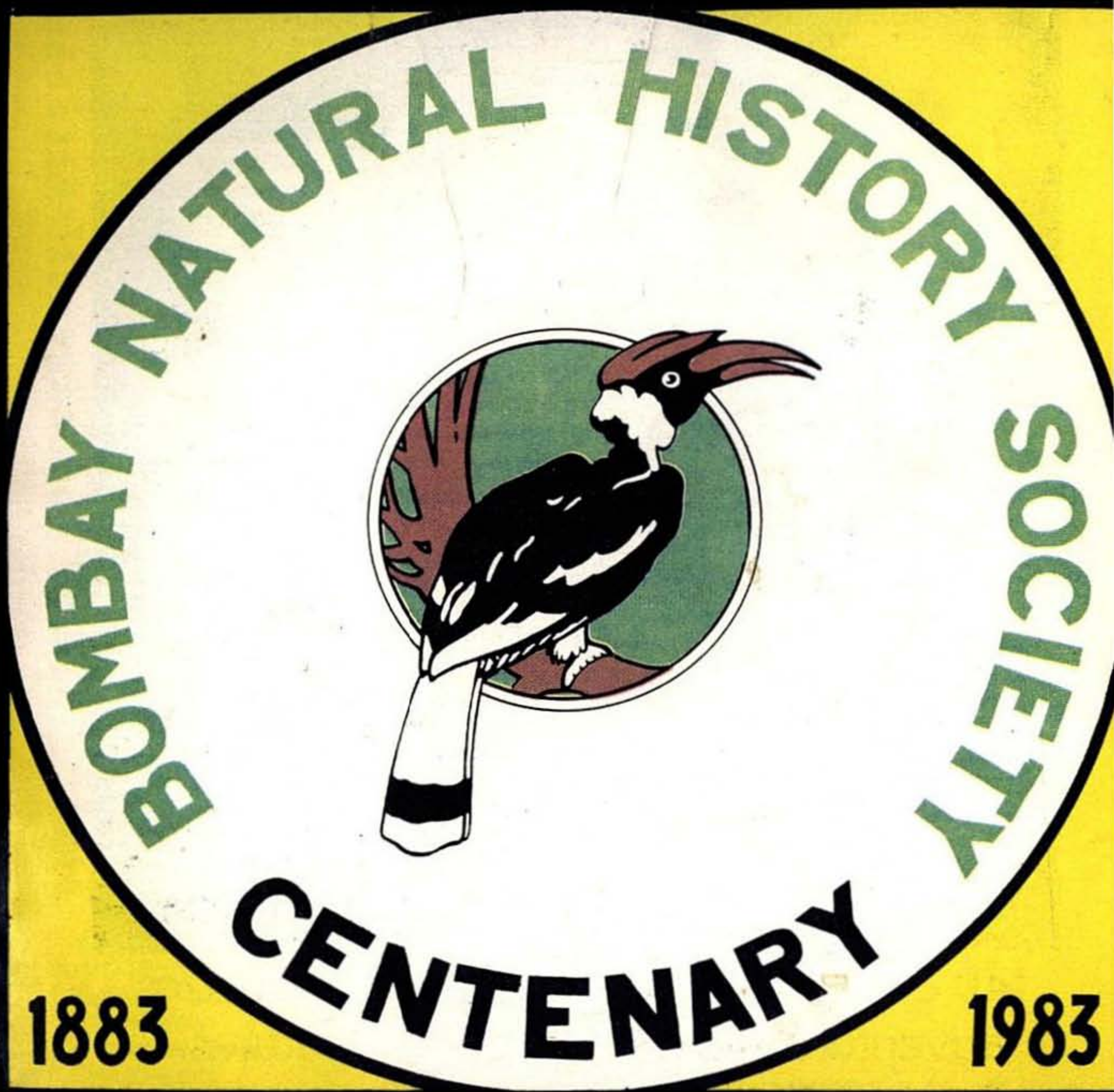


HORNBILL



BOMBAY NATURAL HISTORY SOCIETY

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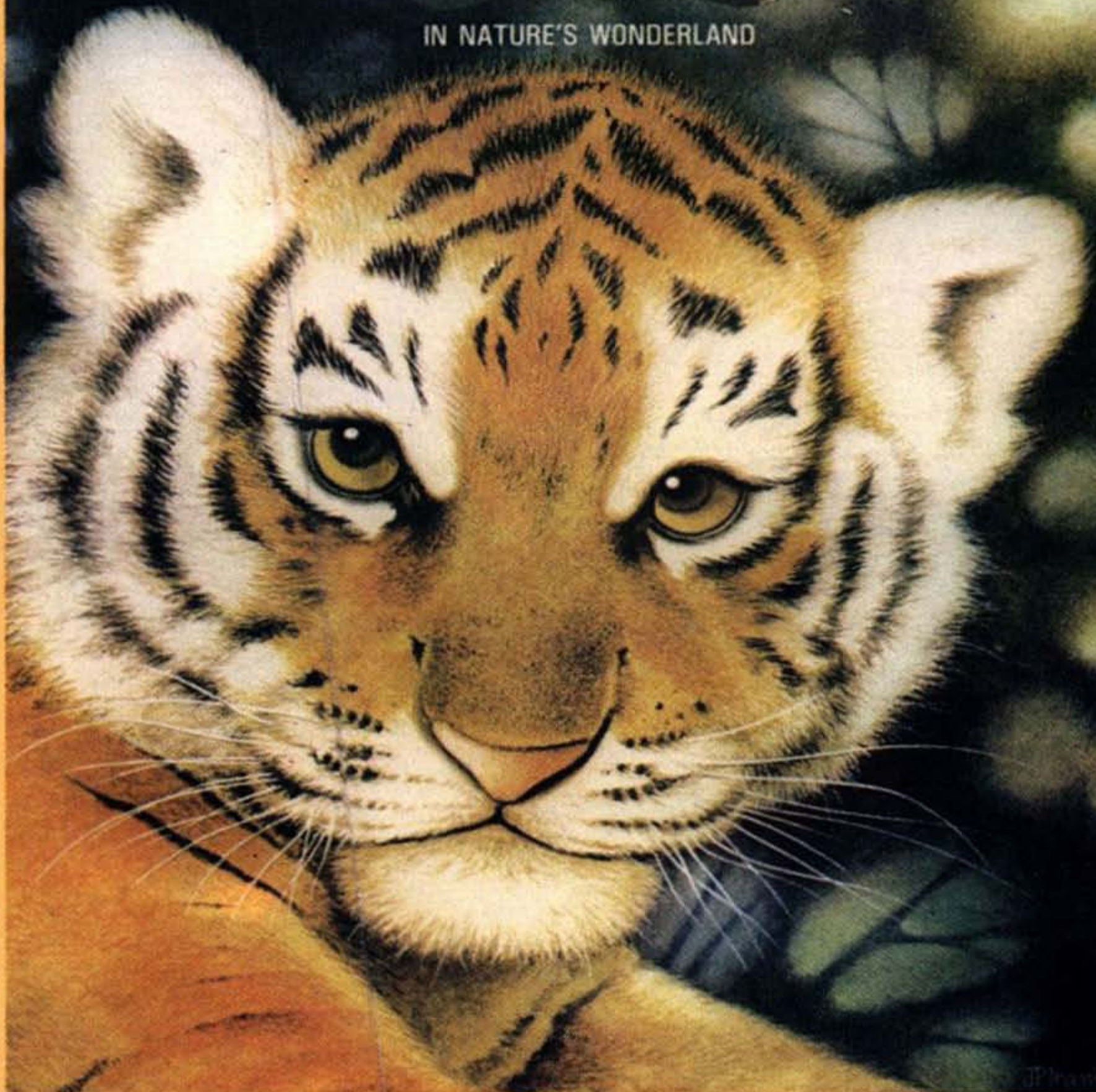
VOL. 1, NO. 1
1984

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The Society was founded in 1883 for the purpose of exchanging notes and observations on Zoology and exhibiting interesting specimens of animal life. Its funds are devoted to the advancement of the study of zoology and botany in the Oriental Region. The Society also promotes measures for conservation of nature.

Membership of the Society is open to persons of either sex and of any nationality, proposed and recommended by one or more members of the Society; and also to persons in their official capacity, scientific societies, institutions, clubs, etc. in corporate capacity.

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Members receive during a year three issues of the *Journal of the Bombay Natural History Society* now in its 79th volume, and four issues of *Hornbill*, the Society's popular publication.

Journal Editors

J. C. Daniel, P. V. Bole and A. N. D. Nanavati.

Advertisements for publication in *Hornbill* are welcome. Rates: Inside full-page Rs. 500/-; half page Rs. 250/-; back cover Rs. 1000/-.

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The first annual subscription of members elected in October, November, or December will extend to the 31st December of the year following the election.

Write to:

The Honorary Secretary
Bombay Natural History Society
Hornbill House, opp. Lion Gate
Shahid Bhagat Singh Road
Bombay 400 023

EDITED BY

J. C. DANIEL

J. S. SERRAO

I. D. KEHIMKAR

EDITORIAL

A hundred years is an infinitesimal fraction in terms of earth history but to man who rarely reaches that age it is a very long period indeed. In fact a century is a long period in human history and the rapidity with which changes occur make the survival of human institutions a matter of satisfaction.

In this issue of *Hornbill* which is a combined volume of the issues for July-September and October-December 1983, we survey the history of the Bombay Natural History Society over the hundred years of its existence from the age of the bullock cart to the space age, and curiously enough, India perhaps is the only country where they co-exist.

It is often said that the Society is the product of amateur endeavour. This is not strictly true. It is a combination of both. Amateurs organised it and professionals gave it substance. At this moment we salute the devoted service of amateurs like Phipson, EHA, Millard, Spence, Abdulali, Futehally and the equally devoted services of Kinnear, Prater and McCann, professionals who were, in their time, the backbone of the Society. There is only one anomaly, Salim Ali. He is equally in both the camps.

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BOMBAY NATURAL HISTORY SOCIETY

1883 - 1983

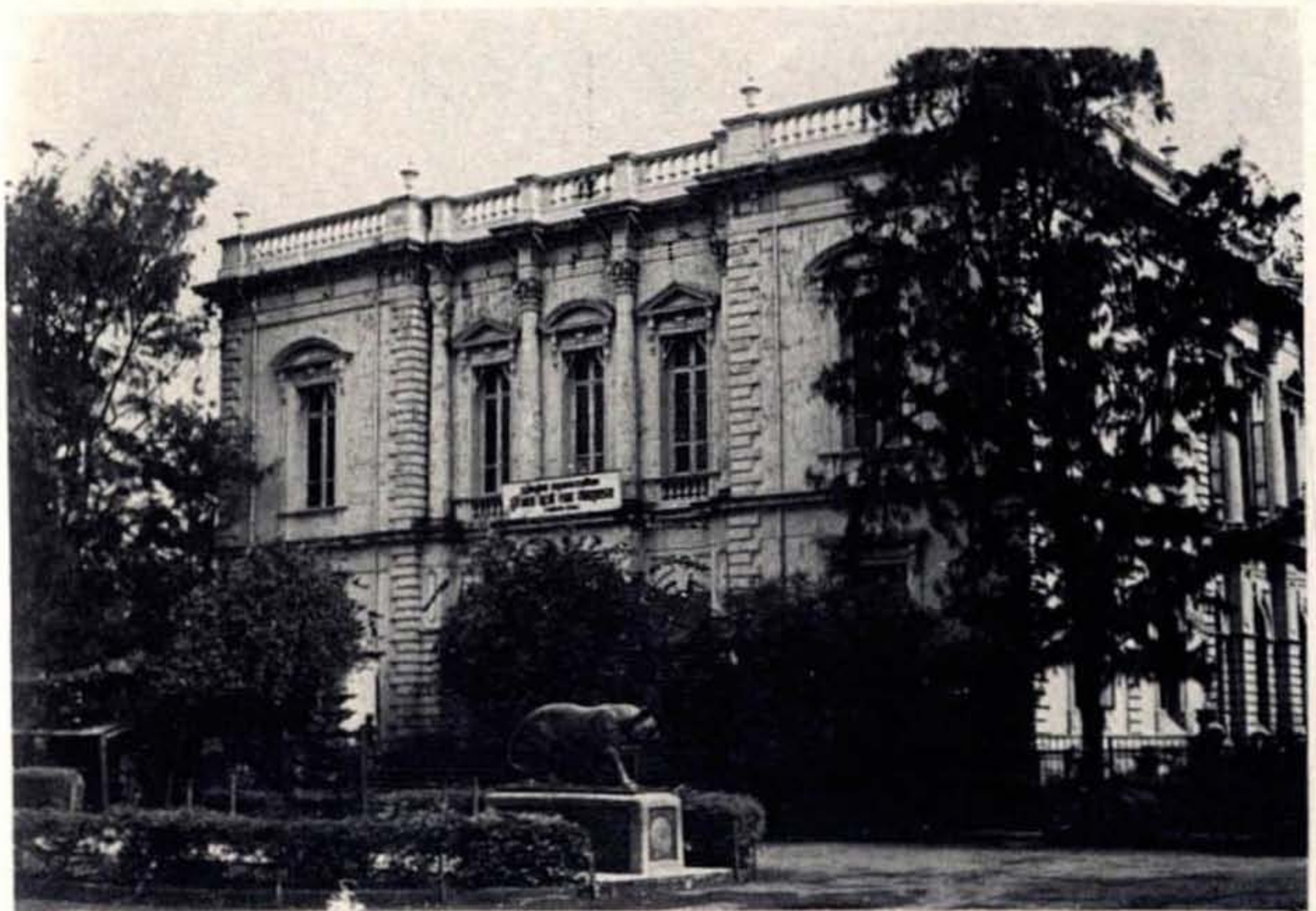
THE HISTORY OF A CENTURY OF NATURAL HISTORY

THE FIRST FIFTY YEARS, 1883-1933

Origins

In 1883 eight residents of Bombay decided that "it would be an excellent idea to form a Society for the study of Natural History. The founders met on the 15th of September 1883, in the Victoria and Albert Museum, Bombay and constituted themselves the Bombay Natural History Society. They proposed to meet monthly and exchange notes, exhibit interesting specimens and otherwise encourage one another.

"For several months meetings were held in the Victoria and Albert Museum, but in January 1884, Mr H. Phipson kindly offered the use of a room in his office at 18 Forbes Street, Fort, Bombay. This removal to a central situation gave an astonishing impulse to the Society. The meetings were better attended, the membership increased and collections began to be made, so that in a very short time the necessity for more ample accommodation was pressingly felt".



The Victoria and Albert Museum at Bombay, where the Society held its first meetings in 1883

Photo: S. R. Nayak

Phipson again came to the rescue of the Society and both Phipson's office and the Society moved to larger and more suitable accommodation at 6, Apollo Street (presently Shahid Bhagat Singh Road). This association was to last for the next 74 years to the everlasting benefit of the Bombay Natural History Society.

The Founders

Dr. D. MacDonald

Mr. E. H. Aitken

Col. C. Swinhoe

Mr. J. C. Anderson

Mr. J. Johnston

Dr. Atmaram Pandurang

Dr. G. A. Maconochie

Dr. Sakharam Arjun

*The founders of the Society
Del. B. R. Amonkar*

It was Dr Maconochie who suggested early in 1883 that it would be an excellent thing to form a Society for the study of Natural History.

EHA The Naturalist on the Prowl.

*A drawing copied from the book, a title which aptly describes EHA
Del. Bharat Bhushan*

Edward Hamilton Aitken (EHA) was the first Honorary Secretary & co-editor of the earliest issues of the Society's Journal. Aitken, who used the pen name of EHA had a special genius for seizing the striking and characteristic points in the appearance and behaviour of individual species, and a happy knack of translating them into print so as to render his description unmistakable.



EHA wrote a delightful series of books on Indian Natural History such as TRIBES ON MY FRONTIER, A NATURALIST ON THE PROWL, BEHIND THE BUNGALOW, illustrated with rather quaint drawings. A vignette of his writing follows.



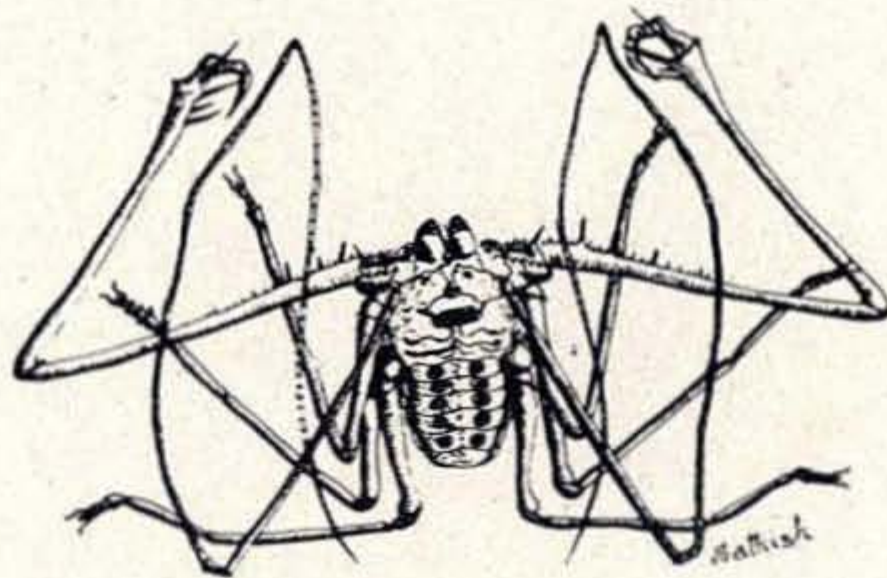
A lizard's tail is a contrivance for the saving of its life, planned on exactly the same principle as the faithful Russian slave who threw himself to the wolves that were pursuing his master's sledge. I once saw a fierce scorpion catch a lizard by the tail and plunge its sting into the wriggling member; but before the venom could circulate to the lizard's body, it detached its tail and ran away grinning. This was one of those little house lizards, called geckos. (From "A Naturalist on the Prowl")

HERBERT MUSGRAVE PHIPSON



The Bombay Natural History Society, to whose growth and development Phipson so greatly contributed, remains a memorial to his life and work in India. During the early years of the Society, Phipson as Honorary Secretary and Editor was the presiding genius of the Society, which had come to be known as 'Phipson's Museum'. He welcomed visitors great and small and taking them round the collections would treat them to a wealth of interesting facts and anecdotes drawn from his wide fund of knowledge and experience.

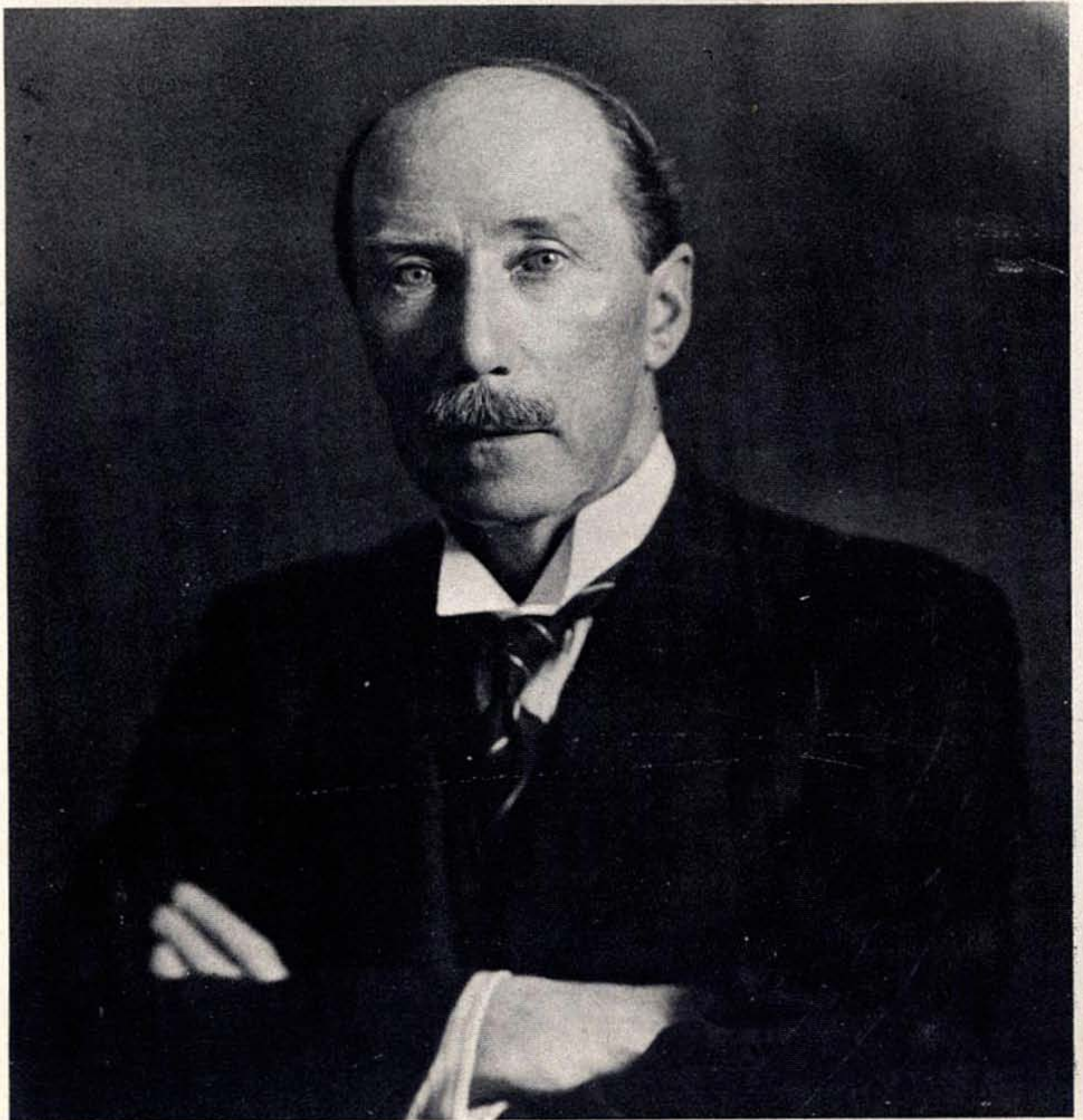
*Phipson's name as a naturalist is fittingly commemorated by zoologists describing several new discoveries after him, for example the whip scorpion *Phrynicus phipsoni*.*



Phipson's interest in natural history and his zeal for the Society were contagious. He interested his numerous friends in the Society's work and imparted his devotion to the young men who came out to India to assist him in his business. Thus commenced, and thus continued, the long association of the Society with the Company which bears Phipson's name. His successors in business took over his post of

Honorary Secretary and Editor of the *Journal* and have each in their time made their contribution to the Society's progress.

On Phipson's retirement from India in 1906, Millard took his place in the Society and as editor of the *Journal* which, under Phipson's editorship, had become the most important scientific publication east of Suez.

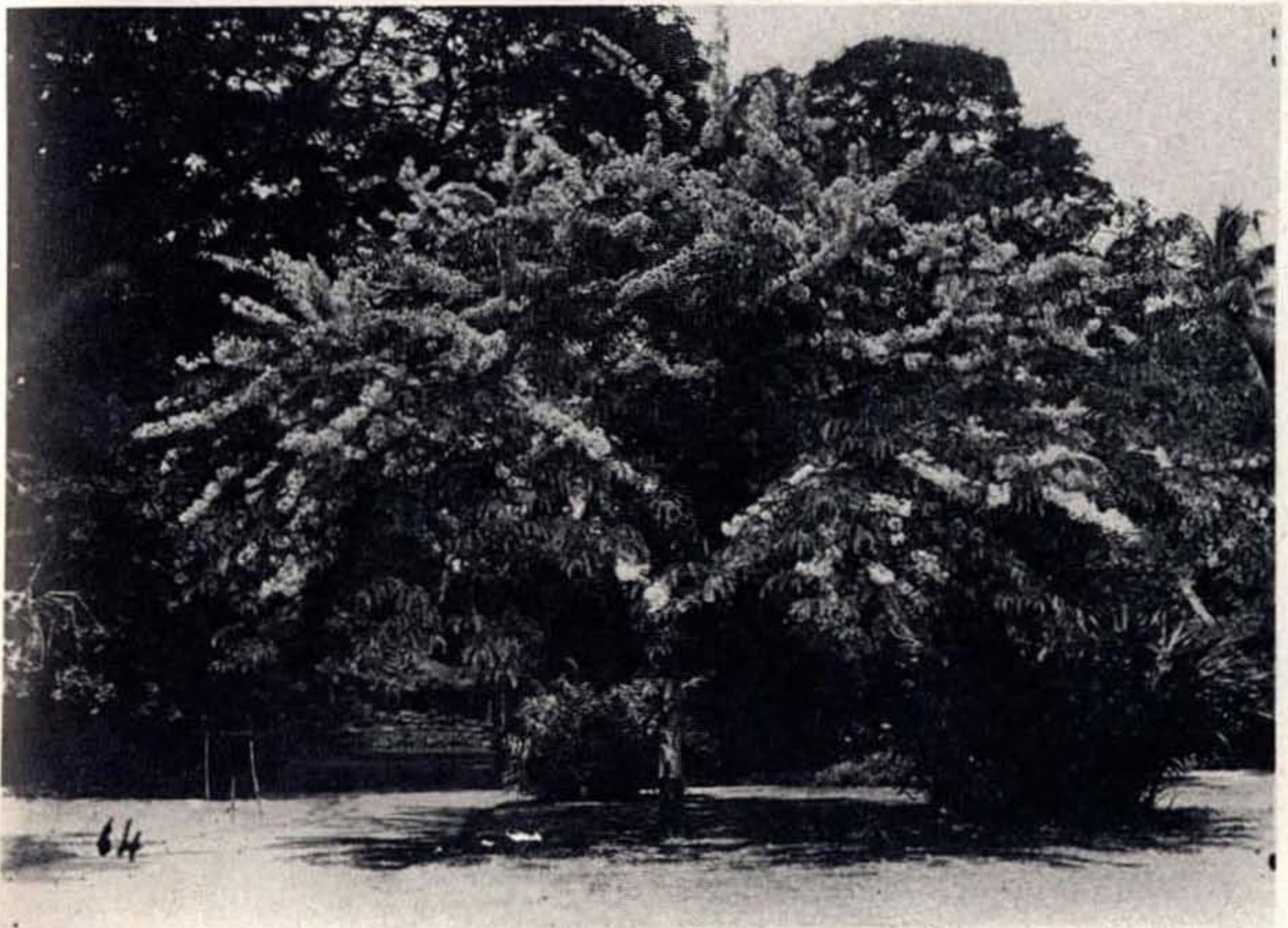


W. S. MILLARD
Honorary Secretary, 1906-1920

Though Millard took interest in natural history generally, his particular hobby was gardening, especially the cultivation of flowering trees and shrubs. The grounds of the bungalow where he lived on Malabar Hill, Bombay, were soon developed into a beautiful garden with a great variety of trees and shrubs and a large fernery full of foliage plants, orchids and other tropical flowers. It was the most important private garden at the time, and guests staying at Government House were frequently sent to inspect its treasures'. He took a deep and active interest in beautifying the city by introducing attractive flowering trees in different localities. Among the more outstanding of his introductions are the Burmese Cassia, *Cassia renigera*

and the Padauk *Pterocarpus indicus* with fragrant yellow flowers which, inspite of its name, is also a native of Burma. Such was his continuing interest in trees he had introduced that years after he had left India for good in 1920, he wrote to the Society enquiring how a particular tree he had introduced was thriving! Millard was instrumental in launching the much needed Mammal Survey of India, Burma and Ceylon, 1911-14, when it had to be terminated on the outbreak of World War I.

