

# HORNBILL



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# EDITORIAL

A very encouraging development noticed by most of us who have been concerned with Conservation over the past two decades and more is the awakening of interest and enthusiasm for Wildlife Conservation in India. Purely from this aspect the conservation movement in the country is a success. Such interest as we find now among the public was unthinkable, for instance, in the fifties. Wildlife then was the preserve of the elite; incidentally therein lies its snob appeal which one occasionally comes across nowadays. The enthusiasm has found its outlet in the numerous wildlife societies which are mushrooming all over the country and which need careful husbanding. This interest is partly a reflection of a world-wide awareness of wildlife, a result of the excellent publicity that the World Wildlife Fund organizes. In India too the World Wildlife Fund has been active in propagating the message. Their methods have been sometimes unique, sometimes brash and always uninhibited. The Society finds itself in the singular position of being the only organization which has the knowhow and the background to effectively direct this enthusiasm. The Society has been often asked to shoulder responsibilities to which it has not reacted as it should have. There is unfortunately a certain sedateness of approach which is not very helpful, and there is often a strong tendency at the Society to crawl back into its cloisters and keep turning over

October-December 1977

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the collections. We at the Society need to be constantly reminded that 'We must take the current when it serves, or lose our ventures'.

### EDITED BY

J C DANIEL  
S A HUSSAIN  
J S SERRAO

On cover: *The Atlas Moth*  
Photo: O. C. Edwards

## FEEDBACK

### Sport Shooting and Conservation

With the Kenya Government having recently put a complete ban on all hunting, Dr. Sálím Ali's letter (*Hornbill*, Jan.-Mar. 1977) is most apt. It was obvious a closer control was necessary on hunting in Kenya so this ban was very acceptable. But, it has done nothing to stop the excessive poaching taking place for commercial reasons. If all the shops selling trophies, skins, etc. were to be shut down then this ban would be excellent but, at present, the poacher is receiving help from Government to carry out his nefarious trade by the shops remaining open to cater for the demand from tourists.

C. E. NORRIS

*Nairobi, Kenya*

\* \* \* \*

The President's letter (*Hornbill*, Jan.-Mar. 1977) is indeed excellent and he deserves the sincere thanks of all sportsmen. It is very heartening to find a person of his eminence understanding and supporting the cause of the legitimate sportsmen, and recognising the fact that the sportsman is not the cause of depletion of wildlife but to a great extent it was these lovers of shikar who helped to preserve the game. The poachers and commercial hunters have been the real cause of depletion of game combined with the effect of encroachment into the natural habitats of game. It might be

of interest to mention the case of the 'Morgan herd' of Nilgiri tahr. This was one of the famous herds in the Nilgiris and a total ban on shooting was imposed in the area it was in, so as to increase the number of animals in it. After a few years when a census of Tahr was taken again it was found that instead of increasing the herd had been completely finished by the poachers as the legitimate shooters who would have helped check the havoc were completely barred. An article on the Morgan herd about this has appeared in the *Cheetal*, the Magazine of the Wild Life Preservation Society of India, Dehra Dun.

DINESH PRATAP SINGH

*Raja of Kasmanda*

*Lucknow, U.P.*

\* \* \* \*

### Lutino Parakeets

Both the first two issues of *Hornbill* were very interesting especially to a layman who is interested in nature as I am. In the third issue Shri S. R. Sane's article on colour varieties of the Roseringed Parakeet reminded me of an observation my sons made during an outing some months ago at a place about 40-50 km east of Poona. They pointed out to me one very bright yellow parakeet among a large flock of about 50-60 other normal coloured parakeets. This flock flew over us several times and we could observe them

for a long time. The other birds were all the normal green and the yellow one was not treated any differently by the others of the flock.

Although we cannot say what sex it belonged to, it must be a 'lutino' as discussed by Shri Sane. We, however, wonder if it is a variety or just an odd one born among other normal parents. If it were a variety, should there not be more of them in the flock.

CAPT. H. A. BAJI MOHITE (Retd)  
*Poona, Maharashtra*

\* \* \* \*

### **Turtle nesting beaches**

In regard to the feature 'Turtle nesting beaches' (*Hornbill*, April-June 1977), it may interest Bombay residents and even surprise some of them that marine turtles do nest at Bombay's famous Chowpatty beach. One would think that, with the great disturbance caused by the large number of strollers on this beach, which lies smack at the city's centre, turtles would have forsaken

this place as a nesting site. But this is not so.

Turtles regularly visit this beach (and other nearby beaches also) during the rainy season to lay eggs. Only this July (1977), a 'nest' with 106 eggs in it was discovered at Chowpatty beach. An attempt to incubate some of these eggs did not succeed due to the failure of the thermostat controlling the incubator's temperature. A few eggs from another batch—also located at Chowpatty—are being incubated by a less sophisticated method, viz. by being buried in a sand-box exposed to the sun and sprinkled with sea water, in the hope that these might hatch out into baby turtles.

The turtle eggs are about the size of a golf ball, and, unlike eggs of birds, they are round and have a soft, leathery shell. If dropped from a little height they do not crack like hens' eggs.

B. F. CHHAPGAR

*Bombay*

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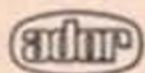
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## PRESIDENT'S LETTER

'MYSTERY' BIRDS OF INDIA—2

### Jerdon's or Double-banded Courser

Coursers are ground-dwelling birds of cursorial (running) habit. They belong to the family Glareolidae which contains besides, the Pratincoles or Swallow-plovers. Of the world total of about 16 species in this family 10 live in the Ethiopian Region. The other six are represented in the Indian subcontinent by three species of pratincoles and three of coursers. Of the latter, there is no mystery about the Desert Courser (*Cursorius cursor*)—a pale sand-coloured bird which is a regular winter visitor to the desert and semi-desert areas of the NW. parts. Nor is there any mystery about the Indian Courser (*C. coromandelicus*), illustrated opposite (right), which is common, though patchy, throughout the plains of the subcontinent. Its chestnut and black underparts, rich rufous crown and conspicuous double black-and-white stripe above and through the eye, and longish bare china-white legs, leave no doubt about its identity. The third species, Jerdon's or Double-banded Courser (*C. bitorquatus*) however is the species that ranks second in my order of mysteriousness as applied to Indian birds. Its prominent double breast-band alone should, I imagine, render it unmistakable if only one could be seen! The first specimen of this enigmatic bird was procured by Dr. T. C. Jerdon in c. 1848 'from the

hilly country above the Eastern Ghats off Nellore and in Cuddapah' (both in the Penner Valley, then 'Madras Presidency' now Andhra Pradesh). Jerdon continues 'It frequents rocky and undulating ground with thin forest jungle, and is found in small parties, not very noisy, but occasionally uttering a plaintive cry. I believe it to be a permanent resident. It is almost a unique instance of a species of plover having such an extremely limited geographical distribution: and I imagine that hereafter it will be found spread through many parts of the Balaghat district and Mysore.'

Two specimens collected in March 1871 by W. T. Blanford at Bhadrachalam (A.P.) are in the British Museum. Blanford met pairs twice and three birds together once (in 1867 and 1871) 'in thin forest or high scrub, never in open or hilly ground'. He describes their appearance on the ground as courser-like, and their flight as more rapid than the Redwattled Lapwing's. The only other record of that period (also Blanford's) is from the neighbourhood of Sironcha, again in the Godavari Valley. Since then, in 1895, an anonymous writer in the defunct newspaper *The Asian* claimed to have taken a clutch of two eggs of this courser (locality undisclosed!), but this need not be taken too



