasi, Garo, and Tipperah Hills, *JASB*, Vol. XLIII, Part II, (No. III), 1874, p. 151.
8. Godwin-Austen, Major H.H., List of the Birds collected on the Expedition into the Dafla Hills, Assam, together with those obtained in the adjacent Darrang Terai, *JASB*, Vol. XLV, Part II, (No. II), 1876, pp. 64-5.
9. Godwin-Austen, Major H.H., Fifth List of Birds from the Hill Ranges of the North-East Frontier of India, *JASB*, Vol. XLV, Part II, (No. IV), 1876, pp. 191-2.
10. Godwin-Austen, Major H.H., Descriptions of three new Species of Birds of the Genera Pellorneum, Actinura, and Pomatorhinus; lately collected in the neighbourhood of Saddya, Assam, *JASB*, Vol. XLVI, Part II, (No. I), 1877, pp. 41-44.
11. Godwin-Austen, Lieut.-Colonel H.H., Sixth List of Birds from the Hill Ranges of the North-East

Frontier of India, *JASB*, Vol. XLVII, Part II, (No. I), 1878, p. 12.
12. Hume, Allan Octavian, Additional Observations regarding some species of birds noticed by Mr. W.T. Blanford in his "Ornithological notes from Southern, Western and Central India", *JASB*, Vol. XXXIX, Part II, (No. II), *JASB*, 1870, pp. 113-22.
13. Stoliczka, Dr. F., A Contribution to Malayan Ornithology, *JASB*, Vol. XXXIX, Part II, (No. IV), 1870, p. 277.
14. Stoliczka, Dr. F., Notice of the Mammals and Birds Inhabiting Kachh, *JASB*, Vol. XLI, Part II, (No. III), 1872, No., p. 211.
15. Ibid. p. 229.
16. McMaster, Lt. Col. A.C., Notes on Birds Observed in the neighbourhood of Nagpore and Kamptee (Central Provinces), Chikalda and Akola in Berar, *JASB*, Vol. XL, Part II, (No. III), 1871, pp. 207-215.
17. Blanford, W.T., Note on Colonel McMaster's List of Birds from Nagpore & c., *JASB*, Vol. XL, Part II, (No. III), 1871, No., p. 216-7.
18. Blanford, W.T., List of Birds Collected or Observed in the Wardha Valley and its vicinity near Chánda, *JASB*, Vol. XL, Part II, (No. III), 1871, No., pp. 268-70.
19. Blanford, W.T., Account of a Visit to the Eastern and Northern frontiers of Independent Sikkim, with notes on the Zoology of the Alpine and Subalpine regions, Part I, *JASB*, Vol. XL, Part II, (No. IV), 1871, No., pp. 383-4.
20. Blanford, W.T., Account of a Visit to the Eastern and Northern Frontiers of Independent Sikkim, with Notes on the Zoology of the Alpine and Sub-alpine Regions, Part II, Zoology, *JASB*, Vol. XLI, Part II, (No. I), 1872, No., pp. 30-2.
21. Ibid. p.31.
22. Ibid. pp. 41-73.
23. Blanford, W.T., Notes on a Collection of birds from Sikkim, *JASB*, Vol. XLI, Part II, (No. II), 1872, No., p. 152.
24. Ibid. pp. 152-3.
25. Brooks, W.E., Notes on the Ornithology of Cashmir, *JASB*, Vol. XLI, Part II, (No. I), 1872, No., p. 73.
26. Brooks, W.E., On Two undescribed Cashmir Birds, *JASB*, Vol. XLI, Part II, (No. IV), 1872, No., pp. 327-9.
27. Brooks, W.E., Some Ornithological Notes and Corrections, *JASB*, Vol. XLIII, Part II, (No. IV), 1874, No., pp. 239-53.
28. Blyth, E. (Late), Catalogue of Mammals and Birds of Burma, *JASB*, Vol. XLIII, Part II, (Extra Number), August, 1875, pp. 245-340.



রাজেন্দ্রলাল মিত্রের পাখির জগৎ ঃ *বিবিধার্থ সংগ্রহ*

স্বপন বসু
প্রাক্তন অধ্যাপক, বাংলা বিভাগ, বর্ধমান বিশ্ববিদ্যালয়

'পাখি সব করে রব'— না, শুধু আমাদের দেশে নয়, পৃথিবীর সব প্রান্তের মানুষজনই পাখির কলকাকলিতে অভ্যস্ত। কিন্তু দেশ-বিদেশের কটা পাখিকেই বা চিনি আমরা, আর কতটুকুই বা জানি তাদের সম্বন্ধে! কিন্তু মানুষ তো জানতে চায়। অপরিসীম তার জানার আগ্রহ। এই আগ্রহ মেটাতে ভার্নাকুলার লিটারেচার কমিটি বিলাতের *পেনি* ম্যাগাজিনের আদলে বাংলায় একটি পত্রিকা প্রকাশের পরিকল্পনা করে। পত্রিকার নাম *বিবিধার্থ সংগ্রহ*। সম্পাদনার দায়িত্বে বিবিধবিদ্যা বিশারদ রাজেন্দ্রলাল মিত্র। প্রকাশের আগে প্রস্তাবিত পত্রিকার কথা জানিয়ে *সংবাদ প্রভাকর*-এ রাজেন্দ্রলাল লিখলেন—

> *বিবিধার্থ সংগ্রহ*। পুরাবৃত্তেতিহাস প্রাণিবিদ্যা শিল্প সাহিত্যাদি দ্যোতক মাসিক পত্র। —বঙ্গভাষানুবাদক সমাজের আনুকূল্যে... প্রকটিত হইবেক। যাহাতে বঙ্গদেশস্থ জনগণের জ্ঞানবৃদ্ধি হয় এমত সৎ ও আনন্দজনক প্রস্তাব সকল প্রচার করা উক্ত সমাজের মুখ্য কল্প, এবং ইংরাজী ভাষায় 'পেনি মেগাজিন' নামক পত্রের অনুবর্ত্তিত এত্যপত্রে অভিপ্রায় সিদ্ধ্যর্থে অবিরত সম্যক চেষ্টা করা যাইবেক। আবাল বৃদ্ধ বনিতা সকলের পাঠযোগ্য করণার্থে উক্ত পত্র অতি কোমল ভাষায় লিখিত হইবেক এবং তত্রত্য প্রস্তাবিত বস্তু সকলের বিশেষ পরিজ্ঞানার্থে তাহাতে নানাবিধ ছবি থাকিবেক।...

রাজেন্দ্রলালের বক্তব্য প্রকাশ করে, ঈশ্বরচন্দ্র গুপ্ত মন্তব্য করেন—

> ...মিত্র বাবু দৃঢ়তর সংকল্প পূর্ব্বক যেরূপ সদনুষ্ঠানের সূত্র সূচনা করিয়াছেন তাহাতে কৃতকার্য্য হইতে পারিলে অত্যন্ত সুখের বিষয় হইবেক, যেহেতু এতদ্দেশে তদনুরূপ একখানি পত্র প্রকাশের বিশেষ আবশ্যক হইতেছে...।

এইসব লেখালেখির মাসখানেকের মধ্যে ১৮৫১-র অক্টোবর মাসে কলকাতা থেকে প্রকাশিত হল *বিবিধার্থ সংগ্রহ*। প্রথম সংখ্যায় সম্পাদক জানালেন, শুধু ইতিহাস, ভূগোল, পদার্থবিদ্যা, পুরাতত্ত্ব, সাহিত্য-বিজ্ঞানই নয়, 'জীবসংস্থার বর্ণনা'ও স্থান পাবে এই পত্রিকায়। জীবের মধ্যে কীট-পতঙ্গ, বিভিন্ন ধরনের মাছ বা পশুর বিবরণই শুধু নয়, থাকবে পাখিদের কথাও। পাখিদের বিচিত্র জগতের আভাস দিয়ে প্রথম সংখ্যার ভূমিকায় সম্পাদক জানালেন—

> কিয়ৎকাল পূর্ব্বে অস্ট্রেলিয়া দেশে এক পক্ষী ছিল যাহার ঊর্ধ্ব পরিমাণ সামান্য হস্তি হইতে দ্বিগুণ। অনেক পক্ষী আছে যাহাদের ডানা নাই...

প্রথম সংখ্যা থেকেই শুরু হল পক্ষী বৃত্তান্ত। চেনা-অচেনা সব রকম পাখির কথাই শোনাতে শুরু করলেন রাজেন্দ্রলাল। তবে বিদেশি পাখির কথা জানানোর দিকেই ঝোঁক তাঁর বেশি। কারণ রাজেন্দ্রলাল তো চেয়েছিলেন বিশ্বের জ্ঞানভান্ডারের চাবিকাঠি এদেশের আবাল-বৃদ্ধ-বনিতার হাতে তুলে দিতে। তাই পৃথিবীর বিভিন্ন প্রান্তের হরেক রকম পাখির কথা তিনি প্রকাশ করতে শুরু করলেন। শুধু বর্ণনা নয়, পাখিটির পরিচয় পূর্ণাঙ্গ করে তোলার জন্য প্রতিটি বিবরণের সঙ্গে দিতে লাগলেন পাখির ছবি। সে সব ছবি আবার বিলাত থেকে আনা। রেখা ও লেখায় ধরা দিতে লাগল একের পর এক পাখি।

প্রথম সংখ্যাতেই রাজেন্দ্রলাল প্রকাশ করলেন হোমা পাখির সচিত্র বিবরণ। পুরাকালে মানুষ

বিশ্বাস করত যার শরীরে এই পাখির ছায়া পড়ে, সে রাজা হয়। ইউরোপীয়ানদের ধারণা ছিল এই পাখি শিশির পান করে বেঁচে থাকে। পা না থাকায় এরা মাটিতে বসতে পারে না। পৃথিবীর কোনও কোনও প্রান্তে হোমা আবার 'দেবতার পক্ষী' হিসাবে পরিচিত। অন্যদের কথা বাদ দেওয়া যাক, *বিবিধার্থ সংগ্রহ*-এর প্রথম সংখ্যায় প্রকাশিত লেখাগুলির পরিচয় দিতে গিয়ে, উনিশ শতকের বিখ্যাত পত্রিকা *ফ্রেন্ড অফ ইন্ডিয়া* হোমাকে 'The Birds of Paradise' হিসাবে চিহ্নিত করে।

বিচিত্র বর্ণের সুদৃশ্য এই পাখিটি সর্বভুক। নানা জাতের হোমার কথা জানা গেলেও 'নিষ্পাদ হোমা'রই সবচেয়ে নামডাক।

টৌকনও আমাদের না দেখা এক পাখি। পাখিটির সচিত্র পরিচিতি *বিবিধার্থ সংগ্রহ*-এর দ্বিতীয় সংখ্যায় বেরোয়। দক্ষিণ আমেরিকার উষ্ণ প্রদেশগুলিতে এই পাখির বাস। এদের ঠোঁট খুব লম্বা আর ধারালো, গায়ের রঙ বড় সুন্দর। জিব লোমে ঢাকা। ধারালো ঠোঁট দিয়ে বড় গাছের ডালে কোটর তৈরি করে সেখানে এরা ডিম পাড়ে। ডিম বা সদ্য ফোটা ছানার লোভে বাঁদর বা সাপ সেখানে হানা দিলে কোটরের ভেতর থেকে লম্বা ঠোঁট দিয়ে টৌকন এদের এমন আঘাত করে যে তারা পালিয়ে বাঁচে।

টার্মিগান পাখির কথা *বিবিধার্থ সংগ্রহ*-এর সাতাশ নং সংখ্যায় (জুন ১৮৫৪) বেরোয়। এটি তিতির জাতীয় পাখি। দেখতে সুন্দর এই পাখির মাংসও খুব সুস্বাদু। ঋতু পরিবর্তনের সঙ্গে সঙ্গে এদের শরীরের রঙ বদলায়। টার্মিগান বেশ লম্বা —এর লেজই প্রায় চার ইঞ্চি। পার্বত্য প্রদেশ টার্মিগানের প্রিয় বাসভূমি— কাছাকাছি কোনও জলা বা শস্যখেত থাকলে তো সোনায় সোহাগা। সকাল থেকে বিকেল পর্যন্ত স্থানটি তাদের কলকাকলিতে পূর্ণ থাকে।

চৈত্র মাসে স্ত্রী টার্মিগান ষোল থেকে কুড়িটি পর্যন্ত ডিম পাড়ে। স্ত্রী-পুরুষ দুজনেই ডিমে তা দেয়। বাচ্চা ফুটলে দাঁড় কাক তা খেয়ে ফেলার সুযোগ খোঁজে। তাদের রক্ষার জন্য বয়স্ক টার্মিগান কাকের সঙ্গে লড়াই করতেও পিছপা হয় না। যে ভাবে এই পাখি মানুষকে বোকা বানায়, তা চমকে দেবার মতো। *বিবিধার্থ সংগ্রহ* থেকেই তা তুলে ধরা যাক—

> ... কোন মনুষ্য তাহাদিগের নীড়ের নিকট আইলে টার্মিগান পক্ষী ভগ্ন-পক্ষ বা খঞ্জের ন্যায় হইয়া তাহার সম্মুখে আসিয়া পড়ে ও সে ব্যক্তি তাহাকে ধরিবার নিমিত্তে অগ্রসর হইলে তথা হইতে লম্ফ দিয়া স্থানান্তরে পড়ে; এবং পুনঃ পুনঃ এই প্রকার ভণ্ডতা করত তাহাকে আপন নীড় হইতে অত্যন্ত দূরে লইয়া গিয়া উড্ডীয়মান হইয়া স্বস্থানে প্রত্যাগমন করে।

টার্মিগান-এর সঙ্গে কেপর্‌কেলির মিল সহজেই চোখে পড়ে। আগেকার দিনে ব্রিটেনে এই পাখি দেখা যেত। প্রায় দু-হাত লম্বা এই পাখির এক-একটির ওজন পাঁচ-ছ সেরের মতো। ভীতু স্বভাবের এই পাখি মানুষ দেখলেই পালায়। এদের মাংস খুব সুস্বাদু— সেই লোভে নির্বিচারে চলে কেপর্‌কেলি নিধন। প্রাণভয়ে গ্রেট ব্রিটেন থেকে পালায় তারা।

নতুন বাসভূমি হিসাবে বেছে নেয় সুমেরু

সাগরের বরফে ঢাকা অঞ্চল। পাইন গাছের কচি পাতা খেয়ে কাটায় তারা দিন। কিন্তু নাগাল্যান্ড, নরওয়ে দেশেও শান্তিতে বাস করতে পারে না এরা। সুমেরু সাগরের নিকটবর্তী এই অঞ্চল শস্যবহুল নয়, অধিবাসীরা মূলত মাছ-মাংসের ওপর নির্ভরশীল। স্বভাবিকভাবেই তাদের চোখ পড়ে নিরীহ এই পাখিটির ওপর। বসন্তকালে পুরুষ কেপর্‌কেলি। 'স্ফীত বক্ষে বিস্তৃত পুচ্ছে পক্ষিণীর আহ্বান করিতে করিতে এমনি মত্ত হয় যে চক্ষু কর্ণের চৈতন্য লুপ্ত' হয়ে যায়। সেই সুযোগে নির্বিচারে চলে হত্যালীলা। ফলে কেপর্‌কেলি আজ ধরাতল থেকে লুপ্তপ্রায়।

১৮৫৮-র জানুয়ারি মাসে রাজেন্দ্রলাল মিত্র *বিবিধার্থ সংগ্রহ*-এর পাঠকদের উপহার দেন মেনুরা পাখির সচিত্র বিবরণ। সুদৃশ্য এই পাখিটির বাস অস্ট্রেলিয়ার ইলবারা ও দক্ষিণ ওয়েলসে। পার্বত্য অঞ্চলে বসবাসকারী এই পাখির লেজটি বড় সুন্দর। এটি দেখতে 'লায়র' নামক ইংরেজি বাদ্যযন্ত্রের মতো। সে কারণে ইংরেজরা একে 'লায়র বার্ড' বলে। তবে সুদৃশ্য এই ধরনের লেজ শুধু পুরুষ মেনুরাদেরই থাকে। লেজ নিয়ে পুরুষ মেনুরাদের গর্বের অন্ত নেই। সূর্য ওঠার সময় থেকে পেখম মেলে পুরুষ মেনুরা ঘন্টাদুয়েক গান ও অন্য পাখিদের নকল করে সবাইকে মাতিয়ে রাখে।