It was the routine in the Society during Millard's secretaryship that every afternoon at 2.30, after the lunch hour, the accountant Baburao (?) would bring up his Day Book, ledger and vouchers to be checked. Baburao, loaded with the books,



A Burmese Cassia, introduced into Bombay by Millard, in flower

would first timidly push the spring door ajar and peep in. Then, on a nod from Millard he would nervously tiptoe in. As soon as he got to his desk, Millard would look up and over his reading glasses straight into the man's eyes and with mock

solemnity declaim "Baburao I suspect you! Whenever you are making an entry in your cash book say to yourself 'Mr. Millard suspects me!' That will keep you out of temptation."

The Old Museum at 6, Apollo Street

Natural History has always been a collector's hobby, whether of butterflies, shells or the trophies of the hunt. It is also the field in which the amateur has contributed most to science and the Society's members are the best examples.

The increasing membership of the Society and the extension of its activities led to the rapid growth of its collections. Except for Surveys carried out in later years by professional collectors, employed by the Society, which brought very large accessions to the mammal and bird collections, the Society's Museum has been built up entirely by the voluntary contributions of members, resident in all parts of the Indian Region.

The collections are confined to the Oriental region; mainly to India, Burma and Ceylon and at the present time constitute, particularly as regards Mammals and Birds, one of the most important collections illustrative of the Fauna of this area.

As its members included many hunters of big game, the Society gradually acquired a fine collection of horns and heads:

The Society's Bird Collection, which now numbers several thousand specimens, has been built up almost entirely by the contributions of its members, many of whose names are now permanently associated with Indian Ornithology. Those who helped to form this magnificent collection in the early days were E. H. Aitken, Col. Swinhoe (Sind), H. S. Ferguson (Travancore), Curator of the Trivandrum Museum, whose work helped considerably the building up of what is known of the Zoology of the state, J. Davidson, who collected in Kanara, and Mr. Stuart Baker, the foremost Indian Ornithologist of his day, whose long and valued connection with the Society represents 42 years of devoted labour for the progress of Indian Ornithology.

The fine collection of Bird eggs now in the Society's possession was formed largely by contributions made by Mr. Stuart Baker. Others who helped were Prof. Littledale, J. Davidson, Lt. H. Barnes, Mr. W. M. Gibbs, Sir Henry Macnaghten, Sir P. Z. Cox, Mr. F. A. Grant and Mr. F. Ludlow.

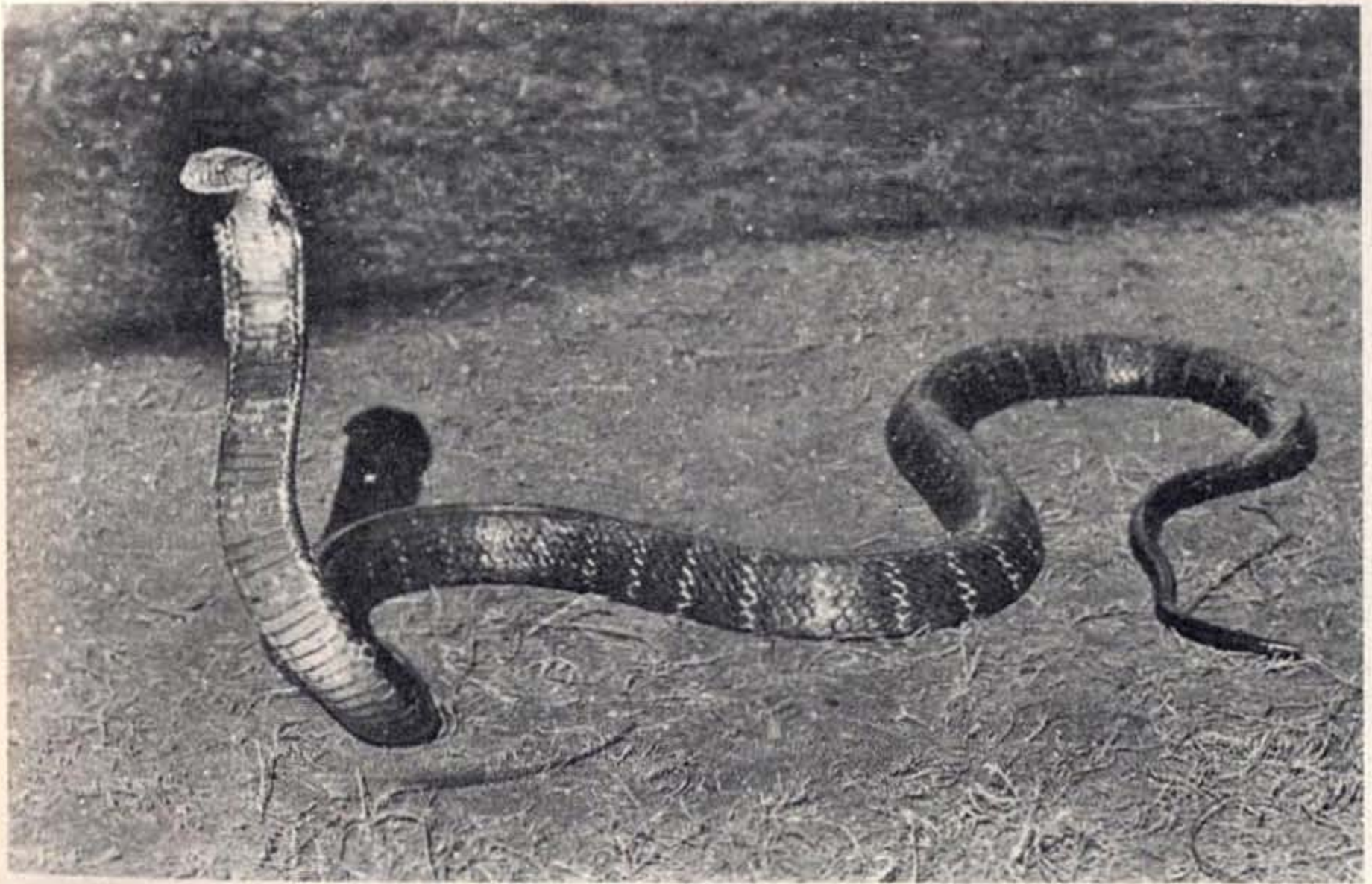
The Society's collection of Reptiles, was formed in the early days by the late Rev. Fr. Dreckman and Mr. Phipson. But the bulk of the collection is the work of Col. F. Wall, than whom no man has made a greater contribution to the existing knowledge of Indian Snakes.

As is the case with most amateur Societies, the collections are strongest in those fields of Natural History which make the widest appeal to amateur collectors. The invertebrates are confined mainly to Insects and Molluscs. The splendid collection of Butterflies now possessed by the Society was formed by collectors in all parts of the Indian Region.

Among those who helped to form the collection of Molluscs were Mr. J. A. Abercrombie author of various papers on the Marine Molluscs of the Bombay Coast, Mr. E. H. Aitken, Mr. W. Sinclair and Mr. T. R. Bell.

Living animals also found a place in the old rooms. Most famous of these was a great Indian Hornbill named 'William' which, taken as a nestling in 1894 lived in the Society's rooms till May 1920.

Live Snakes—as was but natural—were well in evidence. In one cage was a 15 feet Malay Python, and in another a 12 feet Indian Python. The latter previously had a companion, a little longer



Poisonous snakes were always a source of mingled interest and alarm, particularly a King Cobra

Photo: G. C. Patel

than himself, but after a struggle as to who was to swallow a black partridge—the winner swallowed not only the partridge but the other snake plus a red blanket! and so there was one! The Malay Python would not feed naturally and at times had to be pulled out of the cage and held by four men whilst Mr. Phipson rammed bullocks' tongues down its throat.

The poisonous snakes were always a source of mingled interest and alarm particularly a King Cobra.

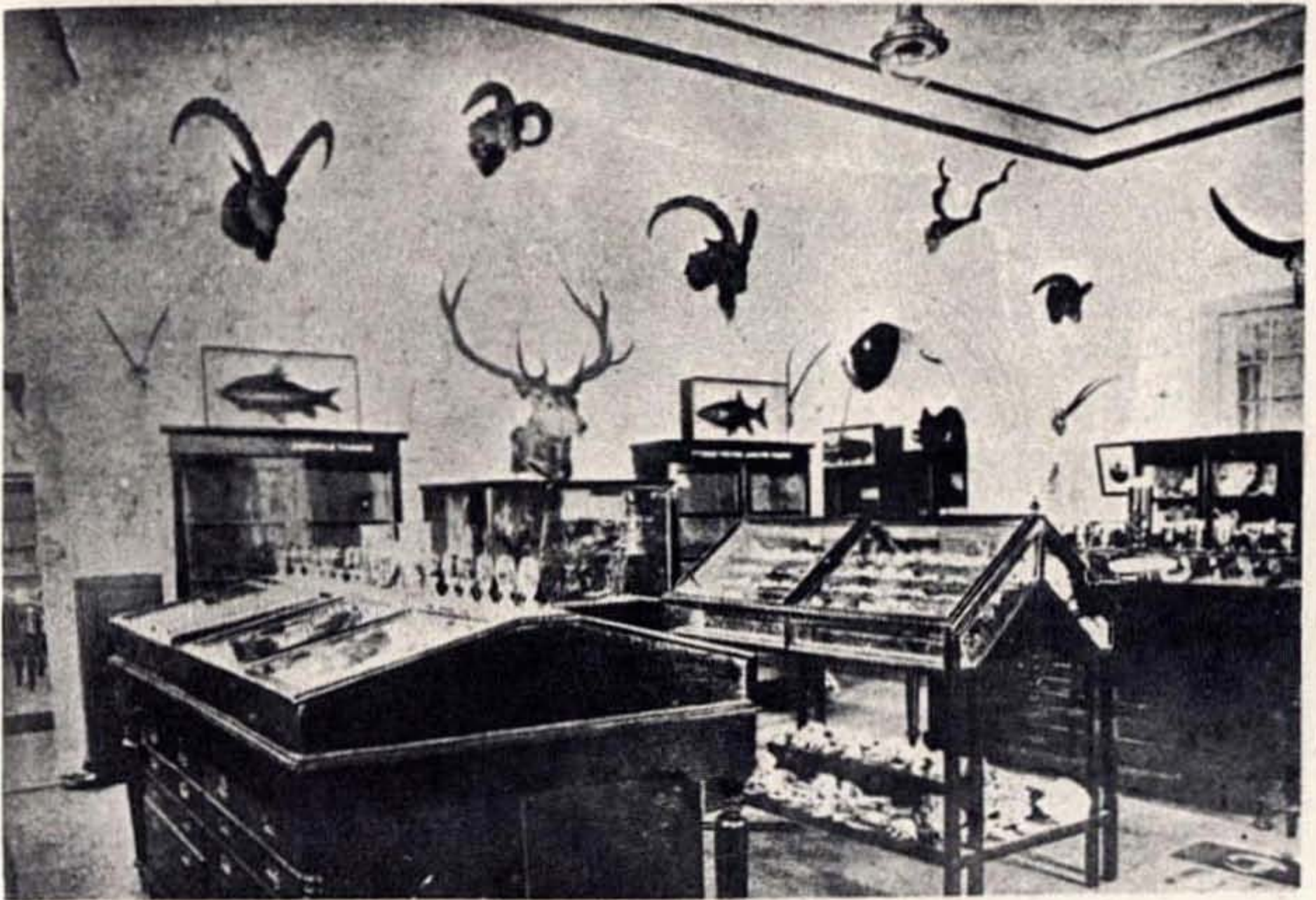
The story of how the Society obtained the King Cobra may be of interest as it was one of the last contributions received from E. H. Aitken.

EHA had written from Kanara to say that one evening one of his subordinates in the Salt Department came to his bungalow with a snake trailing over his shoulder and told EHA 'I saw two big snakes fighting in the jungle—I smashed at them with a stick—one got away, but I killed this one and have brought it to you—What is it?' 'It is a King Cobra, and you have not killed it,' replied EHA. The much belaboured snake was put in a crate and sent by sea to the Society. 'It may not survive the journey' wrote EHA. 'If it does not you will know it by the smell. If there be no smell be careful'. There was no smell—and they were careful and the King Cobra lived at the Society for two years serving the cause of science by permitting—with a good deal of suasion—the snake men from the

Parel Laboratory to remove his poison about once a month.

An idea of the old museum at 6, Apollo Street, as it appeared in the early days, will be obtained from the photographs published. They show the beginnings of the museum and its growth and development up to the period when the bulk of the collections were transferred to the Prince of Wales' Museum, Bombay. There was about the old rooms nothing of that frigidity and gloom which one somehow associates with museums. A spirit of friendliness prevailed; and a welcome there was for all who came in to look over the collections. The old 'Visitors' Book' contained many distinguished names. Among them the King of Roumania, who became a Life Member of the Society, the King of Siam, the Crown Prince of Belgium, the late Franz Ferdinand, Archduke of Austria, a Life Member, whose tragic death at Serajevo signalled the outbreak of the 1st World War. Statesmen were represented by the late Mons Clemenceau of France, and the late Sir Samuel Montagu who came in with the then Viceroy, Lord Chelmsford, and, to the horror of the staff, chose New Year's day for his visit.

Among men of letters there were Rudyard Kipling, and Mark Twain who during one of his 'tramps abroad' strolled across from his rooms at Watson's Hotel and on leaving emblazoned the name 'Clements' across the page of the visitors' book with the wrong end of the pen.

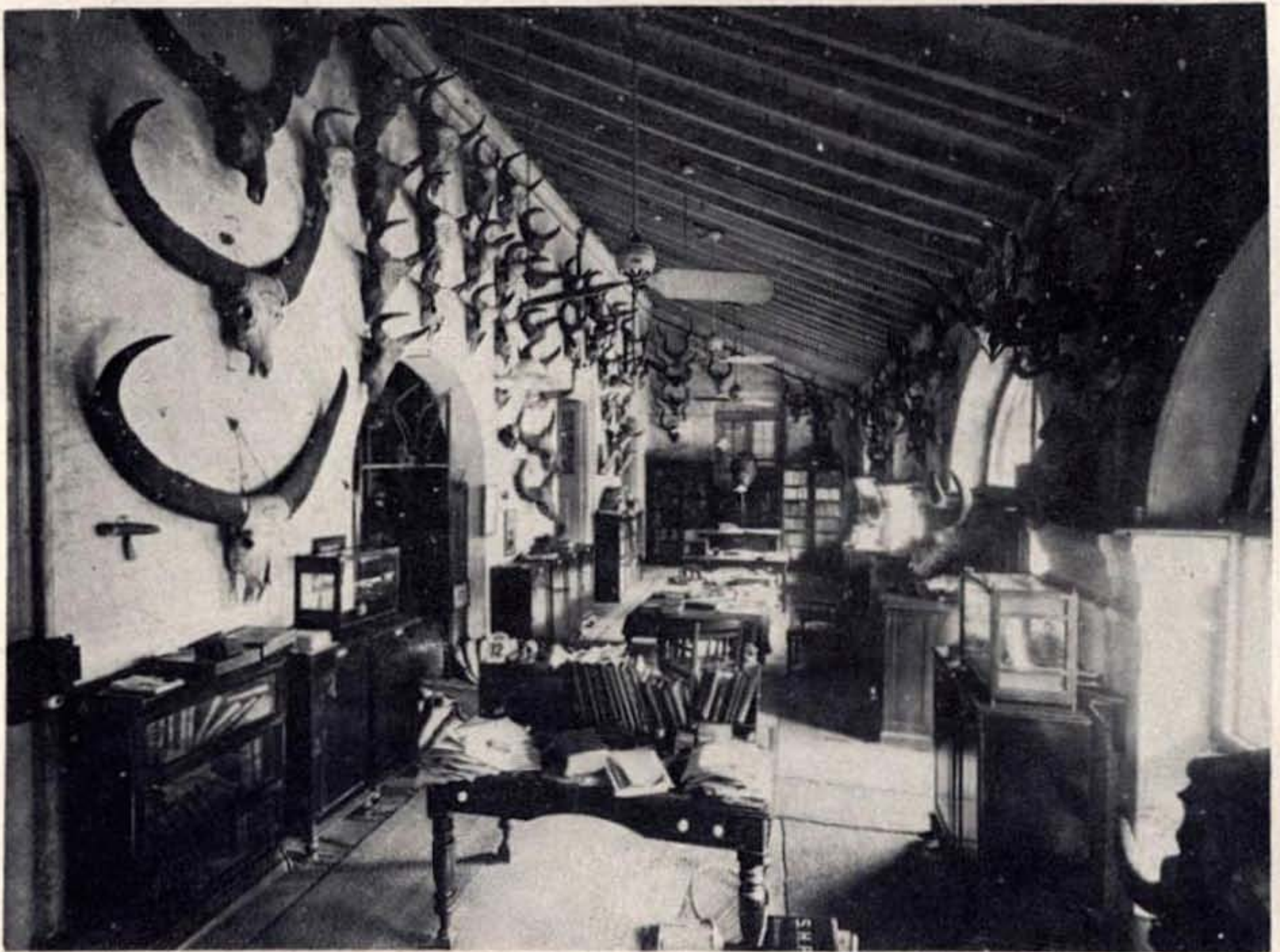


Two views of the Society's Museum at 6, Apollo Street in 1888





Two views of the Society's Museum at 6, Apollo Street in 1921, prior to transfer to the Prince of Wales Museum



The Prince of Wales Museum, Bombay

Mr Phipson's desire that Bombay should have a proper Natural History Museum was fulfilled when he was appointed by the Govt. to the Committee set up in 1904 to consider the question of a public Museum and Library for Bombay. At the third meeting of the Museum Committee, Mr. Phipson proposed that the public Museum should take the form of three separate buildings, one for Art and Archaeology, the second for a public Library, and the third for a Natural Science Museum. The three buildings in

question to be grouped on the Crescent site (the present location of the Museum) for architectural effect, but otherwise to be kept distinct. Mr. Phipson's proposals were approved by the Museum Committee which submitted its report to Government in May 1904. In the following year, at a public meeting of the citizens of Bombay held on the 15th August 1905, it was resolved that the permanent memorial to commemorate the visit of Their Royal Highnesses the Prince and Princess of Wales to this City and



The Prince of Wales Museum in 1921

Presidency should take the form of a public Museum and Library.

The actual transfer of collections happened only in 1921 and a modern Museum was built by the Society largely with financial assistance from its benefactors. The foundation stone of the new wing of the Museum presently housing the

Natural History section was laid in 1933 as part of the Golden Jubilee programme.

The Museum exhibits are a tribute to the talent of the Society's two officers of that period, S. H. Prater, the Curator, and C. McCann the Asst. Curator.



An aerial view of the Prince of Wales Museum — the plinth of the new Natural History Section can be seen on the right

The Mammal Survey of India, Burma and Ceylon 1911-1923

In the year 1911, the Committee of the Society decided to undertake a systematic survey of the Mammals of India, Burma and Ceylon.

The purpose of the Survey was to secure a systematic series of carefully preserved skins and skulls of the Mammals of the Indian Region and Ceylon, collected in different provinces, in order to provide the material necessary for a comprehensive study of the status, variation and distribution of species. Such material was non-existent. The collection of Indian Mammals in the British Museum and in the museums in India was remarkably inadequate.

The Society's Mammal collection had been built up by its members. Notable contributions were made by Col. Ward, Major Magrath, Major Hutton, Major Dunn and Capt. Whitehead. But it was realised that a task of the magnitude of the proposed Survey could not be left to the efforts of private collectors. It was work which could only be effectively carried out by trained collectors expressly employed for the purpose and at no small expense. The Society therefore issued an appeal for funds for carrying out the survey. The response from its members was immediate. On the 30th of April 1915, the total amount received in donations was Rs. 85,762-10-7, while the total expenditure amounted to Rs. 77,320-14-4 leaving a balance of Rs. 8, 441-12-3

Between 1915-1919 Rs. 15,000 were received in donations from members, while a grant of Rs. 50,000 from the Government of India enabled the Society to engage new collectors to carry on and complete the survey which was brought to a close in 1923.

The value of the collection obtained by the Survey lay firstly in that for the first time series of carefully prepared specimens of Indian Mammals, obtained in different areas of their habitat were available and thereby furnished data for the investigation of problems relative to their variation and distribution.

Secondly, in deciding the areas in which our collectors worked, a special effort was made to cover the districts in which the earlier naturalists collected.

No advance in systematic Mammalogy was possible without the re-examination of material illustrative of the species named by the earlier writers. The type specimens on which the written descriptions of these species were based, were in many instances no longer available. The Survey provided a series of topotypes obtained in the localities from which the 'types' originated.

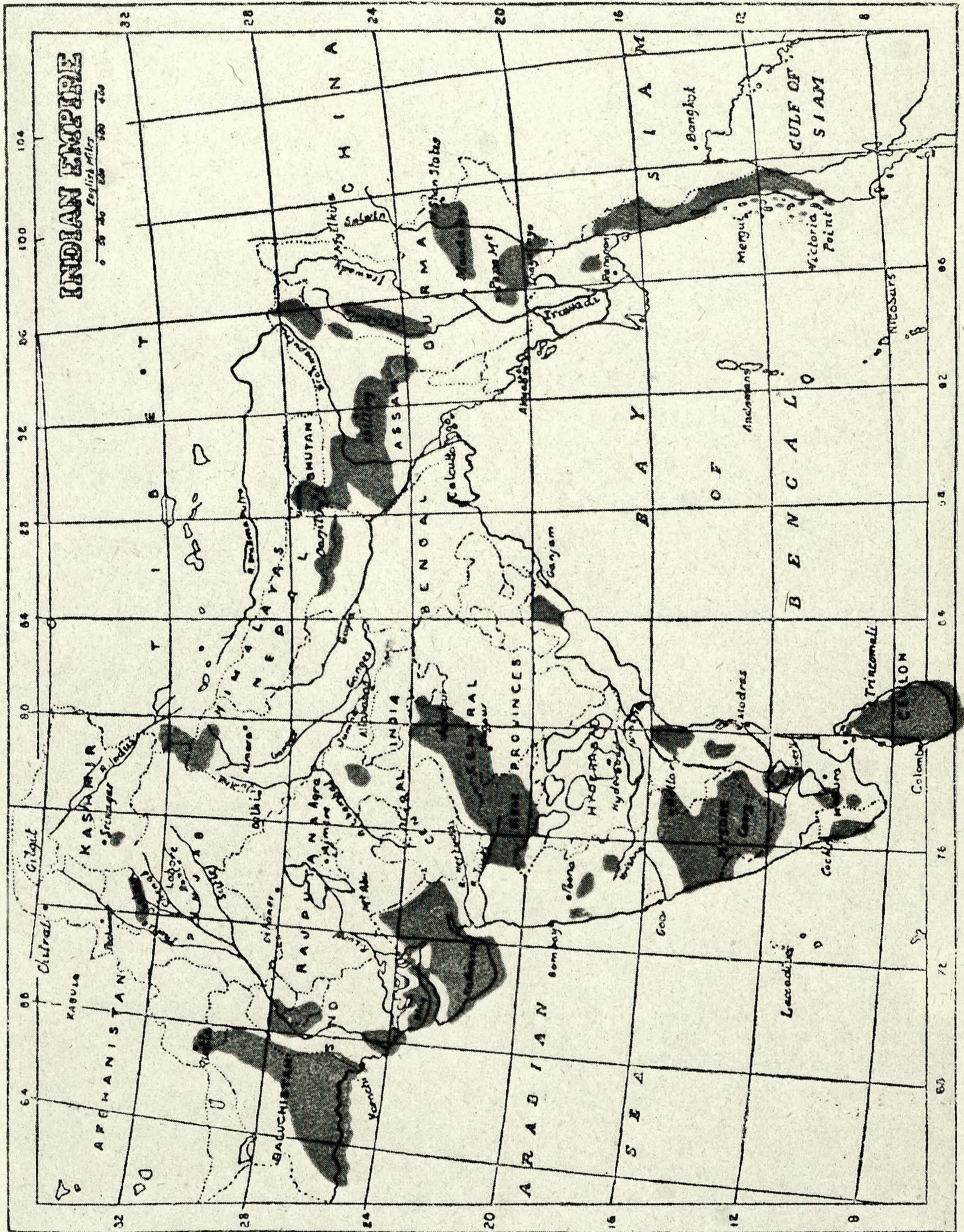
The collection localities covered an extraordinary variety of geographical regions and habitats: *Western Himalayas* (Srinagar, Kangra & Chamba, Murree Hills);



Above. *Charles McCann at the Kukal Forest Bungalow, Palni Hills, Tamil Nadu, in 1921.*

Below. *Charles McCann in the field at Kukal, Palni Hills, 1921 on Mammal Survey*

The Society's staff camped again at the same bungalow in 1981, but this time for ringing birds



Map of the Mammal Survey localities.
Copied from the Society's 50th year (Golden Jubilee) volume.

Central Himalayas (Nepal & Kumaon); *Eastern Himalayas* (Sikkim and Darjeeling Dt, Bengal Terai, Bhutan Duars); *Assam* (Naga Hills, Mishmi Hills); *Burma* (North and South); *Baluchistan and Sind*; *Gangetic Plain* (Rawalpindi & Campelpore, Hissar, Salt Range, Mt Abu, Gwalior, Bengal, Bihar and Orissa); *Peninsular India* (Cutch, Kathiawar, Palanpur, East Khandesh, Poona Dt., Koyna Valley, Dharwar, Kanara, Berars, Nimar, Vijaynagar,, Mysore, Coorg, Nilgiris, Highwavy Mts., Palnis & Travancore, Ceylon.

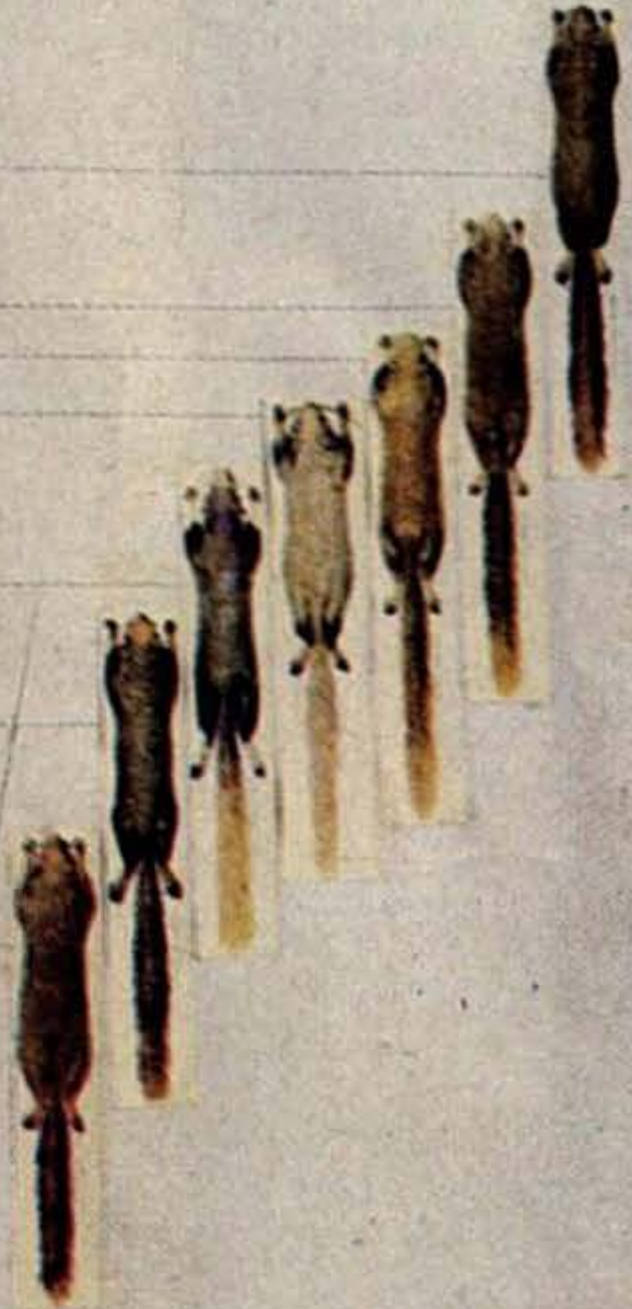
The collection from Sikkim showed that a sharp line of demarcation existed at about 28° N. between the two distinct faunas, i.e. the Palaearctic in the North and the Oriental in the South. This was indicated by the juxtaposition of such Palaearctic genera as Voles, Mousehares, Water Shrews, Marmots and Musk Deer with such characteristically Oriental forms as Flying Foxes, Tree Shrews, Civets, Mongoose, Bamboo Rats and Barking Deer. Further the collection indicated that the area is a meeting point of the Indian and Malayan faunas of the Oriental Region as was instanced by the numerous kinds of Squirrels represented in the collection which did not occur in the Indian Peninsula but were widely distributed through Burma, Western China and Siam. The intrusion of these Malayan forms along the Himalayan chain weakened as one travelled west. On the other hand the collections from Kumaon contained examples of such species

as the Mole rat (*Nesokia*) which extends westward through Persia to Palestine, Egypt, but does not extend eastward beyond Nepal. Equally interesting was the discovery in Baluchistan of the Vesper Mouse (*Calomyscus hotsoni* and *C. baluchi*), a genus intimately related to the New World genus *Peromyscus*.