0 30 60 90 mm

Jerdon's or Double-banded Courser

Indian Courser

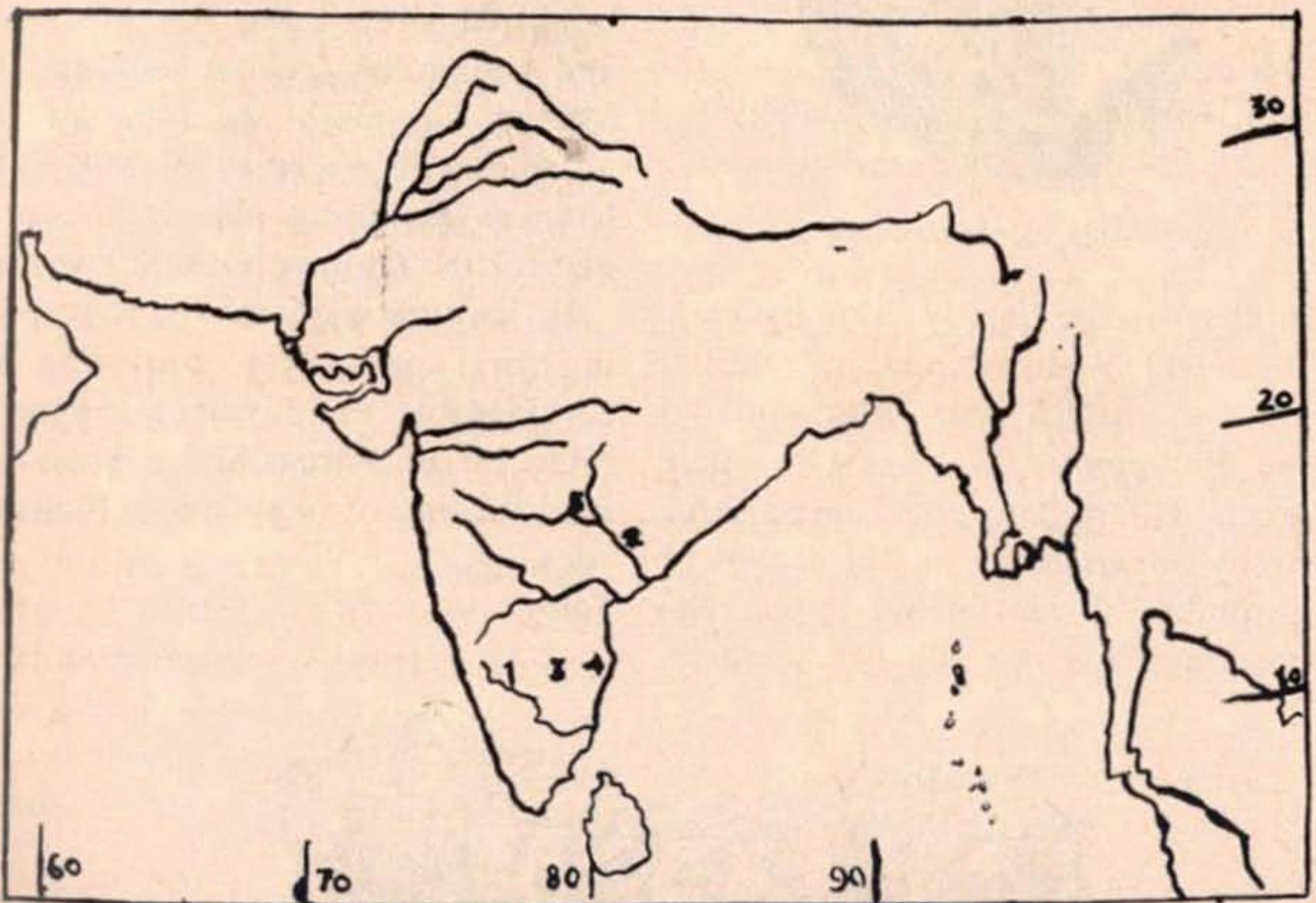


seriously. The last sight record, presumably authentic, was in 1900 by Howard Campbell, a fairly reliable ornithologist of the time, in the neighbourhood of Anantapur in the Penner Valley (Andhra Pradesh). Thus the curiously restricted geographical range of the bird, as so far known, lies only in Andhra Pradesh and only in the valleys of the Godavari and Penner rivers—Bhadrachalam, Sironcha, Nellore, Cuddappah and Anantapur.

The ornithological surveys of the Eastern Ghats (1929-31) and Hyderabad State (1931-2) between them covered the known range of Jerdon's Courser pretty thoroughly and made special efforts to rediscover the fugitive, or at least pick up some workable leads, without success. Likewise the two special explorations organized by the Society in 1975 and 1976 with the collabora-

tion of Smithsonian Institution, Washington and WWF-India respectively. With the help of the lifelike colour sketches (opposite), specially prepared and generously donated by our artist-member J. P. Irani, the Society issued a leaflet in colour for wide publicity in Andhra Pradesh and adjoining States among local Forest and Revenue officials, shikaris, villagers, *adivasis* and others to help in the search. Several hundred leaflets have been freely broadcast in the last two years, but—sorry to say—not a single positive response to date! I do not like to accept that the bird has definitely become extinct, and would therefore urge all suitably placed readers to make every effort in every way to try to solve the mystery of the Double-banded Courser.

SALIM ALI



Jerdon's Courser was known from 1. Anantapur, 2. Bhadrachalam, 3. Cuddappah, 4. Nellore, 5. Sironcha.

## The Atlas Moth *Attacus atlas*

On the cover of this issue we have the largest moth in India and perhaps the second largest among the butterflies and moths of the world. Large females attain a span of 25 cm from wing-tip to wing-tip. The Atlas Moth is one among the wild silk moths of the family Saturniidae as opposed to the domesticated silk



Atlas Moth cocoon

moths of the family Bombycidae. It is widely distributed in forested areas in eastern Asia from India to the Philippine Islands. The pale green caterpillar with large blue fleshy spines feeds on the leaves of a number of trees including tea. The cocoon yields raw silk of the varie-

ties *Fagara*, *Tagore* and *Ailanthus*.

The 'silk belt' holding the main silk producing countries of the world is situated mainly between 20° and 40°N. latitude. The silk industry based on the domesticated silkworm *Bombyx mori* fed on mulberry leaves is said to have spread to India from China about 140 B.C. There are many references to silk in the Vedas and sericulture flourished under the Moghuls in the 16th and 17th centuries. India is currently the fourth largest producer of raw silk after Japan, China and the U.S.S.R. Among the Indian states Karnataka leads with an annual production of over 1300 tonnes of raw silk. India has the largest silk moth fauna in the world, both domesticated and wild. Raw silk of various types, the brownish silk of the Tasar silk moth, the white or brick-red silk of the Eri silk moth and the golden-yellow silk of the Munga silk moth are some of the notable wild varieties of silk. The Chinese Shantung silk is the product of the Chinese Oak Silkworm.

Sericulture is one of the most paying rural industries providing for considerable employment opportunities in rural areas and a gross annual income of over 300 million rupees.

Source WEALTH OF INDIA,

INDIAN INSECT LIFE, etc.



Atlas Moth caterpillar

# NOTES, NEWS AND COMMENTS

## The Explorers' Club

The Explorers' Club, New York, N.Y., has elected Dr. Sálim Ali a Corresponding Member. Among other scientists so honoured are Jean Dorst, J. R. Ellerman, George Schaller and Ben King.

## Osmaston Diaries

B. B. Osmaston who was in the Indian Forest Service from 1888 to 1923 was one of India's pioneer ornithologists, and an excellent field naturalist and sportsman. A limited edition of 100 copies of his diaries which he kept during his service, as edited by his son Brig. G. H. Osmaston, are being privately published. Copies can be had at £7/- plus forwarding charges. Enquiries may be sent to the Society.

## Meetings at and of the Society

Continuing the series of talks INTRODUCTION TO BIRD WATCHING **Dr. Robert B. Grubb** spoke on 17th September on how to recognize waders resident in, and visiting Maharashtra. Attention was drawn to the distinguishing characters, including habits, of each species concerned, and particularly to such species which are superficially similar in appearance. He guided his audience on what to look for in such intriguing cases. The talk was illustrated with cabinet specimens of birds in the Society's collection.

**Miss Meher Moos** gave a talk illustrated with colour slides on 19th October to the members of the So-

ciety at the Air India auditorium on her recent expedition to the ANTARCTICA. A well-attended and fascinating presentation.

## Dr. Mohammad Ali Reza Khan

spoke on the WILDLIFE OF THE NILGIRIS on 24th November at Hornbill House. As a doctoral student in field ornithology under Dr. Sálim Ali, Reza Khan spent two years in the Nilgiris studying the bio-ecology of the endemic Black-and-Orange Flycatcher. The status of wildlife in general according to Reza Khan is satisfactory, though the populations of the Nilgiri Langur have suffered owing to encroachment on the langur's habitat, as well as by unscrupulous trapping of the animal for sale in spite of a ban existing on its trade, and persecution of the animal for its dubious aphrodisiacal properties. The status of the Nilgiri Tahr, the other endangered species in the area is apparently satisfactory.

**Dr. R. M. Naik**, of the Department of Avian Biology, M.S. University, Baroda, spoke on 29th November on the ENVIRONMENT. Environment, according to him, is hard to define. We talk about total environment, perceptual environment or operative environment. While speaking of human ecosystem, he pointed out that we must also consider the Conceptual environment or *culture*. Culture varies from place to place, and country to



The Tahr and its habitat in the Nilgiris

Photo: E. R. C. Davidar

country, and the current trend of destruction can be reversed only if the Conceptual environment of Man is suitably modified.