শস্য এবং কীট দুই-ই এরা খায়। গাছে না বসে মাটিতে ঘোরাঘুরি করতে এরা ভালোবাসে। কোনও কারণে উড়তে হলে এদের কষ্ট হয়। তবে দৌড়তে এরা ওস্তাদ। গাছের কোটরে ঘাস-পাতা দিয়ে বাসা তৈরি করে এরা। এখানে মেয়ে পাখিটি একবারে দশ-বারোটি ডিম পাড়ে।

হোমা বা মেনুরা কোনো পাখিকেই আমরা দেখিনি। দক্ষিণ সাগরের বরফ ঢাকা উপদ্বীপের আর একটি পাখিকেই বা নিজের চোখে কতজন দেখেছেন! কিন্তু না দেখা এই পাখিটির সঙ্গে আমাদের বড় ভাব। শীতল দেশের এই পাখিটির নাম পেঙ্গুইন— এটি শুধু আমাদের পরিচিতই নয়, ভীষণ প্রিয়।

প্রিয় হলেও, পাখিটির স্বভাব-চরিত্র প্রায় কিছুই আমরা জানি না। আমাদের জ্ঞানভাণ্ডারের অপূর্ণতা দূর করতে এগিয়ে এলেন জ্ঞানতাপস রাজেন্দ্রলাল মিত্র। ১৭৮০ শকের ফাল্গুন সংখ্যা *বিবিধার্থ সংগ্রহ*-এ প্রকাশ করলেন পেঙ্গুইনের সচিত্র বিবরণ।

পেঙ্গুইন জলের পাখি। সামুদ্রিক শামুক এদের প্রধান খাদ্য। সাঁতার কাটতে ও ডুব দিতে এরা ওস্তাদ। লেজ এদের নেই বললেই চলে। পা দুটি লেজের এত কাছাকাছি যে 'মনুষ্যের ন্যায় উপবেশন না করিলে' এরা মাটিতে বসতেই পারে না। দল বেঁধে থাকতে এরা ভালোবাসে। আকারে পেঙ্গুইন বেশ বড়। হাত দুয়েক লম্বা এই পাখির এক-একটির ওজন পনেরো সেরেরও বেশি। মাংস এদের তেলতেলে আর চর্বিতে ভরা। সুস্বাদু নয় মোটেই। যে কারণে মানুষের লোলুপ দৃষ্টি পড়েনি এদের ওপর। ফলে আজও বহাল তবিয়তে বর্তমান আমাদের প্রিয় এই পাখিটি।

আগেই বলেছি, বিদেশি পাখির কথা বলার দিকেই ঝোঁক ছিল রাজেন্দ্রলালের। কিন্তু তাই বলে ভারতের পাখিদেরও উপেক্ষা করেননি তিনি।

হুপো বা হোদহোদ পাখিটির কথাই ধরা যাক। ১৮৫৮-র জুন মাসে সুদর্শন এই পাখিটির সচিত্র বিবরণ *বিবিধার্থ সংগ্রহ*-এ প্রকাশিত হয়। লম্বা ঠোঁটের এই পাখিটির দেখা ভারতের সব জায়গাতেই মেলে। হাকিমি চিকিৎসায় এই পাখিটির ভীষণ কদর। এর বিভিন্ন অঙ্গ রোগ নিরাময়ে কাজে লাগে।

গাছের কোটরে ঘাস, লোম আর পালক দিয়ে নির্মিত বাসায় এরা একসঙ্গে চার-পাঁচটি ডিম পাড়ে। ডিম ফুটে ছানা বেরোলে বাবা-মা দুজনেই হরেকরকম কীট এনে তাদের খাওয়ায়। এইসব কীটের দেহাবশেষ পচে হুপোর বাসা থেকে দুর্গন্ধ বেরোয়।

শ্যামা পাখির মতো হুপোও কীট-পতঙ্গ খেয়ে বাঁচে। খুব সহজে পোষ মানে এরা। পোষা হুপো ছাতু খায়। দুধ খেতে ভালোবাসে। মনিবের কাঁধে চড়ে খেলা করতে হুপোর জুড়ি নেই।

পারাবত বা চলিত বাংলায় পায়রা আমাদের অতি

পরিচিত। এদেশের ছেলে-বুড়ো অনেকেই পায়রা পোষে, আদর করে চাল-গম খাওয়ায়। শুধু এদেশেই নয়, সারা পৃথিবীতেই এদের আদর।

নারী-পুরুষের মধ্যে এদের ভীষণ ভাব। জোড়ায় জোড়ায় বাসা বেঁধে থাকে। ফল-মূল, শস্যদানা খেয়ে এরা বাঁচে। পথ চিনতে এদের জুড়ে নেই। অনেকদূরে ছেড়ে দিলেও, পথ চিনে ফিরে আসে। আগেকার দিনে পায়রার মাধ্যমে চিঠির আদান-প্রদান হত।

নানা ধরনের পায়রার দেখা মেলে— গলাফুলো ওলন, জাকোবিন, ঝুঁটিওয়ালা, ঘুঘু, বন্যগোলা, লক্কা, খোপাওয়ালা, গৃহবাজ, গোলা (ছবি দেখুন সহজে চেনার জন্য a, b, c, d হিসাবে এদের চিহ্নিত করা হয়েছে।)।

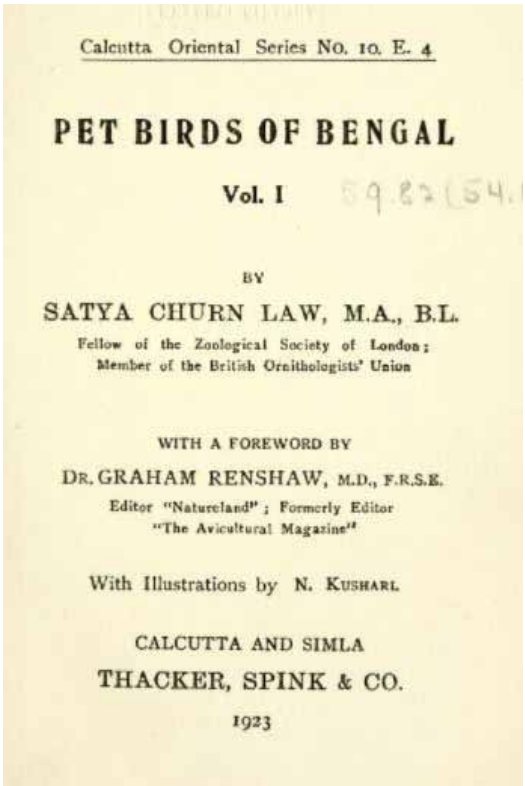
বিবিধার্থ সংগ্রহ-এর পাঠকদের তিনি জানাতে চেয়েছেন, 'কপোতকগণের বিবরণ'। প্রাণিতত্ত্বজ্ঞেরা এদের পাঁচটি শ্রেণিতে ভাগ করেছেন— (১) ডাইডঙ্কুল— এরা তিতির জাতীয়; (২) ডোডব— ডোডো নামে তারা সর্বত্র পরিচিত; (৩) গৌরা— ভারত সাগরের দ্বীপগুলিতে এবং জাভায় এদের খুব আদর। বড় আকারের এই পাখির রঙ মেঘের মতো নীলাভ; (৪) কপোত— এরা আবার ঘুঘু, কপোত প্রভৃতি নানা ভাগে বিভক্ত; (৫) ট্রেরোন— গাছেই থাকে, মাটিতে বিশেষ ঘোরাফেরা করে না।

শুধু পায়রার কথা বলাই রাজেন্দ্রলালের উদ্দেশ্য নয়। আমাদের জ্ঞানভাণ্ডারকে পরিপুষ্ট করার জন্য প্রকাশ করেছেন কপোতকদের বিচিত্র কথা। এত সহজ করে এসব কথা তাঁর আগে আর কে বাঙালিকে শুনিয়েছেন?

Forgotten Indian Ornithologist – Dr. Satya Charan Law

Asok Kanti Sanyal
Biological Science Secretary, The Asiatic Society

The study of Indian birds was started in the Vedic period. Later Mughal Emperors and then most of the British people in India studied birds and published valuable documents. Among them Captain Surgeon Thomas C Jerdon, Brian Hodgson and Edward Blyth were collectively called the "Founders of Indian Ornithology". Next major contribution in advancement in ornithological knowledge in India was made by Allan Octavian Hume, CB, ICS (1829-1912) who is regarded as the "Father of Indian Ornithology".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PET BIRDS OF BENGAL

Vol. I

BY

SATYA CHURN LAW, M.A., B.L.

Fellow of the Zoological Society of London;
Member of the British Ornithologists' Union

WITH A FOREWORD BY

DR. GRAHAM RENSHAW, M.D., F.R.S.E.

Editor "Natureland"; Formerly Editor
"The Avicultural Magazine"

With Illustrations by N. KUSHARI.

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The 20th century saw many talented and dedicated ornithologists in India. Among them the most celebrated man was Dr. Salim Ali (1896-1987). Dr. Salim Ali is considered as the first Indian ornithologist who conducted systematic bird surveys. He is sometimes referred to as the "Birdman of India". But a man who was born in Calcutta six years before Salim Ali and started publishing articles and books on birds long before Dr. Ali, Dr. Satyacharan Laha (also transcribed as Satya Charan Law), M.A.,Ph.D. is unfortunately almost unknown to the present generation bird watchers. He was a wealthy naturalist, amateur ornithologist, educationist and intellectual in Calcutta. A Fellow of the Zoological Society of London and Member of the British Ornithologist's Union, Dr. Laha was for a while Treasurer of Indian Statistical Institute, the Vice President of the Calcutta Zoological Garden, scientist in Zoological Survey of India (?) and in many honourable positions. In 1937 Nirod C. Chaudhuri became his literassy assistant. He is the first Indian ornithologist who undertook bird surveys, maintained aviary of very high standard, identified birds collected from different places in India, mainly from Bengal and wrote several articles and books in Bengali and English. His first book entitled, *Pakhir Katha* in Bengali was published in July 1921. This book is a compilation of articles on birds of Bengal written by him and published in different journals like

Prabasi, *Manas, Bharatbarsha, Subarna Banik Samachar* and others. The articles were edited and divided into three chapters,*viz*., cage birds or pet birds, economic ornithology (value of birds in human life) and the third one is on lives of different birds in the plays and poems of the great Sanskrit poet Kalidasa. The Preface of the book was written by Mahamahopadhyay Hara Prasad Shastri. He wrote that the book is beautiful…the third part is specially very interesting where Dr. Laha elaborately described great poet Kalidasa's knowledge of birds. Shastri expressed immense pleasure in reading the book. Satyacharan babu's second book was *Pet Birds of Bengal* published in December 1923. This 349 pages book in English contains elaborate descriptions of mainly song birds including general features, distribution, field notes, nests and eggs, cage life, songs and coloration. The book was started with description of great song bird *shama* and the added attraction of the book is excellent black and white drawings of birds in eight plates drawn by the artist Sri Narayan Chandra Kushari. In the Preface Dr. Graham Reshow, M.D., F.R.S.E., Editor 'Natureland' remarked that, "Mr. Law needs no introduction to the Zoological public. Himself a fine naturalist and a keen observer …".

After thirteen years Dr. Laha realised that the knowledge on Indian birds has been enriched considerably and it would be appropriate to write the revised version of the earlier book *Pakhir Katha* as a new book - *Kalidaser Pakhi*. This voluminous book of 332 pages with price of Rupees six was published in 1934. The book was the result of Dr. Laha's researches on the writings of Kalidasa in *Meghdoot, Ritusanhar, Raghubansha, Kumar Sambhaba* and his plays. The names of twenty-six birds which were mentioned by Kalidasa in his writings and subject index are included at the end of the book. Dr. Satyacharan babu proved in his publication, "Notes on the occurrence of some hitherto unrecorded birds in central and south Bengal", in 1945 that he was a serious researcher also. In this context another forgotten name Sri Sudhindralal Roy can be mentioned. He worked under Dr. Laha in his young age. Since then he used to publish articles on birds of Bengal and after twenty-five years in 1948 he published the book *Banglar Parichita Pakhi* containing his published articles. He mentioned in the book that I know Dr. Satya Charan Laha M.A., Ph.D. as the only ornithologist in Bengal.

Birds in Indian Art: Antiquity and Importance

Keka Adhikari Banerjee
Curator, The Asiatic Society

Birds are depicted in numerous numbers in early Indian art as an inseparable unit of nature, imaginative creation and symbolic metaphors of high degree of spiritualism. The antiquity of birds in art goes back to the Pre-historic times when human being drew pictures of birds pertaining to the activities of everyday life. Such rock art paintings at Bhimbhetka, Mirzapur beautiful depiction of peacock, cock, heron etc. are found in colours (Fig.1). Early representation of birds are found in Harappan art in various manners and in different mediums. Almost all varieties of faunas were depicted on seals, amulets, potteries and toy-cart. During the Vedic period birds had a mythical and religious value. In the Rig Veda bird is referred as it can separate *soma* from water when mixed and the same has been referred to later Indian literature which mentions *hamsa* separates milk from water as the symbolism of individual soul or spirit and universal soul or spirit. Even the hymns of Rig Veda, Epics and Puranas mention a variety of birds with the root of *hamsa* (i.e swan or goose).

Fig. 1 : Peacock in white colour, Bhimbhetka [photograph by Keka Adhikari Banerjee]

In the second-first century BC depiction of floras and faunas as a part of nature in stone and terracotta was a common practice. Parrots, peacocks in the medallion are beautifully delineated in the sculptures of Bharut and Sanchi (Fig. 2). From the Mauryan period onwards we have evidences of birds and animals in *Jataka*s, classical dramas, *Arthashastra*, *Panchatantra*, *Hitopadesha* and other texts. In *Pachatantra*, a text of fables of the contemporary period, crane, heron, pigeon are emulated in popular yoga poses, the peacock is depicted as cultural and religious icon associated with a number of deities. The *hamsa* was also used extensively in the art of Gandhara, in conjunction with the images of Shakyamuni Buddha.

Fig. 2 : *Hamsa*s are exquisitely carved in the story of Miracle of Flood (as per Dr. Debala Mitra), Gateway of Sanchi [photograph by Keka Adhikari Banerjee]

In the ancient Indian art representation of birds is related to bodily yearnings or spiritual liberation. Birds undeniably emerge and operate on many levels such as

1. Represented as a part of nature ;
2. As vehicle, where it is a hidden symbol of expression of spiritualism ;
3. As pet where they are the representatives of *sukakrida* or engaged in different activities mentioned in early literature like *Mrichhakatika* by Sudraka, *Meghaduta* by Kalidasa and other literatures. A pet is often trained as a messenger. Such early figures are found in the Kushana period. This proto-type of art is also found at Ahichhatra, Mathura, Chandraketugarh and other sites. This tradition also continued up to 10th-12th centuries at Khajuraho on the temple walls with several depictions of lady with parrot.
4. Represented separately or with the *mithuna* figures or symbolically emitting jewels as setting significance of ultimate realism (*moksha*).

Different kinds of birds were carved on the terracotta plaques of early mediaeval temples and monastic sites of Bengal like Paharpur, Mainamati, Somapura *Vihara* (the sites are in Bangladesh) (Fig.3), Jagjibanpur (at Maldah district of West Bengal) and other excavated Buddhist sites. One plaque from Jagjibanpur depicting emitting jewels from its mouth signifies *moksha* (Fig.4A & 4B).