The Survey material again furnished frequent data relative to the distribution of individual genera and species. The magnificent collection of squirrels numbering 400 specimens obtained on both banks of the Chindwin River provided striking evidence that this river forms a barrier to the westward extension of the different species of squirrels. The species inhabiting the west and those found eastward were found to be generally referable to two different groups thus indicating that the separation had been of long enough standing, long enough for the groups on each bank to have respectively evolved a rich series of subspecies found in succession from North to South.

The enormous collection obtained by the Survey numbering over 50,000 specimens were worked out in detail at the British Museum by various authorities. The Taxonomic results of the Society's Mammal Survey appeared in 47 papers entitled the 'Scientific Results of the Mammal Survey'. The substantial results so recorded form together a tremendous contribution to the Progress of Indian Systematic Mammalogy.

No account of the survey would



On the east bank of the Chindwin river, the races of the squirrel of the Calloscirus sladeni group show the rapidity of subspecies formation

be complete without acknowledging the efforts of W. S. Millard, and Sir Reginald Spence, Honorary Secretaries, during the Survey period, and N. B. Kinnear, the Curator. They efficiently controlled and brought to completion a task which must remain perhaps one of finest contributions made by an amateur Society to the cause of Scientific Progress.

The Survey of Iraq

Unlike the Mammal Survey, which was organised in every detail and carried out by trained collectors specially engaged by the Society, the Survey of Iraq was the spontaneous work of members of the Society who made large collections in Mesopotamia during the Great War.

Numerous specimens of all kinds were sent to the Society by members and others serving in the Expeditionary Force in Mesopotamia, between the years 1915-1919. They were collected under the discomforts and privations of war, and the history of the gradual growth of these collections is deserving of a special place in the annals of the Society. Many of the specimens were collected close to the enemy's lines, and some were prepared by enthusiastic collectors within range of the enemy's guns.

It is recorded how Col. Magrath caught and skinned a Lesser Shrew in the trenches before Kut, notwithstanding the flies and the Turkish Shells; how Capt. Pitman trained his Regimental Scouts to

look out for specimens as well as for the enemy and how Col. Wall, I.M.S., covered the palm trees of Basra with posters advertising a reward for snakes brought in or sent to him.

The Vernay Scientific Survey of the Eastern Ghats

The hope of an Ornithological Survey of South-Eastern India had for a long time been in many minds. The necessity for such a Survey was apparent to all systematic workers who were continually hampered in all directions by the absence of specimens and field notes from practically the whole of the "Madras Presidency", with the exception of the Nilgiri area from which fairly representative collections had been obtained.

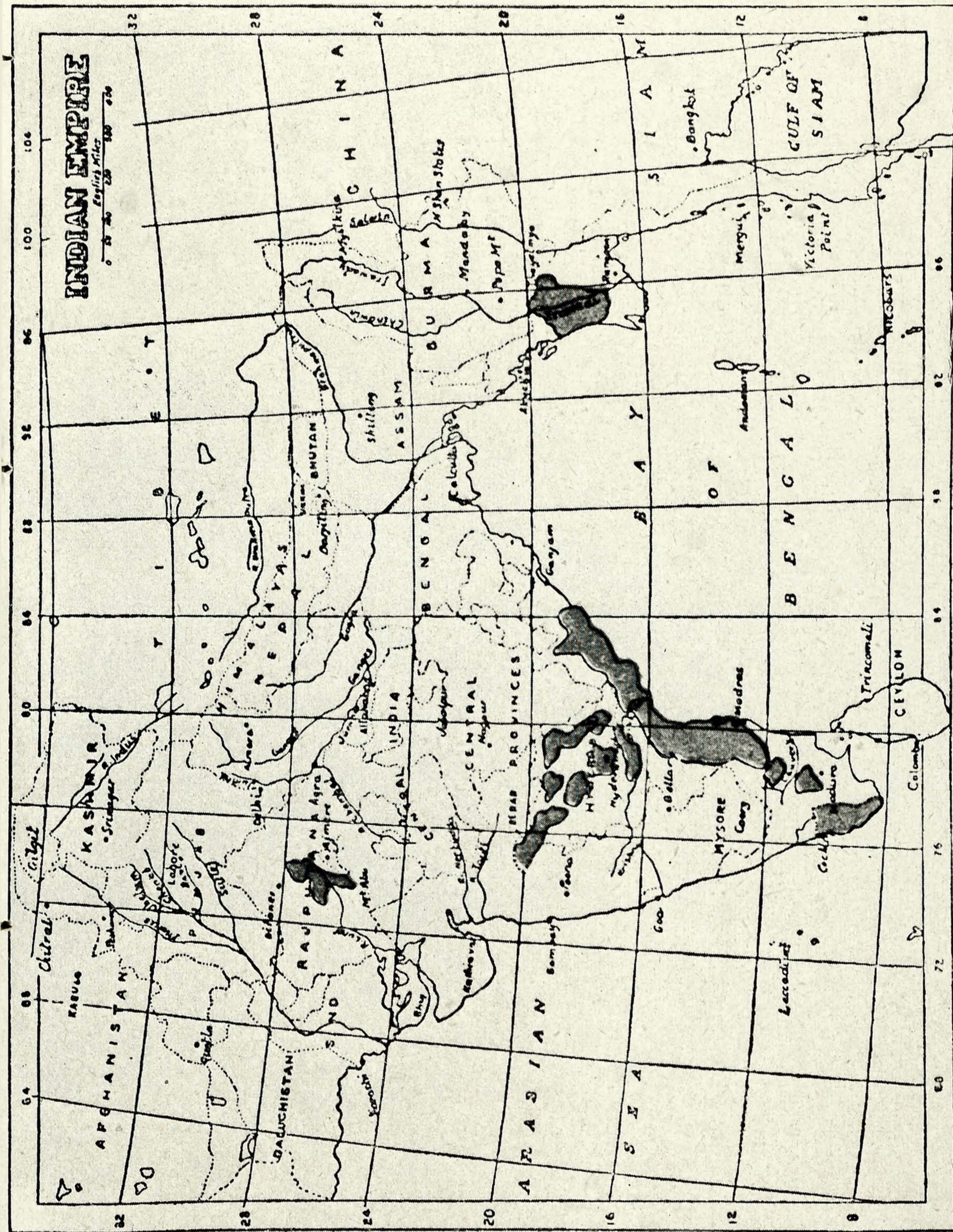
That the Society was able to carry out this very necessary Survey of Southern and Eastern India is due entirely to the generosity of Mr A. S. Vernay who was one of its Vice-Patrons. The name of Mr. A. S. Vernay was already well known not

only in India but across the seven seas as a Patron of Science who combined generosity with an ample appreciation of the field where such generosity could most advantageously be applied.

The Survey covered practically the whole area traversed by the Eastern Ghats. In all about 1,500 birds were collected.

The bird collections obtained by the Survey were worked out by Mr. H. Whistler and by Mr. N. B. Kinnear of the British Museum. Mr. H. Whistler, who up to the time of his leaving India was a member of the Society's Advisory Committee, had an established reputation as one of the principal authorities on Indian birds. His contributions to Indian Ornithology were characterised by the careful painstaking study upon which his writings were based.

The results of the ornithological work of the Survey were issued in a series of papers by Kinnear and Whistler in the Society's *Journal*.



Map of the Bird Survey Localities

Copied from the Society's 50th year (Golden Jubilee) volume



Salim Ali (standing, extreme left) guide-lecturing at the Museum to the students of the Victoria Jubilee School for the Blind - 1927

Nature Education has always been a primary concern of the Society. An attempt was made to organise a Nature Education scheme in the late 'twenties of this Century but financial constraints aborted it.

THE BOMBAY NATURAL HISTORY SOCIETY

1933

Patrons :

H. E. The Viceroy of India, G.M.S.I., G.C.M.G., G.M.I.E., G.B.E.

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Curator :

Mr. S. H. Prater, M.L.C., J.P., C.M.Z.S.

Assistant Curators :

Mr. C. McCann, F.L.S. | Mr. V. S. LaPersonne.

Head Clerk :

Mr. A. F. Fernandes.

The Golden Jubilee

1883-1933

Proceedings of the Fiftieth Anniversary Jubilee Meeting

A special Meeting to commemorate the Fiftieth Anniversary of the Bombay Natural History Society was held at the Cowasjee Jehangir Hall on the 10th August 1933 at 9-45 a.m. Sir Hugh Cocke, the Sheriff of Bombay, was in the Chair. His Excellency the Viceroy was unfortunately unable to be present, but a special message was received from His Excellency the Governor of Bombay, the President of the Society, congratulating the Society on the great work it had accomplished during the 50 years of its existence and wishing it all success in the future.

Mr. P. M. D. Sanderson, Honorary Secretary, gave a brief History of the Progress and Development of the Society. He was followed by Mr. S. H. Prater, the Society's Curator, the subject of whose address was the 'Problem of Wild Life Protection in India'.

The text of Mr. Prater's address on 'Wild Life Protection' appeared on page 1 of the Supplement in Vol. XXXVI, No. 4, of the Journal. In this connection the Society must record its appreciation of and gratitude to those who have made it possible for it to publish the Supplement which deals with the Wild Animals of the Indian Empire and the Problem of their Protection. Mr. F. V. Evans in paying for the large number of illustrations, coloured and black-and-white, which will appear with the series. A special

donation of Rs. 5,000/- has been received from His Highness the Maharaja of Travancore, who has recently been elected a Vice Patron of the Society, a donation of Rs. 500/- from H. H. the Maharaja of Jodhpur, Rs. 250/- from H. H. the Maharaja of Bhavnagar, Rs. 100/- from the Raja of Chamba, Rs. 100/- from the Maharaja of Rajgarh, Rs. 500/- from the Maharaja of Junagadh, and Rs. 100/- from the Maharaja Rana of Jhalawar, to cover the cost of printing these articles which the Society hopes to make available for distribution.

The creation of sane public opinion on the question of Wild Life is essential to the success of any effort directed to this end. A necessary preliminary to the creation of such opinion is the spread of knowledge about our Wild Life, from this alone can come that interest which will engender a wider recognition of the need for its preservation.

The thanks of the Society are due to all those authors who have contributed to the series of articles dealing with the subject and have so helped in the cause.

The thanks of the Committee and Members of the Society are due to Mr. A. S. Vernay who has given the Society a special donation to meet the cost of printing this Special Number.

The material for the first fifty years is largely based on the Commemorative volume referred to in the last paragraph of the 50th anniversary proceedings.

EDITORS



*The Meeting to commemorate the Golden Jubilee of the Society held at the Sir Cowasjee
Jehangir Hall, Bombay, on 10th August 1933*

THE SECOND FIFTY YEARS, 1933-1983

Personalia

S. H. Prater as Curator and Charles McCann as Assistant Curator dominated the organisation and running of the Society in the first fifteen years mainly in the design and setting up of the natural history section of the museum in the newly constructed wing of the Prince of Wales Museum and in the editing of the Society's *Journal*.

Prater joined the Society's service in 1907, first working under the guidance of E. Comber and later as assistant to the first stipendiary Curator, N. B. Kinnear. After a 4-years' probationary period following the latter's resignation in 1919 Prater was confirmed as Curator of the Society and of the Natural History Section of the Prince of Wales Museum which was then under its management. To qualify him for the stewardship of a really first class natural history museum, which the Prince of Wales aimed to become, he was deputed by the Board of Trustees in 1923 to the United Kingdom to learn the art of modern taxidermy, and in 1927 he was again sent abroad to study the techniques of modern natural history museum exhibition and management in England and America. The fruits of all the skill and aptitude he thus acquired are evidenced by the artistically designed exhibition galleries and the superb dioramas, in the Natural History Section, acclaimed to be the

finest in the East. He possessed the gift of transmitting the knowledge and experience gained abroad to his co-workers and staff in a way that extracted their whole-hearted co-operation and helped to achieve the highest results. The Natural History Section is a standing monument to Prater's genius. He was fortunate in having as his lieutenant an exceptionally competent naturalist and skillful craftsman in the person of Charles McCann. McCann readily lapped up the imported techniques, adapted them to local needs and conditions, and put them into masterly execution in the museum's galleries.

Charles McCann joined the Society as a collector in the Mammal Survey in December 1921 and was appointed Assistant Curator in 1922 and Joint Curator in January 1946. He was one of the outstanding field naturalists of India. The study of Nature was his absorbing passion and his main recreation. His powers of observation were uncanny in their keenness and incisiveness. Nothing escaped his attention as he tramped through the jungles of his beloved Western Ghats.

In the Museum his services were invaluable, and the galleries of the Natural History Section of the Prince of Wales Museum and the fine range of groups and well-mounted exhibits owe much to his skill and ability.



Gilbert Nouguiera preparing a mould of the Reticulated Python



Chipping the mould off the cast



The final diorama exhibit of the Reticulated Python in the Prince of Wales Museum, Natural History Gallery. Donated by Lt Col. K. L. Gharpure



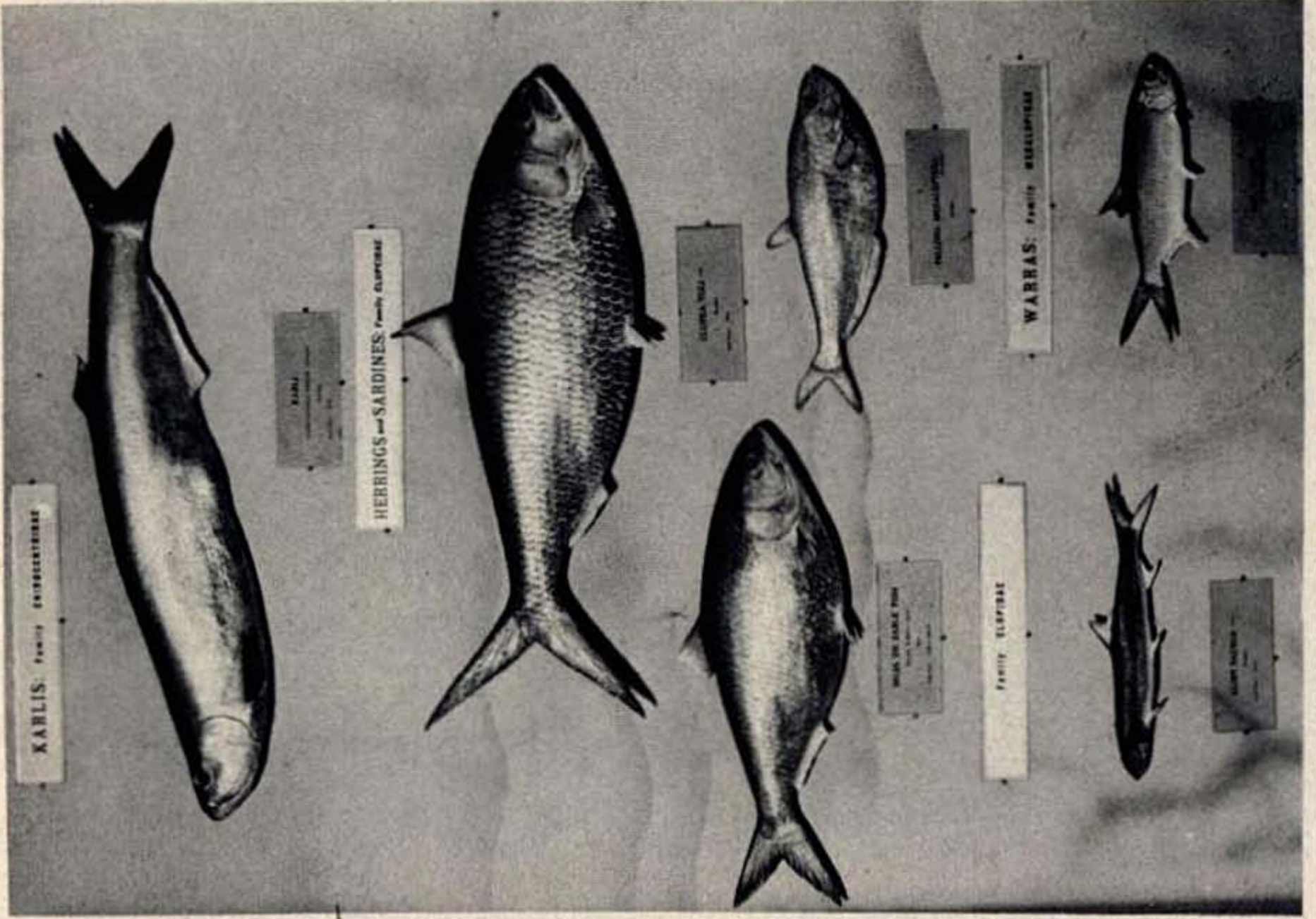
Diorama of Lammergeier at its nest



*Diorama of Kashmir Stag or Hangul
Donated by David Ezra*



Diorama of Ridley Turtle nesting at Malad Beach, Bombay



A panel of plaster and wax casts of Fish.

Donated by F. H. Evans

The post-Independence period (1948-1983)

The growth of the Society, even its continued survival is a tribute to the sterling work put in by **Salim Ali**. Salim Ali has had a long and active association with the Society. He served as one of the editors in 1927-28 and briefly as one of the assistant curators and for some time as the Nature Education Organiser. The period 1933 to 1948 he spent in the field on bird surveys which contributed substantially to our knowledge of the Indian bird fauna. When Prater and McCann left at Independence, Salim Ali took over as the General Editor of the *Journal* and Honorary Secretary of the Society. The Society's present position as the premier natural history organisation of Independent India is largely his making. **Humayun Abdulali**, who joined Salim Ali in 1950 first as the Joint Honorary Secretary and later as Honorary Secretary shouldered the burden of administration for the next twelve years. It was during his tenure that the agreement with the Museum and

the State Government was concluded by which the Society severed its connections with the Museum and the Government of Maharashtra agreed to pay for housing the Society's collections other than the exhibits at the Museum and the establishment to maintain them. The association with Phipsons also came to an end. However, negotiation with the Government of India for funds to house the Society were successfully concluded.

Zafar Futehally took over as Honorary Secretary in 1963 and the whole outlook of the Society changed from an introverted to an outgoing, conservation-oriented organisation. Member participation increased from a situation where it was sometimes difficult to even get a quorum for an annual general meeting to the situation where member participation has become a mainstay in the Society's activities. It was also the period when large scale collaborative scientific projects were commenced. The trend that was then set is being continued.

Salim Ali ringing nestlings at Keoladeo Ghana in the early 1950's



The Ornithological Surveys

What the Mammal Survey was to the first fifty years, ornithological surveys were the first and continuing scientific programme of the second fifty years. The surveys were singularly effective in the collection of exact data as they were conducted by a trained ornithologist. Financed largely by the Indian States, they permitted Salim Ali to be in the field for extended periods of time, though he was neither a salaried employee of the Society nor of the States, both benefited from the extensive and thorough study of the bird fauna done by him. The collections were studied from the taxonomic point of view by Hugh Whistler at the British Museum and the results, namely ecological notes by Salim Ali and taxonomic notes by Hugh Whistler were published serially in the Society's *Journal*. The surveys, though generally covering the habits and habitats of the bird fauna often examined specific points of ornithological interest. The ornithological surveys commenced during the last two years of the first fifty years and continued during the second fifty years and are briefly summarised below:

The Hyderabad Ornithological Survey (1931-1932)

The survey, in addition to exhaustively studying the bird fauna of the erstwhile State of Hyderabad examined the question of Economic Ornithology investigating the role of

birds as crop destroyers, crop protectors, scavengers and in relation to vegetation. Attempts were also made to rediscover the elusive Jerdon's Courser, but without success.

The Birds of Travancore and Cochin - 1933

In view of the considerable advances that were made in the study of the avifauna of the Peninsula, it became desirable to undertake a fresh and thorough investigation of the extraordinarily interesting bird fauna of the heavy rainfall forests of these two states. Apart from an extensive survey of the bird fauna in relation to ecological conditions, the discontinuous distribution of the Indo-Malayan species was examined in detail.

The Birds of Mysore (1939-1940)

The avifaunal surveys of adjacent areas brought to light among other things, some curious divergences between certain forms inhabiting the eastern and western sides of the Peninsula. Their line of separation lay within the state of Mysore where systematic investigation had not been done previously. The carefully collected specimens and the study of ecological conditions reconciled some of these problems.

Other surveys equally important in the understanding of the bird fauna of the subcontinent undertaken by Salim Ali were:



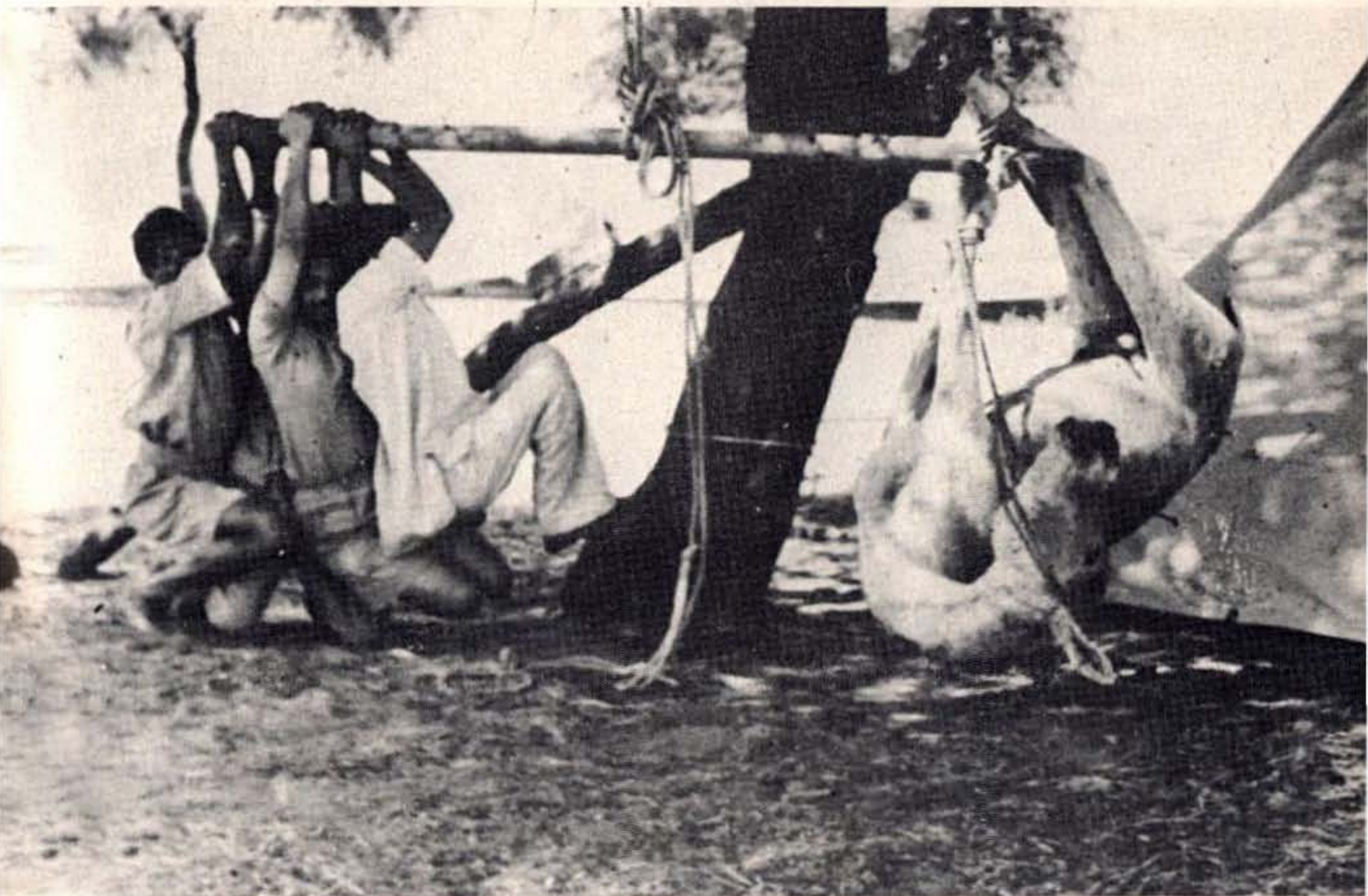
Tista River'bed near Chungthan, N. Sikkim
Photo: Loke Wan Tho



A rough trail, N. Sikkim
Photo: Loke Wan Tho



The International Station Wagon provided with a swivel seat on the roof for collections and observations donated by Loke Wan Tho to Salim Ali for field surveys. The sale proceeds of this vehicle formed the seed money of the Salim Ali-Loke Wan Tho Ornithological Research Fund



Wild Ass, a special collection by Salim Ali, being weighed against known weight 'domestics' in Kutch in 1943

Photos: Salim Ali

The Birds of Central India (Bhopal, Gwalior, Indore, Dhar) in 1938
 The Birds of Gujarat, 1944-1948
 The Birds of Orissa, 1948-1949
 The Birds of Berar, 1951
 The Birds of Sikkim, 1952-1953
 The Birds of Bhutan, 1966-1968
 The Birds of Goa, 1972
 The Birds of Arunachal Pradesh, 1979-1982

The surveys often undertaken in collaboration with other institutions and more often than not run on shoe string budgets culminated in the many volumes on birds by Salim Ali and finally the ten volume

HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN.

The Birds of the Andaman and Nicobar Islands - 1964, 1966

The avifauna of the Andaman and Nicobar group of islands had not received serious attention for over fifty years when these two and subsequent expeditions were mounted and conducted by Humayun Abdulali. The survey enabled a thorough revision of the avifauna of the Islands and also resulted in several new races being described.

The Study of Bird Migration, 1959-1972

Bird life in India is of two kinds, the residents that live and breed and spend their entire life in India, and the migrants that spend only the winter months in India and the rest of the year elsewhere outside the country. Every year as the monsoon rains come to an end and the weather cools down, millions of birds come to India from the northern latitudes, as conditions gradually become harsh in the north. From October to March the following year, the monsoon's bounty supports an enormous bird population. For instance, the four resident species of duck, namely the spotbill, the nukhta, common teal and the whistling teal are supplemented by over twenty species of winter visitors. The single resident species of crane in the plains, the Sarus, is supplemented by three more species—the Common, Demoiselle and the Siberian cranes.

As the hot weather advances and food becomes scarce the migrants leave for the northern latitudes to nest and bring up their young as spring brings a resurgence of life. The migrants have the best of both worlds.