**Mr. Prakash Gole**, an active member from Poona, showed to members on 30 November, photographic slides made in the course of his nature rambles. Three sets of slide presentations were made: *Winged Beauties* showing some of the common Indian butterflies, moths, and wild flowers which bloom during or immediately after the SW. monsoon rains; *A day in the home of birds*, on birds—both resident and migratory—and the Mula Mutha Sanctuary in Poona; *Land of the CHAKRAVAK*, photographs shot in Ladakh, which Mr. Gole termed as 'A portrait of a cold

desert', showing the birds, animals, and flowers he came across during the recent BNHS/WWF quest of the Blacknecked Crane in Ladakh.

#### **Farming butterflies in Papua New Guinea**

Mr. Angus Hutton, a life member of the Society, has sent us information on the farming of butterflies in Papua New Guinea. Mr. Hutton, a very keen naturalist was a tea planter in the unique High Wavy Mountains of Tamil Nadu, India. An avid collector and field naturalist, he had a viper *Trimeresurus huttoni* named after him. Another specimen of a bat collected by him and sent to the Society was recently on re-examination described as of an entirely new genus and species *La'idens salimalii*.

Mr. Hutton writes: "I spent 1952-1962 in East Africa, Uganda and Kenya, developing the Tea Industry over there and in 1962 I came to Papua New Guinea, at the invitation of the Australian/Papua New Guinea Government to assist in setting up a Tea Industry here. In 1975, I was seconded into the Division of Wildlife, to set up a new village industry in Papua New Guinea, to teach the people how to farm butterflies and other insects. Breeding and study of Lepidoptera has been a hobby of mine since I was old enough to hold a net—probably when I was 4 or 5 years old in South India. We now have a large number of Isolated Village People in this new business, which was worth nearly a quarter of a million Kina (1 PNG Kina = US \$1.25) last year.

"We have had terrific International support for this unique Government-backed venture. Previously the butterfly trade was in the hands of a few expatriates, who cared little for Conservation and swindled the nationals out of hundreds of thousands of Kina, by paying a pittance for specimens—20c or so, and then selling these magnificent Bird-wing Butterflies for up to \$600 each overseas. In 1966 the Government introduced the Fauna Protection Ordinance, totally protecting seven species of *Ornithoptera*, which were gravely endangered. These are: *O. allottei*, *O. alexandrae* (the largest butterfly in the world—12 inches wingspan!), *O. chimaera*, *O. goliath*,

*O. meredionalis*, *O. paradisea*, and *O. victoriae*. The first named is only known from three specimens, the only one in a private collection was sold 15 years ago for \$3600 to an American collector, this probably makes it the world's most valuable butterfly!!

"A scheme similar to ours has its place in numerous parts of the world and we have had inquiries for information etc. from several developing countries in SE. Asia and elsewhere."

### Sriharikota Island

A very encouraging trend is the interest that organizations not even remotely connected with biology show nowadays in the care of the environment. For instance, the Indian Space Research Organization invited the Society to examine and report on the fauna and flora of Sriharikota Island on the east coast, S. India. Dr. Robert B. Grubh assisted by Mr. P. B. Shekar visited the island and on the basis of their study submitted a report suggesting guidelines for habitat manipulation and conservation of the Sriharikota complex. The ISRO have agreed to give weight to the suggestions in the planning of further development activities on the island. As a corollary, a booklet on the birds of Sriharikota Island is under preparation.

## Are Wild Dogs wanton killers ?

My observations at Bandipur Tiger Reserve give an emphatic answer NO to this query. For instance when these pictures were made an alarmed sambar doe, followed by a yearling doe, safely walked through six

dogs, a part of the pack of seventeen. Anti-Wild Dog people may say that the pack was not hunting. In fact the pack after allowing the two sambar to walk through their cordon killed and ate a small sam-



### Sambar and Wild Dogs

Note agnostic attitude of sambar and the relaxed behaviour of the wild dogs

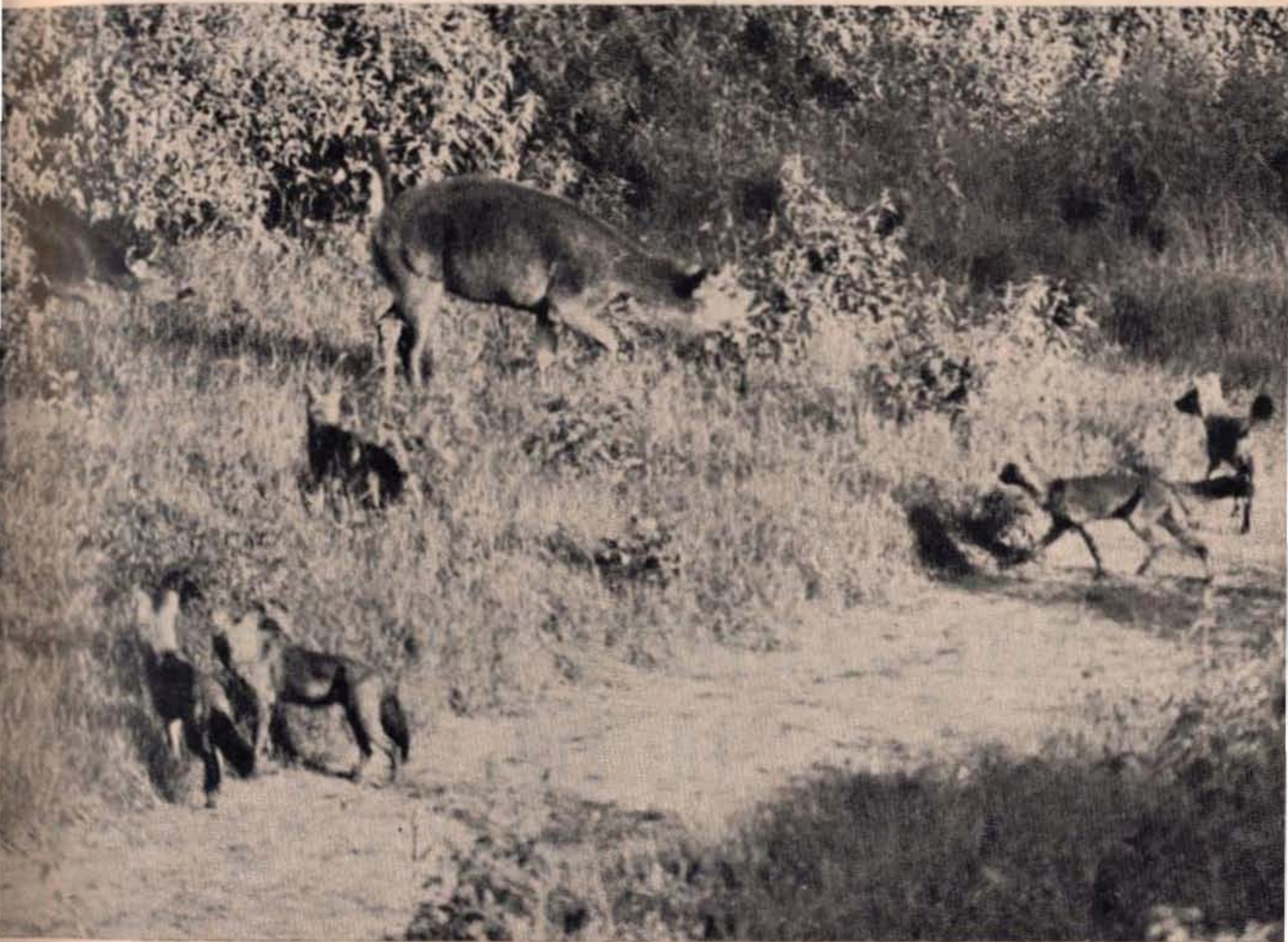
*Photo:*

A. J. T. Johnsingh

bar fawn 18 minutes later. Twelve minutes after the kill was made three dogs rested under shade and four alarmed sambar—2 adult does and 2 yearling does—walked towards them, and the adult does chased the dogs here and there. It appeared to me that the dogs en-

joyed being chased. Sightings like this refute E. P. Gee who postulated that wild dogs keep deer on the move and so favourite grazing areas do not become over-grazed and thus get impoverished.