Fig. 4A : Terracotta Plaque of Jagjibanpur Monastery, Maldah, W.B [photo courtesy: Professor Durga Basu]

Fig. 3: Sompura Mahavihara established by Pala ruler Dharmapala at Naogaon district of Rajshahi division of present Bangladesh (now in the custody of Indian Museum), dated 8th century C.E. [Photo Courtesy: Debkumar Maitra, Kolkata Museum, Town Hall]

Fig. 4B : Terracotta Plaque of Paharpur Monastery, Bangladesh
[Photo courtesy: https;//www.researchgate.net/publication/339527677 Article by Sanjay Sengupta on "Terracotta- Ornamentation on the Religious Architecture of Bengal:Gradual Deconstruction of Cultural Units Through the Expanse of Lokayata"

In the late mediaeval terracotta temples a wide range of birds are found on the temple walls sometimes as a part of nature (Fig.5), sometimes as decorated panels with groups of ducks or geese (Fig.6) and often as Suk o Sari (mythical birds) or parrots especially in the temples dedicated to Lord Krishna (Fig. 7) and *hamsa*s are also depicted as the witness of the cosmic play of Radha-Krishna or singly as its separate entity(Fig.8)

Fig. 5: Lakshmi Janardan temple at Gram Debipur of Purba Burdwan district, dated 1844 C.E. [Photo Courtesy: Surajit Chanda, Assistant Professor of Applied Arts, Rabindra Bharati University]

Fig. 6 : Ekratna Madanmohan temple established by Malla ruler Durjan Singh at Bishnupur, Bankura district, dated 1694 C.E. [Photo Courtesy: Surajit Chanda, Assistant Professor of Applied Arts, Rabindra Bharati University]

Fig. 7: Pancharatna Radha-Damodar temple of the Bada taraph of Mandal family at Hadalnarayanpur of Bankura district, dated 1806 C.E. [Photo Courtesy: Surajit Chanda, Assistant Professor of Applied Arts, Rabindra Bharati University]

Fig. 8: Navaratna Siva temple of the Nandi family at Baidyapur of Purba Burdwan district, dated 1802 C.E. [Photo Courtesy: Surajit Chanda, Assistant Professor of Applied Arts, Rabindra Bharati University]

Different species of birds are beautifully delineated in painting throughout the Indian art history (Fig.9). Painters found birds to be a part of an affluent visual symbolism. Mention may be made of some of the birds and what they symbolizes. Peacock symbolizes love, spring, new growth, when it is white in colour it symbolizes benevolence, serenity, kindheartedness, compassion and good luck. Pigeon symbolizes love and marital bliss, white dove symbolizes peace and innocence while duck can signify piousness of the soul. Sparrow is the symbol of optimism, fertility etc. Likewise owl symbolizes astuteness, insight and good value, whereas crow is symbolically associated with *Sraddha*, a ritual practices by the Hindus. A beautiful illustration of white swan with Devi Saraswati on its back is found in a manuscript of 17th century, Devimahatmya by name preserved in the museum of the Asiatic Society, Kolkata. Here the swan is depicted as vehicle as well as signifies good luck as per content of the manuscript (Fig.10). Thus the Indian art has rendered feathered creatures from the perspectives of not only beautification but of hedonistic indulgence and spiritual awakening.

Fig. 9 : A Pelican by Robert Home (Oil painting, The Asiatic Society Museum collection)

Fig. 10 : Saraswati riding on white Swan (*hamsa*), illustration on manuscript-Devimahatmya (The Asiatic Society Museum collection)

Ornithological Representations in Indian Archaeology: A Brief Outline

Anuja Bose
M.A. (Archaeology), University of Calcutta

From a very early stage of cultural evolution, humankind had had a strong connection with his natural environ consisting of the flora, fauna and the topographical surroundings. This wilderness surrounding early humans has often been used in his own favour. In the domain of faunal remains bird, inter alia, seems to have played a significant role in man's societal existence–subsistence, in activities, entertainment and ecological balance.

A comprehensive study of Indian birds started in the seventies of the twentieth century by T. C. Jerdon. Thereafter scholars like A. O. Hume, W. T. Blanford and E. W. Oates, S. Baker, H. Whistler and C. B. Ticehurst studied the subject. Salim Ali, more popularly known as 'the father of Indian Ornithology', has provided an extensive treatise on Indian birds. The Bombay Natural History Society has contributed considerably to the study of Indian birds. Through tireless effort of several Indian and foreign scholars, some 1200 species of birds are identified living in India, which represent 75 families and some 20 orders.[1] It is important to note at this juncture that the Asiatic Society in the later part of the nineteenth century played a pivotal role in the dissemination of knowledge on ornithology; the works carried out by Robert Swinhoe on East Asian ornithology and published in the Journal of the Society is an important point of reference.[2] However, compared to the modern studies in Ornithology forming part of the larger discipline of Zoology, comprehensive works on early Indian birds are yet to be undertaken, though decades of individual researches on specific sites/chronological phases has let to the accumulation of a large body of sources on the subject. Here I attempt a very brief outline of these sources that might in future help undertake a detailed research on the theme.

Ancient Indian bird depictions and faunal remains consist of both wild and domesticated variety of birds. Although the advent of domesticated birds in the archaeological remains is much later phenomenon. Several lower Palaeolithic sites of India have yielded faunal remains of birds. Mention should be made of Hunsgi valley where the excavator undertook ethnoarchaeological study of the communities living near the prehistoric site in order to understand the subsistence pattern of the human group that once occupied the site. From this study, he came to the conclusion that birds like sand grouse, partridge, and quail formed parts of the dietary system of the early population living at the site and its neighbourhood.[3]

Indian birds have also been the medium of earliest art works in India. Fragments of ostrich egg shells have been found from various Indian upper Palaeolithic sites.[4] The ostrich is the largest living bird. Contrary to their current habitat restricted to Africa,

in late Pleistocene and early Holocene they roamed freely over India. This is well documented in the faunal remains from Upper Palaeolithic sites like Patne in Maharastra, Chandesal in Rajasthan, Ramnagar in Madhya Pradesh.[5] About forty-one sites have yielded disc and beads of ostrich egg shell dated to 39000BP-25000BP. Some of them had a hole through which they could be strung. A large fragment from Patne was engraved with criss-cross patterns. Although these beads appear to be non-utilitarian, because of their symbolic and ideological value they are of utmost importance.[6]

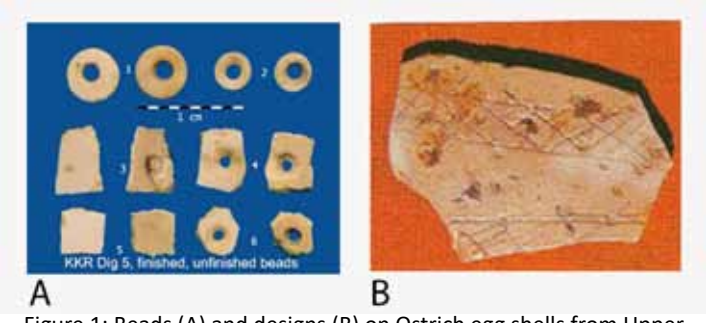


Figure 1: Beads (A) and designs (B) on Ostrich egg shells from Upper Palaeolithic context (after Kumar and Roy 2012).

The Mesolithic period in the Indian subcontinent brought significant changes into subsistence, life style and artistic expression of the society. Almost 150 Mesolithic rock art sites shed light on the subsistence, belief, ideology and daily life of the period. Different species of birds were recorded at Mesolithic rock shelters sites of India. On the basis of their occurrence, birds in rock art can be grouped into four major groups:[7]

1. Perching birds: Perching birds are very rarely depicted in prehistoric rock art. One such important occurrence is at Baniaberi shelter in Pacnhmari region, where probably a southern black bird is shown sitting on the branch of a tree.[8]
2. Birds of prey: V.S. Wakankar has recorded seven drawings of 'Vultures' from Putii Karar shelter in Raisen district of M.P. and Pacnhmari in district Hoshangabad.
3. Water birds: A few examples of the water birds from Bhaldaria shelter of Mirzapur are snipe, common snipe, common sand piper and white ibis.[9] Other birds like bar headed goose, spoon bill, saras (crane), tupaelle crane, and shoveller all are recorded from different rock shelters like Kandakot, Bhimbetka, Naryauli, Sagar etc.[10]
4. Non flying birds: Several drawings of common peafowl have been recorded in Indian rock paintings from Mirzapur, Bhimbetka, Pacnhmari, Adamgarh and Sagar; besides, species of jungle fowl has been identified at Bhimbetka and Pacnhmari. Two faded drawings of Ostriches following one human and one animal figure are found in Bazar cave at Pacnhmari.

In the protohistoric context, before the advent of Mature Harappan phase many sites in Baluchistan illustrate the change from semi-nomadic pastoral life towards settled agriculture. These regional cultures with their own subsistence, pottery and material culture act as links connecting the Harappan civilization with a gradual process of urbanization. The sites of Baluchi protohistoric cultures like Sohr Damb/Nal and the site of Kulli in southern Baluchistan yielded a large variety of exquisitely painted pottery. The bird motif occurs very frequently in Kulli and Nal pottery along with other geometric pattern, all painted in vibrant colours such as black, red, yellow and blue-green. Birds were all depicted in their side/ temporal views. Postures depicted in such illustrations also represent a wide variety: the one about to fly with his wings open, the one catching games with

his beak and the one standing still. Birds are depicted having large round eye and parallel strokes on the body filled with colours. On some examples, crest of feathers on the top of their heads are stylistically represented. Geometric designs such as criss-cross, triangles, l-shapes, concentric circles and so on are placed around birds on some specimens. Griffin, a composite animal consisting of a body of quadruped, a head of bird and wings is also observed in few specimens. The tail is depicted in a raised position. The body and wing are filled with oblique parallel strokes, between which colours are applied.[11] Although it seems natural that birds were used just to decorate the vessels, their occurrence with symbols like bull and pipal leaf might also indicate their ritualistic significance.

Figure 2: Representation of birds on Harappan pottery (after Katolec Collection, 2017)

Faunal remains and pottery, burnt clay tablets, amulet, terracotta figurines, toy carts, and whistle unearthed from several Harappan sites suggest a close association of the early cultures with birds like cock, peacock, pigeon, owl, eagle, duck etc.[12] Archaeological findings indicate that the domestication of chicken has been observed at several Harappan sites, especially the site of Lothal, situated in Gujarat. Lothal has yielded convincing evidence of domestication of chicken as early as 3,200 BCE. Contrary to the Harappa-centric theory of domestication, recent archaeological finds and DNA studies argue that the domestication of chicken appeared independently in different locations of Asia, including India.[13]These birds were an integrated part of the Indus economic system. Birds were not just part of food and trade, but they were also used for amusement of children. Mention should be made of 'Hollow egg' and bird-shaped whistles that were most probably used as toys and also to represent pet birds like doves or partridges. Also, the terracotta figurine of a bird perching from its cage unearthed from Mohenjodaro suggests that birds were kept as pets. Further, birds like peacock frequently occur on Cemetery H pottery along with several ritualistic symbols.

Figure 3: Bird shaped Toy whistle of Mature Harappan period, captioned "Indus Valley Culture. Small Toy Whistle, 3000-2500 B.C.E. Hand-modeled baked clay with polychromy, 2 1/8 x 2 9/16 in. (5.4 x 6.5 cm). Brooklyn Museum, A. Augustus Healy Fund, 37.38. Creative Commons-BY (Photo: Brooklyn Museum, 37.38_SL1.jpg)".

The disintegration and decline of the Harappan Civilization around the middle of the second millennium BCE led to the development of a number of farming communities occupying varying geographical niches in different parts of India. Bengal was also no exception and sites like Bharatpur, Mahisadal, Pandurajardhibi, and Mangalkot were effectively colonized by Chalcolithic

agricultural communities. The faunal remains of birds like hen, jungle fowl and pigeon have been identified from these sites.[14] In the Megalithic context, Khapa in Maharashtra yielded several copper lids of dishes with finials in the form of perching bird.

Peacock gained a lot of importance as early as the mid-first millennium BCE. Numerous representations of birds characterize the early series of punch-marked coins of what have been designated as the 'Imperial Magadha-Nanda-Maurya Series', particularly in the Series VI of this classification.[15] The symbol of peacock on arches, representing a composite symbol, also became one of the five main elements on imperial Mauryan coin. The tradition of depicting birds on the reveres of coins continued in the later centuries of the pre-Christian and early centuries of the Common Era, as seen on the coins of the Kuninda and Audumbara.[16] Peacock was also used as a food resource as mentioned in the rock edict of Asoka where reference is found to the regular slaughter of peacock in the royal kitchen.[17]

Figure 4: Representation of peacock on both sides of imperial punch-marked coin (https://www.cointalk.com/threads/coinage-of-the-maurya-empire-322-bce-185- bce.283509/).

Ample reference to the prominent position of bird is reflected in the early narrative art of India in the *Jātaka*s, the Epic and the Puranic episodes chiselled/ painted on temples, *stūpa*s and *vihāras*. Buddhist cave art and sculptures on *Stupas* are famous for faunal depiction in which bird figures conspicuously, for example at Bedsa, Bhaja, Karle, Kanheri, Nasik, Ajanta, Bagh and the *stūpa*s at Bharhut, Amaravati, Sanchi etc. One very prominent example of bird is the painting of the *Haṁsajātaka* in the cave 17 of Ajanta dated to fifth century CE.[18] Here Buddha as a golden goose is shown teaching the king of Vārāṇasī the value of loyalty. Besides Buddhist art, animals and birds were depicted on Brahmanical temples as *vāhana*s of deities. One excellent example is the *Rāmāyaṇa* panel of Ellora cave 16, the depiction of Jaṭāyu trying to prevent Rāvaṇa from abducting Sītā. Depiction of birds in art has multifarious bearings on philosophical, religious, cultural and aesthetic pasts of India.

Figure 5: Ravana being attacked by Jaṭāyu while abducting Sita, Kailasha temple, Ellora, southern wall (Photo: Author).

Both Brahminical and Buddhist belief systems have placed humans, birds and animals on the same plane of existence, sharing cycles of reincarnation. Indians have endowed them with supernatural power mostly due to their awfully inspiring ability of flying and due to many benefits derived

from them. Thus, both wild and domestic birds have played a prominent role in the artistic, religious and spiritual expression of ancient India. One has to note, finally, that even a graphic review of representations of bird in early Indian archaeological and aesthetic sources is beyond the purview of this note. A more detailed study with specific and individual focus on three components–skeletal materials, prehistoric and protohistoric artistic creations and historical aesthetic compositions–is expected to yield a more comprehensive understanding of birds in Indian art and archaeology.

Notes and References

1 Salim Ali and Z. Futehally. *Common Birds*, 1967. New Delhi: National Book Trust.

2 Robert Swinhoe. 'Ornithology of Amoy', *Journal of the Asiatic Society of Bengal* 29: 240-65, 1868; for a passing yet important reference to Swinhoe, see Aparajita Basu, Edward Blyth and the Asiatic Society, *Indian Journal of History of Science* 52(2): 148-160, 2017.

3 K. Paddayya. *The Acheulian Culture of Hunsgi Valley: A Settlement System Perspective* 1985, pp. 59-64. Pune: Deccan College Post-Graduate and Research Institute.

4 Robert G Bednarik, About Palaeolithic ostrich egg shell in India, *Bulletin of the Indo-Pacific Prehistory Association,* 13: 34-43, *1993*.

5 Bednarik, op. cit.

6 Giriraj Kumar and Ragini Roy, Late Pleistocene Art of India, J. Clottes ed. *L'art pléistocène dans le monde / Pleistocene art of the world / Arte pleistoceno en el mundo* Actes du Congrès IFRAO, Tarascon-sur-Ariège, septembre 2010 – Symposium « Art pléistocène en Asie », 2012.

7 Yashodhar Mathpal, Rock Paintings of India: An Ornithographical Interpretation, *Bulletin of the Deccan College Post-Graduate and Research Institute* 35 (3/4): 83-93,1976.

8 J. Gupta. *Pragaitihasik Bharteeya Chitrakala (*Hindi), 1967, Delhi, National Publication House.

9 M.R. Ghosh. Rock Paintings and other Antiquities of Prehistoric and Later Times, *Memoirs of the Archaeological Survey of India, No. 24, p.193. Delhi* Archaeological Survey of India.

10 Gupta, op. cit. 1967, plate XXXIV-1.

11 Akinori Uesugi, *Ceramics and Terracotta Figurines from Balochistan of The Katolec Collection*, 2017, Tokyo: Katolec Corporaion.

12 Shivendra B. Kadgaonkar. The Role of Animals and Birds in Ancient Indian Art and Culture, *Bulletin of the Deccan College Post-Graduate and Research Institute* 68/69:,2008-2009.

13 Sriramana Kanginakudru, Muralidhar Metta, R.D. Jakati and J. Nagaraju. *Genetic Evidence from Indian Red Jungle Fowl Corroborates Multiple Domestication of Modern day Chicken. BMC Evol Biol* 8, 174, 2008 (page reference not available for citation), http://www.biomedcentral.com/1471-2148/8/174.