The migratory movement, when, where and how is a question which has intrigued scientists. The Society pioneered the study of bird migration in 1927 when attempts were made to ring ducks with the assistance of the Maharaja of Dhar at Dhar State. In 1959, the World Health Organisation, concerned at the sudden appearance of a tick-borne virus encephalitis in the Kayasanur Forest of Karnataka State, similar to a disease endemic in the Omsk region of the USSR, decided to investigate the possibility of migrant birds acting as carriers of the infected ticks. Salim Ali was in-



On camel back in the Banni, Rann of Kutch

Photo: Salim Ali

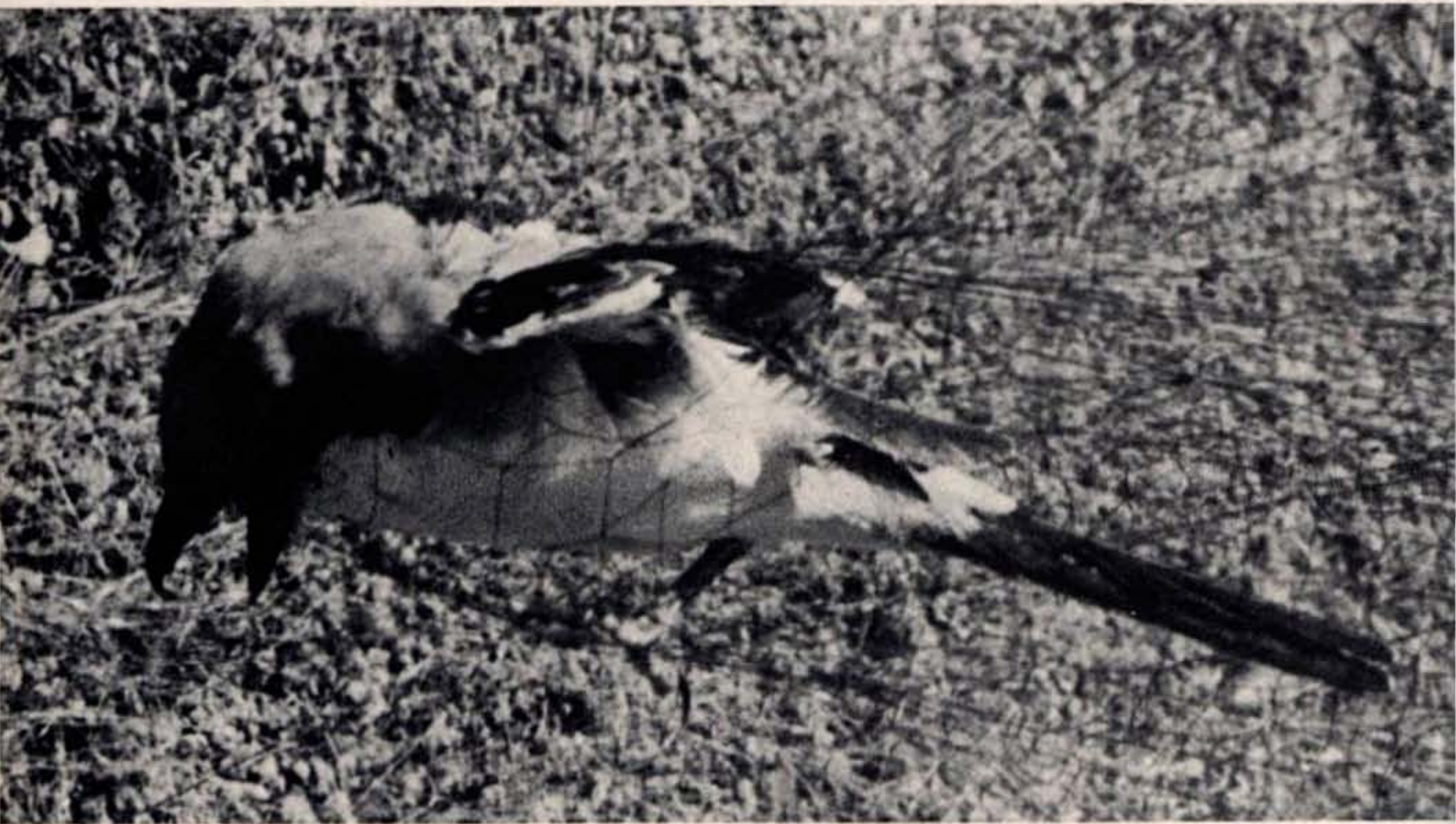
BIRD MIGRATION PROJECT



Loke Wan Tho (foreground), D. J. Panday (at the back) ringing birds in the Rann of Kutch

Photo: Salim Ali

BIRD MIGRATION PROJECT



A shrike in a mist net



Salim Ali scans the Rann of Kutch
Photo: Harold Trapido

vited to examine the problem, and with financial assistance of the Virus Research Centre at Pune, a large scale banding programme was launched. In course of time it was established that birds were not the carriers. The migration studies so fortuitously launched were carried on with the assistance of the Smithsonian Institution and the Government of India up to 1972.

Apart from the use of mist nets for capturing birds for ringing and releasing, the Society used indigenous traditional methods of capture as practised by professional trappers, which have proved most effective. The induction of indigenous methods is due to the efforts of one of the most effective Research Assistants, Mr. P. V. George, that the programme ever employed. George, a very persistent and persevering field biologist, brought the trappers from Bihar into the Programme. George was also responsible for locating enormous roosts of wagtails in sugarcane fields which resulted in large numbers of this group being ringed.

The bird fauna, both resident and migratory, of a wide variety of biotopes in the plains and hills of the subcontinent were studied, namely: GANGETIC PLAIN (Ghana Sanctuary, Bharatpur, Monghyr, Dt. Bihar); DECCAN PLATEAU (Daulatabad, Maharashtra); COASTAL FOREST (Point Calimere Sanctuary, Tamil Nadu); SEMI-URBAN AND AGRICULTURAL (Edanad, Kerala); SEMI-DESERT (Hingolghadh, Gujarat); DESERT (Kutch, Gujarat); WESTERN HIMALAYAS (Kashmir); WESTERN GHATS (Mahableshwar, Kodaikanal); EASTERN GHATS (Yercaud, Shevroy Hills, Lammasinghi, Vizag hills).

The recovery data obtained has given a very good indication of the origin of the migratory avifauna of India, and their movements within the country. The movement of resident species hitherto not specifically known has been clearly indicated. The marginal benefit of the programme is the number of young and capable scientists it has been possible to train in field studies and has been of immense help in the organisation and management of large-scale field projects by the Society.

Major Field Projects

The Gir Project

The Gir Forest is of particular significance as the only forested area of the Saurashtra Peninsula of Gujarat, and as the only home of the lion in Asia. The Gir Project developed as a multi-disciplinary scientific study of the Gir Ecosystem executed by the Society in collaboration with the Smithsonian Institu-

tion and Yale University of the United States, the Forest Department, Government of Gujarat and the World Wildlife Fund.

Four aspects were intensively studied by graduate students on Ph.D. programmes: the ecology of the lion by Paul Joslin of the Edinburgh University; the herbivores and the ecosystem by Steven Ber-

GIR PROJECT



A view of the Gir Forest

Photo: E. P. Gee



Stephen Berwick arranging a 'Cafeteria' experiment using Nilgai

wick of the Yale University; the Grasses of the Gir by Toby Hodd of the Edinburgh University; and the ecology of the vultures by Robert Grubh of the Society and Bombay University. The studies identified the problems of the Gir, as agricultural encroachment of the forest land, over-grazing of the grasslands by resident and seasonally introduced cattle, direct loss of prey through appropriation of kills by skimmers for the hides and the consequent cleaning out of the carcase by the vultures. The Gir Project acted as a catalyst drawing attention to the urgent need for remedial measures which have now been put into effect by the Government of Gujarat.

Ecological disturbances in agricultural and adjoining lands caused by the removal of frogs for export 1976-1979

This three-year project funded by the Indian Council of Agricultural Research had Mr Humayun Abdulali as the Principal Investigator. The results of the enquiry indicate that in the removal of frogs the country is losing the services of a good biological control method as insect and other invertebrate pests form a substantial part of the diet of frogs. The data shows that the removal of frogs creates a definite ecological imbalance in agricultural areas.

Short-Term Field Studies and Projects

Rediscovery of Finn's Baya (Ploceus megarhynchus) — 1959

93 years earlier in December 1866 A.O. Hume the celebrated ornithologist described a new species of weaver bird with a massive bill as *Ploceus megarhynchus*. In course of time it came to be known as Finn's Baya after Frank Finn, a superintendent of the Indian Museum, who in 1901 first described the breeding plumage of the male. Kaladungi, the place where Hume obtained his birds became famous later as the home of Jim Corbett. No further collection of the bird by ornithologists was made. Searches were made earlier but without success. A lucky sighting of an adult male and the follow up to the nesting area rediscovered the

species during the survey — Salim Ali, J. H. Crook — Partially funded by the Rockefeller Foundation.

Rediscovery of Wroughton's Free-tailed Bat — 1961

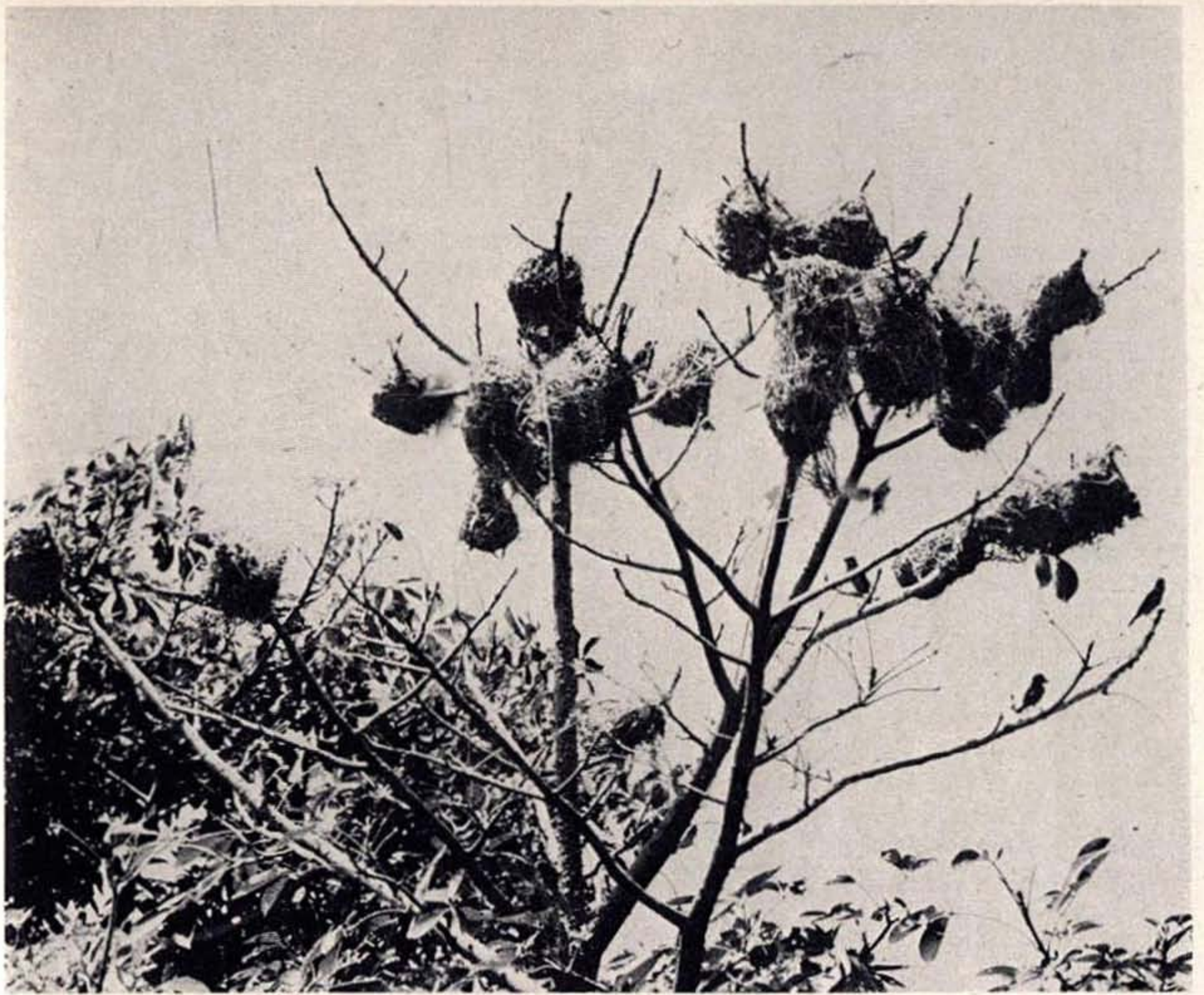
During the Mammal Survey in 1912, Prater collected a new genus of bat from the Barapede Caves, near Shirol on the Goa frontier. Named *Otomops wroughtoni*, the species has not been reported anywhere else and can be considered as one of the rarest among Indian bats. The species was collected again from the same caves and found to be not uncommon in its roost in the crevices of the roof of the cave — Humayun Abdulali, Andre Brosset, P.W. Soman.

The study was funded by the Dorabji Tata Trust.



Finn's Baya nests on simul tree

Photo: Salim Ali



Close-up of nests of Finn's Baya

Photo: Salim Ali

*Wild Buffalo in peninsular
India — 1965*

The status of the species and its habitat was surveyed in the Bastar district of Madhya Pradesh, and the Kutru area was recommended for preservation — George Schaller, J. C. Daniel, R.B. Grubh, P. B. Shekar.

*Status survey of Nilgiri Langur and
Lion-tailed Macaque in South
India — May 1966*

The alarming and rapid change over of natural forests to plantations of economically valuable trees prompted the survey of the two endemic species largely restricted to evergreen forests. The Lion-tailed

Macaque was noted as endangered particularly from habitat loss — J. C. Daniel, P. Kannan.

*The Nilgiri Tahr in the Eravikulam
Sanctuary — 1971*

The Sanctuary maintained as a shooting reserve by the High Range Game Association held the second largest population of Nilgiri Tahr (c. 400 animals) and was to have been taken over for cultivation and plantation. A survey and representations made by the Society to Government retained the area as a sanctuary. Presently it is a National Park — J. C. Daniel, funded by the World Wildlife Fund India.

Breeding colony of the Flamingos in Kutch — 1973

An aerial survey was made with the assistance of the Indian Air Force to delineate the area to be declared as a sanctuary for protecting the breeding colony. The survey also located a large colony of the Lesser Flamingo, hitherto not reported from the area — Salim Ali, Lavkumar Kachar, M. A. Rashid — Funded by the Government of Gujarat.

The Estuarine Crocodiles of Bhitarkanika — January 1973

Habitat loss and the skin trade have dangerously depleted the population of this, the largest among the reptiles. The Bhitarkanika area in Orissa was believed to have a substantial population. As a result of the survey it was suggested that every effort should be made to preserve the mangrove forests and the whole area be declared a sanctuary. This has since happened.

The survey also located the largest breeding area of the Olive Ridley Turtle along the Indian coast — J. C. Daniel, S. A. Hussain - Funded by World Wildlife Fund, India.

Nature Reserve Potential of Kinwat, Maharashtra — August 1974, October 1975

At the request of the local legislative councillor, the Society examined and reported on the possibility of establishing nature reserves in Kinwat Taluka of Nanded with a view to conserve the depleted natural resources of the area. The Ambadi Forest, a fine example of Tropical

Southern Dry Deciduous Forest and the Sahasrakund areas were identified for conservation — J. C. Daniel, S. R. Amladi, S. R. Nayak, S. A. Hussain.

Puddukotai Bird Survey — 1975

On behalf of the Government of Tamil Nadu the birds of Puddukotai district were surveyed and a report prepared for inclusion in the Gazetteer volume of the district — Salim Ali, S. A. Hussain — Funded by the Govt of Tamil Nadu.

Crocodile status survey for the Maharashtra Government — 1976

At the instance of the State Government, Crocodile habitats in the State were surveyed and localities identified where captive breeding of the endangered Mugger or Marsh Crocodile could be undertaken — J. C. Daniel — Funded by the Govt. of Maharashtra.

Ladakh Wildlife Survey — 1976

Wildlife habitats in Ladakh particularly locations where the endangered Blacknecked Crane breeds in summer were surveyed. The report on the status of the species and the status of wildlife in general with recommendations of areas suitable for being turned into wildlife sanctuaries was sent to the Government of India — Salim Ali, V. S. Vijayan, S. A. Hussain — Funded by the World Wildlife Fund India.

The search for Blewitt's Owl (Athene blewitti) — February and April 1976

One of the enigmatic and rare



Walking along the Ambadi Saddle (Kinwat Survey)
Photo: S. R. Amladi



A bull Wild Buffalo looks at the intruder

species of the Indian avifauna, only five specimens of Blewitt's Owl are known, all from the thick forests of central India from Orissa to Gujarat. The Melghat Tiger Reserve and Mandvi in Gujarat were unsuccessfully surveyed for the species — S. D. & M. Ripley, S. A. Hussain, P. B. Shekar - Funded by Smithsonian Institution.

Birds of Sriharikota Island — January 1976

The avifauna of the island was investigated at the request of the Indian Space Research Organisation who wished to: (a) know the birds in their research complex, and (b) evaluate ecological changes that may result from human activity. The survey identified and listed the avifauna of Sriharikota and suggested methods of habitat manipulation and conservation — R.B. & S.R. Grubh - Funded by the ISRO.

Ecology of the Honeyguide — 1977

The status of the Honeyguide occurring uncommonly at middle elevations in the Himalayas was investigated in the Bhutan Himalayas. Locations where the species is seen in association with honeycombs were identified for further research — Salim Ali, S.A. Hussain — Funded by the Government of Bhutan.

Nilgiri Bird Survey — 1977

The birds of the Nilgiri district were surveyed and a consolidated report prepared for inclusion in the district gazetteer volume — J. C. Daniel, M. A. Reza Khan, P. B. Shekar — Funded by Govt.

of Tamil Nadu.

Harike Lake, Punjab, as a waterfowl habitat — 1978

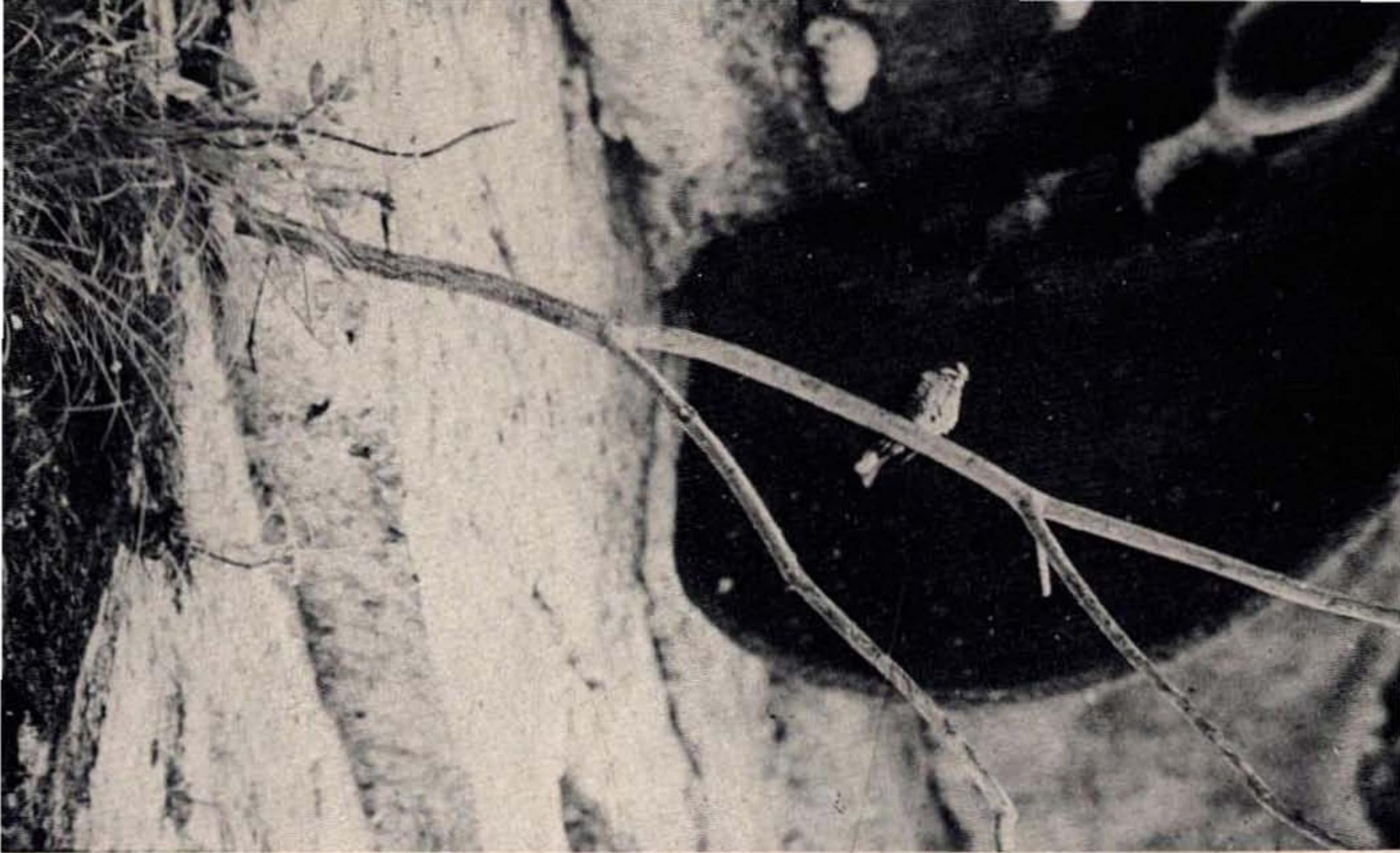
The Harike Lake, a man made impoundment was investigated as to its potential as a wildlife refuge. The area was recommended as a wildlife refuge. It was also suggested that efforts be made to study the cycle of the changes that happen in a man made lake when given protection as refuge — J. C. Daniel, Shahid Ali — Funded by the World Wildlife Fund and the Punjab Government.

Bastar Wild Buffalo Survey — 1978, 1979

Follow up survey of the Wild Buffalo in peninsular India, which was undertaken by the Society in 1965. The re-surveys established the fact that the Buffalo habitat has further deteriorated making the species more endangered and requiring urgent attention for its conservation — H. K. Divekar, R. B. Grubh, P. B. Shekar — Funded by Salim Ali Conservation Fund.

Blacknecked Crane Survey — 1983

The alarming reports on the breeding status of the species prompted a re-survey of the breeding habitat of the species in Ladakh. The report stressed the need for conservation of the habitat and complete protection from utilisation for purposes other than as a breeding habitat of the Crane — Adm. Awati, S.A. Hussain, Prakash Gole — Funded by Salim Ali Conservation Fund and World Wildlife Fund India.



*Above. A Himalayan Honey Guide sitting guard over its honey combs in Bhutan. Below.
The Blacknecked Crane incubating in the marshes of Ladakh*
Photos: S. A. Hussain





*Above. A Narcondam Hornbill male feeding his family. Below. Andaman Teal. Both are
Photo: Pat Louis*



Photo: S. A. Hussain

Narcondam Hornbill

Under the overall supervision of Mr Humayun Abdulali from Bombay, the status of the Narcondam Hornbill on Narcondam Island was studied for about a month. The fin-

dings indicate that the 200 odd birds that live on the Island maintain a fragile ecological balance likely to be upset by human interference — S. A. Hussain.

The University Department — 1957

In 1957 the University of Bombay recognised the Society as approved research institution authorised to admit students for research programmes in field ornithology, leading to the Master of Science degree of the University. Dr. Salim Ali was recognised as the Research Guide. Subsequently the recognition was extended to research for the Ph.D. degree of the University and recognition was extended to cover field research in mammals and reptiles as well. The Bombay University and the Society thus pioneered the study of vertebrate ecology in India. Presently the Society has four research guides, Dr Salim Ali and Mr. J. C. Daniel recognised to guide students for the M.Sc. and Ph. D. programmes, and Dr. Robert Grubh and Dr. V. S. Vijayan as research guides for the M.Sc. programmes. The following students have received post-graduate degrees through the Society.

MASTER OF SCIENCE

Some Indian Weaver Birds. 1964. V. C. Ambedkar.

Ornithophily - a preliminary study. 1965. P. Kannan.

The ecology of hole nesting birds.

1974. K.N.P. Panickar.

Ecology of the Bonnet Macaque (*Macaca radiata*) with special reference to feeding habits. 1976. George P. Kuruvilla.

Ecology of the Fivestriped Palm Squirrel *Funambulus pennanti* Wroughton with special emphasis on population and activity cycle. 1977. R.K. Chandrahas.

DOCTOR OF PHILOSOPHY (Ph. D.)

Studies on the Baya Weavers. 1966. D.N. Mathew.

The ecology and behaviour of vultures in the Gir Forest. 1974. R. B. Grubh.

Ecological isolation of Bulbuls (Family Pycnonotidae) with special reference to *Pycnonotus cafer cafer* and *P. luteolus luteolus* at Pt Calimere, Tamil Nadu. 1975. V. S. Vijayan.

Synecological studies on specialised nectar feeding birds and bird flowers in the Nilgiris. 1979. Priya Davidar.

Ecology and behaviour of the Black-and-Orange Flycatcher *Muscicapa nigrorufa* (Jerdon). 1978. Md Reza Khan.

Nature Education Scheme

Another activity in which the Society has been engaged since 1948 with the financial support of the Government of Bombay (now, of Maharashtra), is a scheme for Nature Study education in schools by means of talks, films, and other visual aids in the classroom, by guided lectures and tours in the Natural History Section of the Prince of Wales Museum, the Zoo and the Aquarium, and also by nature rambles in the beautiful countryside surrounding the City. It is an activity that has proved its usefulness in arousing interest in school children as well as their teachers. With the better financial assistance we hopefully anticipate, and the facilities that will be available in our new field centre, we plan to develop and expand this activity to cover other parts of the State as well. It is realized that the lack of interest shown by our young people in nature is largely due to want of encouragement from their parents at home and from their

teachers in school, a disability we aim to remove for future generations. In connection with the Nature Education Scheme the Society has published simply written, attractively illustrated, and well-printed booklets on Birds, Mammals, and Plants in English, Hindi, Marathi, and Gujarati. Although priced at only a few Paise per copy, the response from Education Departments, school libraries, teachers, parents, and the general public alike has been disappointing.

The turnover has been too slow and tardy for us to afford the considerable expansion in the series that was contemplated. The sales of the Hindi editions have, paradoxically enough, been the most disappointing of all. And this despite the fact that our late Prime Minister Pandit Jawaharlal Nehru himself had by personal letters drawn the attention of the Chief Ministers of the Hindi-speaking States to the excellence and availability of the booklets.

The *Journal*, 1886

The *Journal* of the Society, the first number of which was published in January 1886, has reached its eightieth volume. These volumes represent the Society's contribution to the advance of our knowledge of the zoology and botany of the Indian subcontinent and the countries which adjoin it. They incorporate a

substantial share of the scientific achievements in these fields in India during the past 100 years.

For a natural history publication conducted by a private society purely out of revenues derived from its membership subscriptions, with practically no financial aid from Government or extraneous sources,

NATURE EDUCATION SCHEME



Above. High School students with Nature Education organiser in the field at Borivli National Park. Below. Students getting acquainted with harmless snakes — a John's Sand Boa



NATURE EDUCATION SCHEME



Children participating in a wildlife painting competition



Question and answer. The Nature Education organiser and children in the Natural History Section of the Museum

is indeed a praiseworthy achievement. Add to this the general lack of interest in natural history in India that had to be contended with for keeping up the Society's membership strength; also the fact that contributions for publication were gratis and voluntary and therefore not always to be depended on—and the achievement becomes doubly creditable.