A. J. T. JOHNSINGH



### Sambar on the move

Note flanking behaviour of the wild dogs in front of the doe

*Photo:*

A. J. T. Johnsingh

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# PERSONALIA

## The founding fathers

HERBERT MUSGRAVE PHIPSON

Phipson was a truly remarkable man. The Bombay Natural History Society, to whose growth and development he 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 its virtual *ma-bap*.

He was in England when the eight original founders of the Society met at the Victoria and Albert Museum, Bombay, on the 15th September 1883. He joined the Society on his return from England in the same year, and in January 1884, offered a room in his offices at 18 Forbes Street as a more central place for the Society's meetings and for keeping its collections. The removal of the Society's offices to a central situation in the city and Phipson's enthusiastic association with it gave an astonishing impulse for its growth. The need for finding better accommodations for its rapidly increasing collections soon becoming urgent, Phipson again provided the solution by offering the Society part of the larger premises he had acquired at 6 Apollo Street (now Shahid Bhagat Singh Road), to which the Society's collections were transferred in 1886. Thus commenced and thus was continued the long association of the Society with the Company

which bears Mr. Phipson's name. His successors in business took over his post of Honorary Secretary and Editor of the *Journal* and have each in his time made his contribution to the Society's progress. The Society finally 'fledged' and left its nest at Phipson's only when first the Government of Maharashtra in 1958 and subsequently the Government of India in 1965 took over the responsibility of providing a home of its own for the Society.

From March 1886 when he took over the office of Honorary Secretary from E. H. Aitken, more familiarly known for his books as EHA, to April 1906 when he left India, Phipson was the heart and soul of the Society. Originating and directing its early activities he brought it to vigorous maturity. Through these twenty years he edited the Society's *Journal*—for a year in collaboration with Robert Stern-dale, then as sole editor for fifteen years and finally in collaboration with Mr. W. S. Millard his immediate successor in office.

His business and his management of the Society's affairs left Phipson little time for contributing in print the wide knowledge he had acquired of Indian Natural History. His favourite branch was Snakes. His rare contributions to the *Journal* centre round this subject, and



Herbert Musgrave Phipson

among the notes he published is a paper on the Snakes of the Bombay Presidency.

Phipson directed his energies to increasing the influence and usefulness of the Society to Zoologists and laymen and to the building up of its collection. So intimately was his name associated with the work that the Society's rooms at 6 Apollo Street were often referred to as 'Phipson's Museum'. In his day Phipson was its presiding genius. 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 the wide fund of his knowledge and experience. He was charming: always interesting and ever ready with shrewd and amusing comment. In the early days of the Society various animals, birds and reptiles were kept alive in the Museum. Amongst these was a cobra with which Phipson was on familiar terms. He once turned this cobra out of its blanket and patted its coils to make it sit up and expand its hood before some visitors. The cobra, probably startled, turned and struck at Phipson and buried its fangs in one of his fingers. Phipson displayed his usual coolness in this dreadful situation. His remedy was drastic. He went to the Society's

small laboratory adjoining the museum and applied some permanganate of potassium to the wound. Except for some swelling of the finger he fortunately escaped unharmed.

Though the Society's Mammal Survey of India, Burma and Ceylon was taken up long after Mr. Phipson's departure from India, Oldfield Thomas, who described many of the new species discovered by the Survey, named a beautiful Flying Squirrel in honour of Mr. Phipson to whose initiative and enthusiasm the Society owes so much of its existence and to whose ready help most Indian Zoologists have at various times been greatly indebted'. Few men have striven more earnestly, more continuously to advance 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. Phipson was always ready to help anyone, and, as one friend with whom he lived said: "He monopolized the self-denial of the whole house!" This was the key to the character of the man and to his life of service.

Phipson left India in 1906 and died in London in 1936 at the ripe old age of 86 years.

**A reminder to you that the Annual Subscription of the Society falls due on 1st January**

## The lonely tigress

Unlike other zoological parks which are situated in cities and towns, the Nandankanan Biological Park, Orissa, is situated right inside the lush green forests of the Chandaka range (Puri Forest Division). Because of its natural setting of rolling forests, with a 50 hectare lake in the centre and flanked on the outskirts by extensive swamps and marshes, many wild animals and birds freely move about in and around the Park area.

An open-air tiger enclosure with an area of about 1350 sq. metres and a chainlink mesh fence of 5.5 metres high all around it was constructed in December 1966. On the viewers' side there is a water moat measuring 21 metres in length and 5.4 metres in depth including the 90 cm high parapet. The enclosure is quite spacious and it is at a lower level than the ground outside the moat. The vegetation of the area having trees, plants, bushes and bamboo clumps has been left undisturbed so as to give it the appearance of a natural forest. This open-air enclosure with our tiger, Pradeep, was opened to the public on 29th December 1966.

Pugmarks on the soft earth around our old tiger enclosure (prior to the construction of the open-air enclosure) had been frequently seen from the latter part of 1965. On the opening day of the

enclosure a tiger was sighted on a road inside the Park. All attempts such as a trap with a live goat or a live fowl bait, digging a capture pit, etc. were made throughout 1966 to capture this tiger without success.

The most interesting tiger incident happened on the night of 4th January 1967 at the enclosure. A full-grown wild tigress, which was apparently in oestrus, jumped into the enclosure of her own accord to meet with our zoo tiger, Pradeep. Though nothing could be seen in the darkness, it is presumed from the noise that was heard that they must have exchanged a fair number of snarls and blows. On the next morning (5th January) the keepers were astonished to see two instead of one tiger. The tigress was seen sitting in the retiring den, rather the worse for wear, whereas the zoo tiger was moving freely in the enclosure. The tigress had apparently tried her best to escape, and in her attempts had bitten the wooden portions of the observation window. In the process she lost both her lower canines.

Impression of the pugmarks of the leaping tigress were left in the wet cement plaster of the parapet. They are still there as a mark of remembrance. This was probably the last tigress of the Chandaka range, as there are no more reports of cattle lifting or movement of tigers since then.

For the first fortnight she refused to accept any food such as mutton, beef, live fowl, etc. She was kept on glucose and chicken essence in drinking water. Gradually she started taking the usual zoo diet of about 14 kg beef with bones. The tigress was named Kanan, after the place of her capture.

We tried putting the tigress and the tiger in adjacent cages for several weeks before they were released together into the open-air enclosure intermittently. But each time this was done they fought fiercely and

wounded each other. The tiger did not accept her as his mate as he had his own female companion called Sikha.

She has now grown old, the estimated age being over 16 years at present. The story of tigress Kanan jumping from freedom to captivity for the sake of a mate is unique in the history of the zoological parks of the world. Her love story is known to the thousands of visitors coming to the Park the last eleven years.

L. N. ACHARJYO



The tigress Kanan—from freedom to bondage

Photo:

L. N. Acharjyo



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# BIRDWATCHER

## A birdwatcher at large—Ladakh, June-July 1976

In 1876 the Russian explorer Maj. General Przewalski introduced to the world of science a new bird named *Grus nigricollis*, the Black-necked or Tibetan Crane. Exactly a hundred years later Dr. Salim Ali headed an expedition to Ladakh to determine the status of this same bird which, it was feared, might soon become extinct if steps were not taken to protect it.

I happened to be a member of this expedition as a representative of the World Wildlife Fund—India which had sponsored it financially. The expedition was organised and equipped by the Bombay Natural History Society. The other members of this expedition were Mr. S. A. Hussain and Dr. V. S. Vijayan from the Bombay Natural History Society, and Dr. B. Biswas from the Zoological Survey of India.

We spent about six weeks in Ladakh, entering the region on 19th June through the Zoji La from the northwest and reaching Leh through Kargil. The expedition mainly explored the south and southwest of Ladakh, while a trip to the Nubra Valley in the north had to be abandoned due to inclement weather. A striking point of our itinerary was a visit to the high altitude lakes Tso Kar and Tso Moriri known to be the breeding haunts of the Barheaded geese,

another bird supposed to be endangered and on the decline. Our task was to examine if any danger threatened the breeding grounds of these birds. A general survey of the flora and fauna of Ladakh, where no systematic work on natural history was done since the thirties, formed of course, the supplementary objective of the expedition.

Our first halt was Sonamarg where we stayed overnight at the High Altitude Warfare School with the picturesque background of the lofty snow peaks. The lush meadows around the School displayed a wealth of familiar Kashmir flowers, like buttercups, forget-me-nots, bird's foot trefoil, anemones and primulas. Gold Finches and Gold-fronted Finches flitted around, and beyond on the banks of the Sind river were seen Rufous Turtle Doves, Hodgson's Pied Wagtails and Whitecapped Redstarts.