14 Asok Datta. Subsistence Strategies of the Chalcolithic People of West Bengal*:* An Appraisal, *Bulletin of the Indo-Pacific Prehistory Association* (Taipei Papers, Volume 3) *25*: 41-47, 2005.

15 For a detailed discussion, see P.L. Gupta and T.R. Hardaker. P.L. Gupta and T.R. Hardaker, *Ancient Indian Silver Punchmarked Coins of the Magadha-Maurya Karshapana Series*, 1985. Nashik: Indian Institute of Research in Numismatic Studies.

16 Kalyan Kumar Dasgupta. *Tribal Coins of Ancient India*, 1965. Calcutta: University of Calcutta.

17 Sircar, Dines Chandra. *Select inscriptions bearing on Indian History and Civilization vol.1*, 1965. Calcutta: University of Calcutta.

18 R.S. Gupte & B.D. Mahajan. *Ajanta, Ellora and Aurangabad Caves*, 1962. Bombay: D. B. Taraporevala.

The Mind of Birds

Debashis Banerjee and Anindita Banerjee
Sunshine Birdworld

Birds are colourful.
Birds are beautiful.
Birds are dexterous.
Birds are intelligent.

But ...

Do birds also have a mind of their own which can emote?

That the parlance "having a bird brain" is a misnomer is common knowledge now. There used to be a time when birds were believed to be no-brainers and human beings with less than average intelligence were equated with birds. However, today the intelligence of birds has been well documented and widely established by many scientific evidences.

But a question that can only be answered by those who have been in very close contact with these feathered friends for a long period of time is that: do birds really have a mind that can have feelings like us humans? Do they rejoice, grieve and have emotions like us?

Our association with birds is several decades old. We are in love with exotic feathers for as long as we can remember. For decades we have spent major chunks of our days with birds, reading about them, taking care of them, trying to build an ideal habitat for them, trying to understand their nutritional requirements, social necessities and environmental requisites, nurturing their babies and, often, spending hours to cater to their individual idiosyncrasies.

The rewards of this seemingly endless association have been phenomenal. Such associations have also led to repeated observations providing us with a large amount of experience. We have seen that birds with greater intelligence definitely have more emotions. Parakeets and parrots are birds believed to be endowed with a great deal of intelligence. Thus these would be birds which would also be bestowed with greater emotional attributions.

The word "emotion" is defined as "a strong feeling derived from one's circumstance or mood". Thus having the capability to enjoy or experience joyfulness is undoubtedly an expression of being emotional. We have been experiencing this expression of being joyful in birds day in and day out at Sunshine Birdworld. The birds flap their wings, spread themselves out and soak themselves in the first drops of rains after prolonged droughts

with so much enjoyment! Even hens with eggs or chicks in their nests rush out to get a sprinkle of rain water onto their outstretched wings, forgetting their nestlings for a brief period of time. We watch them rejoicing with their mates in the rains and then, rushing back to take care of their custody with sudden frenzy in their flight. And then when the sun emerges from behind overcast skies after days of relentless rains, we see the birds enjoying the sunshine with gusto. Changes in seasons reflect a definite change in the behaviour and demeanour of each and every psittacine. These expressions of joy cannot be estimated numerically, but can be measured empirically with the mind's eye even by a cursory observer. Whenever any bird fails to respond to the changes in the environment in its usual manner, the daily caregiver is sure to have noted some irregularity in the health or in the general situation of the bird.

As with joy, the expression of sorrow is an equally potent manifestation of emotion. There are birds which pair bond for life, and if, due to any reason one bird of a pair passes away, the other would grieve throughout its life, but never accept a new mate. Such devotion is indeed an elevated emotion. Then, there are birds which prefer living in flocks. Separation of such a bird from its flock due to any reason whatsoever is encountered with agony on part of the single separated bird, often leading to long term behavioural issues of the bird, that are difficult to deal with. Death of an offspring is also associated with expression of grief. A bird would often sit in front of its dead chick for a long time, and would sometimes refuse food. But in case the hen has other nestlings to attend to, she would respond to the call of duty overlooking everything else. For a mother bird, emotions are definitely inferior to the instincts for procreation, survival and continuation of the species. This instinct would sometimes lead a mother bird to kill her own diseased or severely infected chick for the purpose of saving the lives of her other healthy babies sharing the nest with the diseased one. Thus "the hand that rocks the cradle" can go to extremes to save the cradle from any danger. This is as true for the feathered moms as it is for their human counterparts.

An important faculty of emotion is the ability to share and care for each other selflessly. Many inspiring tales of this profound faculty have been observed at Sunshine BirdWorld over the years. One such incident involves a very old pair of Moluccan Cockatoo *(Cacatua moluccensis),* which we had inherited from our grandparents. These birds were in our care for more than twenty years,

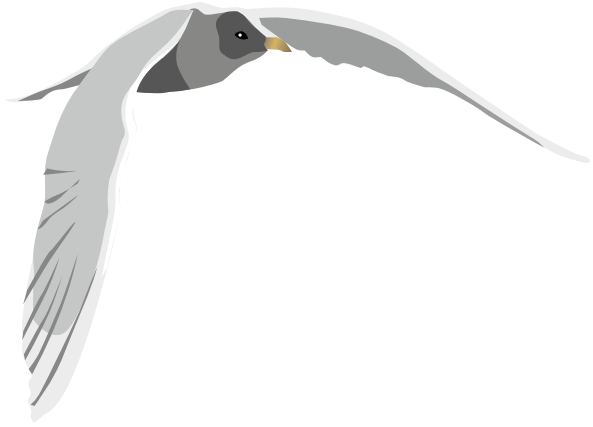
living and breeding happily. Unfortunately, with advanced age, the female bird lost its eyesight. For the next three years, it was the male Moluccan Cockatoo which took total care of its female and would feed and clean her with complete devotion until her death. In these three years the female bird would hardly ever leave the security of her nest box to come out to eat on her own or to defeacate. This image of deep empathy has been etched in our eyes permanently, but we are unable to recollect it without drops of tears trickling down the cheeks.

Another such memoir at Sunshine BirdWorld involves a pair of Green-winged Macaws *(Ara chloropterus)* that had been breeding prolifically over the years. A few years back the male bird was diagnosed to have a gangrenous affliction in one of its legs, and there was no option but to amputate it. We were devastated and thought that the birds would not be able to breed any more. Imagine our wonder and ecstasy when we found in the subsequent breeding season that the birds had reversed their roles completely and given birth to two beautiful healthy chicks! Normally, it is the female bird which sits on the eggs and broods, while the male gathers food and feeds her. In this case, as the male had lost one of its legs, the female bird collected food and fed the male, while the male one sat continuously onto the eggs and took care of the chicks when they hatched. They are doing exactly the same to this day and are raising successful clutches, undeterred by the adversity they were faced with!!

A heartwarming incident of avian empathy involving parental love and care was encountered at Sunshine BirdWorld during the recent super cyclone Amphan, when our property was lashed by very high wind throughout the night, with wind speeds gusting up to 165 km per hour occasionally. Obviously, we sustained huge infrastructural damages. We did lose some birds too. However, our greatest loss was the uprooting of a large number of of very old eucalyptus, mahogany, guava, mango and other trees bordering the periphery of our property, along with hundreds of smaller banana, papaya and other fruit and flowering plants inside the garden. The large trees were homes for hundreds of cormorants and egrets. Unfortunately, this was the breeding season at its peak for all these birds. Thus, their nests

were full of eggs and chicks. Walking through the wreckage the morning after the cyclone, we found hundreds of broken cormorant and egret eggs and not less than a hundred chicks of various sizes lying on the ground. The majority of the chicks were alive: shivering due to shock and cold. We picked all the living chicks up and tried to arrange for their proper rehabilitation. They feed only on small live fish, so procuring that for so many chicks in the midst of a catastrophe on a daily basis was quite a task. But the parents had seen us picking up the chicks and wanted to help us raise them. They themselves had been rendered homeless and had lost their babies, but each morning they would leave small pieces of fish for the babies just below the trees which had once been their homes and from where we had picked the babies up. The astonishing thing was that no other bird would touch these fishes, which were offered as "baby food". Although the quantity was insufficient, they did not miss to keep the food even for a single day! With time of course the chicks became bigger, learnt to eat by themselves, learnt to fly and were released by us at a far end where a few big trees still stood tall. The daily supplies of "baby food" also became lesser and lesser and stopped around the same time! We were astounded by the sensibility of the parent birds!

As regards the various aspects of emotions like love, jealousy, hate and anger: all of these can be seen in different birds in different proportions. Some birds are overtly demonstrative and spread their entire spectra of varied emotions out in the open for anyone who cares to stop by and watch out. Others are subtle in their emotional outpours and would require a careful observer to unravel their minds. But the vast majority of birds would reveal their inner magic only to those who can swing the magic wand in the proper way and can sing a song or two along with them! One has to spend years with avians to learn to swing the wand properly and to tune in melodiously to sing their ethereal song along with them!!!



পাখির দেশে

অরুণ কুমার চক্রবর্তী
রেখাচিত্রম

সারা পৃথিবীতে কত পাখি আছে সেটি গণনা করার চেষ্টা করেছেন পক্ষী বিশারদ Fisher। দেখা গেছে ১০০০ মিলিয়ন অর্থাৎ ১০ হাজার লক্ষ পাখি আছে এই পৃথিবীতে।

ব্রিটেনে প্রতি বছর ১২০ মিলিয়ন পক্ষী শাবক তৈরি হয়। পাখি বিশারদ Peterson হিসেব করেছেন শুধু আমেরিকাতেই প্রতি বছর পাখি জন্মায় ৭৬০০ মিলিয়ন। অন্য দেশেও এইরকম গণনা হয়েছে।

গবেষকরা বলছেন পাখিরা যেখানে বসবাস করে প্রায় প্রতি ১০ হেক্টর অর্থাৎ ২৫ একর জায়গাতে প্রায় ৭৫০ টি শাবক জন্মাতে পারে বছরে এমন দেখা গেছে। আবার এটাও দেখা গেছে সব জায়গায় একই হারে পাখিরা জন্মায় না । কোথাও বেশি কোথাও কম। সাধারণত পাখিদের কলরব শুনেই তাদের সংখ্যার হিসেব করেন বিশেষজ্ঞরা এবং সেটি দিনের বেলা।

কিন্তু সব পাখি যে দিনের বেলা বাসা ছাড়ে তা নয় কোন কোন পাখি রাত্রিতেও খাবার সন্ধানে বেরিয়ে পড়ে। তাই পাখি গণনা করা বেশ একটু ঝামেলার কাজ, এটা একটা মোটামুটি গণনা করা হয়ে থাকে। একেবারে সঠিক হিসেব করা সম্ভব হয়নি আজ পর্যন্ত ।

পাখিদের পূর্বপুরুষ কারা ?

পক্ষীবিশারদরা মনে করেন সরীসৃপ থেকেই পাখিদের স্বাধীন বিবর্তন ঘটেছে, যদিও বাস্তব উদাহরণ তেমন কিছু পাওয়া যায় না, তবে কিছু মিল আছে এদের।

ডাইনোসর আর কুমিরের অনেক মিল খুঁজে পেয়েছেন পাখি বিশেষজ্ঞরা।

এদের মস্তিষ্ক, চোয়াল, গলার গঠন এবং পা, এমনকি বুকের খাঁচার হাড় আর কোমরের গঠনও একই রকম, এরা ডিম পাড়ে।

জার্মানিতে পাওয়া তিনটি ফসিল থেকে বিজ্ঞানীদের অনুমান ডাইনোসরের মাথার খুলি, ঠোঁট, ও পায়ের গঠন পাখিদের মতো।

আবার বেশ কিছু অমিল লক্ষ্য করা যায়। পাখিদের রক্ত গরম, সরীসৃপের রক্ত ঠান্ডা, পাখিরা উড়তে পারে, সরীসৃপেরা পারে না।

এবার আসি পাখিরা ওড়ে কিভাবে, তাদের চামড়ার ওপর পালক গজায় কেন?

বিশেষজ্ঞরা বলছেন গরম রক্তের এই প্রাণীটিকে প্রকৃতির ঠান্ডা-গরম আবহাওয়ার হাত থেকে বাঁচানোর জন্য পালক-এর অবস্থান। তার সঙ্গে এই হালকা শরীরে যাতে কোনো আঘাত না লাগে তাই পালক দিয়ে ঢাকা সারা শরীর। তবে পাখিকে কেবল উড়তে সাহায্য করে পাখনার পালকগুলি। আবার পালকের নানা রং প্রকৃতির গাছপালার রঙে একাকার হয়ে লুকিয়ে থাকার একটি অনন্য উপায়ও বটে। কিংবা স্ত্রী পাখির মনোরঞ্জনের জন্য নানা রঙে পুরুষ পাখি নিজেকে সাজানোর ঘটনায় এই পালক সাহায্য করে।

পাখিদের ওড়ার কায়দা দেখেই মানুষ উড়োজাহাজ তৈরীর কথা ভেবেছিল—ইতিহাস তাই বলে। শিল্পী লিওনার্দো দ্য ভিঞ্চি সারা জীবন লক্ষ্য করে গেছেন পাখিরা কিভাবে উড়ে বেড়ায়। তিনি বাজার থেকে পাখি কিনে তাদের উড়িয়ে দিতেন এবং নানা ভঙ্গিমা লক্ষ্য করতেন কীভাবে

তারা উড়ে বেড়ায়। তাই তিনি পাতলা কাপড়, পালক আর কাঠ দিয়ে পাখনা বানিয়ে আকাশে ওড়ার একটি মডেল যন্ত্র বানিয়েছিলেন।

দেখা গেছে পাখিরা খুব সাবধানে থাকে যাতে তাদের পালকগুলি কোন শক্ত কিছুতে ঘষা না লাগে। পালকগুলি ময়লা বা নোংরা থাকলে, বা ভিজে গেলে তাদের শরীর গরম রাখার উপযুক্ত থাকে না। তাই প্রায় সব পাখি অনেক সময় ব্যয় করে তাদের পালক ঠোঁট দিয়ে পরিষ্কার করে।

দেখা গেছে পাখিদের লেজের নীচের দিকে একটি গ্ল্যান্ড আছে যাকে Preen gland বলা হয়। এর থেকে এক ধরনের তেল বের হয়। যে পাখিরা জলে থাকে সারাদিন তাদের এই গ্রন্থি থেকে যে তরল বের হয় তা সম্ভবত পালকগুলি যাতে তেলতেলে থাকে এবং পালকের কোনো ক্ষতি না হয় তারই ব্যবস্থা করে। তবে এই পালক যা পাখিদের বর্ম, চিরকাল থাকে না, নতুন পালক জন্মায় এবং পুরনো পালক ঝরে পড়ে যায়।

মানুষের খাবার যেমন আলাদা আলাদা, তেমনি পাখিদের খাদ্যও। কোনো পাখি নিরামিষ ভোজী, আবার অনেকে আমিষ ভোজী । কেউ ফল বা কেউ মাছ খায়, আবার কেউ সর্বভুক।

পাখির বাসা সে এক অদ্ভুত বিস্ময়। কেউ বাসা বাঁধে গাছের ডালের কোটরে, কেউ পাথরের খাঁজে, কেউবা পাথরের গর্তে আবার কেউ কেউ অন্যের বাসাতে তাদের জীবন কাটিয়ে দেয়। আমাদের দেশের কোকিলের নাম সকলেরই জানা যারা মূলত ডিম পাড়ার প্রয়োজনে অন্যের বাসাতে অনধিকার প্রবেশ করে। আবার কিং পেঙ্গুইন নিজেদের পায়ের ওপর দাঁড়ানো অবস্থাতে ডিম পাড়ে। তারা এক জায়গায় কলোনি গড়ে সংঘবদ্ধভাবে থাকে।

অস্ট্রেলিয়ার Mallee Fowl, এরা Megapodidae পরিবারের সদস্য যারা গাছের ডালে বাসা বাঁধে না, এরা বাসা বাঁধে সমুদ্রতীরে। একটি গর্ত খুঁড়ে তার মধ্যে গাছের পাতা দিয়ে ভর্তি করে দেয়। সেখানে কুড়ি থেকে ত্রিশটি ডিম পাড়ে। এরপর বালি কাদা দিয়ে দেড় ফুটের মতন একটা আস্তরণ দিয়ে ঢেকে দেয়। ছোট্ট একটা ফুটো রেখে গর্ত থেকে বেরিয়ে যায় মা ও বাবা পাখি।