Apart from the results of scientific researches, the Society's *Journal* is unique in that it contains an immense amount of data contributed by field naturalists. As such, it has become an invaluable auxiliary to biological research in this country. The contribution made to scientific progress in India by field naturalists is due in no small measure to the help they received from the Society and the ready acceptance which their notes and observations received in its *Journal*. With the trend of modern biology from the museum to the field, from the study of the dead to the living creature in its environment, the services rendered by field naturalists to science must receive that fuller recognition which they have so well merited.

The contributions to the *Journal* at first consisted largely of sporting and popular articles written mostly by members of the Society who were generally observant sportsmen and field naturalists — 'amateurs' it is true, but in the best sense of the term. The scope of these contributions has steadily expanded, and serious scientific papers by

acknowledged experts have now become a regular feature of its pages.

The membership of the Society does not consist of scientific men alone, nor does it consist of sportsmen pure and simple, nor altogether of persons who look upon natural history merely as an amusing pastime. It is a conglomerate of all these types. And this is not all, for while readers of the *Journal* include some who are interested in large game animals, the interest of others centres chiefly on plants or snakes or butterflies or birds or in conservation. Every branch of the study of animals or plant life, moreover, has its devotees among them. Some are interested in problems of evolution or systematics and taxonomy, others in field study and ecology, others in morphology and laboratory experiments, others in economic and applied biology or some other line of study, and yet others in shooting, fishing or nature photography. The effort to cater for all these polyglot tastes makes the task of editing the *Journal* one of absorbing interest, but by no means easy.

A passage from the Introduction to the very first issue of the *Journal* (Vol. 1, No. 1, January 1886) seems worth quoting, since what was true then is perhaps even truer today: 'In accordance with the character which this Society has assumed from the beginning, the aim of its journal will be, as far as possible, to interest all students of nature, ever remembering that there are many naturalists,

in the highest sense of the term, who have not such a technical knowledge of any particular branch of science as to be able to enter with interest into questions of nomenclature and the discrimination of closely allied species...'

The *Journal* has been the outlet for the remarkably talented membership of the Society. Their versatility is reflected in the articles that have been published, whether of purely natural history interest or the highly technical articles on species and groups. The majority of the seminal papers on the taxonomy, ecology and conservation of the major vertebrate groups and in some of the insect groups have appeared in the *Journal*. To give some

examples, revision of Lycaenids by Keith Cantlie, Caddisflies, by Mosley; on fishes, by Hora, Silas, Menon, etc.; on reptiles, by Wall, Smith; on birds, by Salim Ali, Ripley, Stuart Baker, Hugh Whistler, H. Abdulali; mammals, by Pocock, Schaller, Gee, Groves, etc.

Equally outstanding have been the serial articles which have appeared in the *Journal*. Written usually for the layman by acknowledged experts in the field, they have formed the basis for many of the Society's popular books. The *Journal* continues to be *the* required reading on the natural history of the Oriental Region.

Hornbill

One of the ideas that the Executive Committee of the Society had considered for several years was the publication of a popular, illustrated, magazine for lay members who find the *Journal* too technical. In 1976 with the assistance from the Salim Ali Conservation Fund, the Society launched its popular

quarterly, *Hornbill*. Its reception has been enthusiastic. *Hornbill* not only presents natural history and conservation in easily readable language to its members but also serves as a newsletter and as an inducement to friends of members to join the Society.

Field Work Funds

Financial support to undertake field projects has been one of the main handicaps for field work in India, particularly for students interested in undertaking short-term field projects.

Four major field work funds have now been started from donations.

Salim Ali-Loke Wan Tho Ornithological Research Fund, founded in 1965 with a capital of Rs. 10,000/- with the object of promoting scientific ornithology and bird preservation in India. Monetary assistance from the Fund is given to biologists, whether

graduates or not, preferably between the ages of 20 and 30 years, and preferably resident within the Indian subregion by way of small grants, either a lump ad hoc sum or tenable over a specified period. Research Fellowships are also granted for more serious studies extending over a long period. Added to from time to time the corpus of the Fund now stands at Rs. 3,21,136.52.

Charles McCann Vertebrate Zoology Fund for Field Work, started as the Vertebrate Zoology Field Work Fund by Humayun Abdulali in 1969 with a corpus of Rs 10,000/- for assisting naturalists, amateurs or professionals, for field studies including collection trips preferably of vertebrates. The fund was re-christened in 1972. Currently its corpus stands at Rs. 41,506.34.

Pirojsha Godrej Foundation Field Work Fund was formed in 1975 with a corpus of Rs. 10,000/-, and subsequent donations have swelled it to Rs. 40,000/- as of to-

day. Small grants are made from the Fund for short-duration ecological studies of the environment.

Salim Ali Nature Conservation Fund is the result of a munificent grant from Dr Salim Ali in 1976 from the moneys received by him from the Getty Prize. The Corpus of the Fund now stands at Rs. 6,18,124.80 and its objective is to promote Nature Conservation in the Indian subcontinent, including the preservation and management of all forms of wildlife together with the natural habitats. The Fund assists financially schemes for conservation already in operation, institutes and finances new schemes by engaging researchers to carry out specific projects bearing on conservation problems, and for educating public in the value and need for nature conservation through publication of literature, films and other mass communication media — in fact any means whatever that are likely to promote conservation directly or indirectly.

Roll of Honour

The choice of names for the Roll of Honour is entirely the editors' and does not necessarily reflect the views of the Executive Committee of the Society. The listing is alphabetical.

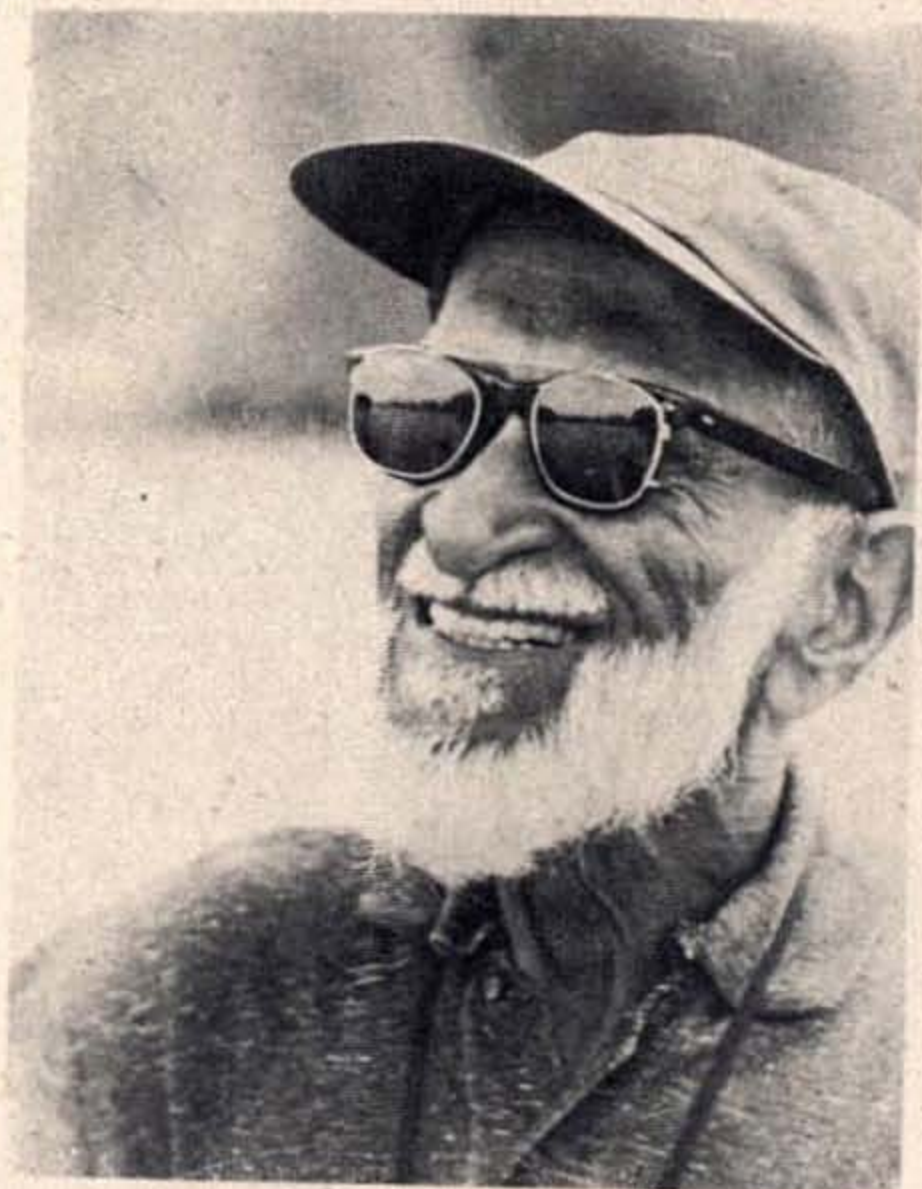
HUMAYUN ABDULALI, Honorary Secretary of the Society from 1950 to 1962. He was the executive officer of the Society during the



crucial period in the existence of the

Society, when Phipsons closed down operations in Bombay. The negotiations with the Government of Maharashtra for financial assistance to house and maintain the collections and administrative offices of the Society, and negotiations with the Government of India and the Prince of Wales Museum for building a permanent house were successfully completed during his tenure.

SALIM ALI has been the mainstay of the Society since Independence and his name has become synonymous with that of the Society. His has been the principal thrust for the several new directions in which the Society has expanded, namely nature education, bird migration studies, the university department, and the major projects currently in operation. The Society is the heir to his library and film collections and the substantial financial contribu-



tions he has made from time to time have permitted the Society to constitute the Salim Ali Nature Conservation Fund and the Salim Ali-Loke Wan Tho Ornithological Research Fund, and assisted in other fields of activities.

E. C. STUART BAKER joined the Society in 1888 and his first bird paper 'On the genus *Chloropsis*' appeared in Vol. 6 of the *Journal* in 1891 followed by many other contributions from time to time. But it will be for his beautifully illustrated popular serials on ducks and other sporting birds that Baker will be best remembered. These articles



helped to boost the Society and popularize the *Journal* among sportsmen and naturalists throughout the country and beyond more than anything else. 'The value of Mr Baker's papers in popularizing the *Journal*' his obituarist pertinently remarks' must never be forgotten. 'They were later publish-

ed in book form, and the success of the first volume on INDIAN DUCKS AND THEIR ALLIES emboldened the Society to launch out cautiously on its natural history book publication ventures which have proved so profitable in the long run.

N. A. BAPTISTA who worked as a museum assistant at the Society was one of the outstanding collectors of the Mammal Survey. He worked in Sikkim in 1915, then moved eastwards to the Bhutan Duars and onto Kalimpong in 1916. From the eastern Himalayas, Baptista was sent to Baluchistan where he worked till 1918, and moved to Persia where he collected till the end of 1919. In 1920 Baptista was sent to Nepal



where he collected up to 1923. His collections from Nepal formed perhaps the most remarkable contribution to Indian Mammalogy made by the entire Mammal Survey.

H. K. DIVEKAR presently the Honorary Treasurer of the Society,

joined the Society in 1974. By profession an engineer, Divekar has used his acute business acumen to propagate knowledge of reptiles among the people through educational exhibitions and has in the process brought substantial monetary benefit to the Society.

F. H. EVANS came out to India in 1886 and with a partner founded (in c. 1892) the prosperous department store of Evans, Fraser & Co. in Bombay, himself retiring from active business to England in 1908. His active interest in the Society seems to have begun some years later; he was elected a Vice Patron in 1928 in recognition of the very generous financial assistance and support which he gave to the Society. His several substantial contributions were chiefly utilised for the exhibition galleries of the Natural History Section (Prince of Wales Museum), then under construction. And harking back to his fishing days in India, when he had difficulty in getting his catches identified, he maintained at his own expense for over a period of ten years the services of a modeller for the preparation of a series of casts of local marine and freshwater fishes for the Fish Gallery. The beautiful models of local fishes in wax and *papier mache* now on exhibition in the P. W. Museum are the outcome of his altruistic benefactions since he himself was unlikely ever to see them. Mr Evans also presented to the budding Museum the series of beautiful and expensive enlarged models illustrating insects in relation to

disease. The Society's *Journal* profited by his magnanimous offer to meet the cost of many of the coloured and black-and-white plates for the serial on 'Wild Animals of the Indian Empire' and the illustrations for Mr Mosely's lengthy serial on Caddis Flies. In addition, he gifted to the Society's Library a collection of rare and valuable old books on Bombay and Western India and a complete set of the 7 elephant folio volumes of the priceless Gould's BIRDS OF ASIA, and a copy of A CENTURY OF BIRDS OF THE HIMALAYAN MOUNTAINS by the same author.

ZAFAR FUTEHALLY, Honorary Secretary of the Society from 1963 to 1974, was responsible for the lifting of the Society from a rut of routine activities to a progressive outlook which contributed to the rapid growth of the scientific and other activities of the Society.

E. P. GEE was a valued friend of the Society. He became a member in 1931 and took the closest interest in



its activities and helped in whatever way he could to further its interest. He left to the Society all his books, films, photographs and papers on wildlife.

R. E. HAWKINS joined the Executive Committee in 1939 and has been the guiding hand for the Society's publication programme. Hawkins retired as General Manager of the Oxford University Press. He is



presently the General Editor of the Society's *ENCYCLOPEDIA OF INDIAN NATURAL HISTORY*.

N. B. KINNEAR came out to India in 1907 as the Society's first stipendary Curator to organize and look after the considerable zoological collections, particularly of vertebrates, that had been amassed by its enthusiastic amateur members from all over the erstwhile 'Indian Empire' during the first quarter century or so of the Society's progress and development. Kinneare gave invaluable service to the Society by placing the whole of its museum on a sound scientific basis through the rearrangement, labelling and cataloguing of the collections. He threw himself whole-heartedly into

the direction and control of the systematic survey of the Mammals of India, Burma and Ceylon which the Society had started with the preliminary spadework of Millard. He identified the geographical areas that needed to be worked by the collectors with special coverage of



those where earlier mammalogists had obtained Types but which were missing, with a view to replacing them by Topotypes.

LOK WAN THO. Loke's connection with the Society dates from 1942, not long after he landed at Bombay as an evacuee from Singapore in the wake of the Japanese occupation. Loke's active participation in the field programmes and numerous benefactions to the Society after his return to Singapore helped the Society both financially and in equipment. On his tragic death in an air crash, the superb collection of negatives of his wildlife photographs and valuable equip-



ment were received by the Society and remain as a memorial to his association with the Society.

CHARLES McCANN was an outstanding naturalist equally versatile in botany, mammals, reptiles and any other group that interested him. He was equally adept in the preparation



of museum exhibits. The Society benefited exceedingly by his services.

W. S. MILLARD. The starting and success of the Mammal Survey was entirely due to Millard, and only those who were in close association with him at the time had any idea of the the amount of time and work he spent in the raising of the money and the organizing of the survey. All this was done in addition to attending to the Society's other business and editing the *Journal*, to say nothing of looking after his own business of Messrs Phipson and Co. and the many other honorary social and charitable activities in which he was involved.

SHIRIN (SILOO) MODY joined the Society in 1975 and is one of the most effective fund raisers that the Society has ever had. The Society is indebted to her for substantial funds for its activities.

H. M. PHIPSON. From March 1886, when he took over the office of Honorary Secretary to April 1906 when he left India, Phipson was the heart and soul of the Society. Initiating and directing its early activities he brought it to vigorous maturity. Through these twenty years he edited the Society's *Journal*. Few men have striven more earnestly and more continuously to advance such a purely unselfish cause, and few have laboured for the advancement of science and for the general good in a more self-effacing and unobtrusive spirit.

S. H. PRATER. For nearly a quarter of a century prior to his retirement in 1948 Prater's name was almost synonymous with the Bombay Natural History Society. The



Natural History Section of the P.W. Museum is a standing monument to his genius. For the last 27 years of his service he was the executive editor of the *Journal* and was largely responsible for the high standard and international recognition it earned as the foremost natural history periodical in Asia. Prater was in truth a remarkable man — capable, versatile, sociable, ambitious, and a striver after perfection as many of his handiworks clearly show. He deservedly enjoys an honoured place in the annals of the Society as one of its most stalwart and capable builders.

S. DILLON RIPLEY. Ripley's association with the Society is directly related to his interest in the avifauna of the Indian region and his friendship with Salim Ali. In addition to numerous benefactions, the two editions of his SYNOPSIS which the Society published were donated by him to the Society.



SIR REGINALD SPENCE. Came out to Bombay in 1901 as assistant in the firm of Phipson & Co. On Millard's retirement from India in 1920 Spence took over as Honorary Secretary, continuing to serve in this capacity until he left India in 1934. During this period the Society expanded its activities in several fields including the establishment of the Natural History Section in the Prince of Wales Museum. This was achieved predominantly through the untiring efforts of Sir Reginald Spence who was also Chairman of the Board of Trustees of the Museum. The outstanding progress made by the Society between the years 1923 and 1937 was due entirely to the dynamic combination of two dedicated personalities, namely Sir Reginald Spence and S. H. Prater, the former as Honorary Secretary of

the Society and Chairman of the Board of Trustees of the Prince of Wales Museum, and the latter as the versatile Curator.



P. B. SHEKAR. Technical Assistant at the Society, his energy, drive and organizing ability are the main force behind the Society's reptile exhibitions where his collaboration with



H. K. Divekar has contributed amply to the funds of the Society.

D. S. VARIAVA. Joined the executive committee of the Society in

1978 and has since then worked untiringly in raising of funds for the publication and other activities of the Society.

The institutions and governments listed below in the roll of honour have made major contributions, financial and otherwise, to the Society's welfare and continued existence.

Cheng Kim Loke Foundation, Singapore

Dorabji Tata Trust, Bombay

Government of India

Government of Maharashtra

Phipson & Co., Bombay

**Prince of Wales Museum of Western India,
Bombay**

Smithsonian Institution, Washington D.C.

Fish & Wildlife Service, Washington D.C.

The Society's Crest or Logo

In the first fifty years of its existence, the Society apparently did not have a distinct logo of its own, though the mounted antlers of a barasingha do appear on the cover of the Golden Jubilee Commemorative volume.



In 1938, however, the then Honorary Secretary advised as the minutes of the meeting of March that year indicate "that the *Journal* would attract more attention on the tables of Libraries and Clubs if there was a coloured illustration on the cover. He had obtained a suitable design for a crest which featured the Great Indian Hornbill which had been always associated with the Society and recommended that this crest be printed in colour on the Society's *Journal* and on the prospectus of the Society. He also proposed that a replica of this crest be used for the Society's stationary."

The Society's association with the hornbill dates back to 'William', the Great Indian Hornbill which arrived at the Society as a nestling in 1894, and lived in the Society's rooms till 1920. William was quite a character

and was so intimately associated in the minds of the many who knew him with the Society and its museum that he is fittingly honoured in a case in the Bird gallery in the Prince of Wales Museum which shows the curious nesting habits of the Great Indian Hornbill. William is here given the role of pater-familias — a privilege he did not in life enjoy, and is seen feeding his imprisoned spouse through the narrow slit in the wall which the birds build to close the entrance to the nest hole.

William apparently was very happy during the years he lived. He made a great fuss of his personal appearance, and painted his great casque and beak with bright yellow from his 'Vanity-box' (the oil gland at the root of the tail) and he finished this daily ritual off with a dash of colour carefully placed on each wing. He was then ready to play a game with you. He would catch easily a tennis ball thrown from a distance of 7 or 8 yards. The long curved beak prevented him from ever drinking anything, but he got all he wanted from the juice of ripe berries and fruit, and this in no way affected his cheery disposition. Cockroaches were to his liking, and a mouse, a snake or even a large rat he dearly loved, but it was not easy for him to get these as he was hardly ever on the ground. One rat he held in his pickaxe beak for more than an hour before finally crunching it up.

William, affectionately known as the office canary, lived in a cage



William in the role of pater-familias

behind the Honorary Secretary's chair during the 26 years he lived at the Society. Hornbill House is his permanent monument.

Publications

It was Millard the third Honorary Secretary who set the Society on its publication activities. It was under his careful supervision of details when on leave in England, that Stuart Baker's serial on 'Indian Ducks and their Allies', which had started in the *Journal* as long ago as 1897 was published by the Society in book form. It proved an immediate success, and ran out of print faster than anticipated. He followed up the success of this first major venture of the Society by the publication of the two other volumes on Game Birds by Stuart Baker, THE PALMS OF INDIA by Fr. E. Blatter and SOME BEAUTIFUL INDIAN TREES by himself and Fr. Blatter. The title of the last is slightly misleading since it included a number of trees that are not Indian.

The programme then started has enabled the Society to make outstanding contributions to the study of natural history in India. The publications have also enabled the Society to survive as some of its popular publications have had substantial sales over the years. A list of some of the publications is given below; those presently out of print are indicated by placing an asterisk against the title.

*A CATALOGUE OF THE FLORA OF MATHERAN AND MAHABLESHWAR. By H. M. Birdwood (Reprinted with additions and corrections from vol. 10 of the Society's *Journal*, 1897). The Times of India

*INDIAN PIGEONS AND DOVES. By E. C. Stuart Baker. Witherby & Co. London. 1913

*THE GAME BIRDS OF INDIA, BURMA AND CEYLON. By E. C. Stuart Baker. Vol. 1. Ducks and their allies (1921); Vol. 2. Snipe, Bustards and Sandgrouse (1921); Vol. 3. Pheasants and Bustard-Quail (1930). John Bale, Sons & Danielson Ltd. London

*THE FLORA OF THE INDIAN DESERT (Jodhpur & Jaisalmer). By E. Blatter & Prof. F. Hallberg (Reprints of papers appearing in the Society's *Journal* between 1918 and 1921) with 'The physiological anatomy of the plants of the Indian desert', by T. A. Sabnis.

*Five Wall Charts illustrating in colour over 200 species of commoner birds of the Indian plains

*Wall Chart to distinguish a Wild Dog from a Domestic Dog or Jackal, etc.

IDENTIFICATION OF POISONOUS SNAKES. Wall Chart in English, Gujarati and Marathi. (Reprinted in 1958)

*THE PALMS OF BRITISH INDIA AND CEYLON. By Ethelbert Blatter, S. J. Oxford University Press. 1926

*A SHIKARIS POCKET-BOOK, WITH HINTS ON PRESERVING AND SKINNING TROPHIES IN THE FIELD. By Charles McCann and Lt Col. C. H. Stockley. Oxford University Press. 1926

*AN AID TO THE IDENTIFICATION OF BUTTERFLIES OF THE INDIAN REGION. By Brig. W. H. Evans. Bombay Natural History Society. (1st ed. 1927; 2nd ed. 1931)

*BIRD LIFE IN INDIA. By Capt. R.S.P. Bates. Bombay Natural History Society. 1931

*CIRCUMVENTING THE MAHSEER AND OTHER SPORTING FISH IN INDIA AND BURMA. By A. St. J. Macdonald. Bombay Natural History Society. 1948

THE BOOK OF INDIAN BIRDS. By Salim Ali. Bombay Natural History Society. (1st published 1941, now in 11th edition)

A SYNOPSIS OF THE BIRDS OF INDIA AND PAKISTAN. By S. D. Ripley. Bombay Natural History Society (1st published 1960, now in 2nd ed.)

CHECKLIST OF THE BIRDS OF MAHARASHTRA. By H. Abdulali. (2nd ed.)

CHECKLIST OF THE BIRDS OF DELHI, AGRA AND BHARATPUR. By Humayun Abdulali and J. D. Panday

THE BOOK OF INDIAN ANIMALS. By S. H. Prater. Bombay Natural

History Society. (1st published 1948, now in 4th edition)

*BUTTERFLIES OF THE INDIAN REGION. By M. A. Wynter-Blyth. Bombay Natural History Society. 1957

GLIMPSES OF NATURE IN INDIA (in English), and booklets in this series on: **Our Birds** (in Kannada), **Our Monsoon Plants** (in Hindi and Marathi), **Our Animals** (in English, Gujarati and Hindi)

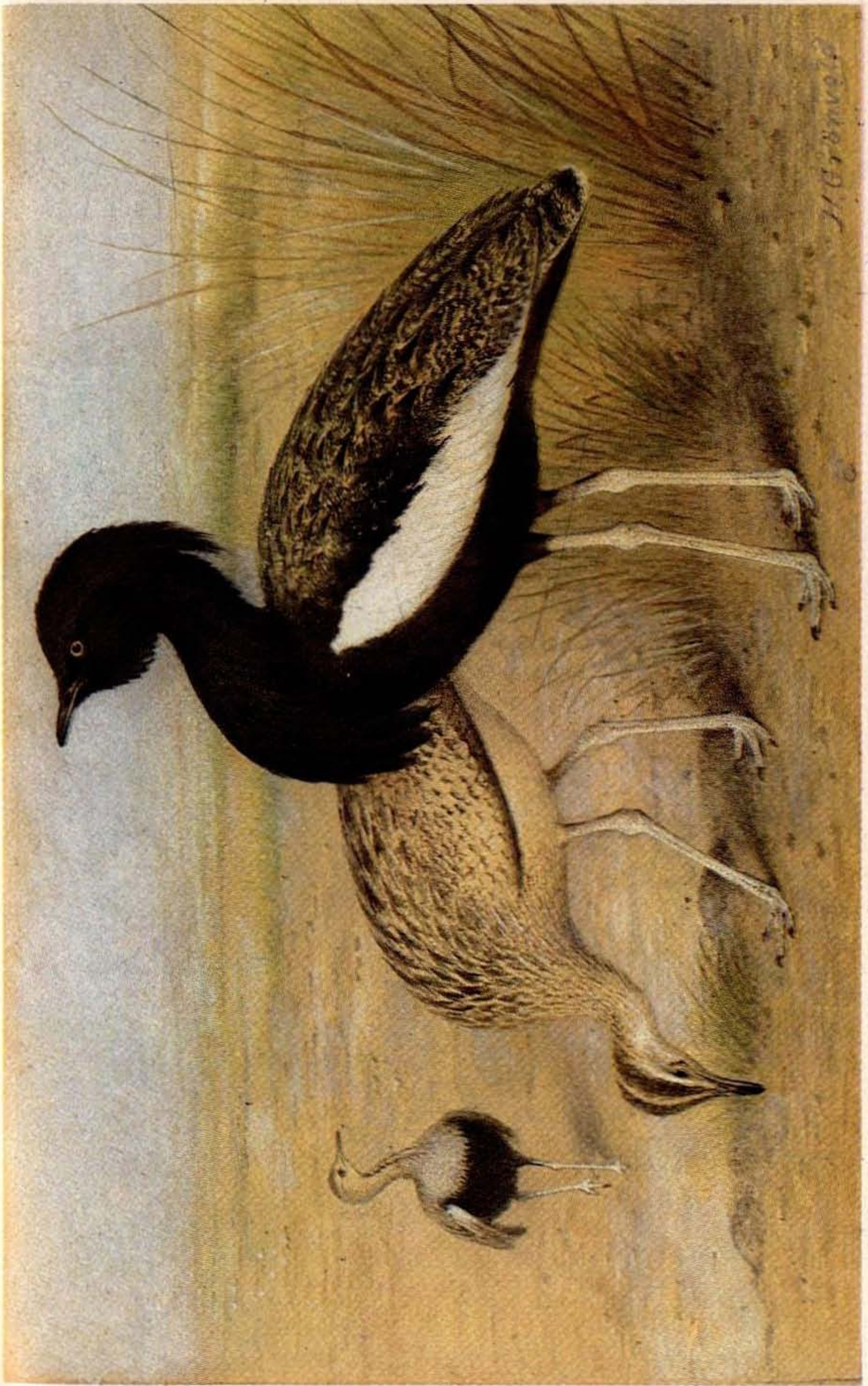
SOME BEAUTIFUL INDIAN TREES. By E. Blatter & W. S. Millard. Bombay Natural History Society. (1st published 1937, now in 2nd reprinted edition)

SOME BEAUTIFUL INDIAN CLIMBERS AND SHRUBS. By N. L. Bor and M. B. Raizada. Bombay Natural History Society. (1st published 1954, now in 2nd revised edition)

GRASSES OF WESTERN INDIA. By Toby & Patricia Hodd. Bombay Natural History Society. 1982

A CENTURY OF NATURAL HISTORY. Edited by J. C. Daniel, Bombay Natural History Society. 1983

THE BOOK OF INDIAN REPTILES. By J. C. Daniel, Bombay Natural History Society. 1983.