This familiar world of lush meadows, high stands of fir and spruce, and delightful birds afforded a contrast to the one which we were about to enter. As the ascent towards the Zoji La began, the slopes became increasingly barren, outcrops of rock more frequent, gullies and ravines hidden under snowdrifts of larger and larger dimensions until at the top of the pass the road had to be hacked through an enormous snow-drift almost



Leh environs

*Photo:*

Prakash Gole

two-storeys high. The Zoji La may be regarded as a portion of the boundary between two zoogeographical regions—between the Himalayan subregion of the Indian region and a portion of the Palaearctic region.

Beyond the pass the ground fell away gently, almost imperceptibly, and we gradually emerged from the sleet and fog that surrounded the pass, to witness a mass of low barren hills, with broad pastures in the valley in which grazed ponies attended by the Redbilled Choughs. Our vehicles chased off the road two fully gorged Himalayan vultures—too heavy to fly—as if these

had no place in the regions we had entered.

In the gold finches and the gold-fronted finches we had already seen our first Ladakhi birds. These were found to be common up to medium heights in Ladakh—around Kargil and Pushkyum, and again at Tangtse (4500 m) where they fed on the willow blossoms around our barracks. But our first typical Ladakhi bird was undoubtedly the Magpie, which was common around cultivation and human habitations—garrulous and pugnacious when out and abroad, suave and well mannered when courting his mate atop our barracks in Kargil. Among the



precipitous cliffs and boulder-strewn screes, among willows, poplars and apricot groves and among immense blossoms of wild rose the meeting with common birds of the Indian plains seemed a remote possibility. Not a little disappointing, therefore, were the chirping, noisy throngs of the common House Sparrows that greeted us in Kargil and Pushkyum. The sparrow appears paces ahead of even the magpie which was met only in the valleys below 3500 m, while the former was present even at Tangtse (4500 m) along with the Snowfinch and the Raven. The sparrow is not the only bird that reminded one of the plains. The familiar Redstart, Hodgson's Rosefinch, the Golden Oriole and the ubiquitous Hoopoe could be seen right up to Leh. A Collared Bushchat was last seen in Kargil and not thereafter. Indeed the Common Redstart competes with the Short-toed Lark as one of the commonest birds of Ladakh. Again the Plumbeous Redstart was to be seen up to Kargil and not beyond while the Whitecapped Redstart was even noted just below the Chang La at a height of approximately 16,000 ft or 5000 m, the highest limit to which it is normally known to ascend.

It was near the Chang La (5600 m) that we first met the typical high-altitude birds of Ladakh, namely the Robin Accentor, the Horned Lark, the Desert Wheatear and the Himalayan Mountain Finch. The last named was found

associated with alpine pastures, stony slopes, and flat plateaux at altitudes well above 4800 m.



Raven in Ladakh

Photo:

Prakash Gole

The lovely Robin Accentor was seen commonly associated with Caragana (Tibetan furge or *Tama*) and generally not far from streams. It was first seen near a mountain rill below the Chang La, then near the streams at Phobrang, Chushul, Puga and on the banks of the large stream that joins the Tso Morari from the north. In one of the hollows on the banks of the Chushul stream a pair was building its nest, while near the Tso Morari stream it nested under the protective cover of *Urtica*, the nettle that inflicts a severe itch on whosoever touches its leaves. Incidentally, some marmots were also seen to take advantage of this protective cover.

The other finches like the Tibetan Snowfinch and Blanford's Snowfinch as well as the Desert Wheatear were usually seen on the high, stony plateaux or broken scree and even on boulder-strewn sandy banks of streams and lakes. Tibetan Snowfinches were even observed around cultivation and nested in the boundary wall of a field near Tangtse, while a Desert Wheatear was seen to nest in a cavity in the wall of a dilapidated barrack. In a word, these birds had a far greater range than the typical high altitude birds.

At Tangtse a twittering Tibetan Snowfinch rose in the air like a lark, calling softly, soared higher and higher and with wings aquiver came down with a dive to alight on a small boulder in the field. His display reminded me of the display of the familiar Redwinged Bush Lark. Blanford's Snowfinch was seen only twice, once near the Tso Morari and once on a high plateau above Puga. These high plateaux of Ladakh support very little vegetation except Caragana and a short spiky grass that grows in the sand. Arabis (?) and Astragalus shrubs were seen to carpet stretches of sand for miles together. Caragana affords nesting sites for the Eastern Twite, and the Great Rosefinch, while the young ones of the Tibetan Hare shelter in its thickets. Its yellow flowers provide food for the Tibetan Partridge.

Salt puddles and bogs are a feature in the flat, sandy plains between mountain ranges in Ladakh. The great lake Tso Kar has now been reduced almost to a sterile salt marsh. Very little birdlife was to be seen there except a few pairs of Brahminy Ducks with ducklings, Lesser Sand Plovers which picked up tiny insects on the mudbanks and the Redshanks. A Redshank nest with four eggs was found near a puddle concealed in a grass clump in the salt marsh to the east of Chushul. Common Terns were also seen to hover and look for food over the stretches of these marshes.

Ladakh's mighty lakes, the Pangong and the Tso Morari are also brackish and hardly support any life. But wherever freshwater streams join them, birdlife flourished. On the stream that joins the Pangong from the north, scores of Brahminy Duck along with ducklings, Common Terns, Brownheaded Gulls and Barheaded Geese were seen.

The large stream that joins the Tso Morari from the north has created a broad stretch of fresh water separated from the main body of the lake by a dead weed mass. In this freshwater lagoon were found the Great Crested Grebes and Brahminy Ducks and scores of Barheaded Geese which probably nested in the adjoining patch of the bog. In the freshwater puddles in this bog were feeding the Common and the



Caragana bushes in the foreground, Chushul, Ladakh

*Photo: Prakash Gole*

Green sandpipers, while a pair of terns quartered the sky.

In summer the melting snows pour water into shallow depressions in the valleys, creating freshwater lakes of no mean dimensions. These support birdlife both varied and numerous. Startsapuk Tso, the freshwater lake that empties into the Tso Kar, was the only place where we witnessed birds in their hundreds. More than 300 Brown-headed Gulls with their young ones floated over its surface, while numerous Brahminy Ducks and Bar-headed Geese were scattered in all of its corners. On its floating dead weed masses nested the Great Crested Grebes while the surrounding marshes undoubtedly supported nests of the gulls, Bar-headed Geese and scores of Short-toed Larks and Yellowheaded Wagtails. Redshanks,

sandpipers and a lone Grey Heron were the other birds noted on and around this lake. Surprisingly enough we saw small flocks of the Garganey Teal also. Were they on their autumn passage? Or did they nest on this tundra-like bog? For, an unidentified nest with a clutch of 12 creamy eggs was seen on Startsapuk Tso.

The freshwater lake near Chushul was the haunt of the Redshank and Barheaded Geese, while marshes surrounding it supported numerous families of Yellowheaded Wagtails. The only eggs of the Tibetan Crane we saw in Ladakh were the ones taken from a nest situated in this marsh, rifled probably by the collectors. The lovely Afghan Redstart was also seen here. The green pastures surrounding this marsh afforded sustenance to many a



Nest of a Buzzard at Puga

Photo: Prakash Gole

flock of sheep which were fraternised by the pair of Tibetan Cranes.

At Hanle, the extensive freshwater marsh supported another pair of Tibetan Crane, more fortunate than the former because their only chick had remained hale and hearty and even survived the intrusion of the field naturalists on the privacy of the family. Besides Large Callandra Larks and Yellow-headed Wagtails, many Short-toed Larks nested in this marsh which fell under the searching scrutiny of a Redtailed Buzzard.

A rather surprising aspect of the birdlife in Ladakh was the scarcity of birds of prey. Except for an occasional Kestrel and some unidentified falcon that swept past a cliff defying observation, the buzzard was the only killer bird noticed by us. This, notwithstanding the abundance of small mammals (voles and mouse-hare) and lizards everywhere. A buzzard pair nested

on the ledge of an inaccessible cliff about 100 m above our camp in Puga, their nest containing a young almost ready to fly. In spite of the presence of large concentrations of breeding birds on Startsapuk Tso and Tso Morari, we failed to notice any bird of prey in their vicinity.

The crows were represented not only by the Raven but also by the Carrion Crow. Around Leh the latter predominated while their ranges overlapped at Dungi on the Indus, a place more than 4000 m high. Higher still at Puga on the Tso Kar and the Tso Morari only the raven was noticed. Lämmergeier, a scavenger rather than a bird of prey, was also observed only twice—once in Chushul and once on the Tsaka La.