গর্তের মধ্যে গরম গ্যাসের উত্তাপ সৃষ্টি হয়। সেই উত্তাপ থেকেই ডিম ফোটার উপযোগী অবস্থা তৈরি হয়। এরপর ঠিক সময় ডিম ফুটে বাচ্চা সুড়ঙ্গ পথে বাইরে চলে আসে।

Hornbill এক অদ্ভুত পাখি। পুরুষ পাখিটি স্ত্রী পাখিটিকে একটি গাছের গর্তের মধ্যে তুলে দেয়, সেখানে একটি ছোট্ট দেয়াল তৈরি করে আর তার ভেতরে থাকে একটি ছোট গর্ত যা থেকে সে নিয়মিত খাবার দেয় তার স্ত্রীকে - যতদিন না ডিম ফুটে বাচ্চা বড় হয়ে উঠতে পারছে।

আমাদের দেশে টুনটুনি পাখিদের (*Orthotomus sutorius*) দর্জি পাখি বলা হয়। এরা ঝোপের ভিতর গাছের নিচের দিকে নেমে আসা পাতা বেছে নিয়ে তাতে সরু সরু লতা দিয়ে সুন্দরভাবে সেলাই করে বাসা বানায় যার উপর দিকটা থাকে খোলা।

টুনটুনি পাখির সমগোত্রীয় আরেক পাখি হলো বাবুই পাখি। এদের তাঁতি পাখি (Weaver Bird) বলা হয়। কচু গাছে বা লম্বা কোন গাছের ডালে ঝুলতে দেখা যায় এদের বাসা, ঠিক যেন একটি উল্টানো কুঁজোর মতো।

মজার বিষয় হলো এই বাসাটি বানায় পুরুষ পাখি। সে বাসা বানিয়ে স্ত্রী পাখির জন্য অধীর আগ্রহে অপেক্ষা করে। অবশেষে স্ত্রী পাখির বাসা পছন্দ হয়, সে বাসায় ঢুকে পড়ে। তখন সেই পুরুষ পাখিটি বাসায় ঢোকার অনুমতি পায়।

অনেক ক্ষেত্রে দেখা গেছে ছোট ছোট পাখিরা দলবদ্ধ ভাবে বেঁচে থাকে। শিকারির হাত থেকে বাঁচতে তারা সংঘবদ্ধ হয়। আক্রমণকারীদের বিরুদ্ধে সংঘবদ্ধভাবে একটি প্রতিরোধ গড়ে তোলার চেষ্টা করতে থাকে। একদল যখন খাবারের সন্ধানে মনোযোগ দেয় অন্য দল তখন কোনো বিপদ আসছে কিনা সেদিকে নজর রাখে। তবে বড় শিকারি পাখিরা, যেমন, চিল, বাজপাখি, পেঁচা এরা একটু অন্যরকম, তারা একা একাই থাকতে পছন্দ করে বেশি।

বিভিন্ন জায়গায় শীতকালে ভিন্ন ভিন্ন প্রজাতির পাখির দেখা মেলে। এদেরকে আমরা পরিযায়ী পাখি বলি। এই পাখিরা যে ভিন্ন ভিন্ন দেশ থেকে অন্য দেশে উড়ে আসছে তার একটা পরিসংখ্যান নেওয়া শুরু হয় ডেনমার্কে ১৮৯৯ সালের। এরপর ১৯২০ সালে উত্তর আমেরিকায়।

পাখিদের পায়ে একটি করে রিং পরিয়ে তাতে দেশের নাম ও ঠিকানা খোদাই করা হতো, এবং পুরুষ ও স্ত্রী পাখির একটি তথ্য সংগ্রহ করে রাখা শুরু হতো।

১৯১১ সালে ফিঙে জাতীয় পাখি ধরা পড়ল দক্ষিণ আফ্রিকায় এক ফার্ম হাউসে। পাখিটিকে ১৮ মাস আগে ইংল্যান্ডে রিং পরানো হয়েছিল।

পাখিদের অনুসরণ করে দেখা গেছে ছোট বা বড় পাখির দল দিনে কিংবা রাতে এক দেশ থেকে অন্য দেশে পাড়ি দেয়।

সব পাখি পরিযায়ী নয়। উত্তর ইউরোপের এবং আমেরিকার উত্তর সামুদ্রিক অঞ্চলের দুই-তৃতীয়াংশ পাখি হলো গ্রীষ্মের অতিথি। কিন্তু নাতিশীতোষ্ণ দেশগুলিতে অধিকাংশ পাখি স্থায়ী বাসিন্দা। ছোট শরীরের এই পাখিরা দীর্ঘ পথ অতিক্রম করার জন্য যে শক্তির প্রয়োজন হয় তারা তা মজুত করে তাদের শরীরের fat থেকে। দেশান্তরিত হওয়ার কয়েক সপ্তাহ আগে থেকে তারা তাদের ওজনের এক তৃতীয়াংশের বেশি fat মজুত করে। জলপথে বিশাল পথ কীভাবে তারা অতিক্রম করে বিশেষজ্ঞদের কাছে এটি একটি বিরাট বিস্ময়!

পক্ষী বিজ্ঞানীরা পৃথিবীর সমস্ত পাখির এক বৈজ্ঞানিক নাম দিয়েছেন Aves। মূলত সাতাশটি পরিবারে বিভক্ত করেছেন এই পাখিদের। যাদের মধ্যে চড়াই প্রজাতির ছোট পাখির শ্রেণী সব থেকে বড়। এদের বৈজ্ঞানিক নাম Perching birds বা Passeriformes । আর সব থেকে ছোট গোষ্ঠীর পাখিদের মধ্যে একমাত্র জীবিত উপজাতি হলো উটপাখি। এদের নাম দেওয়া হয় *Struthio camelus*।

কৃতজ্ঞতা: *গগনের পাখিরা* — নিখিলেশ বন্দ্যোপাধ্যায়।

Preserving Avifaunal Diversity in Santragachi Jheel, Howrah, West Bengal, India

Advay Mishra
Student, Calcutta International School

Introduction

The human civilization and its early non-human ancestors were governed by water sources, namely, the wetlands. Wetland is considered as an interface between terrestrial and aquatic ecosystems. It is the most precious life-sustaining water resource which plays a crucial role as the ecosystem service provider. It provides food, filtered water and offers a unique habitat for many different species. Although wetlands occupy only 2% of the surface area of the earth, yet they are the most productive ecosystem of the world. They also play a vital role in the sustenance of different life-forms and often harbour many endemic as well as endangered species. In the recent past wetlands have not been given due importance and they have been considered as wasteland and breeding ground of disease carrying insects. There have also been cases of encroachments and neglect which has disturbed the habitat of various species which thrive on wetlands. In this context the preservation of biodiversity in wetlands has become a challenge (Gopal, 1995 & Ali, 1996).

Wetland of West Bengal

The fresh water wetlands in West Bengal are distributed over 3.35 lakh ha. excluding rivers, canals and paddy fields. The wetlands with varied forms and characteristics support widely diverse floral and faunal resources especially the habitat of resident and migratory birds. One such abode of migratory birds is Santragachi Jheel in Howrah district.

Santragachi Jheel

This is one of the most prominent wetlands of Howrah district, West Bengal spreading over an area of 32 acres. It is located on the northern side of the Santragachi Rly. Station (South Eastern Railway) and is nearly 8 kilometres away from the central part of Kolkata. The Jheel is roughly rectangular in shape having a total area of 10.87 hectares. It has a length of about 914 metres with a width of 305 metres, a perimetre of 2418 metres and the main depth varies from 1.5 to 2.13 metre. This freshwater aquatic system is flanked by rail yards on one side and dwelling houses on the other. The Jheel has large trees along the banks which provide shelter and food for many species of birds. The most important feature of the Jheel is extensive proliferation of water hyacinth (*Eichhornia crassipes*) which covers the whole of the Jheel throughout the year. This wetland has provided shelter and food to a large number of migratory water birds in the past. However, it has continuously faced anthropogenic pressure due to its vicinity to Kolkata and the bird population has fluctuated over the years.

Objective of the study

The objective of this study is to review the results of the studies so far done on status of biodiversity with special reference to resident and visiting migratory birds in Santragachi Jheel. Recent effort in preserving this precious wetland has also been included. The findings in this paper may be of help in preparation of management plan of the Jheel.

Review of the studies

Mazumdar and Saha (2005) studied

diversity and behavior of waterfowl in Santragachi Jheel during the period from October to April 2002–2003 and 2003–2004. In the study they recorded 27 species of water birds belonging to seven families, of which eight (29.63%) were migrants, eleven (40.74%) local migrants and eight (29.63%) resident. In the study, Lesser Whistling Duck was the most abundant species of migratory birds and a considerable number of birds roosted on the small islands made of water hyacinth.

Santragachi Jheel in Nov, 2000

Mazumdar et al. (2006) published the report based on results of a comprehensive study conducted in six wetlands including Santragachi Jheel of southern West Bengal. The survey was conducted during January, 2006 when most of the migratory water birds visit the wetland. In Santragachi Jheel higher population (9869 nos.) of water birds and wetland-associated species were recorded. The study reported the Lesser Whistling Duck as the most populous species comprising 96.2% of water bird population. Lastly it was concluded that the Jheel is an important wintering ground for birds.

Scientists of the West Bengal Biodiversity Board and the Centre for Biodiversity Studies, Vivekananda College, Kolkata jointly conducted a survey in the Santragachi Jheel in September, 2008. They made an extensive study of biodiversity of the Jheel for which the whole area was divided into 290 grids based on latitude – longitude by using a GPS (Garmin etrex). The vegetation map was prepared including all species of macrophytes – floating and submerged, present in each grid. The sampling plots were randomly selected within 1 metre of the waterline around the Jheel and sampled by using a dip-n-drag net and also by ad libitum search. The study also included physical and chemical parametres of water and subsurface sediment of the Jheel. A list of twenty seven water bird species which usually visit the Jheel was prepared by Prakriti Sansad, Kolkata an NGO working in the area. This was incorporated in the paper. The results of the study showed higher values of N, P, K, Pb and Cr in the sediment and low BOD level in the Jheel. It included seventeen wetland macrophytes but submerged ones were found to be low in abundance. The bank vegetation included twenty nine species under twenty five genera and sixteen families. A rich population of macroinvertebrates including mollusks and insects was recorded in the study.

Patra *et al.* (2011) conducted a study during 2000-2002 to ascertain the seasonal abundance and population dynamics of zooplankton community and its relationship with physico-chemical factors of the water bodies at Santragachi Jheel. A total of eighteen species under twelve families and fifteen genera were recorded. The work also reported abundance of different groups of zooplankton.

Ghosh *et al.* (2012) observed in their study at the Santragachi Jheel between November, 2009 and July, 2010, presence of 29 phytoplankton taxa. The study showed a low diverse community in the monsoon period.

In 2012 Mukherjee and Gupta made an assessment of avifaunal diversity of Santragachi wetland during the period from November 2009 to March 2010. The study reported a total of twenty species of birds belonging to eight families under six orders.

Diversity of aquatic insects in Santragachi Jheel was studied by Das *et al.* (2016). They conducted survey during the period from September 2015 to February 2016 and reported presence of three orders of insects like Hemiptera (4 species), Coleoptera (9 species) and larvae (naiad) of Odonata.

Palit (2018) studied the status of wetland birds in Santragachi Jheel for three consecutive years from 2013-2015. Altogether twenty five

species of birds were identified, of these Lesser Whistling Duck was found to be the dominant ones followed by Gadwall and Northern Pintail. The density of birds reached a peak during December-January months. Total number of birds fluctuated over 4000-5000 in number.

In January 2019 a report was published by Karelia in Swatch Warriors in which it was reported that number of visiting migratory birds in 2017 and 2018 was greatly reduced due to problems in cleaning up of water hyacinth in the Jheel.

Cormorants and whistling ducks at the Heels - struggling to get a foothold

Management Strategy

Santragachi is located in the densely populated area of the Howrah district. The Jheel is surrounded by dense habitations, railway yard and small scale industrial complexes. It has been reported that the Jheel is also being polluted due to the dumping of municipal and plastic waste. The satellite imagery in 2020 shows a large number of constructions work around the Jheels. As a result the Jheel has been facing serious anthropogenic pressure. The migratory bird population in the Jheel reduced to as low as 800 in the year 2017 from 9869 in 2006. The results of various studies have played a catalytic role in bringing the problems of the Santragachi Jheel under the scanner. This has necessitated development of a management plan for the Jheel.

Santragachi is placed within a complex governance framework. While the land belongs to the Ministry of Railways, Howrah Municipal Corporation is responsible for the normal cleaning and garbage disposal. The general regulatory oversight is done by the West Bengal Bio-Diversity Board. In the past, there has been a coordination failure due to the multiplicity of agencies. In 2019 the Board took an initiative to restore the habitat for the birds by scientific cleaning of the wetland. While the logistics was provided by the Howrah Municipal Corporation, the cleaning of the water hyacinth was done in a calibrated manner (leaving part of dried water hyacinth for roosting) with the help of 'Nature Mates - Nature Club'. Full removal of water hyacinth, however, could not be done since the migratory birds had started visiting the Jheel. Howrah Municipal Corporation has put in place a mechanism to stop dumping of waste near the Santragachi Jheel. At the same time sensitization workshops have been conducted at the Jheel to involve community and educate them about the value of the wetland. As a result the number of migratory birds visited in 2019 shot up to 5694 from 2889 as observed in 2018. This is a remarkable achievement in the context that West Bengal was hit by the cyclone 'Bulbul' in late 2019 which had caused a large number of deaths of migratory birds. The achievement is an outcome of a successful collaboration among the regulator, urban local body and NGO.

Santragachi Jheel (after cleaning, Jan 2020)

Discussion and Conclusion

Altogether nine different studies on ecology and biodiversity of specially resident and migratory water birds have been reviewed here to develop a firsthand idea about the health of

the Santragachi Jheel through analysis of biodiversity and population of winter migrants in the Jheels. It was noted that the phytoplankton and zooplankton population which indicate the status of water body was rich in both quality and quantity. Altogether 30-35 birds were recorded by different researchers. Lesser Whistling Duck was the dominant species among the migratory birds. Along with them commonly spotted birds were northern Pintail, Gadwall, northern Shoveler, Garganey, comb Duck, common Moorhen, cotton pygmy Goose, Fulvous whistling Duck, Red Crested Pochard and knob billed Ducks. It was also observed that the birds were flying in all the way from Kazakhstan, Russia, China and other countries. In most of the papers the authors mentioned that the presence of water hyacinth all over the Jheel prohibited birds to settle for roosting and feeding. High use of fertilizer in the catchment area has resulted into high presence of N,P,K in wetland which has led to prolific growth of water hyacinth. The studies suggest year round scientific management of water hyacinth in the Jheel. This has been successfully attempted in late 2019 by bringing in coordination among different stakeholders and setting a future trajectory for management of the wetland. Since the wetland is located in a complex surrounding it is not possible for a single agency to ensure that the wetland is properly maintained and provides full range of biodiversity services. In the management plan roles of different agencies need to be clearly delineated to bring in synergy.

Acknowledgement

I express my sincere thanks and gratefulness to Dr. Asok Kanti Sanyal, Chairman, West Bengal Biodiversity Board, Kolkata for inspiring me as a research guide to undertake the work for developing aptitude in environmental studies. I further thank him for allowing me to access the published papers present in his library.

References

Ali, S. 1996. The book of Indian Birds, Oxford University Press, New Delhi, 12th revised edition.

Chatterjee, Arijit, Roy, Anirban, Bhattacharya, Silanjan, Ghosh, Soumendra Nath and Ray, Debal 2011. Planning for eco-restoration of a water fowl habitat–case study of Santragachi Jheel, Kolkata, India. Abstract for presentation at the 15th meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the Convention on Biological Diversity, 7-11 November 2011, Montreal, Canada, 27-28.

Das, Apurva, Debnath, N. and Ghosh, L. K. 2016. A preliminary study on the biodiversity of aquatic insects in Santragachi Jheel, Howrah. *J. Exp. Zool. India*, 19 : 1505-1512.