The Bengal Florican (*Eupodotis bengalensis*)

MEMBERS' ACTIVITIES

In the early seventies the Society commenced week end field programmes for its members in Bombay and nature camps at sanctuaries for its members throughout the country.

The week end field programmes consist of nature walks in suitable localities, usually the Borivli National Park on the outskirts of Bombay. The nature walks introduced members to birds, butterflies, vegetation and other aspects of natural history interest. Another local field activity which has been continued on a long-term basis is the Bird Count at Borivli National Park (Sanjay Gandhi National Park). This monthly roadside count of birds over fixed stations of 1.5 km each in the Park is normally conducted on the third Sunday of each month and helps to train members in birdwatching and the collection of data on population fluctuations over a period of time.

Other field projects have been associated with specific problems, such as the Leopard Study Group which investigated the food of leopards in the Borivli National Park through fecal analysis. This study was prompted by the decision of the Park authorities to eliminate

through trapping the leopards in the Park to protect the introduced herbivores. The study showed that the leopards preyed on stray dogs which, in fact, killed the introduced deer!

Another project aimed at teaching vegetation survey and phenology and natural cycle of life in a small area was the Pongam valley project at the Borivli National Park which was active in 1974-75.

Nature Camps

Nature Camps are organised for members in sanctuaries and national parks to give them first hand knowledge of the problems and needs of wildlife conservation. This is a continuing programme and camps have so far been held at

- (1) Gir National Park (1974)
- (2) Keoladeo National Park (1976)
- (3) Bandipur/Mudumalai/Nilgiris (1977)
- (4) Valley of Flowers National Park (1978)
- (5) Point Calimere Sanctuary (1979)
- (6) Manali, W. Himalayas (1980)
- (7) Pachmarhi (Satpura National Park) (1981)
- (8) Bandhavgarh National Park (1982)

MEMBERS' ACTIVITIES



Photo: Devendra Patel

Above. A battery of photographers at Bandhavgarh Sanctuary. Below. The object of their attention

Photo: N. Chaturvedi



MEMBERS' ACTIVITIES



In the Valley of Flowers, Garhwal Himalayas



At Point Calimere, Tamil Nadu
Photos: G. C. Patel

MEMBERS' ACTIVITIES



Photo: G. C. Patel

A view of the pavilion and an exhibit at the Snake Exhibition organised by H. K. Divekar and P. B. Shekar in 1980. Over 230,000 individuals visited this educational exhibition.



Photo: R. Whitaker

Long term ongoing projects

An ecological study of Bird Hazards at Indian Aerodromes

Birds have become a hazard to air travel. A bird could hear and see propeller driven planes and accidents were uncommon but when jets introduced subsonic and supersonic flight, the chances of collision were heightened.

To commercial jets birds are a hazard when they land and take off and come within the normal flying heights of birds up to 3000 ft. To airforce planes which fly low and fast, birds are a critical hazard at all times.

The specific aims of the project are:

1. To identify all bird species that are potentially hazardous to aircraft in and around an aerodrome.
2. To study the habits and basic ecological requirements of these bird species and find out the reasons for their occurrence in and around the aerodrome.
3. To evolve ways to discourage the 'problem birds' from frequenting the airfield and the entire air space used by aircraft in and around aerodromes, on a long-term basis.

The project which is funded by the Aeronautics Research and Development Board of the Ministry of Defence has Dr Salim Ali as Principal Investigator and Dr Robert Grubb as Executive Investigator.

The project has identified the birds which are hazards; vultures,

kites and other birds which soar; parakeets and mynas which fly to roost in flocks; egrets and lapwings and grass dwelling birds which frequent the grass verges. Among suggested remedies are slaughtering and processing animal carcasses in abattoirs thus denying food to the vultures, discouraging tree groves near airports which attract roosting flocks, changing the grass cover to kinds which do not attract insects and insect eating birds.

Hydrobiological (Ecological) Research Station, Keoladeo Ghana Sanctuary, Bharatpur, Rajasthan

Keoladeo Ghana National Park at Bharatpur is a partially man made unique wildfowl habitat. Through summer and winter it supports an enormous concentration of birds, and holds as well mammals and reptiles. The project studies the components which make up this system function as a cohesive unit, such as the quality of the water and the chain of life that exists in it from the microscopic plants and animals to the fish which provides the major food of the birds, their season of abundance, the vegetation that provides cover, food and nesting facilities, the insects that provide the food for a variety of land birds, and the smaller animals, frogs, etc. The predators which keep the population in check. The interaction of animals and how the system operates from year to year is under investigation.

BIRD HAZARDS PROJECT



Causes for birds becoming hazards: Municipal dumps (above); flensing carcasses in the open (below)

Photo: R. B. Grubh





Photo: G. C. Patel

Aircraft and possible bird hazards (above). Flensing and processing indoors, one of the remedies (below)



Photo: R. B. Grubh

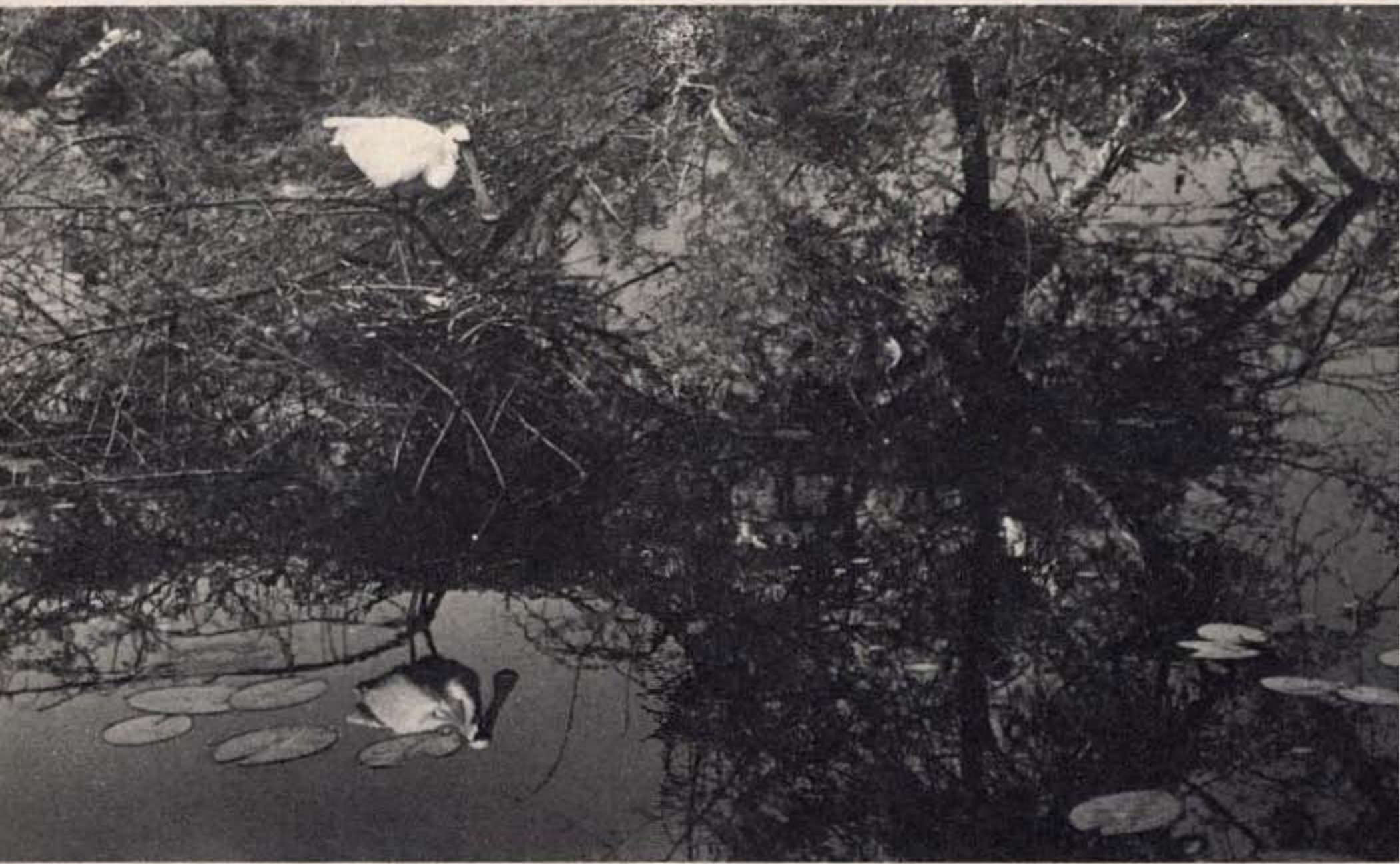


'N' block with *Typha* and *Nymphoides* — in flower



Nymphoides in flower

Photos: V. S. Vijayan



Partial view of a Heronry Siberian Cranes

Photos: V. S. Vijayan





Mat-like formation of *ipomoea* — L Block



Egret flocks in April *Scirpus* patch to the right of the pole

Photos: V. S. Vijayan

The programme is originally for a five year term, but we hope that the research station we have established can be maintained on a long-term basis.

Ecology of Endangered Species and their habitat

The losers to human development are the birds and mammals which live in habitats which provide man's major support systems: Grass and marshland dwelling animals, such as the lion, the swamp deer, wild buffalo, rhinoceros, the bustard. A part of India's national heritage, their protection is an obligation we owe to future Indians.

Two endangered animals are under study: the Great Indian Bustard and the Elephant.

The *Great Indian Bustard* lives in the semi-arid region of Rajasthan, Gujarat, Madhya Pradesh, Maharashtra and Karnataka. It has adapted itself to living with the Indian farmer, using both the fallow land surrounding his cultivation and his cultivated fields.

A large, heavy, ground dwelling bird, the Great Indian Bustard is exclusive to the Indian subcontinent. It feeds largely on grasshoppers, small lizards and fruit, and is generally a friend of the farmer.

Though it was in tune with its neighbour, the farmer, our studies show that this is no longer true. Increasing human need is taking over scrub forest and grassland adjoining cultivation, used by the bustard for

breeding. the bustard lays and broods its single egg in such open country, that disturbance by cattle herds, dung collectors, and fuel gatherers denies the tranquility required by a brooding bustard. Our researches show that during the breeding season cattle and man should be kept away from the breeding grounds, but these can be freely used during the non-breeding season for grazing by the village cattle. In fact the land requires to be judiciously grazed as land overgrown with tall grass is unsuitable for the bustard. As our studies progress it is evident that the bustard, the friend of the farmer, can be saved if we can keep at least some of the wilderness around our villages. How much land and in which areas is the object of our continuing study.

The Asian Elephant. Through the centuries the elephant in India has been the keeper of the forest, the major controller of forest growth as it moved from forest to forest in its quest for food. From the Himalayas to the Cape wherever forests occurred elephants also existed. But recorded history shows that the elephant has been fighting a losing battle for its survival in spite of being useful to man.

Presently human needs are making inroads into its habitat and forestry practices of mono-cultures of teak and eucalyptus, the construction of dams and drowning of elephant habitats, the blocking of its traditional migratory paths have left the elephant with little chance of

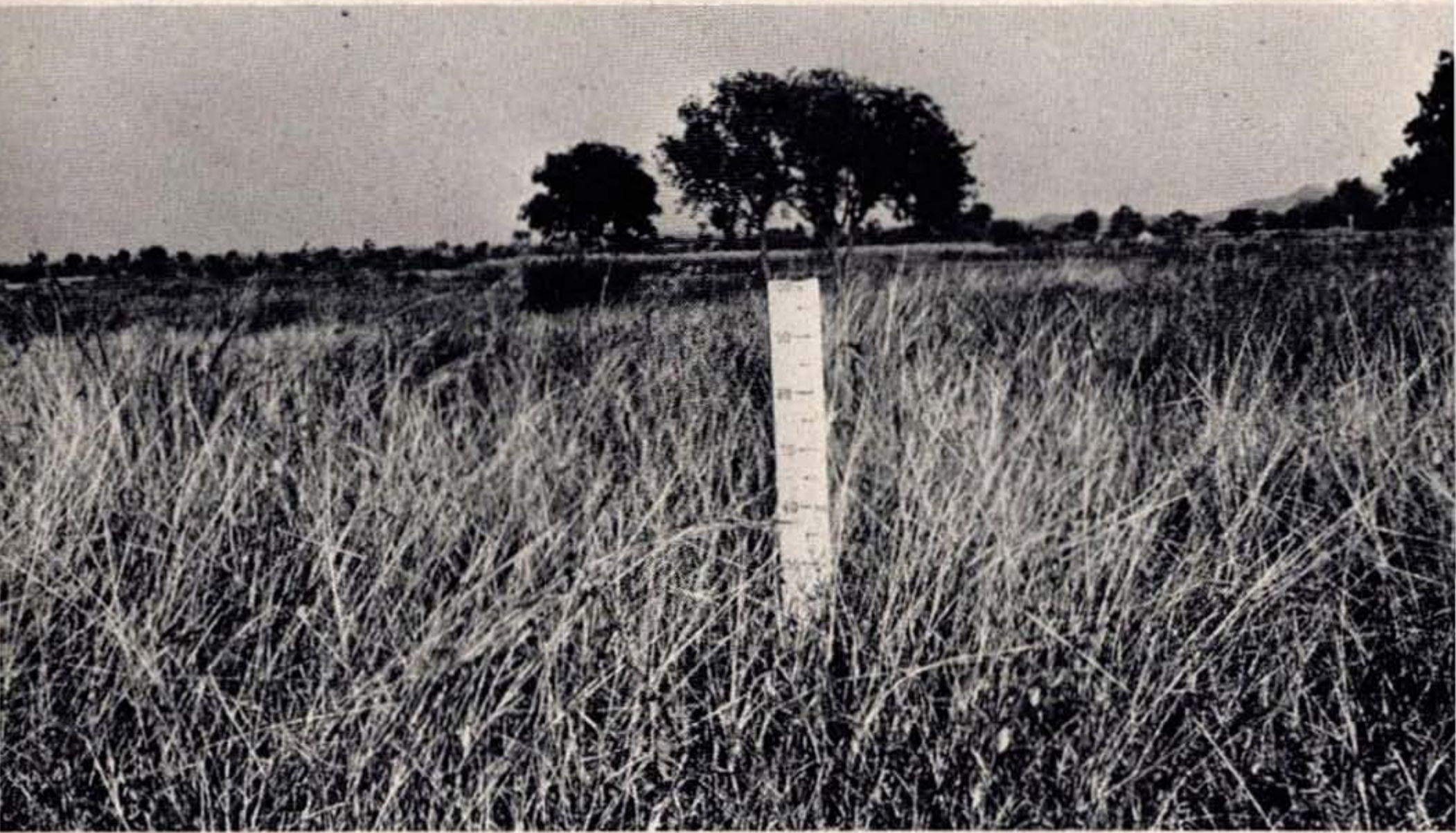


Adult male in Karera

Subadult male in Karera. Note the narrow neck

Photos: Asad Rahmani





A lightly grazed private field (Nov. 1982)

Bustard drinking — Desert National Park

Photos: Asad Rahmani





Dung pickers in the Sanctuary



Cowherds in the main bustard area in the Sanctuary are causes of disturbance

Photos: Asad Rahmani

ENDANGERED SPECIES PROJECT — ELEPHANT



Photo: R. Whitaker

The Asiatic elephant occurs in such varied habitats as the Tropical Rain Forests of Kalakkad Hills of Tamil Nadu (above); and the swamps of Kaziranga (below)

Photo: M. Krishnan



survival. Confrontation has resulted in man and elephants being killed. Our investigation is to determine which populations have a chance for survival and how many elephants can survive in such populations and whether man and elephant can co-exist.

The programme of work will extend initially over a period of five years.

Studies on the Movement and Population structure of Indian Avifauna

The Indian subcontinent has varied habitat types supporting rich avifaunal communities. Some of the questions that require attention are: What would be the impact of the wintering migrants from the north on the habitats and the communities already occupying them? Where do the migrants disperse and what is the nature of the competition for prime zones between the residents and the migrants and how is it minimized? What are the factors that contribute to or control interspecific competition and permit them to adapt themselves to the rapidly changing environmental conditions brought about by man on their traditional wintering grounds? There seems to be an urgent need to examine these ques-

tions in order to understand the present trend of an ancient phenomenon namely migration and before it is too late to find possible solutions for cushioning human impact on environment.

The Society's project studies on the movement and population of birds in different habitat types, namely the freshwater ecosystem of Bharatpur and the marine ecosystem of Point Calimere. The movement and population elsewhere within the Peninsula will also be monitored by carrying out short term ringing operations in selected habitats such as Harike Lake and Shivaliks in Punjab, Chilka lake in Orissa, and Eastern/Western Ghats of the Peninsula.

One of the aims of the studies at Bharatpur and Point Calimere is to monitor the ecological regimes in relation to bird communities.

It is hoped to correlate the dynamics of various regimes and analyse the nature of their mutual interaction. Various study plots will be intensively monitored. Baseline data of all regimes will be properly documented and coded on permanent basis to facilitate statistical/computer analysis.

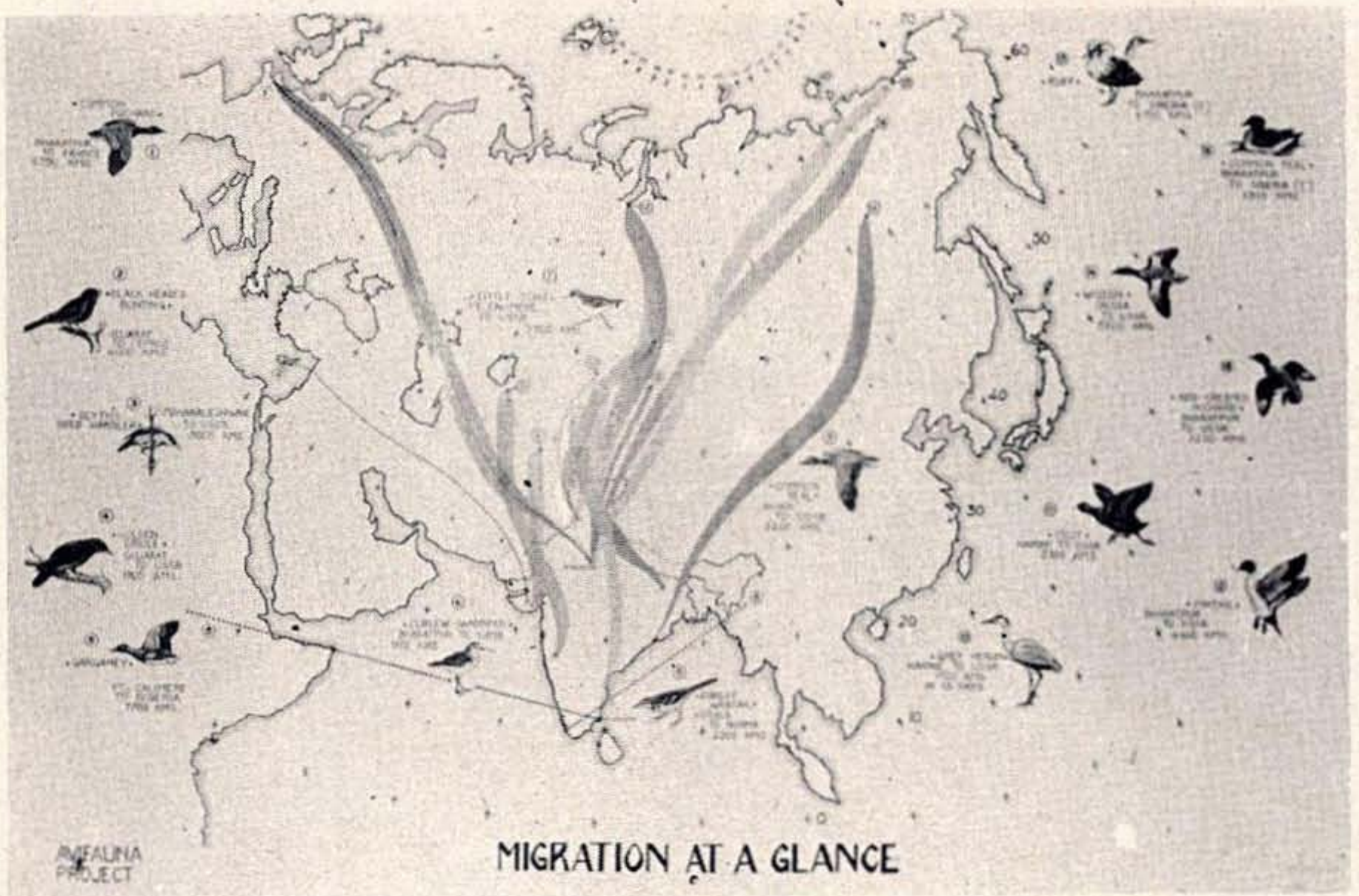
The present investigation is for a period of five years.

AVIFAUNA PROJECT

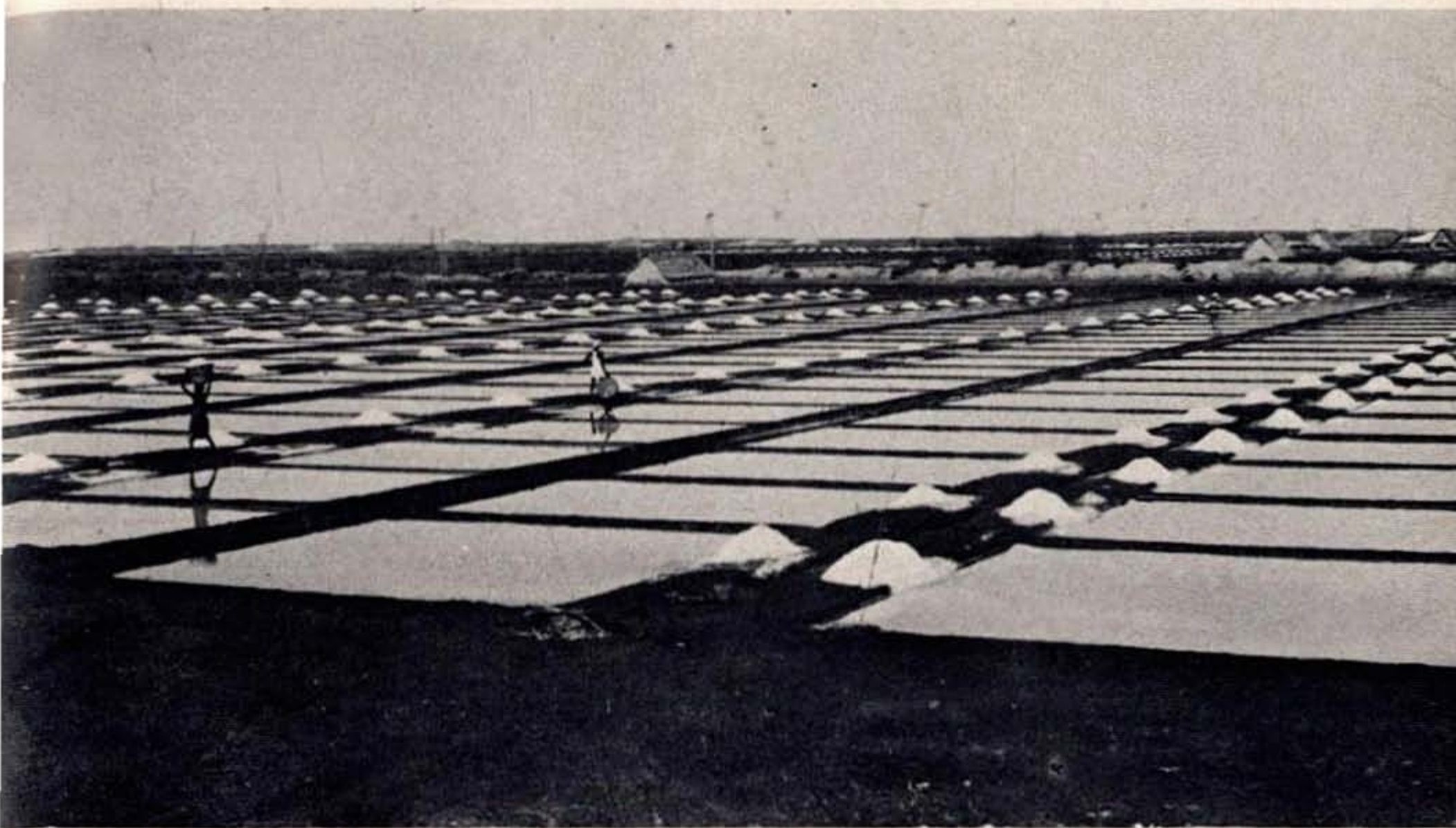


Above. Migrant gulls, terns and waders on the saltflats of Pt Calimere Sanctuary, Tamil Nadu. Below. Some of the species migrating to India

Photo: S. A. Hussain



AVIFAUNA PROJECT



The saltpans of the Pt Calimere Sanctuary

Photo: S. A. Hussain



A herd of Blackbuck on the seashore

Photo: R. Sugathan

Reminiscences in a lighter vein

In 1950 the Bombay Natural History Society had advertised their need for a Curator. The salary was of a senior scale, and I, who had just completed my M.Sc. and was feeling on top of the world thought it would suit me ideally. I had never heard of the Bombay Natural History Society! Truly a reflection on how poorly it was known among the middle class in India, even among those who were genuinely interested like me, who, as a child, had collected the odd chrysalis and watched the butterfly emerge; dismayed the household trying to preserve specimens which stubbornly continued the natural process of decay; wondered at the haunting call of the hawk-owl and listened with some trepidation to the howl of the jackals in the backyard of our house at Trivandrum.

My opinion on suitability was not shared by the Society's administration, but they did think that it would be an excellent idea to train up a suitable young person. I was offered the post of a Research Assistant on the inconsiderable salary of Rs. 210/- and told quite clearly that accommodation was a problem in Bombay and I should make my own arrangements. I accepted.

Salim Ali was the Honorary Secretary; Humayun Abdulali who was the Joint Hon. Secretary, looked after the administration. I was accepted apparently meeting even Humayun's somewhat exacting standards. The Society was then liv-

ing with Phipsons. One climbed to the first floor of the old and cavernous building at 6 Apollo Street and avoiding the Phipsons' rooms on the right entered the Society's rooms on the left to be greeted first by Mr. V. K. Chari, the Assistant Curator, a timid soul, who was often shown Humayun's "forbidding face" and was therefore always on tenter hooks.

In the next alcove sat Humayun, at what is presently being used as the Committee meeting table, and about six feet away to his left and at the same table, sat Salim Ali, studiously editing the *Journal* and available to Humayun for consultations under the title of 'Salimbhai' and offering an *obiter dicta* on all problems.