The distribution of the choughs, high altitude birds *par excellence*, also appeared to be somewhat erratic. On crossing the Zoji La, the Redbilled Chough was noticed al-



#### Mouse Hare in Ladakh

most immediately. From here to Kargil and Moulbekh on the Wakha stream, it was our companion, while at Bodh Kharbu (3500 m) near Namki La, we were suddenly greeted by flocks of the Yellowbilled Chough. These were completely absent in the vicinity of Leh, reappearing again just below the Chang La and at Tangtse. From then onwards we did not see a single Yellowbilled Chough till we came to a post in the sandstone gorge of the Indus, just short of Upshi on our way back to Leh. One curious thing that attracted notice was the presence of these birds around army outposts away from villages, cattle and cultivation.

Let me end by noting some more peculiarities. We saw the White-breasted Dipper only once on the stream that joins the Tso Morari. A British expedition noted it also once at approximately the same height near Leh. Possibly, in summer it breeds in Ladakh around 4500 m and seldom lower. Inciden-

*Photo: Prakash Gole*

tally, I found the bird extremely scarce in Kashmir during a recent visit. Probably around the same height snow conditions in Kashmir even in summer may prove a deterrent to its breeding.

Besides Brahminy Ducks, the only other duck noted by us were the Garganey Teal, Goosanders, Tufted Pochard and possibly a Pintail. The latter three were seen only on a brackish lake near Dungti. The goosander was said to breed in Ladakh. Do they still breed there? Or have their numbers drastically reduced of late? We did not come across a single Snowcock, while the Chukor and the Tibetan Partridge were just glimpsed. It is possible that in summer the Snowcock moves even higher. But are the game birds of Ladakh also facing possible extinction like the Bharal, the Snow Leopard and the Tibetan Gazelle? Only repeated visits and longer investigations can provide the answer.

PRAKASH GOLE

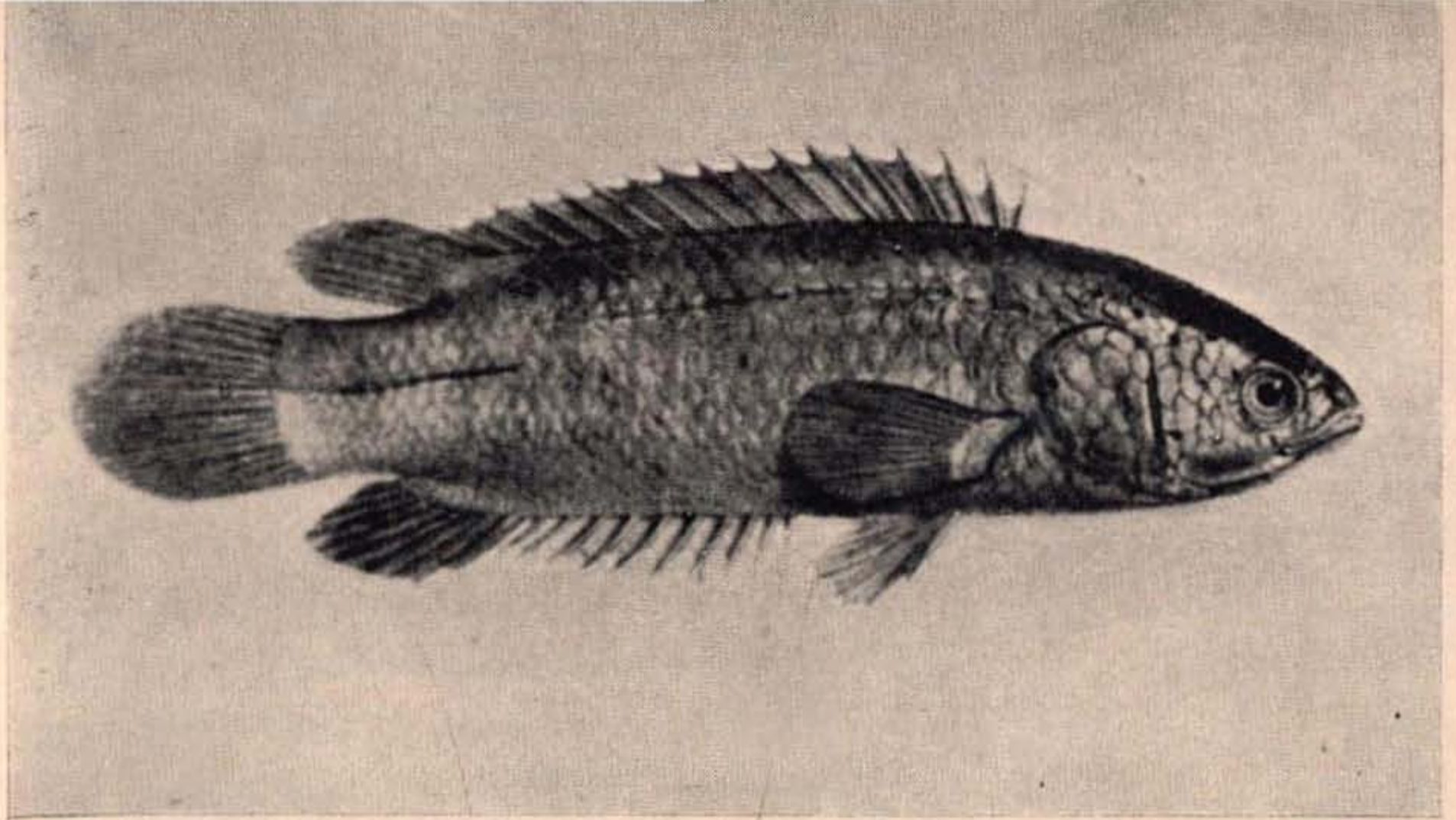
## Does a Climbing Perch really climb ?

Students of Ichthyology can hardly afford to forget the Climbing Perch (*Anabas testidineus*) which figures in almost every text book. It is a native of India and Malay Peninsula and is known as *Koi* in Bengal, *Khajuri* in Bombay and *Panai feri* in Tamil Nadu—possibly *panai yeri* which means in Tamil 'one which climbs a palmyra palm'. But does the Perch really climb? This has always been a question lingering in my mind, though Mr Ranga-swamy Moodaliar's assertion was accepted by Jordon in his book *A GUIDE TO THE STUDY OF FISHES* (p. 367), as a convincing evidence in this controversy. Mr Moodaliar writes: "... when there are palmyra trees growing by the side of a tank or pool, when heavy rain falls and the water runs profusely down their trunks, this fish, by means of its opercula which move unlike those of other fishes, crawls up the trees sideways (i.e. including to the sides considerably from the vertical) to a height of from five to seven feet, and then drops down. But Dr B. K. Das, as quoted by Norman in his book *HISTORY OF FISHES* considered it erroneous to attribute to this fish scansorial powers. Dr S. L. Hora also does not record any first hand knowledge on this topic, but reports large scale migration of the fish on land. My personal observations, however, corroborate the views of Das regard-

ing the ambulatory capacity of the fish.

In 1944 the first evening of the monsoon season was heralded with a crack of thunder storm and rain. It continued drizzling intermittently almost throughout the night and the morning also was thoroughly wet with overcast sky. With the usual anxiety about the conditions at the departmental tank at Bandra, I visited it early at dawn. To my surprise I found the watchman's boy holding a small tinful of fish and looking around for more. I burst forth 'You fool; instead of preventing theft you are yourself committing theft?' 'No Sir' he replied. 'They were running away from the pond.' What a wonderful story! Who would believe it? I had however, to restrain myself when I realised that the famous climbing perch was involved. The boy continued: 'They came out of the tank and were climbing the steep slopes of the bund.' I had then no reason to doubt or believe him straight-away without actual experience.