Ghosh, Subhabrata, Barinova, Sophia and Keshri, Jai Prakash 2012. Diversity and seasonal variation of phytoplankton community in the Santragachi Lake, West Bengal, India. *Science Connect*, 1-19.

Goal, B. 1995. WWF Handbook of Wetland Management, WWF Publication, I-395.

Karelia, Gobi 2019. Migratory birds return to Kolkata's Santragachi Lake after citizen led clean-up drive. Swachh Warriors (ed. Sonia Bhaskar), January 17, 2019.

Mazumdar, Subhendu, Ghosh, Prantik and Saha, Goutam Kumar 2005. Diversity and behavior of waterfowl in Santragachi Jheel, West Bengal, India, during winter season. *Indian Birds*, 1(3) : 68-69.

Mazumdar, Subhendu, Kushal, Mookherjee and Saha, Goutam Kumar 2007. Migratory waterbirds of wetlands of southern West Bengal, India. *Indian Birds*, 3(2) : 42-45

Mukherjee, Aparajita and Gupta, Santanu 2012. Assessment of avifaunal diversity of Santragachi wetland, West Bengal, India. *Ecology, Environment and Conservation*, 18(2) : 357-362.

Palit (Paul), Sobhana 2018. Status of Santragachi wetland birds with special reference to their conservation strategies. *International Journal of Zoology Studies*, 3(1) : 18-20.

Patra, Ashis K, Santra, Kalyan Brata and Manna, Chanchal Kumar 2011. Ecology and diversity of zooplankton in relation to physic-chemical characteristics of water of Santragachi Jheel, West Bengal, India. *J. Wet. Eco*., 2011(5) : 20-39.

Roy, Anirban and Bhattacharyya, Silanjan 2008. Vegetation mapping and study of aquatic biodiversity of Santragachi jhil. Published by the West Bengal Biodiversity Board, Kolkata, 24 pp.

Birds of East Calcutta Wetlands and Erstwhile Marshy Salt Lakes

Asok Kanti Sanyal
Biological Science Secretary, The Asiatic Society

While passing through the EM Bypass after Chingrighata you will find the huge open areas with many large and small water bodies, that is the border area of the Wetland of International Importance under Ramsar Convention in 2002 – the East Kolkata Wetlands (EKW). It is comprised of numerous water bodies and agricultural fields with an area of 12,500 hectare situated to the east of the city of Kolkata in the districts of 24 Parganas North and South. Pollen analysis and Radio Carbon Dating clearly indicated that when Calcutta was born in the late 1600's the whole area east of the city was part of Sundarbans, the mangrove forests that has now retreated about 100 kms from the city. The area - within the EKW - is considered the 'kidney' of Kolkata and adjoining areas because of its ability to naturally treat waste water. The health and function of any ecosystem depend on the status of biodiversity present there. Hence, it is a regular practice to monitor the state of art of the system by checking the status of physical and biological components. Recently, the EKW Management Authority with the expertise of Late Kushal Mookherjee studied the present status of avian fauna of EKW and has published a pictorial book written by Late Mookherjee - *Birds of East Kolkata Wetlands* containing beautiful photographs and short descriptions of 267 birds recorded from EKW. Some of the important birds are Ducks, Geese, Cormorants, Darter, Gulls and Terns and shore birds or waders such as Storks, Crakes, Rails, Gallinules, Coot, Cranes, Jacanas, Snipes, Herons, Plovers and Sandpipers (Mookherjee,

Kushal 2016. *Birds of East Kolkata Wetlands*. East Kolkata Wetlands Management Authority, Department of Environment, Government of West Bengal, 117 pp.).

Before reclamation of the marshy Salt lakes during 1958 and 1965 to develop the Salt Lake city, the present areas of the Salt Lake city and the East Kolkata Wetlands (EKW) were continuous having similar topography which is seen in the photographs. The first systematic and extensive survey of mammals, birds and bird-ringing in the erstwhile Salt lakes were undertaken by the scientists of Zoological Survey of India (ZSI) led by the acclaimed ornithologist and senior scientist in ZSI Dr. Biswamoy Biswas during the period from 1961 to 1969.

A brief note on the results of the studies

done by the ZSI scientists was prepared by S. S. Saha and others and published in the *Journal Bombay Natural History Society* (Vol. 68, 1971). The topography of the Salt Lakes as they observed was a marshy area with numerous water bodies used extensively as fisheries and large number of fish rearing farms (bheri). The most common aquatic plants there were Nal reed (*Phragmites karka*), Hogla bulrush (*Typha angustata*) and water Hyacinth (*Eichhornia crassipes*) besides various grasses, herbs and shrubs on land. They reported birds from the Salt Lakes which were not supposed to be present there according to the earlier records. Tyller's Swallow (*Hirundo rustica tytleri)* which was known only from Dacca and Mymensingh was recorded as a regular winter visitor in the Salt Lakes along with *Hirundo rustica rustica* and *Hirundo rustica gutturalis* during late October to April. They also observed that the number of *tytleri* birds is less than the other two subspecies. Another common visitor in the Salt Lakes that preferred to live in reed-beds was the Chinese Wryneck (*Jynx torqailla*). Blackbrowed Reed Warbler (*Acrocephalus bistrigiceps*) which was known from Assam and Manipur only was recorded by the scientists as regular visitor in the Salt Lakes in small numbers during winter. It was recorded from thick reed-beds, generally in association with the Paddyfield Warbler (*Acrocephalus agricola)*, Blyth's Reed Warbler (*Acrocephalus dumetorum)* and the Grasshopper Warbler (*Locustella certhiola)*. According to the published records Indian Great Reed Warbler (*Acrocephalus stentoreus brunnescense)* was only a winter visitor in Bengal, but the team found the bird as resident in the Salt Lakes and influx of migrant populations in winter. The resident population was found to breed in thick reeds during the monsoon. In this brief but very informative note the authors described the nest building methods and nature of nests, characters of eggs and nestlings. This long term study by ZSI recorded 248 species from the erstwhile Salt Lakes (Mookherjee, Kushal 2016. *Birds of East Kolkata Wetlands*. East Kolkata Wetlands Management Authority, Department of Environment, Government of West Bengal, 117 pp.).

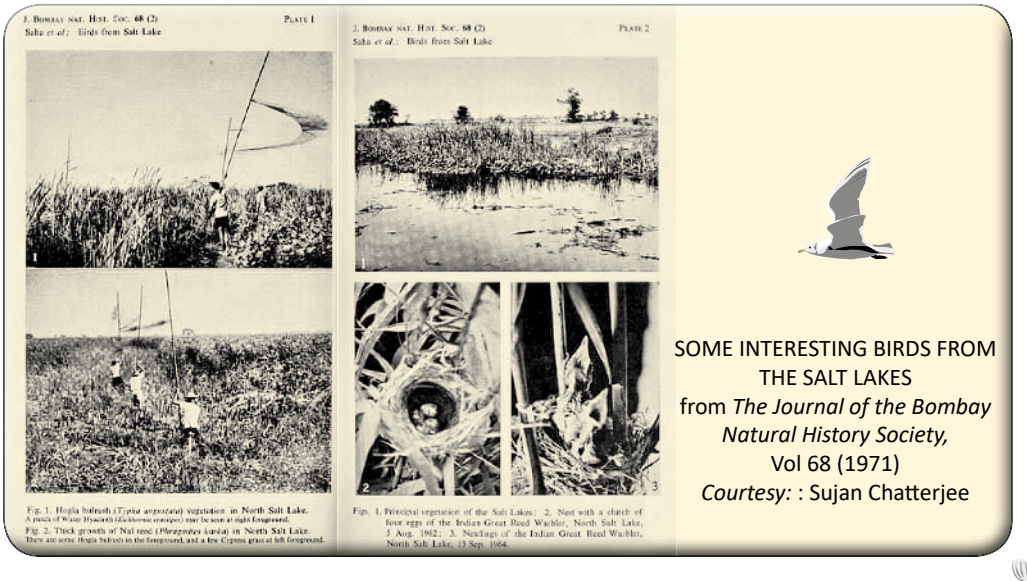

J. Bombay nat. Hist. Soc. 68 (2) Plate 1
Saha *et al.*: Birds from Salt Lake

Fig. 1. Hogla bulrush (*Typia angustata*) vegetation in North Salt Lake. A patch of Water Hyacinth (*Eichhornia crassipes*) may be seen at right foreground.
Fig. 2. Thick growth of Nal reed (*Phragmites karka*) in North Salt Lake. There are some Hogla bulrush in the foreground, and a few Cyprus grass at left foreground.

J. Bombay nat. Hist. Soc. 68 (2) Plate 2
Saha *et al.*: Birds from Salt Lake

Figs. 1. Principal vegetation of the Salt Lakes: 2. Nest with a clutch of four eggs of the Indian Great Reed Warbler, North Salt Lake, 5 Aug. 1962; 3. Nestlings of the Indian Great Reed Warbler, North Salt Lake, 15 Sep. 1964.

SOME INTERESTING BIRDS FROM THE SALT LAKES
from *The Journal of the Bombay Natural History Society,*
Vol 68 (1971)
Courtesy: : Sujan Chatterjee

Birds Captured through Lens from Salt Lake (Banabitan)

Soumitra Chakraborty
Photographer

My journey started as an amateur photographer clicking photos of all kinds of events, (be it marriage ceremony, birthday party and so on) but my likings towards nature & wildlife attracted me so immensely that I got dissolved in its aroma. In 2010 I took a deep dive into my passion and finally paid a visit to the African National Park and got mesmerized by the true beauty of untouched natural habitat.

I had an opportunity to experience capturing the wildlife of the largest mangrove forest in the world namely Sunderbans in West Bengal and got the golden opportunity to capture the Royal Bengal tiger in its rich but difficult habitat. I have visited local bird sanctuaries like Purbasthali Bird Sanctuary (in Burdwan), Chintamani Kar Bird Sanctuary (Near Narendrapur), Santragachi Jheel at Howrah, Bharatpur in Rajasthan, Mangalajodi Bird Sanctuary at Odisha, where number of local and migratory birds throng every year.

Common Kingfisher

The most fabulous bird sanctuary near my residential area is BANABITAN, Saltlake. Locally is known as Central Park, Saltlake. It is a public urban park. It is the second largest open space in Kolkata Metropolitan area after the Maidan. The park is built around an expansive water body. There is a bridge which connects one side of the lake to an island which has a Pagoda. The lake serves as a haven for water birds like Lesser Whistling Duck, Common Moorhen, Egrets, Cormorants and other species. The park has a very beautiful Rose Garden as well where in bloom the rose flowers present is a delightful sight.

I have captured more than 200 photos of both Indigenous and Migratory birds visiting Banabitan throughout the year out of which pictures of only twenty birds are showing here.

Some local indegenous birds which are captured include – Rose Ringed Parakeet, Black Hooded Cormorant, Purple Sunbird, White breasted Kingfisher, Lesser flameback Woodpecker, Green Bee-eater, Spotted Owlet, Waterhen etc.

The peaceful wetland-like surface attracts birds like Kingfisher, Pond herons and Barn Swallows.

Asian Pied Starling


Blue Eared Barbet
Black Hooded Orile
Alexander Paraket
Green Pigeon
Green Pig Common Hawk Cuckoo
Green Bee-eater

Asian Openbill Stork

Malabar Starling

Lesser Goldenback Woodpecker

Coppersmith Barbet

Rose Ringed Parakeet

White Breasted Kingfisher

Night Heron

Hopee

Brahmini Starling

Rufous Woodpecker.

Common Hawk

Spotted Owlet

Report on Release of an Album of Birds in the Collection of The Asiatic Society

Sagarika Sur
Publication Division, The Asiatic Society

Flying Feathers: Colourful Drawings of Birds in the Collection of the Asiatic Society, 1810-1815, an album of birds, edited by Dr. Asok Kanti Sanyal was released on 4 November 2020 by The Asiatic Society, Kolkata. The programme set off with the pertinent speech of Dr. Satyabrata Chakrabarti, the General Secretary of The Asiatic society. He began the speech reminding the audience about the significance and responsibility of The Asiatic Society in the documentation of human culture in its all-pervasive diversities in terms of possession, preservation and dissemination of cultural heritage. The speech by the General Secretary was followed by the precise speech of Professor Isha Mahammad, President of the Asiatic Society. The President too emphasised on the enriched collection of The Asiatic Society possessing various objects of arts and antiquities belonging to different culture and tradition of Asia including Flora and Fauna, composed by the indigenous artists and how they are kept in the museum of the Society with utmost love and care. According to Professor Mahammad, instead of being mere documentation, they are the miniature paintings and works of art of the time. He did not miss the chance to pay his homage as an artist as he aptly commented, "Being an artist myself, I feel it is quite necessary for me to make a humble appreciation of the works (numbering 82 as printed in this Album) of Bird paintings and drawings done about 200 years ago when photography was not invented. Perhaps the artists had to become an ornithologist by circumstances to study the total habit of the species in details and come back to his studio or workplace to immediately capture his subject perfectly till the memory is very fresh." He has also expressed his awe about the mastery reflected in the paintings, the softness of the feathers, bony character of legs, paws and nails, different types of beaks with fine moustaches, glittering eyes and their nests and eggs too. Though the works of art possess extreme aesthetic qualities, the names of the artists remain unknown; however, Professor Mahammad speculated them to be painted by indigenous artists, like the renowned bird painter Ustad Mansur in Mughal Court. He concluded the speech by expressing his gratitude to the editor of the book and wishing the publication a grand success.

Dr. Asok Kanti Sanyal, the Biological Science Secretary of The Asiatic Society, considered the day as a day of happiness for the 237 years old publication section of the society for releasing the e-version of the album containing drawings of birds which are a small part of the hundreds of treasures of the artistic drawings composed by the Indian artists more than 200 years ago, as the paintings belonging to timeline of 1810-1815 are still preserved in the museum of the Asiatic Society. The paintings of the present album were collected at the initiative of the Francis Buchanan Hamilton, the surgeon of Lord Wellesley, the then Governor General of the Government of India. "The album documents 85 drawings of bird figures, distributed over 28 families, 40 genre and 60 species. For each of them information related to salient characters and other features have been incorporated", Dr. Sanyal commented. He expressed his high hope and optimism about the reception

of the publication as an authentic document depicting artistic acumen of Indian artists of the early 19th century. He concluded his speech by expressing gratitude to Dr. Satyabrata Chakrabarti and Dr. Ramkrishna Chatterjee, Publication Secretary of The Asiatic Society for their keen interest in publishing the album, and also to Late Kushal Mukhopadhyay and Dr. Rudraprasad Das for extending help in the identification of the birds.

The Book was launched by Mr. Soumen Mitra, IPS, Additional Director General of Police, West Bengal and an ardent nature lover.

Following is the extract of the address delivered by Mr. Soumen Mitra:

It is my proud privilege to launch *Flying Feathers* by Dr Asok Kanti Sanyal. I thank The Asiatic Society for giving me the opportunity to launch this book of drawings from the Francis Buchanan collection. Buchanan spent a lot of time documenting the natural history of 19th century India from Latbagan Barrackpore which is now the training Academy of the State Police of which I am presently in charge.

I also congratulate Dr Sanyal for bringing out this collection for those interested in natural history.

Towards the 18th century and during much of the 19th century, European residents in India showed a keen interest in natural history. Besides collecting specimens, they procured drawings of birds, animals and plants which provided the basis for later scientific research. The artists were in many cases Indians but Europeans also assisted in this important task. As a consequence large numbers of drawings were made, many of them for private collectors, others on the instruction of the East India Company as part of an official policy.

By the end of the 18th century the Company realised the economic value of research into natural history. The first real step was the establishment of botanic gardens, the largest being the one started by Colonel Robert Kyd in Shibpur. Others in this group include Dr William Roxburgh, Dr Nathaniel Wallich, Dr John Forbes Royle, Dr William Griffith, Dr Francis Day and William Lloyd Gibbons amongst others.

The second step taken by the Company towards the encouragement of research on natural history was the establishment of an 'Institution for the promotion of Natural History of India' with a menagerie and aviary at Barrackpore by Lord Wellesley in 1804. This institution was placed under the supervision of Dr Francis Buchanan who was incidentally the personal physician of the Governor General. Civil and military officers all over India and East Indies were directed to send specimens of quadrupeds and birds to Barrackpore for Dr Buchanan to sketch and document them. In 1805 Wellesley was recalled and Buchanan after an year was transferred out to the districts on survey work.