If you left by the door behind Salim Ali, turned left, and went down a flight of steps, you entered the Society's administrative offices, a small cubicle in which sat Fernandes, the stenotypist, a bright lad, who left for the Gulf in due course to make more money, Krishnaswamy, the accountant, very clever, in fact a bit too clever, Wagle, in charge of the publications, who I found slightly intimidating from his habit of looking at you over his glasses and finally Venugopal, the odd job man and an avid stamp collector.

At the Natural History Section of the Prince of Wales Museum about 200 metres away, sat the rest of the

staff, the Gallery Assistants who also maintained the Society's collections. I sat with them. I was a freak to them, a man with a degree. None had crossed the Indian educational landmark, the Secondary School Leaving Certificate, but were vastly, though narrowly, experienced in their fields. They watched to see whether I would flaunt my degree and when I did not, took me to their heart and taught me all they knew. There was Gilbert Nogueira, belligerent in outlook, spewing out at the slightest chance the names of butterflies. He kept arranging and rearranging the collection of insects. He was also an excellent preparator of plaster casts of animals from the size of a whale shark to the smallest frog; Lawry Nogueira, not very bright but good at the preparation of ground work for exhibits; Ram Subhedar, the artist, the 'artful dodger' of the Section who created more trouble than paintings; Arjun Soma and Pandu, stolid peasants from the Konkan hinterland, who had helped in the building of the Galleries, and now spent their days as guards in the Galleries and finally there was Joseph Gabriel, soft spoken, excellent preparator of birds and Salim Ali's right hand man in the field. It was he who really ran the Section. Seated at his table near the window he would watch the arrival of Salim Ali's motorcycle at the Museum porch a hundred yards away. As soon as the motorcycle was sighted, he would call out to the nearest sepoy '*Mathara álá*' (the old man has come) and send him with a tarpaulin

to cover the motor cycle. The motor cycle, a shaft driven SUNBEAM, the only one of its kind in Bombay, was one of Salim Ali's cherished possessions. He travelled on it between the city and suburban Bandra at an average cruising speed of 80 km per hour. One avoided travelling with him. We watched the next step. If the 'old man' walked off to the Society's rooms everybody relaxed; if he turned into the Museum, there was consternation, teas were gulped down, everyone rushed to his desk and the Section became studious. I did not have much to do in the beginning, but I learned from those who knew and learned by reading the *Journal*, the best background reading on Indian Natural History.

It was Humayun who introduced me to frogs, taking me out on almost all weekends so that field outings on weekends became a habit to such an extent that I am unable to take a balanced view when the younger generation now at the Society does not show the same enthusiasm. Collecting and identifying frogs was a pleasure for me probably because frogs are the most non-violent among animals.

Occasionally, I went out with Salim Ali. One of Salim Ali's greatest achievements is teaching young Indians to be punctual. Indian standard time is to most Indians, elastic, but Salim Ali's staff learned very speedily indeed, that time was a precise factor. If a BNHS man tells you a time he will keep it. He may even come a bit early to the area, but he will hang around and come in on the dot.

Gabriel was Salim Ali's alter ego in the field, they had been together in the field over so many years, that there was complete rapport. Gabriel handled the chores of the camp and, as I found out to my dismay when I accompanied them on a field trip to Berar, both were able to survive on a minimum of food. Until I was able to come to an arrangement with the cook, I had a rather unnerving time, but after that I was able to refuse the next *chapati* that was offered to me at the table with aplomb. It was during the Berar trip that Salim Ali made a discovery that he has since repeated to his assistants and students at almost every field camp. It seems that while on the Travancore State Bird Survey, he had often shared the dak bungalows with a state official who was on a survey tour for the State Education Department. They became quite friendly and though they did not correspond, the goodwill remained. He asked me whether I knew him and when I replied that the person was my father, he was most pleasantly surprised. He had not been able to place me earlier from the unfortunate habit we have in South India of not using a surname.

Field trips with Salim Ali were educative in more ways than one. Apart from learning scientific exactness, one learned the gravity of handling public funds, the accountability not only to the donor but also to oneself, that it must be frugally spent and made to give the maximum benefit. Nothing was said but the example was set. It is a lesson which has been well learned

by all the assistants he trained. Not only have all of them copied his beard, they have also assimilated his rigid standards in the handling of public funds.

Field outings with Humayun were not so exacting and one could relax. He was more a sportsman-naturalist than a scientist. An excellent small game shot, the ducks and waders he bagged during the season were kept for the collection only when of particular interest; the others we ate. I have often watched with amusement as he religiously 'hallaed' birds which had been dead for hours, before he took them into the house to his mother! In the non-shooting season we hunted frogs and reptiles, and made the odd quests of natural history interest.

The five years I spent at the Society I would consider my post-graduate training in the study of mammals, birds, reptiles and amphibians of India, with training in taxidermy, museum organisation and *Journal* editing as bonus points. Unfortunately, the relationship between the Museum and the Society had soured to such an extent that working conditions became quite impossible and I gladly accepted the position of Curator at the Natural History Museum, Darjeeling. When I returned five years later in 1960 as Curator of the Society, the whole complexion of the Society had changed. Government had in the meanwhile literally acted out Solomon's judgment—cut the baby in half, and given the exhibit half to the Museum and the collection half to the Society. The Society was no

longer content to be small and somnolent. The Bird Migration Project which had commenced a year earlier had enlarged the scope of its field commitments. The break with the Museum and Phipsons was fortuitous, and the Society had become a field natural history organization more interested in studying the live, than collecting the dead, specimens. The work was more exciting and challenging and with the completion

of Hornbill House, a hundred metres from the old address at Apollo Street, what had happened to the Society in 1884, happened again—more members joined, more members participated and it has been possible to build up a hard core of conservation oriented younger members and the future of the Society seems secure.

J. C. DANIEL

Handbook of the Birds of India and Pakistan by Salim Ali & S. Dillon Ripley

September 1983 saw two momentous events in Indian ornithology. The Centenary of the Bombay Natural History Society and the publication of the Compact Edition of the *Handbook of the Birds of India and Pakistan* together with those of Bangladesh, Nepal, Bhutan and Sri Lanka. Both events are inextricably linked, the compilation of the original *Handbook* having taken shape under the auspices of the Bombay Natural History Society.

The *Handbook* in ten volumes must be regarded as one of the most remarkable and ambitious Post-Independence Publication Projects undertaken in India. The first volume was published in 1968 (a second edition in 1978) and the tenth was released by Mrs Indira Gandhi in 1974, a fitting recognition of the importance of the event. (The brochure for the occasion added a charming footnote: 'To ensure good wearing qualities and resistance to insect attack, paper with over 75 per cent rag content and waterproof binding cloth have been specially manufactured for the *Handbook*'!) The *Handbook* describes all the 1200 species of birds, in nearly 2100 forms, to be seen in the Indian Subcontinent, providing information on distribution, habits, biology, diet, voice, etc. and is illustrated by 113 magnificent colour plates in addition to sketches, maps and diagrams.

The *Compact Edition* is a remarkable piece of production, the volume costs almost one-third of the price of the original ten-volume set, is economical of space and handier to consult. Ideal for all those who could not afford the original or grudging the space.

BOMBAY NATURAL HISTORY SOCIETY

1983

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THE SECOND CENTURY



PRIME MINISTER
INDIA

MESSAGE

Greetings to the Bombay Natural History Society for its centenary celebrations.

In these 100 years the Society has done much valuable work. Its activities have extended not only in Bombay but far and wide, even beyond our country.

Through its systematic and scientific studies, the Society has contributed significantly to increasing knowledge of our mammals, birds, reptiles and other fauna and flora. It has aroused public interest and enthusiasm in Nature and its preservation. Its publications have brought pleasure to an ever growing audience. It has helped us in the legislation for the protection of wildlife.

The Society's efforts are important for conservation, nature education and research and merit encouragement from all caring organisations and people.

My good wishes for the continued success of the Society.

Indira Gandhi
(Indira Gandhi)

New Delhi
August 12, 1983

SEPTEMBER 15, 1983 AT HORNBILL HOUSE



Clockwise: Dr Salim Ali, Mr. D. J. Panday and Dr. C. V. Kulkarni awaiting the Prime Minister's arrival



Clockwise: Dr C. V. Kulkarni, Mr. R. E. Hawkins, Mr. H. K. Divekar and Mr M. D. Agharkar in conversation before the Prime Minister's arrival



*Dr Salim Ali and Dr A. N. D. Nanavati receive the Prime Minister
The Prime Minister receives a bouquet from the seniormost staff member, Mr J. S. Serrao*





The Prime Minister is introduced to senior staff



Staff and Executive Committee and special invitees at the function

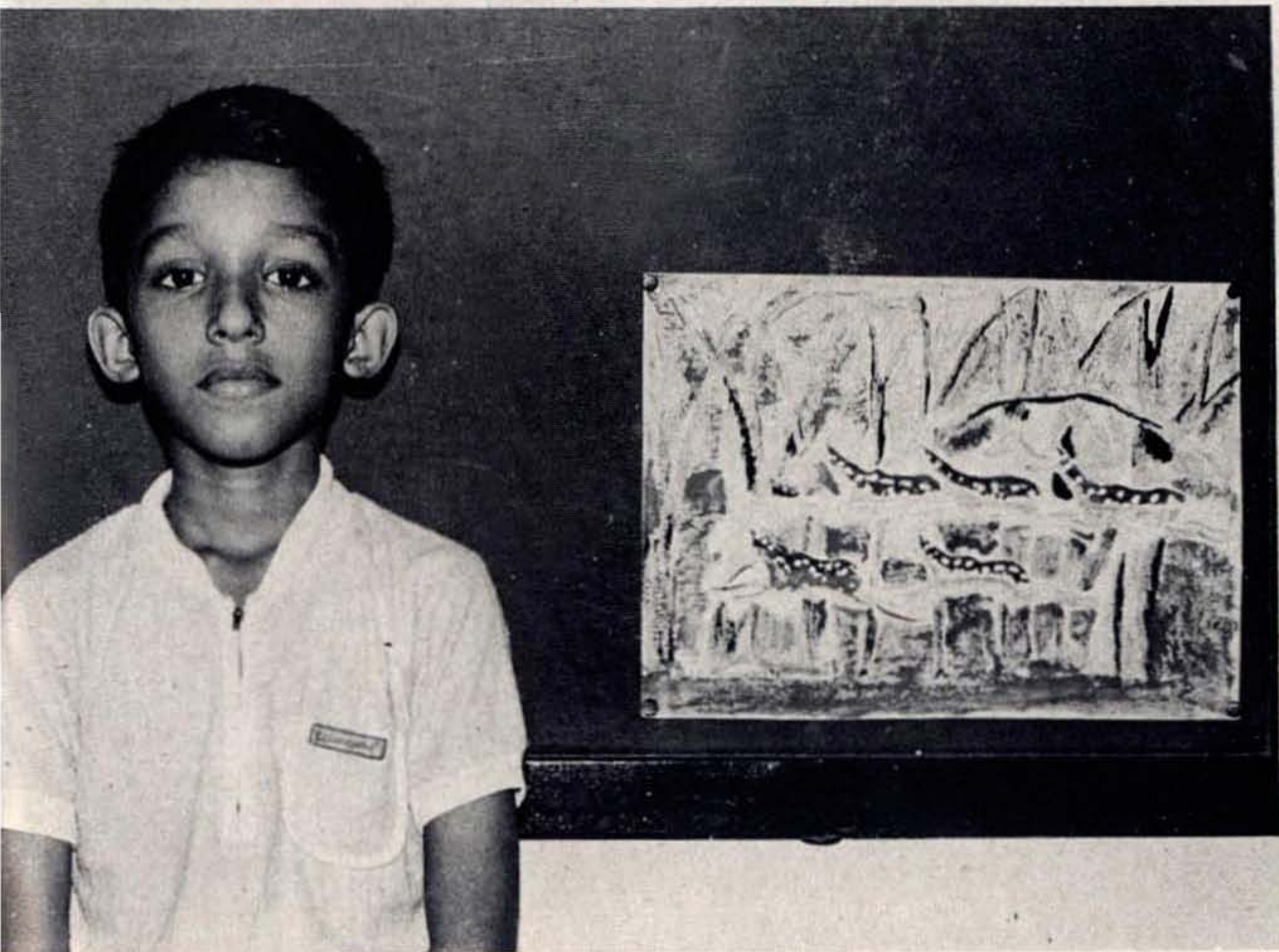


The Prime Minister giving the 1st Prize in the 6-9 years age group of the Centenary Wildlife Painting Competition to

Pradip Pappachan

Age 9, of the Sulochanadevi Singhanian High School, Jekegram, Thane

Below. Pradip Pappachan and his prize winning painting





The Prime Minister giving the 1st prize in 10-13 years age group of the Centenary Wildlife Painting Competition to

Anahita Fallahzadeh

Age 13, of the Queen Mary's High School, Bombay

Below. Anahita Fallahzadeh and her prize winning painting



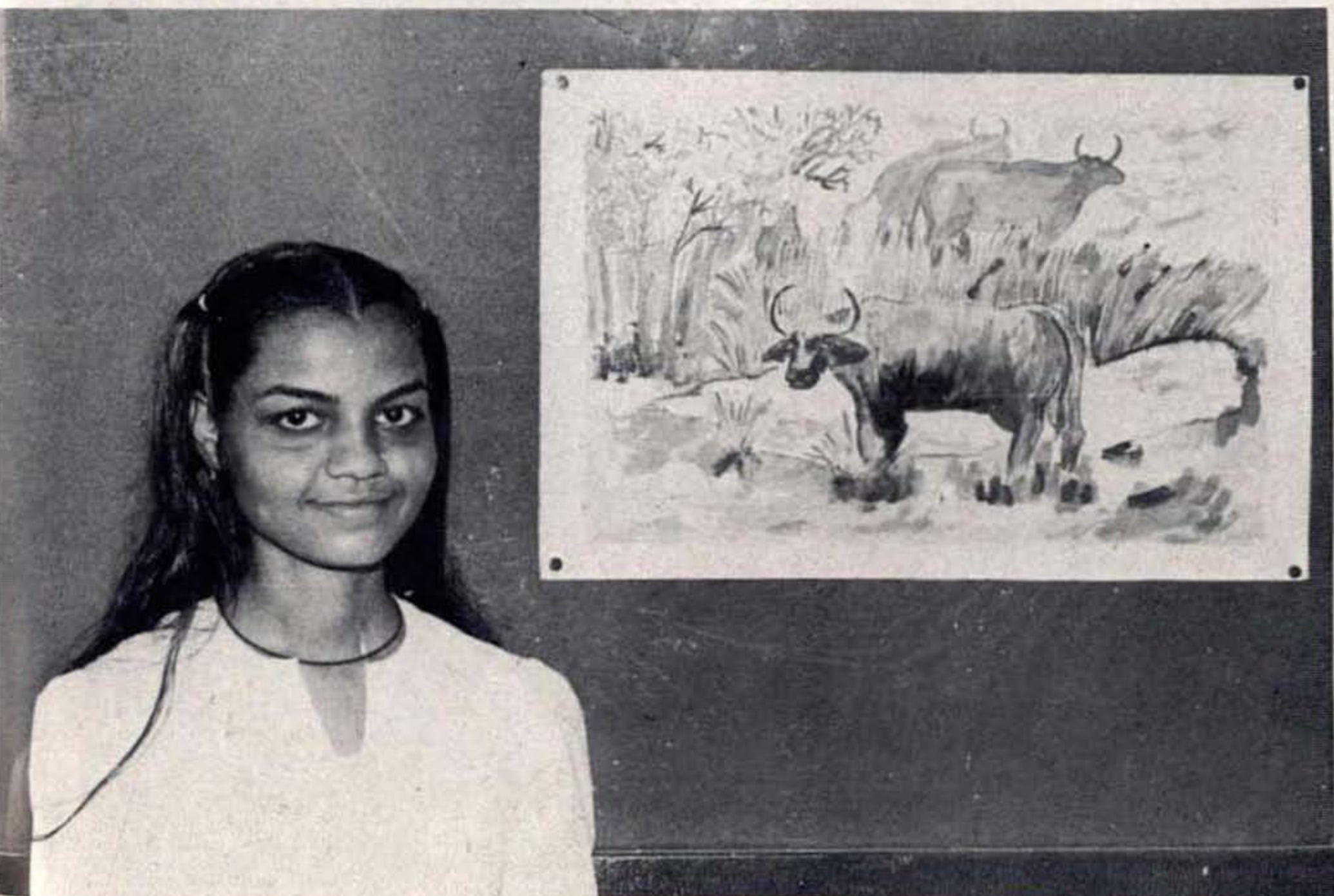


The Prime Minister presenting the 1st prize in the 14-17 years age group of the Centenary Wildlife painting Competition to

Jyoti Mehta

Age 15, of St Anne Girls' High School, Dabul, Bombay

Below. Jyoti Mehta and her prize winning painting





The Prime Minister receives copies of project reports from the Assistant Curator, Mr Naresh Chaturvedi; Mrs R. B. Grubh, the Nature Education organiser looks on



The Society's staff at the entrance of Hornbill House



Bombay Natural History Society

Inauguration of Centenary Celebrations at Tata Theatre on September 15, 1983

Programme

- ★ *Invocation*
- ★ *Presentation of Bouquets*
- ★ *Audio-Visual - 'A Century of Natural History'*
- ★ *Welcome Address by Dr. Sálim Ali*
- ★ *Lighting of Centenary Lamp by the Prime Minister*
- ★ *Release of Centenary Stamp by the Prime Minister*
- ★ *Release of Centenary Publications by the Prime Minister*
- ★ *Address by the Prime Minister*
- ★ *Vote of thanks*



The Prime Minister being introduced to the members of the Organizing Committee: Mrs Shirin Mody, Maj. Gen. E. D'Souza, Mr D. Goenka by Mrs D. S. Variava at the Tata Theatre



Dr Salim Ali and Mrs D. S. Variava escorting the Prime Minister to her seat



Archis Grubh, the youngest member, presenting a bouquet to the Prime Minister



The Chief Minister, the Governor and Mrs I.H.F. Latif being presented bouquets



Invocation being sung by Sunil Nadkarni

वहन्ति वर्षन्ति नदन्ति भ्रान्ति ध्यायन्ति वृल्यान्ति समाश्रयन्ति ।
 लघो घनाः मत्तगजाः वनांताः प्रियाविहिनाः शिशिनः प्लवंगमाः ॥

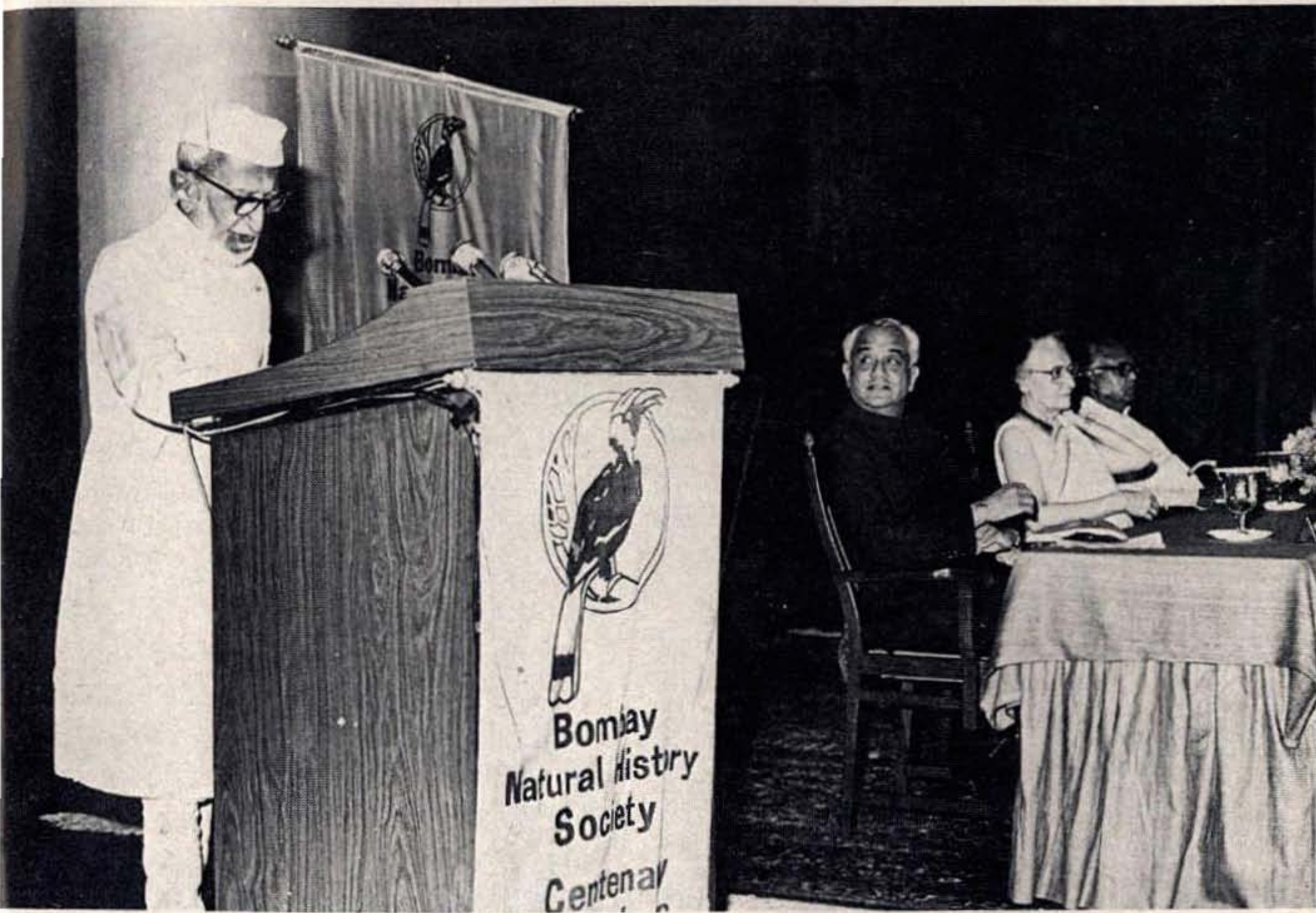
किष्किंधसंड - रामायणाः
 वाल्मीकी

It's raining, rivers are overflowing, musth elephants are trumpeting, peacocks are dancing, showing their glory, monkeys are relieved for it has cooled down. The whole atmosphere is so lovely, that an unhappy soul like me is also refreshed.

From: KISHKINDHAKAND RAMAYAN

By: VALMIKI

WELCOME ADDRESS



Madame Prime Minister, Air Chief Marshal Latif, Honourable Chief Minister and distinguished guests. It gives me great pleasure to welcome you all to the inauguration of the 2nd Century of the Bombay Natural History Society.

After the audio-visual we have seen, most of us should have a good idea of how the Society came into being and of its history, development and activities in the hundred years we are completing today. My own earliest recollection of the Society is of around the year 1904, not so very long after it was formed. A kindly old shikari uncle — one of the earliest Indian members — had taken me in tow to one of the friend-

ly informal monthly socials where the handful of members exhibited their collections of miscellaneous natural history objects and exchanged notes. These soirees were arranged by Mrs. Millard, the Honorary Secretary's wife, whose famous chocolate cake, welcome presence and charming personality always made shy visitors feel at ease. However, for me personally a more purposeful association with the Society than the chocolate cake parties commenced only after the Yellowthroated Sparrow incident in 1906 or '07 when, armed with an introduction from my uncle, I diffidently took the little bird I had shot with my air gun to the Bombay

Natural History Society for identification. A small Indian boy being so much interested in a bird was such a novel experience for the genial Honorary Secretary, that he took special pains to show me the many species of sparrows in the Society's collection and explain their differences. This was the point at which my interest in birds was really sparked off and which developed into a passion with the years. It was much later, in 1916, that I joined the Society as a member but still I find that I am the oldest on the rolls. Thus, as Elder Statesmen, I may perhaps hopefully crave your indulgence for giving you today what may seem rather inconsequential personal reminiscences and observations.

Due to the lack of interest in natural history among middleclass Indians, the vast majority of the Society's membership from its inception almost up to the second World War had remained foreign — chiefly British civil and military service personnel, planters and businessmen. Stark realization of this lopsidedness came only after our Independence in 1947 with the Indianisation of the Services, overnight as it were. With the departure of the British from India there was an alarming spurt of resignations, with the prospect of losing many more repatriate members when the time came for renewal of the annual subscription. A desperate representation made by the Society to Prime Minister Jawaharlal Nehru elicited a positive and characteristically prompt response. We were given a new

lease of life in which to build up an adequate Indian membership to replace what had been lost, meanwhile the Government of India would see to it that the Society kept ticking.

The first half of the Society's century was perhaps the most productive period for Indian mammalogy, just as the second half has been for ornithology. In 1929-31, the important scientific results obtained from the Vernay Ornithological Survey of the Eastern Ghats, till then practically unknown country, had underscored the desirability of similar field surveys in other little known parts which stood as a serious gap in our knowledge of the overall bird fauna of the subcontinent. The Society's Mammal survey a few years before had demonstrated that to supplement the voluntary contribution of members the most productive way of acquiring comprehensive study material was to employ knowledgeable paid field collectors to procure specimens methodically over a sustained period of time in the different areas for taxonomical study by museum experts. But the problem, as always, was how to find the considerable funds needed for such an exercise? However, a providential combination of two totally fortuitous circumstances came to the Society's aid. The first was the 'cheering' news I got on return from study leave in Germany, that the Government of Bombay had meanwhile axed the post I had held in the Natural History Museum due to financial stringency. Jobless but un-

willing to lose contact with ornithology, I offered to conduct regional field surveys gratis for the Bombay Natural History Society if they could find funds for the actual working expenses. Modest funds were not very difficult for the Society to raise as most of the key administrative positions in the Native States at that time were held by senior British officials, most of whom were sportsmen-naturalists and keen members of the Bombay Natural History Society. Thus the surveys were conducted, and in the next 15 years or so we were able to cover, fairly thoroughly, practically all the unworked areas in the sub-continent. The Bhutan Survey was funded entirely by the late King Jigme Dorje Wangchuck; Sikkim, the Mishmi Hills of Arunachal Pradesh, and some of the other surveys by the late Dato Loke Wan Tho of Singapore, a valued friend and benefactor of the Society. Subsequently several short collecting expeditions to the Andaman and Nicobar Islands under the leadership of Mr Humayun Abdulali, a veteran ornithologist member, added much valuable material to the Society's bird collection, as have the several short BNHS/Smithsonian Institution collecting trips undertaken jointly by myself and Dr S. Dillion Ripley, another constant helper and well-wisher, and my co-author of the *HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN*.

From the tattered account book of the Travancore/Cochin survey 1932-33, fortuitously salvaged from

some miscellaneous junk, I notice with much astonishment and a sense of utter disbelief that the entire expenditure on the 5 months of field work came to Rs. 2458/-. This included 2 separate return rail journeys from Bombay for two, plus one servant and considerable excess luggage, messing for four persons, servant's pay, private bus transport for camp shifts, daily wages of local shikaris, and all other odds and ends. It seems truly unbelievable how much it was possible to accomplish in those days with a little bit of judicious skimping and living largely off the land, and on how little. It was lucky for the Society and for Indian Ornithology that so much ground could be covered by those regional surveys while things were so vastly less expensive, and time was not of the essence for me.

Today field research is a very different proposition, involving far more money, to be done in much less time and with professional, specially trained scientists.

With the rocketing cost of transport, goods and services, such unhurried in-depth surveys are unthinkable today as they would be completely beyond the means of an unendowed institution like the Bombay Natural History Society.