I visited the tank again on the following morning to see the phenomenon, but was disappointed as the typical meteorological conditions did not prevail then. After another two years, in June 1946 I was lucky and I could distinctly see the fish leaving a body of water and crawling (struggling) on the grass ap-



### Climbing Perch

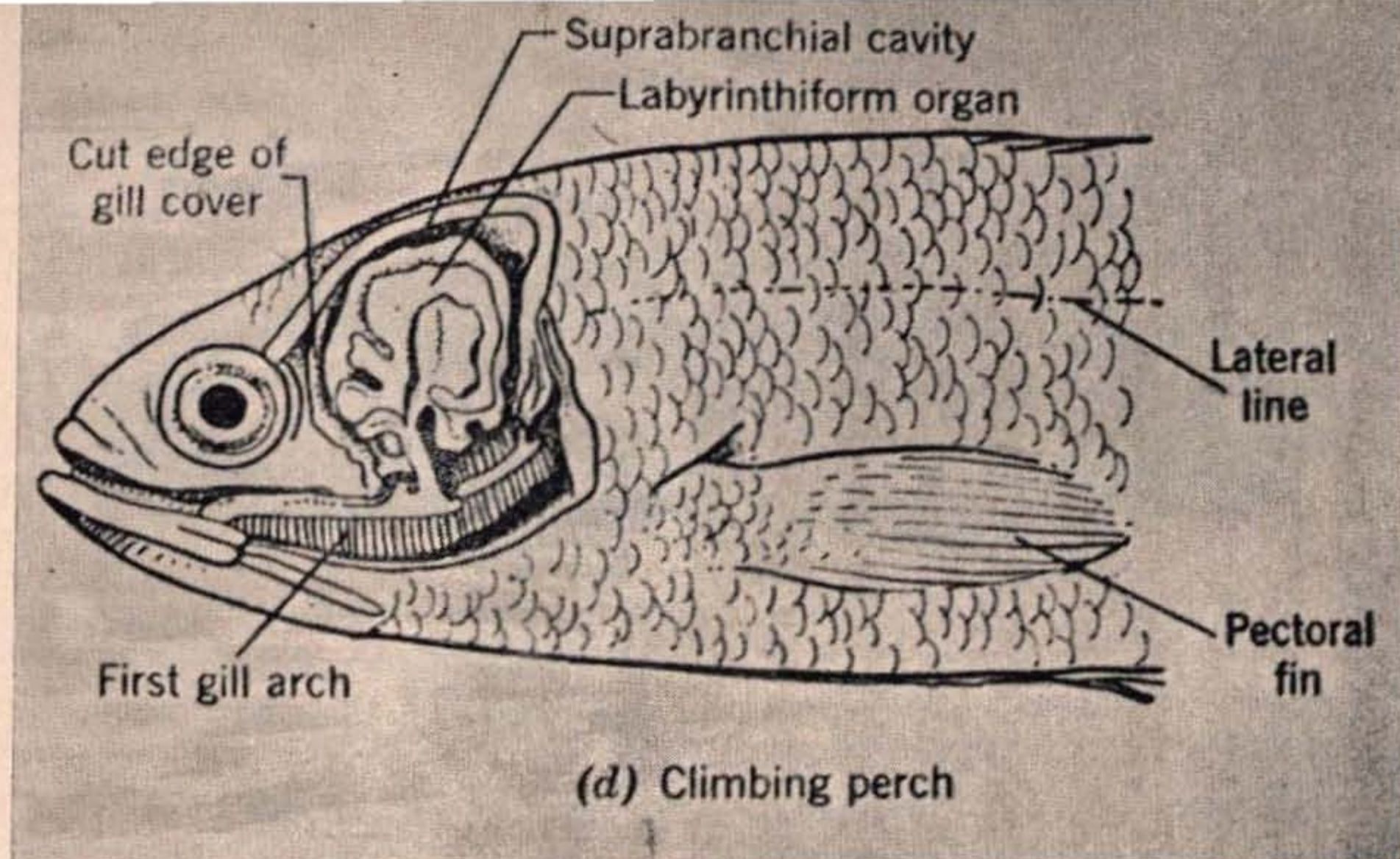
parently in an attempt to migrate to new sheets of water. It was using largely its toothed, and movable operculum, and the anal spine as an anchorage alternately to thrust its body forward, somewhat in a serpentine manner. This is undoubtedly a very interesting case when a fish voluntarily leaves one sheet of water and undertakes a journey on land in search of another. It is true, similar migration has been reported in the case of murrel also, about which an account was published in the *Journal of the Asiatic Society* 1839, p. 556, and in the book *FISHES OF INDIA* by Dr Francis Day.

Mr Moodaliar's description appears to be realistic, though difficult to believe. Earlier, in 1707 Mr Daldorf, a lieutenant in the service of the Danish East India Company at Tranquebar, as quoted by Jordon (p. 367) had reported the climbing habit when he himself recalled hav-

*Photo: P. V. Dehadrai*

ing taken one of these fishes clinging by the spine of its operculum in a slit in the bark of a palm tree. Rev. Mr John, a missionary resident in that area also supported these observations. Though these records appear to be very dubious, no recent observations on this issue have come to my notice. I would therefore request our readers and other observers to report to the editors if they have seen anything about the climbing capacity of this fish.

For information of our young readers I may mention that the 'climbing perch' is well known for the possession of an accessory respiratory organ for aerial breathing. The latter is a highly branched multiplate cluster-like organ or a virtual labyrinth (see figure). The plates are covered by folds of respiratory epithelium or a thin layer of cells below which innumerable blood vessels ramify. The whole structure



#### Air-breathing organ of the Climbing Perch

is derived from the first gill arch of the fish and occupies a wide pocket situated in the upper portion of the operculum or gill chamber. When the fish desires to breathe, it does not take water in the mouth like other ordinary fish but comes to the surface of water and gulps a quantity of air. When the gill chamber is closed the air is forced into the aforesaid labyrinth or the respiratory chamber where, like higher animals, carbondioxide from the blood corpuscles is got rid of and oxygen absorbed. This oxygenated blood then passes to the heart, brain and the body. The *Anabas* is so specialised for this type of air breathing that if it is not allowed to reach the surface of water to take air, it gets drowned, i.e. asphyxiated.

The above climbing perch or *Koi* is a very popular edible fish in West Bengal, Assam and other north-eastern parts of India. At present

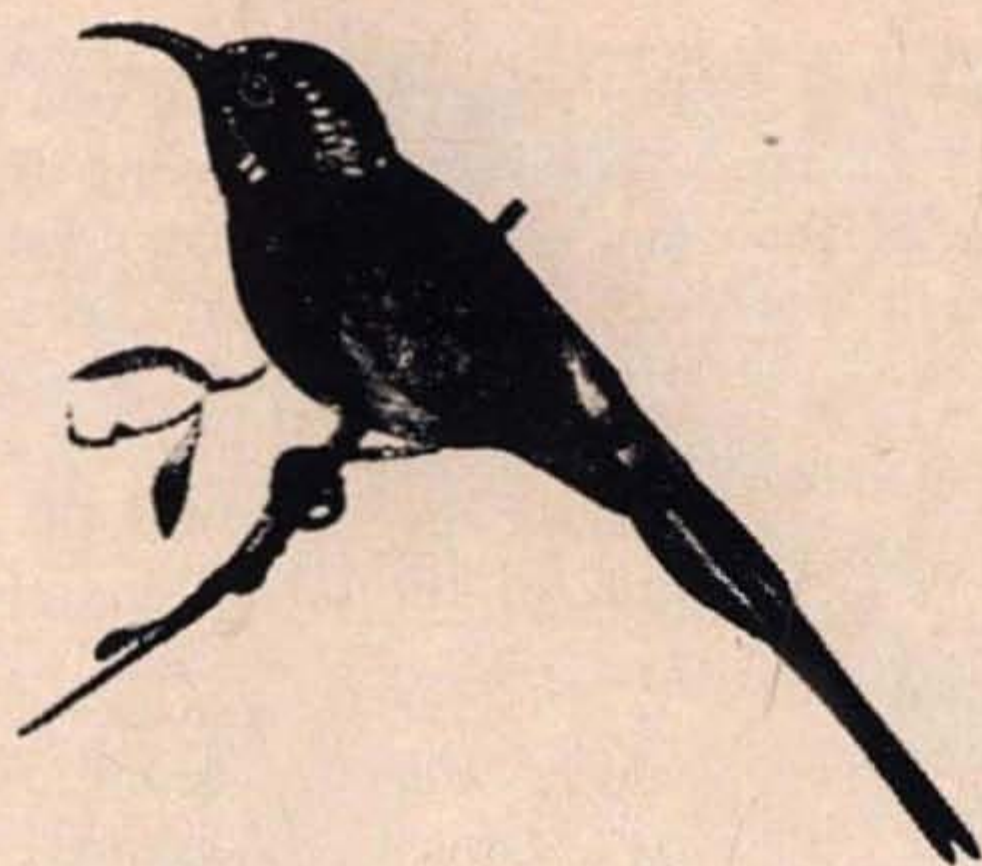
After Jordon

intensive efforts are being made to cultivate it on a large scale in fish farms in that region.