Later when the Governor General, the Earl of Moira, instructed Buchanan in 1815 to leave all the natural history and survey drawings in India, a number of zoological drawings from Barrackpore were handed over to Wallich for copying at the Botanic Garden. A few years later some of these original drawings were sent to the Court of Directors by Wallich. The remainder comprising 226 Buchanan drawings in water colour and pencil depicting 169 birds were sent to the Asiatic Society in 1842.

British artists rarely came to India to do natural history paintings and thus the majority of the artists were Indians though they remained anonymous. However we get a few names like Shiek Zainuddin, Mirza Sangi Beg, Bhawani Das, Ram Das, Manu Lal, Vishnu Prasad, who were prominent natural history artists.

These drawings mainly executed by Indian artists for British collectors have been designated by many as 'Company School Art' or 'Patna Painting' or 'Firangi Art' or even 'Indian Export Art' but the fact remains that it was a collaboration between the British and the Indians in the field of documenting the natural history of colonial India.

I once again thank the Asiatic Society for inviting me on this occasion and Dr Sanyal for bringing out this informative book.

Thank you.

Book to showcase birds that lived in Kolkata 200 years ago

Siberian rubythroat and (R) Blue-bearded bee eater

Jimli.Mukherjeepandey
@timesgroup.com

KOLKATA: Two hundred years ago, the city would wake up to chirps of hundreds of varieties of birds, who no longer live here. Many have become extinct while some have chosen to recede to greener, cleaner and quieter homes away from the city. British ornithologists, during the Company's rule, took a keen interest in these tropical birds and studied them in great details recording their behaviour and movement.

One such mammoth project was commissioned at the Asiatic Society, where the birds were drawn in colour in true likeness. These paintings lay preserved in the annals of the society's archives for two centuries with hardly anyone having seen them. The society has finally decided to publish them. The project, "Flying Feathers", will be published digitally on Wednesday and the physical volume will follow it.

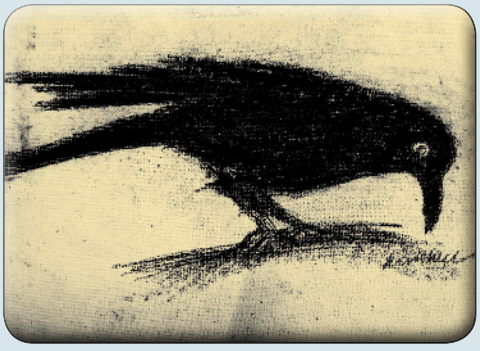
After studying the drawings present day experts have identified species that are no longer seen in the city. The Southern Grey Shrike, that was locally called Kashai Pakhi, is a bird that has not only made its exit from the city but has also entered the Red List of 'threatened categories' of the International Union for Conservation of Nature (IUCN). Among the other birds that are no longer seen in the city but are part of the drawings are, Siberian Rubythroat, Crow-billed Drongo, Blue-bearded Bee-eater and Rufous-necked Laughingthrush.

The present book contains 85 of these coloured drawings of birds, that were commissioned to artists by Francis Buchanan Hamilton, who was the then governor general, Lord Wellesley's surgeon and also a zoologist. The drawings were done between 1810-15 and covers 58 species from 28 families and 40 genera.

"Though well preserved, these drawings were not published all these years and so people did not get a chance to see these birdsh," said historian Ramkrishna Chatterjee, the publications secretary of the Society. The book has been edited by Asok Kanti Sanyal, presently the chairman of the West Bengal Biodiversity Board.

Courtesy: The Times of India

Artist: Anuradha Bysack



Artist: Kanchan Pathak

Artist: Sagarika Sur

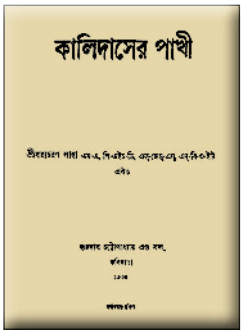
Artist:
Sneha Agarwal

Artist: Rajkumar Mukherjee

Thread on canvas
Artist : Rekha Chakraborty

Van Gogh : Thread on canvas (embroidered)
Artist : Arun Kumar Chakraborty

Thread on canvas, Artist : Rekha Chakraborty



কালিদাসের পাখী, শ্রী সত্যচরণ লাহা, গুরুদাস চট্টোপাধ্যায় এন্ড সন্স, কলিকাতা ১৯৩৪, পৃ ১৯১, মূল্য ৬ টাকা

''যদিও সন্ধ্যা আসিছে মন্দ মন্থরে
সব সংগীত ইঙ্গিতে গেছে থামিয়া - - - -''

বর্তমান করোনা আবহে পরিস্থিতি অনেকটা এমন হলেও থেমে যায়নি পাখির গান, পাখির কলকাকলি। শহুরে যান্ত্রিক সভ্যতার কোলাহলে যা প্রায় অশ্রুত ছিল আজ তা স্পষ্ট হয়ে উঠেছে। পাখির ডাকে আমাদের ঘুম ভাঙ্গছে, আমরা জেগে উঠছি। সেই কবে সৃষ্টির আদিকাল থেকে মানুষ বনের পাখির গান শুনে আনন্দ পেয়েছে, তার বিচিত্র রূপে মুগ্ধ হয়েছে। প্রাচীন গুহাচিত্রে এর অজস্র নিদর্শন রয়েছে। ধীরে ধীরে সভ্যতার ক্রমবিকাশের সাথে সাহিত্য, সংগীত, ভাস্কর্য, চিত্রকলায় দেখা যায় পাখির উপস্থিতি। বৈদিক সাহিত্যেও বিভিন্ন পাখির উল্লেখ রয়েছে। রাজা বাদশাহদের পাখি পোষার বা নিজস্ব পক্ষীরালয় নির্মাণের কাহিনী তো যুগে যুগে প্রবাহমান। খৃষ্টপূর্ব কাল থেকেই পাখির যাবতীয় চর্চা -- তার প্রজনন, বাসা, দেশান্তরী গতিবিধি, সুশৃঙ্খল অবস্থানভঙ্গি ইত্যাদি বিভিন্ন দেশে হতে থাকে। ইউরোপে চারশো শতকে পক্ষী চর্চা শুরু হলেও আরবে এর শুরু হয় অষ্টম শতকে। ধীরে ধীরে তা অন্যান্য ইউরোপীয় দেশেও ছড়িয়ে পড়ে। সপ্তদশ শতাব্দীতে প্রথম বৈজ্ঞানিক পদ্ধতি মেনে পাখির বিবরণ ও শ্রেণীবিন্যাস, তাদের আচরণ ও প্রজনন ইত্যাদি নিয়ে জীব বিদ্যার অঙ্গ হিসেবে বিহঙ্গতত্ত্ববিদ্যা বা Ornithology বিষয়টির চর্চা শুরু হল। এইভাবে ১৮৫৮ সালে ব্রিটেনে স্থাপিত হল British Ornithologist Union । সারাবিশ্বে ছড়িয়ে পড়ে এই বিদ্যার চর্চা। ভারতেও Brian Hodgson, Edward Blyth, C. Jerdon প্রমুখ ইউরোপীয়দের হাত ধরে শুরু হয় পক্ষীবিদ্যার চর্চা।

বাবু সত্যচরণ লাহা (১৮৮৮-১৯৮৪) ছিলেন কলকাতার এক জমিদার, ব্যবসায়ী ও বিশিষ্ট শিক্ষাবিদ। কলকাতার শেরিফও হয়েছিলেন তিনি। অন্যান্য বৌদ্ধিক চর্চার পাশাপাশি ছিল তাঁর পক্ষীচর্চা। তিনি Zoological Society of London-এর ফেলো ও British Ornithologist Union-এর সদস্য ছিলেন। এশিয়াটিক সোসাইটিতে সদস্য হিসেবে (০১.০৭.১৯১৪) নির্বাচিত হন মহামহোপাধ্যায় হরপ্রসাদ শাস্ত্রীর প্রস্তাবনায়। এশিয়াটিক সোসাইটির জার্নালে তিনি প্রায় সাতটি নিবন্ধ লিখেছেন। *প্রকৃতি* নামে সচিত্র বৈজ্ঞানিক পত্রিকার সম্পাদক ছিলেন শ্রী সত্যচরণ লাহা। এটি ১৩৩১ সালে প্রথম প্রকাশিত হয়। সেই সময় বাংলায় বিজ্ঞান পত্রিকা হিসাবে এটি বেশ নাম করেছিল। পাখি নিয়ে এই পত্রিকায় তার অনেক লেখা ছিল। পাখি নিয়ে তাঁর লেখা বই-এর সংখ্যা বেশ কয়েকটি। এমনই একটি বই *কালিদাসের পাখী* -- যেটি এশিয়াটিক সোসাইটির গ্রন্থাগারকে সমৃদ্ধ করেছে।

বইটি গুরুদাস চট্টোপাধ্যায় এন্ড সন্স, কলিকাতা থেকে ১৯৩৪ সালে প্রকাশিত। বই-এর ভূমিকা থেকে আমরা জানতে পারি --''কালিদাস সাহিত্যে বিহঙ্গ পরিচয়ের প্রচেষ্টায় কিঞ্চিৎ আলোচনা আমার পাখির কথা গ্রন্থে সন্নিবিষ্ট হইয়াছিল...।'' কিন্তু এই বইটিতে সূচীপত্রে দেখা যায় কালিদাসের সাহিত্য -- মেঘদূত, ঋতু সংহার, রঘুবংশ ও কুমার সম্ভব ও নাটকাবলী নামে পৃথক পৃথক এক একটি অধ্যায়। প্রতিটি অধ্যায়ে কালিদাস বর্ণিত বিভিন্ন পাখি যেমন রাজহংস, চক্রবাক, বলাকা ও সারস, শিখী ও সারিকা, চাতক, ক্রৌঞ্চ, কোকিল, হারিত, পারাবত, চকোর, ময়ূর প্রভৃতির উল্লেখ ও সচিত্র বর্ণনা যেমন রয়েছে তেমনই একই সাথে আধুনিক পক্ষীতত্ত্বের বিচারে সেগুলির আলোচনাও রয়েছে। তাঁর নিজের লেখনিতে -

> ''মেঘদূতে যে সমস্ত পাখির উল্লেখ হইয়াছে তাহাদের আধুনিক বৈজ্ঞানিক পরিচয় কী সে সম্বন্ধে গবেষণার যথেষ্ট অবসর আমাদের শিক্ষিত সমাজে আছে, মেঘের সঙ্গে তাহাদের নিবিড় সম্পর্কের কথা কাব্যমধ্যে দেখা যায়,

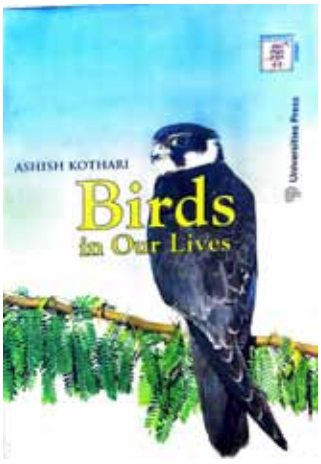
-- নৃত্যপর কলাপী পর্ব্বতে ঠিক কী ভঙ্গিমায় কলাপ বিস্তার করিয়া মেঘ সংবর্দ্ধনায় তৎপর হয়, মেঘের আগমনে গর্ভাধানক্ষণ পরিচয় পাইয়া বলাকা নভোমন্ডলে আবদ্ধমালা হইয়া উড়িয়া বেড়ায়। শিপ্রাতটে বিচরণশীল সারস পটু মদ্‌কলে অন্তরীক্ষ কাঁপাইয়া তোলে, চাতকের নাদ মুর্হুমূহুঃ শুনিতে পাওয়া যায়, বর্ষাগমে বিসকিসলয়পাথেয় মুখে করিয়া মানসোৎক রাজহংস কী উদ্দেশ্যে কৈলাস পর্যন্ত মেঘদূতের সহযাত্রী হইতে প্রয়াসী হয়, তাহাকে গিরিদরী লঙ্ঘন করিয়া হংসদ্বার দিয়া পর্বত অতিক্রম করিতে হয় -- মহাকবি বর্ণিত নিসর্গ দৃশ্যের বিচিত্র আবেষ্টনে বিহঙ্গের অপূর্ব জীবনলীলা পক্ষীতত্ত্বের দিক হইতে আলোচনার বিষয়ীভূত না হইলে আমাদের ভালো করিয়া বুঝিবার সুবিধা হয় না উহা আধুনিক আবিষ্কৃত বৈজ্ঞানিক সত্যের সঙ্গে কিরূপ সামঞ্জস্য রক্ষা করিতেছে...।''

প্রতি অধ্যায়কেই লেখক এইভাবে কালিদাসের বর্ণনা, মেঘদূতের অনুবাদক হোরেস উইলসন্ এর ব্যাখ্যা, হ্যামিলটন, জার্ডিন, মোরক্রফট্, ফিন প্রভৃতি জীববিদ তথা পক্ষীবিদের আলোচনাকে মিলিয়েছেন।

বইটি সাধুভাষা ও সংস্কৃতঘেঁষা অপ্রচলিত বাংলায় লেখা বলে বর্তমান প্রজন্মের কাছে হয়তো অনায়াস স্বাচ্ছন্দ্যবোধ হবে না, কিন্তু এ ব্যতিরেকে সংস্কৃত সাহিত্যে লেখকের সম্যক পরিচয় ও বৈজ্ঞানিক পক্ষীতত্ত্বের গভীর জ্ঞান বইটিকে আজও আকর্ষণীয় করে রেখেছে। উপরন্তু পাওনা - বইটির শেষে লেখককৃত কালিদাসের পাখির তালিকা যেখানে পাশাপাশি রয়েছে পাখিদের সংস্কৃত নাম, ইংরেজী নাম ও বৈজ্ঞানিক নাম।

বইটিতে সংযোজিত রঙীন ও সাদা কালো চিত্রাবলীও (হাতে আঁকা ছবি ও ফটোগ্রাফ) আমাদের দৃষ্টি আকর্ষণ করে।

সুজাতা মিশ্র
সহ-গ্রন্থাগারিক, দি এশিয়াটিক সোসাইটি



Birds in Our Lives, Ashish Kothari, Universities Press (India) Pvt. Ltd., 2007, Paperback, pp. 292

If there is one book to recommend for the perusal of either a layman or a budding researcher who wants to obtain an all encompassing knowledge about every aspect of Indian ornithological studies, it is quite apt to pick up this book by Ashish Kothari. In the seven chapters and four annexures that the book is carefully divided into, the topics of discussion range from the distribution of bird life in the varied topographic and climatic zones of India along with their behavioural pattern like migration, to the study of birds as a part and parcel of the Indian cultural and historical traditions, the significance of bird life in Indian economy, as well as the conservation strategies adopted to secure the avian population from the human generated perils. Although lacking footnotes and references for the facts stated, there is a detailed, though not comprehensive, bibliography of books and journals referred to by the author for each chapter that clearly divulges the richness of the content of this book. Added to the lucidity of both language and theme, what pins the attention of the reader is a host of coloured photographs, many of which are accredited to the author himself.

In the first chapter on the zoo-geographic distribution of birds, the author identifies the natural and human factors involved, particularly the ones which determine the variations in the composition and abundance of birds in the different ecosystems. He contends that even though artificial ecosystems have been created and dominated by humans, the natural ones far supersede the former. Further, more than reading a huge amount of literature on ornithology, he stresses on gathering field experience to obtain a better knowledge of the birds.

Writing about the integral relation of birds with Indian cultural ethos in the second chapter, the writer mentions about how the communities living in close proximity to nature have woven their legends featuring some birds and used them in indigenous art forms, especially the aboriginals, pastoralists and fisherfolk. The folklore traditions centring on birds have also been associated with Buddhist Jatakas and Sanskrit texts like Panchatantra and Hitopadesh. He asserts that human language is integrally related to the physical and natural world that surrounds it, and this is reflected in our literary and artistic traditions beginning from the prehistoric period down to the historical era through the ancient, medieval, colonial and post-colonial periods in the Indian context. He even mentions of the bird imagery that have been used in the forms of Indian classical dance and drama.