In 1929 when I had wished to specialize in ornithology, there was no institution in India equipped for imparting such training, and I had to go abroad. Many years later, when the Bombay Natural History Society had acquired the necessary

expertise and competence to fill this gap we were able to persuade the University of Bombay to recognise the Society as a guiding institution for post-graduate studies in Field Ornithology, and later also for Mammalogy and Herpetology. Since 1958 the Society had produced 5 M.Sc., and 5 Ph.D.s., all scientists of a calibre that would do credit to any scientific institution. Some of these bright young men and women now teach in various universities; others have been absorbed into the several major projects of the Society funded by the Government of India or jointly with American institu-

tions. The Society hopes that with the support of the Governments of India and of Maharashtra, and with the traditional munificence of industrialists in Bombay, it will be in a position to retain the services of these well-tested young scientists upon the termination of the ongoing projects, at our proposed field station which is one of my most cherished second century pipe-dreams.

I now request the Prime Minister to inaugurate the second Century of the Society by lighting the inaugural lamp.

Audio visual

To set the mood for the Inaugural function, a special audio visual on the Society entitled 'A Century of Natural History' captured the spirit of the Society's history and contribution over the past 100 years, and touched on some of its concerns on the threshold of its second century. The 17 minute presentation (using 3 slide projectors and a dissolve unit, with synchronised music and commentary) contains over 250 slides generously contributed for this purpose by 29 photographers.

Production. Dilnavaz Variava and Jhelum Daru

Music Selection. D. J. Panday

Voice. Partap Sharma

Technical consultant. J. C. Daniel

Photographs by

Salim Ali, R. A. Acharya, M. R. Almeida, G. Archibald, Stanley and Belinda Breeden, A. Chandola, J. Cordo, E. R. C. Davidar, H. Denzau, R. Grubh, E. Hanumantha Rao, S. A. Hussain, Headline Photo Library, P. Jackson, I. D. Kehimkar, N. Manjeshwar, C. Mukerji, R. Naoroji, S. R. Nayak, G. Neumann, G. C. Patel, A. R. Rahmani, U. Rane, D. Sequeira, G. S. Siddhu, A. Stevens, O. Thayil, J. van Gruisen, D. S. Variava, W.W.F. India.

LIGHTING OF THE CENTENARY LAMP



The Prime Minister lights the Lamp to the Second Century — Mrs Joyce Periera of the Society's staff assisting

RELEASE OF THE CENTENARY STAMP



The Prime Minister releases the Centenary Postage Stamp handed over to her by the Deputy Minister for Communications, Shri D. N. Gadgil



A panel of the stamps



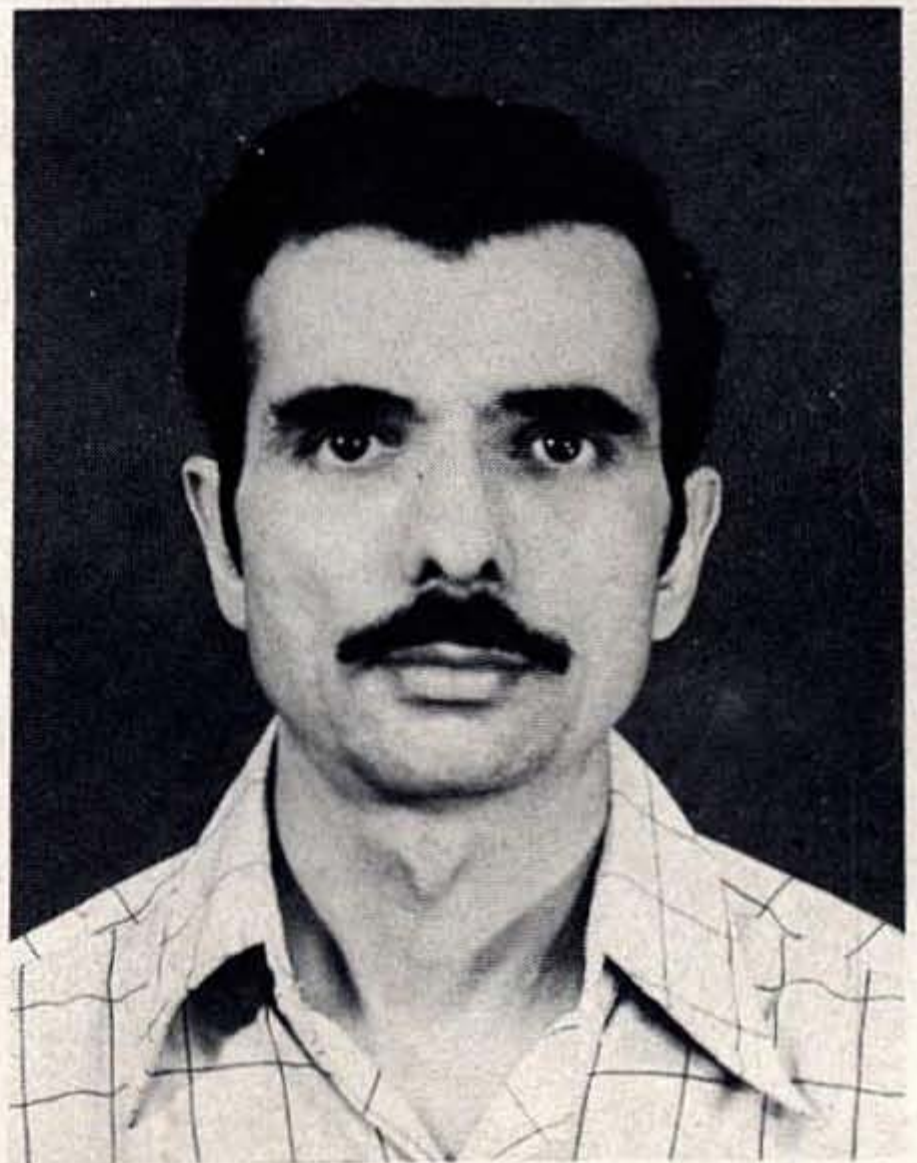
बॉम्बे नैचरल हिस्ट्री सोसायटी,
BOMBAY NATURAL HISTORY SOCIETY

Description of Designs

Both the stamp and the first day cover have been designed by J. P. Irani. The stamp shows 'Hornbill', which is the logo of Bombay Natural History Society. Cancellation has been designed by Alka Sharma.

TECHNICAL DATA

Date of issue	..	15.9.1983
Denomination	..	100 P.
Overall size	..	3.91 × 2.90 cm
Printing size	..	3.55 × 2.54 cm
Number per issue sheet	..	35
Colour	..	Multicolour
Perforation	..	13 × 13
Paper	..	unwatermarked adhesive stamp paper
Printing Process	..	Photogravure
Number printed	..	15,00,000
Printed at	..	India Security Press



Mr J. P. Irani, the foremost Indian bird artist, a member of the Society and illustrator of the Society's publications



Above. *The Prime Minister being presented by the Curator with a copy of A PICTORIAL GUIDE TO THE BIRDS OF THE INDIAN SUBCONTINENT, by Salim Ali & S. Dillon Ripley, illustrated in colour by John Henry Dick for release. Below. The Prime Minister formally releasing the Society's Centenary publication A PICTORIAL GUIDE TO THE BIRDS OF THE INDIAN SUBCONTINENT*



Bombay Natural History Society
Centenary Publications

A PICTORIAL
GUIDE
TO THE BIRDS OF THE
INDIAN SUBCONTINENT

BY

SALIM ALI & S. DILLON RIPLEY

With 106 plates depicting
all the birds by John
Henry Dick

Oxford University Press, 1983

Size 26 × 19.5 cm; 177 pp.

Identifying birds correctly in the field is the first step to enjoyable and meaningful bird watching. For the beginner or inexperienced casual watcher proper guidance is essential. Personal guidance by a competent field ornithologist is of course the best form of learning, but it is not always readily available. The second-best aid to mastering the art is through good colour illustrations. Good colour pictures and simple descriptions are to be found in several recent bird books, but these are mostly of a regional character and even as such the illustrations cover only a small proportion of the total bird fauna of their respective areas. The only comprehensive work on birds covering the Indian subcontinent as a whole, *HANDBOOK OF THE BIRDS OF INDIA AND PAKISTAN*, contains, only some 900 illustrations out of the 1220+ species described from the area.

Even these are spread out on 113 plates over the 10 volumes comprising the set, scattered among the text pages of each volume.

This Pictorial Guide is unique in that it depicts *all* the bird species found in the Subcontinent arranged family-wise on 106 plates which follow one another in systematic order and are thus easy to find. The excellent illustrations, moreover, have the advantage of consistency in quality, all being the work of a single artist, the well-known American bird painter John Henry Dick. They make supplemental verbal descriptions of the birds redundant, but concise information concerning status, size, habitat and distribution within subcontinental limits has been provided.

JOHN HENRY DICK

John Henry Dick is one of America's foremost bird artists. His

interest in natural history was sparked off during boyhood hunting trips with his father in Islip, Long Island. Two years at the Yale Art School helped him to develop his natural artistic talent. John Henry Dick is a

widely travelled man: some of his more spectacular trips include expeditions to the Northern and Southern Polar regions, Africa, New Guinea, Galapagos and India.

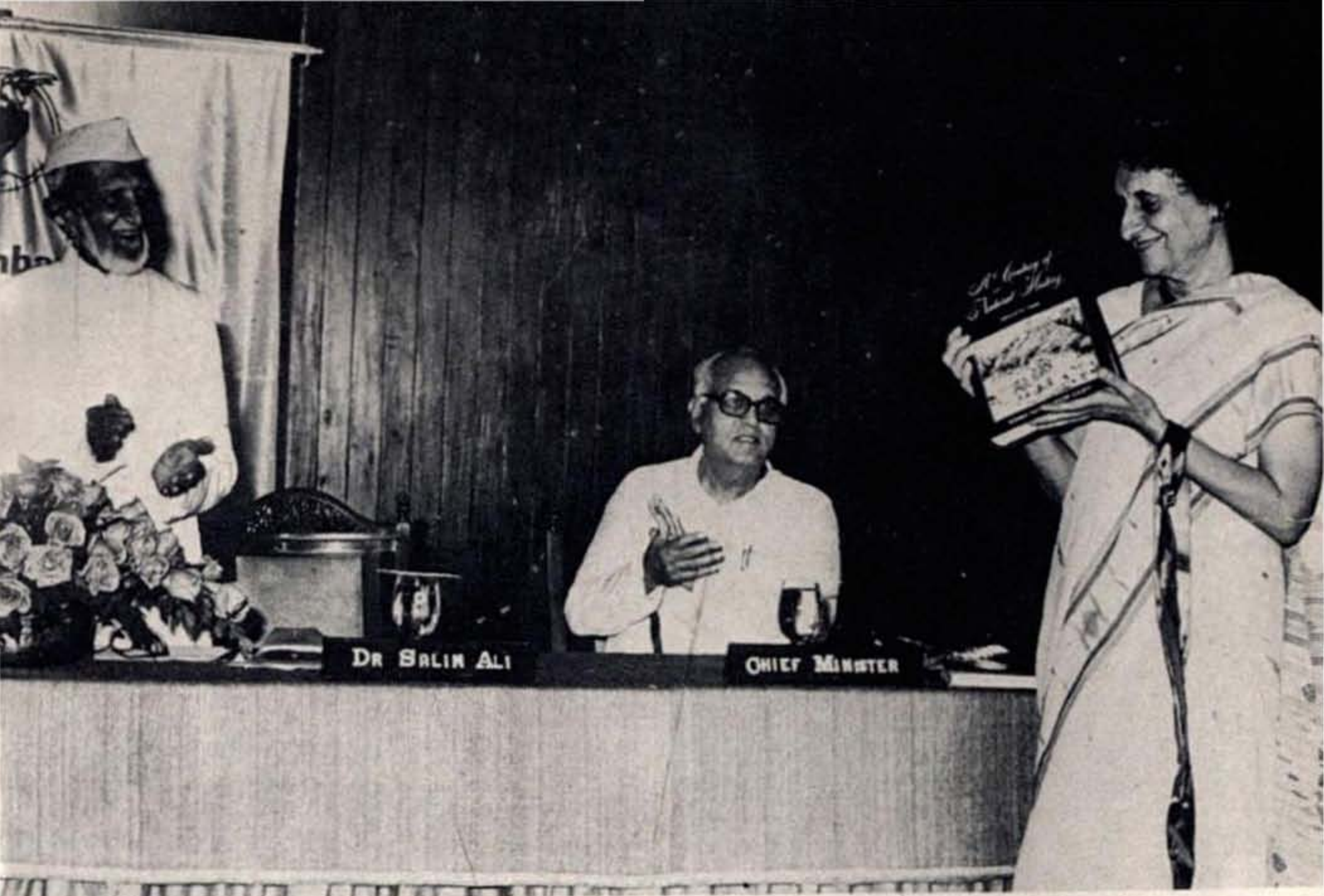
Acknowledgements

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and by members and staff of the Bombay Natural History Society and of the Organising Committee.

1. Smt Kishori Amonkar
2. Mr Partap Sharma — Compere
3. *Organising Committee.*
Mrs S. Mody, Mrs. D. S. Variava, Gen. E. D'Souza, Mr M. Khanna, Mr D. Goenka
4. Staff who assisted in one way or another, especially Naresh Chaturvedi, J. S. Serrao, Joyce Pereira, Savitri Shivaram, S. R. Nayak, I. D. Kehimkar, Charles D'Souza, Vasant Naik, Sunil Gharnalkar, Shantaram Karamble.
5. *Members who assisted.*
Arun Vinayak and Heta Pandit for Co-ordination, N. D. Mulla, Parvish Pandya, Dilip Patil, Sunil Zaveri, Meena Haribal, Dr A. S. Kothari, Sunjay Monga, S. K. Menon, and N. Vaidyanathan.



The Prime Minister formally releasing the Society's Centenary publication A CENTURY OF NATURAL HISTORY, edited by J. C. Daniel, the Curator of the Society

A CENTURY OF NATURAL
HISTORY

Edited by

J. C. DANIEL

With 12 coloured and 141 monochrome
plates and numerous text pictures

Bombay Natural History Society, 1983

Size 25.5 × 19.5 cm; xxii + 759 pp.

This anthology, classified under sections: General, Expeditions and Treks, Hunting, Fishing, Photography, Mammals, Birds, Reptiles, Fishes, Insects, Spiders, Other invertebrates, and Botany, presents a selection from among the best natural history articles published in the *Journal* of the Society during the hundred years (1883-1983) of

its existence. Over the years the *Journal* has offered to the discriminating reader, a melange of fascinating articles on Indian natural history, a term which broadly covers the amateur interests as well as the serious scientific researches on the fauna and flora of the Oriental region by the members of the Society.



Excerpts of the speech of the Prime Minister, Shrimati Indira Gandhi at the inauguration of the Centenary Celebrations of the Natural History Society at Bombay on September 15, 1983.

Dr Salim Ali, members of the BNHS, those who co-inhabit our planet but who speak no human language, I am delighted to participate in the centenary celebration of this Society.

From small beginnings, the Bombay Natural History Society has grown to be a truly important national institution with a high international reputation. Its cause is one that is dear to my heart, and vital for the conservation of our beautiful earth.

We humans share the earth with

many species. For a long period after the human race came into being, we were close to nature, yet at war with it and other larger species for survival. Over the millennia the development of the human brain has enabled humankind to gain unimagined control over our planet. What awesome responsibility it is to have such authority, to have the power to mould the future not only for ourselves but for all species, and it may be of this planet too.

The Bombay Natural History Society is the oldest scientific society in India. In its early years it was largely responsible for the identification and documentation of India's fauna and avifauna, and established a fine natural history museum and library. It was the first organisation to undertake mammal surveys in India. Nothing like this has been done since then, even by our Zoological Survey. Dr Salim Ali has spoken of a field station, I wish it well. It is proposed to have a Wet Lands Research Centre in Bharatpur under the aegis of the Wildlife Institute and this Society will be associated in setting it up and running it.

But the work that is closest to nature-lovers of all ages is the literature the Society has brought out. Dr Salim Ali's *THE BOOK OF INDIAN BIRDS* and Prater's *THE BOOK OF INDIAN ANIMALS* opened out a whole new world to many Indians. I had always loved animals but I didn't know much about birds until the high walls of Naini prison shut us off from them, and for the first time I paid attention to bird song, I

noted the songs and later, on my release was able to identify the birds from Dr. Salim Ali's book.

For those who care, conservation needs no justification or explanation. But there is a big gap between the intention and the deed. The exploding population, expanding cultivation and industry and other development programmes, the desire to hasten material progress and perhaps above all, human greed have already done incalculable damage to many species of plant and animal life and to the earth's capacity for self-renewal. Basically, there is no conflict between conservation and economic development or between the immediate and the enduring. Indeed, in the long run neither can survive without the other. But we cannot wish away the problem. We cannot allow people to think that we care more for animals and plants than for the underprivileged. If a project is to be abandoned it has to be substituted by something equally meaningful to the local population. In order to succeed any such programme needs public awareness and involvement on a mass scale. Education through books, word of mouth, mental at-

titudes inculcated through childhood, or any other means is our best instrument. This is a challenge to members of the Society.

One cannot speak of this Society without mentioning that distinguished and lovable personality, Dr. Salim Ali. For the last 50 years he has been the doyen of conservationists and has shouldered much of the responsibility for the present growing consciousness of Indians in conservation.

The Indian Board for Wildlife has decided to institute a National Award for Wildlife Conservation for outstanding work in the field and all are agreed that the first recipient should be Dr Salim Ali. I am glad to announce the presentation of this gold medal and my greetings to him and to countless others whose names and work are less known.

On this centenary day, I wish the Society a bright future. May it achieve even greater success in reconciling human beings with their Mother Earth.

My good wishes to you all.



The Prime Minister hands over to the President, Dr Salim Ali, the letter of intent from the Government of Maharashtra granting land for the Society's proposed Field Research Centre

R.D.Pradhan



Chief Secretary

Dear Dr. Salim Ali,

D.O.No.LND-2681/25444/2658-G6(R&FD)
General Administration Department,
Mantralaya, Bombay-400 032.

14th September, 1983.

I am desired to convey that on the occasion of the Centenary Celebrations of the Bombay Natural History Society, the Government of Maharashtra have decided to offer to the Society land measuring 13 hectares and 56 ares (33 acres and 20 gunthas) situated at Survey No. 188, Village Klerabad, Taluka Borivali for the proposed Field Research Centre for study of Ornithology and to house the Society's University Department affiliated to the Bombay University.

I am glad to add that as a special case the Government has decided that the land valued at about Rs. 40 lakhs should be offered to the Society at a nominal rent of Re.1/- per annum. The other terms and conditions of the grant will be communicated to the Society shortly.

With Warm Regards,

Yours sincerely,

R.D. Pradhan

(R.D.Pradhan)

Dr. Salim Ali,
President,
Bombay Natural History Society,
Bombay.



*The views of members and guests present at the Inauguration of the Second Century of the
Bombay Natural History Society - 15th September 1983*

Photos: G. C. Patel



Appreciation

Bombay Natural History Society thanks the well wishers of the Society who favoured this Centenary *Hornbill* issue by kindly responding to our request for advertisements. Their magnanimous gesture has helped the Society in meeting the cost of production of the Centenary *Hornbill* to a great extent. Their advertisements follow this page, and we enumerate them in the order they appear.

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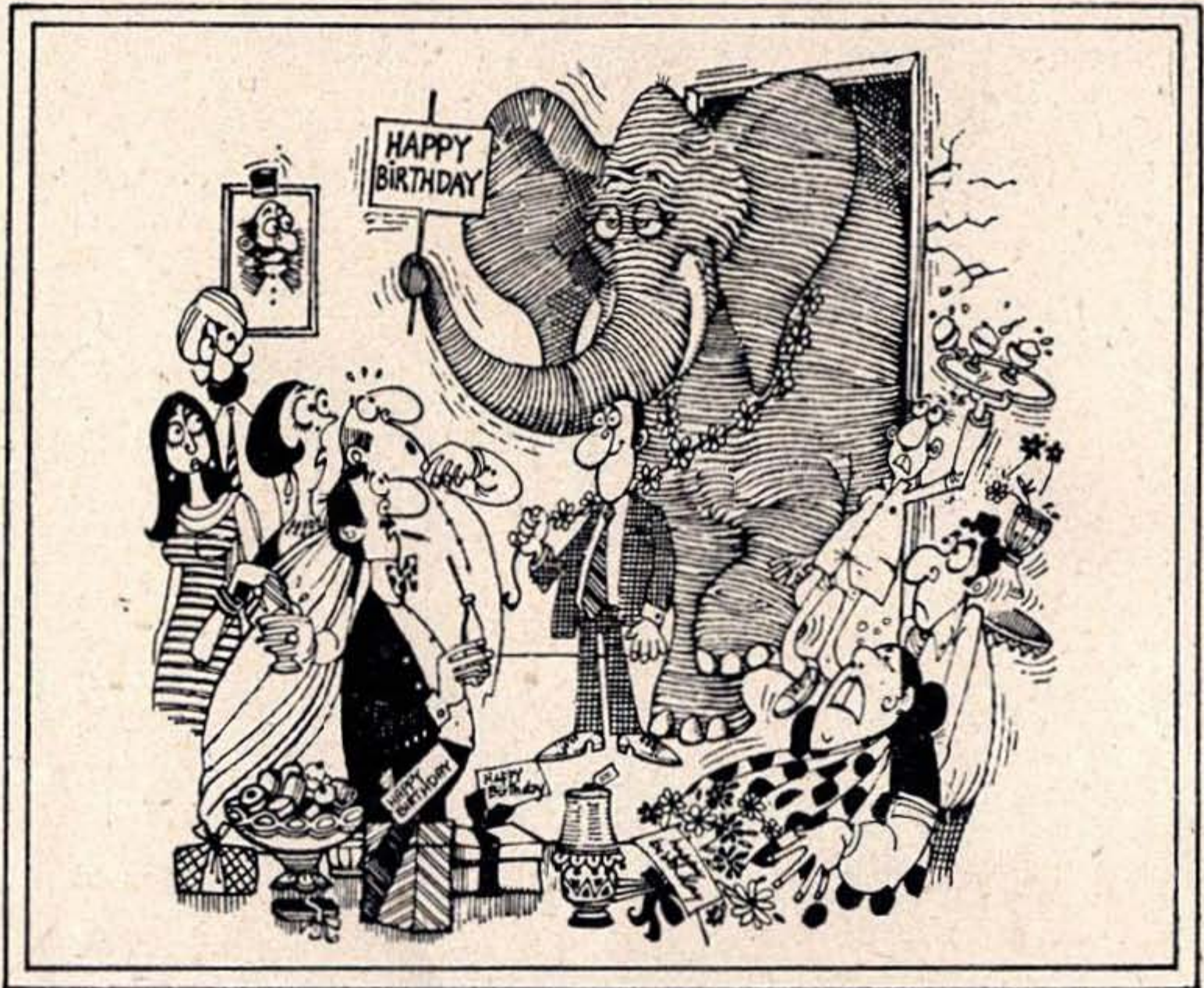
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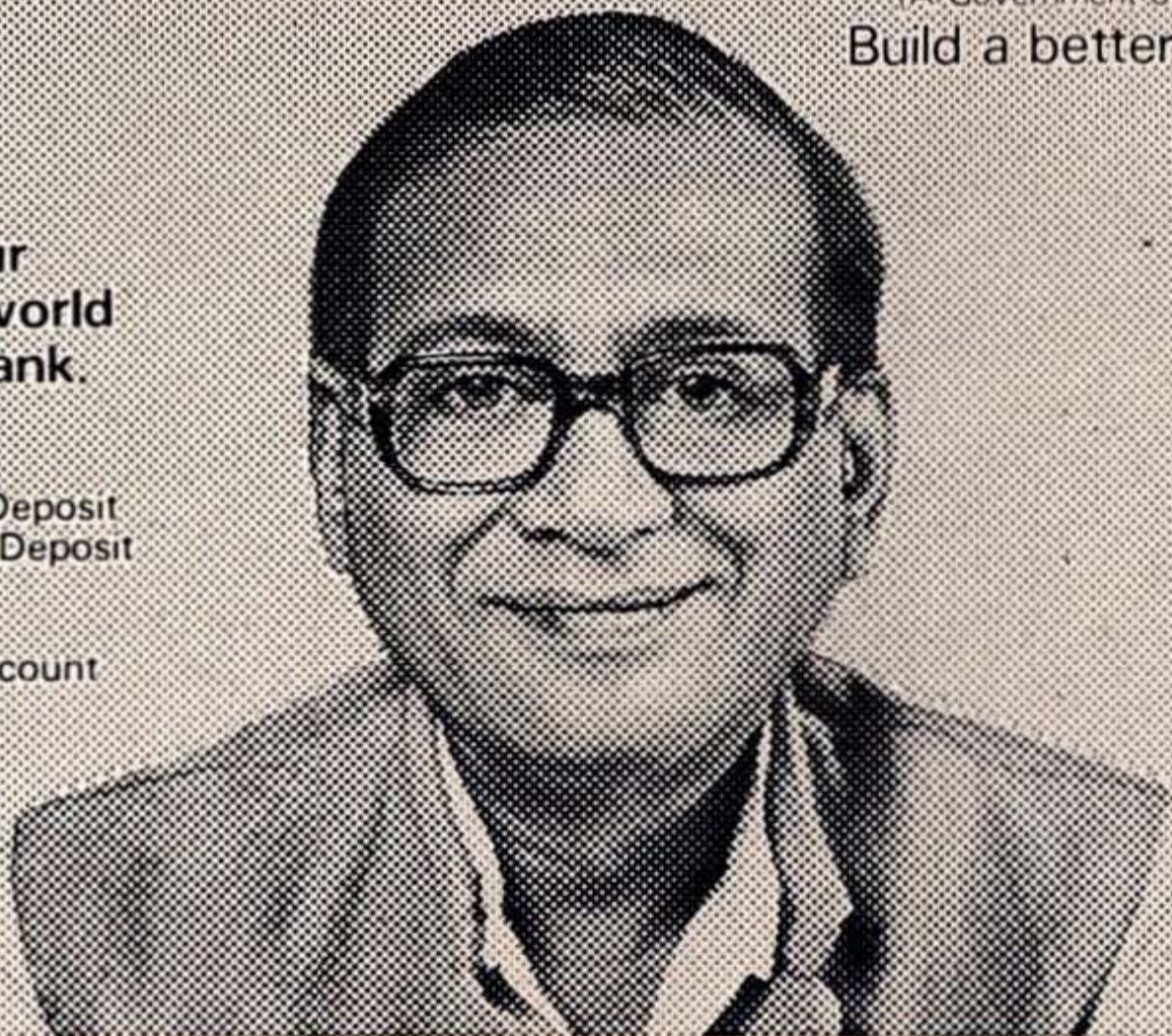
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- * Sanction to open 165 New Primary, 602 Secondary Schools and 55 Colleges this year;
- * Special efforts to promote Hindi;
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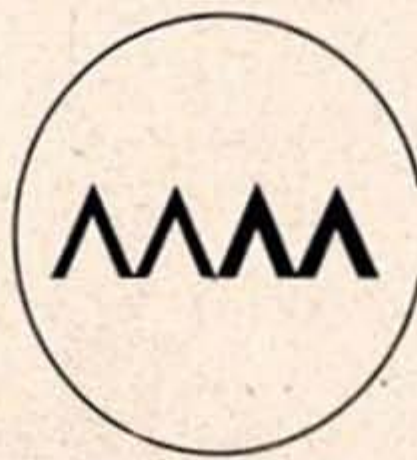
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(Published for the Bombay Natural History Society)



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4. One of the finest research collections in India on Mammals, Birds, Reptiles, Butterflies and other forms of animal life. These are available to members for study on the Society's premises.
5. Up-to-date information and advice on birdwatching, wildlife photography and fishing; natural history field trips and information on possible areas for field trips.

In short, the Society offers a range of activities and interests for the scientist, the amateur naturalist, the sportsman, and the lover of nature. Even if you are none of these the Society deserves your support because it is struggling to preserve our natural heritage and to safeguard it for our children.

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