The third chapter, mostly based on earlier writings on history of Indian ornithology by Salim Ali, J.C. Daniel, Sir Norman Kinnear, et al, deals with the historical aspects of Indian ornithology, where the author mentions about how bird life has been depicted in Harappan pottery, seals and other artefacts, as well as in Vedic literature and Upanishads. Interestingly, a classification of birds based on their food habits and habitats was found in the Chhandogya Upanishad, which in no way is less scientific than a similar kind of classification provided by T.C. Jerdon in his monumental work during the colonial period. The author, therefore, laments that such treasures of knowledge are overlooked by enthusiastic ornithologists in their pursuit of knowledge. The Mughal period, on the other hand, records some amusing pieces of literature on the natural history of the subcontinent, which can be looked upon as a precursor to the systematization of empirical studies

about bird and animal life during the imperial regime. He notes that the British documented their extensive and systematic ornithological observations in the subcontinent either individually or in conjunction with the Asiatic Society of Bengal and the Bombay Natural History Society, especially between 1800 and 1860, whereby special mention may be made of T.C. Jerdon, B.H. Hodgson, Edward Blyth, A. O. Hume and others. Unlike description of birds by painting up to the late eighteenth century, the method of specimen collection was adopted from the nineteenth century onwards, which implied the development of taxidermy. By the beginning of the twentieth century, the use of field glasses and photographic equipment came into vogue, working as a rudimentary pointer to the practices of bird conservation. It was around this period that the first eminent Indian ornithologist of great repute, Salim M. A. Ali (1896-1987) by name, appeared in the field, who went on to make his mark with the documentation of his innumerable insightful and intricate observations individually and in partnership with S. Dillon Ripley, Dato Loke Wan Tho, Whistler et al. Kothari enlisted several Indian and foreign ornithologists in the post-independence period who enriched our knowledge on Indian ornithology, as well as various voluntary organizations and societies dedicated to the study and conservation of wildlife, some of which are solely concerned with ornithology. He also mentions of academic and governmental institutions that are working hard to augment our knowledge on the subject, even to the extent of offering degrees and courses on the same or creating a database on birds and bringing out newsletters.

Kothari embarks on a detailed study of the migratory patterns of bird species in his next chapter, drawing our attention to the enigma of the whole process and theories regarding the same, and arguing that the phenomenon of migration itself still remains a mystery. He notes that about 320 species, constituting around a quarter of the subcontinent's avian population, are migrants, apart from some 70 vagrants. He writes about the time of migration, and provides marvellous facts about the great distances covered by the birds at astonishing speed, sometimes soaring to incredible heights. He also mentions about the systematic study of such migratory patterns by ringing methods, undertaken by the BNHS in the 1950s.

In the fifth chapter, the author takes up the issue of the economic dependence of humans on birds, especially as a natural agent in controlling pests, as well as the vital role birds play in pollination and germination, scavenging, providing natural fertilizers and food, and in a myriad other ways. However, he also talks about how as an agent of pollination birds act banefully in spreading exotic weeds like the lantana camara and at times even act as crop raiders and carriers of diseases like the bird flu. He even touches upon the issue of collisions of aircraft with birds and the perils to bird life due to human want for body parts of birds for decorative and medicinal purposes.

Kothari deals extensively with the threats to bird life in the next chapter and holds human pursuits responsible for the decline in bird population in India, especially in the nineteenth and twentieth century, endangering the existence of quite a few species. Hunting for sport and for the pot, trapping by decoy and other methods, destruction of bird habitats by tampering with the natural eco-systems, building of dams and urban spaces, mining activities, polluting water bodies, rebuilding grasslands, shifting cultivation, expansion of agrarian frontiers, trading in live birds which are often inhumanly dealt with, and the use of toxic pesticides over the years have been hazardous to the existence of birds and the rate of decline of certain species is on the rise. He provides alarming instances of how certain species have been affected by such human activities.

The last chapter takes up the issue of bird conservation, mentioning about India's religious and spiritual beliefs and practices, and

social protection that have been the forbearers of a long tradition of conservation, along with royal decrees, community conservation, legal measures and scientific techniques that have successfully ensured the sustenance of bird habitats and restrained the destruction of bird life by imposing closed seasons for hunting or total ban on it. The entire ecosystem has been protected in some parts of India, like Vedanthangal in Tamil Nadu, Kokkare Bellur in Karnataka and Kheechan in Rajasthan. He touches upon the measures undertaken by the Wild Birds and Animals (Protection) Act of 1912 that introduced a system of granting licences to hunters and declaring close seasons for hunting some species of birds and animals during their breeding seasons; and the Wild Life (Protection) Act of 1972 that launched significant measures to restrict habitat destruction by creating specially protected areas, control trade in wildlife products, render protection to certain species by enlisting them in Schedules I to V and by creating advisory boards and appointing staff to protect wildlife. He writes also about the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) signed in 1973, to contain trade in threatened species of live birds and other similar governmental policies. He mentions the notable contributions of the various NGOs and local communities in effective management of several wetlands which constitute important bird habitats.

Writing about the necessity of captive breeding of birds to protect endangered species, Ashish Kothari does not overlook the deplorable states of zoos which are areas of such ex-situ conservation, where he identifies a lack of expertise. Therefore he stresses upon the importance of international treaties and organizations that have played a positive role in bird conservation and protection, though not without a few snags. He upholds the significant part played by the citizens in such ventures, and particularly mentions the demonstration against the Government of India's decision to allow the Saudi Arabian royal family to hunt bustards in Rajasthan violating its own laws, in order to obtain easier flow of the Arabian oil into the country. He himself was a part of that demonstration, which was successful in saving the bustards. However, the alienation of the communities living in the peripheral zones of the protected areas has only embittered the relation between nature and humans. Hence he prescribes a phased out method in explaining the population living in fringe areas about the importance of conserving the area and offering them jobs as forest guards, instead of drastic relocation of the population, denying them complete usage of the forests. Denial of grazing rights, he writes, played havoc by turning wetlands into grasslands, which proved detrimental to both bird variety and population. Similarly, instead of alienating the traders altogether by banning trade in wildlife, they could have been provided with alternate livelihood by appointing them as forest guards and zoo keepers by utilizing their knowledge about wildlife, thus promoting community-based eco-tourism. Contending that most bird sanctuaries are ill-equipped, under-staffed and under-researched, he advocated after his twenty-years of personal experience in bird-watching, that a great deal of research is imminent on the status of various birds and their relationship with specific habitats, with respect to human impact on their sustenance, since there is no single solution to the diverse problems. The book ends with four annexures that provide a ready reference to an extensive list of threatened birds of India, an updated list of important regions of bird conservation, numbering to a whopping 466, a list of Ramsar sites in India for bird conservation in wetland areas along with a brief description about each site, and a list of Indian and foreign journals on ornithology.

Basabdutta Chanda
Assistant Professor & Head,
Department of History, Sukanta College

Rare Books on Birds in the Collection of The Asiatic Society

(Arranged in Chronological Order)

Year	Call No.	Title	Author/Editor
1795-1800	Q 598.29 L672b	Birds of Great Britain, systematically arranged, accurately engraved & painted from nature	W. Lewin
1770-83	598.2 B929h	Histoire naturelle des oiseaux	M. de. Buffen
1781-90	598.2 L352g	Index ornithologicus, sive systema ornithologiae	Joannis Latham
1760	598.2 B859o	Ornithologie on methode contenant la division des oiseaux en ordrss, sections genres, efpeces & leurs varietes	M. Brisson
1850-83	598.295 P124	Birds of Asia	John Gould
1874-95	598.2 B862c	Catalogue of the Birds in the British Museum	British Museum, London
1848-67	598.2 B862b	List of the specimens of birds	British Museum, London
1850-63	598.2 C112v	Verzeichniss der Ornithologischen sammlung des oberomt-mann F Heine	Jean Cabanis
1834-43	598.2 N285O	Ornithology	Naturalist's library
1793	598.2 B929b	Natural history of birds	Count de Buffon
1836-42	598 H662z	Zoology of the voyage of H. M. S. Sulphur, under the command of Captain Sir, Edward Belcher, during the years 1836-42	Richard Brinsley Hinds
1795	598.29 L672b, V.1	Birds of Great Britain	W. Lewin
1796	598.29 L672b, V.2	Birds of Great Britain	W. Lewin
1796	598.29 L672b, V.3	Birds of Great Britain	W. Lewin
1797	598.29 L 672 b, V.4	Birds of Great Britain	W. Lewin
1797	598.29 L672b, V.5	Birds of Great Britain	W. Lewin
1875-78	598.29 P170	Birds of New Guinea	J. Gould & R. B. Sharp

Year	Call No.	Title	Author/Editor
1879-81	598.2954 H921bM	Game birds of India	Allan Hume & C.H.T. Marshall
1879-81	598.2954 H921bM	Game birds of India, Burma & Ceylon	Allan Hume & C.H.T. Marshall
1869-71	598.2 B862hb	Hand-list of genera and species of birds	G. R. Gray
1887-88	598.2954 M982b	Avifauna of British India and its dependencies	J. A. Murray
1854-55	598.2 E11b	Catalogue of the birds	East india Company Museum, London
1875-76	598.29 A545c	Correstions of and addition to "Raptorial birds of North-Western India"	Andrew Anderson
1800	598.29 L672b, V.6	Birds of Great Britain	W. Lewin
1801	598.29 L672b, V.8	Birds of Great Britain	W. Lewin
1813	598.29944 L672b	Birds of New South Wales, with their natural history	J. W. Lewin
1816	598.29 G776o	Ovarium Britannicum	Georage Graves
1826	Q598.2 J37i	Illustration of Ornithology	William Jardine & Pridaux John Selby
1826	598.2 B698on	Observations on the nomenclature of Wilson's Ornithology	C.L. Bonaharte
1828	598.2 L641o	Manuel d'ornithologie, ou description des generes et des principales especes d'oiseaux	H.P. Lesson
1832	598.2954 P128	Century of birds from the Himalaya mountains	John Gould
1835	598.29 P183	Illustrations of American Ornithology	Willson & C. L. Bona-parte
1836	Q 598.61 S983q	On the quails and hemipodii of India	W. H. Sykes
1836	598.2 W877O	Ornithologist's text-book : being reviews of Ornithological works	Neville Wood
1839	598.2954 J55b	Catalogue of the birds of the Peninsula of India, arranged according to the modern system of classification	T.C. Jerdon
1839	598.2942 Y29bb	History of British birds	William Yarrell
1839	597.09744 Z87r	Survey Commissioners. Reports on the fishes, reptiles and birds of Massachusetts	Massachusetts, Zoo-logical & Botanical
1840	598 B661c	Catalogue of the birds	Edward Blyth

Year	Call No.	Title	Author/Editor
1841	Q 598.2 D228G	Zoology of the voyage of the H.M.S. Beagle, under the command of Captain Fitzroy during the years 1832 to 1836	Charles Darwin
1847	Q 598.295 J55i	Illustrations of Indian Ornithology containing fifty figures of new, unfigured and interesting species of birds, chiefly from the south of India	T. C. Jerdon
1848	598.2994 P123	Birds of Australia	John Gould
1848	598.29 St917M	Dodo and its kindred	H. E. Strickland & A.G. Melville
1849	Q 673 A83	Catalogue of birds in the Museum of Asiatic Society	Edward Blyth
1849	598.295 R888b	Catalogue of the birds	Asiatic Society Museum, Calcutta
1859	598.299 B862bG	Catalogue of the birds of the tropical islands of the Pacific ocean	British Museum, London
1863	598.2942 B862bG	Catalogues of British birds	G. R. Gray, British Museum, London
1863	598.294 B832h	History of the birds of Europe, excluding the British Isles	C. R. Bree
1865	598.2994 G697h	Hand book to the birds of Australia	John Gould
1867	598.2 D318o	Ornithologie Europeinne on Catalogue descriptif, analytique et raisonni des oiseaux observes en Europe	C. D. Degland
1869	598.2 H921m	My scrap book, or rough notes on Indian Oology and Ornithology	Allan Hume, ed
1870	Q 598.296 F516o	On a collection of Birds from a North-Eastern Abyssinia and the Bogos country	Otto Finsch
1875	598.29592 599 B661m	Catalogue of Mammals & birds of Burma	E. Blyth
1876	Q 598.29 W746b/3 vols	American Ornithology	Alexander Wilson & Charles Lucian
1878	598.29 C867b	Birds of the Colorado ''alley	Coues Elliott
1880	Q 598.295 L514h	History of the birds of Ceylon	W. Vincent Legge
1883	F 598.33 S451g	Geographical distribution of the family Charadrudae or the plovers, sandpipers, snipes and their allies	Henry Seebohm
1888	598.2956 P52	Ornithologie du Turkestan et des pays adjacenta	M. A. Menzbier
1889	598.2994 A 937d	Descriptive catalogue of the nests and eggs of birds found breeding in Australia and Tasmania	Australian Museum, Sydney

Year	Call No.	Title	Author/Editor
1889	598.29 U58E	English sparrow (Passer domisticus) in North America, especially in its relations to Agriculture	U.S. Department of Agriculture
1890	598.0723454 M982a/V.2	The Avifauna of British India	James A. Murray
1891	598.2 Y28s	Scientific results of the second Yarkand Mission	R. Bowder Sharpe
1936-43	598.2 S726O	Ostrich	Pretoria, South Africa Ornithologion Society
1896	598.2 B862cs	Catalogue of Graviae and Tubinares	Howard Saunders & Osbert Salvin British Museum, London
1900-3	598.2971 M171b	Catalogue of Canadian birds	John MaCoun
1898	598.2954 O11b	Manual of the game birds of India	E. W. Oates
1899	598.2997 C833b	Birds of Eastern North America known to occur East of the nineteenth meridian	C. B. Cory
1899	598.2999 C833s	Birds of Eastern North America known to occur East of the nineteenth meridian	C. B. Cory
1900	598.2 I39gF	Guide to the Zoological Collections exhibited in the bird gallery	F. Finn
1901	Q 598.29 B915k	Key to the birds of the Hawaiian group	William Alanson Bryan
1901	598.2 I39bF	List of the birds	F. Ferim
1901	598.297 S584b	Summer birds of Flathead lake	P. M. Silloway
1905	598.2 B862g	Guide to the gallery of birds in the department of Zoology	British Museum, London
1905	Q 598.2 H551r	Recensio critica automatica of the doctrine of bird migration	Otto Herman
1906	598.2954 F514b	Garden & aviary birds of India	Frank Finn
1907	598.2954 D142b	Familiar Indian Birds	Gordon Dalglish
1923	598.2954 D515i	Indian birds	Douglas Dewar
1929	598.2 A189b	This bondage : A study of the migration of the birds, insects & aircraft with some reflections on evolution & relativity	Burnerd Acworth
1934	Banga 424	Kalidaser Pakhi (Bengali)	Satya Charan Laha

Year	Call No.	Title	Author/Editor
1937	598.29548 W874s	Some of common birds of Ceylon	C.A. Wood
1942	598.81 B475l	Life histories of North-American flycatchers, larks, swallows, and their allies (order Passeriformes)	A.C. Bent
1945	598.2985 B711n	Notes on Peruvian furnaridae	James Bond
1946	598.297306905 Sm664b	Birds of North & middle America	Robert Ridway & Herbert Friedmann
1949	598.2954 L922b	Birds photographer in India	E.H.N. Lowther
1949	598.295 A398i	Indian hill birds	Salim Ali
1949	598.2954 V813b	Indian scientific nomenclature of birds of India, Burma & Ceylon	Raghu Vira & K.N. Dave
1950	598.297 F911b	Birds of North and Middle America	Herbert Friedmann
1953	598.206905 Sm664b	Life histories of North American wood warblers	Arther Cleveland
1956	598.2971 G583s	Some Canadian birds, with illustrations	W. Earl Godfrey
1985	925.98 S165f	The Fall of a sparrow	Salim Ali
1991	RR 598 H223g	The Hamlyn photographic guide to birds of world	Andren Goster (ed)
1998	598.2954 G863b	Birds of the Indian subcontinent	Richard Grimmett
2003	598.009541 G863b	Birds of Northern India	Richard Grimmett
2004	598.009515 P529b	Birds and mammals of Ladakh	Otto Pfister
2005	S 891.236 D246b	Birds in Sanskrit Literature with 107 bird illustrations	K. N. Dave
2008	808.84936280954 V618u	Birds of India : a literary anthology	Abdul Jamel Urfi, ed
2009	930.1 S485b	Birds	Dale Serjeantson

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