C. V. KULKARNI

*Dr C. V. Kulkarni unearthed the MS. of this note which he had prepared more than 30 years ago, and which he had not offered for publication in the intervening years. The Climbing Perch was then common in most of the tanks in the Bombay suburban area. Besides being used as a food item, it also served for beginners as a hardy aquarium fish, and was being hawked about Bombay city in small glass jars. With the filling of the suburban tanks the Climbing Perch has now disappeared, and even in permanent sheets of water like the Powai, Vihar and Tulsi lakes it is rarely seen. It is feared that the fish has vanished from our area, and its smaller cousin, the Choti khajuri (*Macropodus cupanus*) has followed suit. Information and notes on these fish from readers would be welcome. — EDS.*





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## The 'Golden' Takin

As one of the world's rarest living animals representing a breed facing extinction, the Takin is one of the most sought after zoo-prizes in the animal kingdom.

In a letter dated 24 September 1970, Mr. H. B. House, Associate Curator, Mammals, Bronx Zoo, Bronx, New York informed the writer that Bronx Zoo paid \$16,000 for a male takin in 1966 and \$10,000 for a female takin in 1968 to Frederick J. Zeehandelaar, an animal dealer of New York. Mr. Zeehandelaar recounted in "A Heart Attack Business" in *Zeebon-go*: "In 1966 a friend told me that the zoo in Rangoon, Burma, had a male takin less than a year old which they would consider exchanging for other animals. I was not interested in the kind of deal which would involve me in sending animals from Africa to Rangoon and then swapping them for the single takin that would be shipped to New York. Obviously, the least complicated deal would have been cash. So I offered the Rangoon Zoo all kinds of monetary inducements—but the answer came back on wires that read *no*. In the end the only way I could get delivery of the takin from Rangoon was first to ship them, in exchange, two giraffes and four zebras from Africa. Based on an estimate of my costs to bring the giraffes and zebras from Africa to Rangoon and subsequently to ship

the takin from Rangoon to Bronx—insuring and paying for feeding and care of the animals all the while—I quoted the zoo an offer of \$16,000 for the takin, and again fervently hoped they say no. To my chagrin they accepted the offer and ordered the takin."

The most remarkable animal which Brian Hodgson, Her Majesty's Government representative in Nepal named was the takin. In 1846 a Major Jenkins, the Governor General's representative in Assam sent him an imperfect specimen which was followed by good examples of both male and female.

Heavily built and entirely lacking the lightness of limb and body to which Serows and Gorals, the other two 'goat-antelopes' owe their activity, takins are slow and deliberate in their movements and both ascend and descend rocks in a ponderous manner without any of the spring observable in mountain goats and antelopes. These features, however, which, apart from the horns, detract most from their likeness to serows and gorals are the ears, which, instead of being long and as has been expressed donkey-like, are quite short and broad with a nearly semicircularly rounded upper rim and a much straighter lower rim. Finally the muzzle instead of being bare, slimy and wet above, at least half way back to the cor-



Female Takin at the Bronx Zoo

*Courtesy: New York Zoological Society*

ner of the nostril, is covered with short hair above, only the front of it and the area around the nostrils being naked.

In Burma takin are fairly common locally and, at certain seasons, collect to form large herds. According to local information they keep near the snow line between 8000 and 10,000 feet during the rainy season and hot weather, and come down even lower with the snowfall during the cold season.

The primitive hill tribes of Lisu, Lashi and Maru prize these beasts for food. To them takins are wild cattle. Wrestling a living out of the bleak rocky land, takin meat is their main source of protein. These 'goat-antelopes' conceive only one offspring at a time. Although usually found alone or in small troops, it seems that in June they collect together in large numbers. The hill tribes shoot takin with arrows tipped with aconite poison as the takins congregate in large numbers round hot springs for drinking the water. All dead takins are not retrieved. Finding that the hill tribes would virtually decimate the takin herds completely the Kachin State government in 1958 decided to export takin calves to scientifically conducted zoos in foreign countries for captive breeding.

The hill tribes were told that takins are valuable and to avoid killing these valuable animals for the pot. The Kachin State government at the same time assured the hill

tribes that government would render all possible help to export these valuable animals to foreign zoos.

A number of takin calves died shortly after capture in the first ventures. Mr E. H. Tong, Director, Whipsande Park, England was consulted. Acting in accordance with Mr Tong's advice takin calves which had weaned or about to wean were captured by teams of able-bodied villagers.

In July 1958, a team of four Nung hunters from Sankawng village, captured a female takin calf about two months old on our north-western frontier with India. The exact locality is not known. Sankawng village is situated at 27°6'N., 97°15'E.; altitude 2700 feet above sea level. The capture was organized by the headman of Sankawng. By May, the glacier fed rivers in the Kachin State are not fordable. A camp for the capture of a takin was prepared before May. Sufficient provisions to feed four able-bodied men for a period of two months were dumped by the villagers. The calf after capture was kept at the camp for acclimatisation, when the trappers were satisfied that the calf had been sufficiently domesticated and strong enough to stand the long journey back to Sankawng village, a distance of 100 miles, it was carried by two men in shifts all the way home.

Mr Oliver Milton and Mr Richard D. Estes, members of a Wild Life Survey Mission who were at



Takin male calf and female

*Courtesy: New York Zoological Society*

Myitkyina in January 1959 flew to Putao and then proceeded to Sankawng village. On behalf of the Bronx Zoo, Mr Milton struck a deal with the headman of Sankawng village. The deal was finalised and a sale deed was executed by U Zan Hta Tin, Parliamentary Secretary, Kachin State government, at Myitkyina. The villagers received Kyats 6000.00. The takin calf was brought down from Putao to Rangoon by Union of Burma Airways. Bronx Zoo paid the airfreight.

The takin calf was first shipped by plane to Hamburg, Germany, via Holland, where it was quarantined for 60 days and then taken to the Department of Agriculture Quarantine Station in Clifton, New Jersey, for the next 30 days and finally released to the Bronx Zoo.

On 15th May 1959 four Lishu hunters during a hunting trip on Lung Khu Madin (1030) range, the headwaters of Namlan river in Putao subdivision, came across a herd of takin which took fright when driven by them leaving a baby takin. The baby takin was taken to the village and reared by the villagers. On visiting the area the Administrator General, Frontier Areas Administration, took over the animal paying the villagers a reward. Weighed and measured on 3rd November 1961, at the age of 20 months she scaled 225 lb. with a height of 3 feet 2 inches and body length of 4 feet 6 inches.

On 15th February 1962 at a ceremony held at the Zoological Garden, Rangoon, Brigadier Aung Gyi, Vice-Chief of Staff handed her over to the Ambassador of the People's Republic of China as a gesture of goodwill. She is the second takin to be exported from Burma and is to be the companion of a 'golden takin' in the Peking Zoo.

The Assistant Resident, Putao, furnished the writer with the following information. The four Lisu hunters received Kyats 1500.00 as a reward. Lung Khu Madin is situated at 20°31'N., 97°45'E.

This takin has been identified as Szechwan or Golden Takin *Budorcas t. tibetana* Milne-Edwards by the Chinese zoologists at the Peking Zoo.

Since 1963 Rangoon Zoo has had a pair of Mishmi takins *Budorcas t. taxicolor*, both of which were captured near Putao. In January 1966 the takins mated, but the female aborted after three months of pregnancy. However, the takins mated again in September 1966 and on 1 May 1967 the female gave birth to a male calf after a gestation of between 200 and 220 days.

The old female which reached Bronx Zoo in 1959 died on 4 September 1975, when she was approximately 17 years old.

Rangoon, Burma

TUN YIN

# CONSERVATION ACTION

## Mathura refinery

The Government of India has recently proposed to set up a giant oil refinery complex on the outskirts of Mathura town in Uttar Pradesh. The location of such an industry approximating not only some of India's priceless historical monuments, but also one of the major waterfowl reserves in the nearby Bharatpur has caused an understandable concern among

those connected with Nature Conservation in India. Therefore it is heartening to note that the Government of India, fully alive to the Conservation needs, is giving due attention to safeguarding the Taj Mahal and other monuments around Mathura against potential damage by water and atmospheric pollutants released from the refinery. An expert committee has been set up to advise the Government on the environmental impact of the refinery.

It is felt that it would be absolutely essential that precautions recommended by the committee should be exercised with scrupulous observance of the strictest code of conduct. A regular biological monitoring programme should be set up to detect and identify possible ecological damage so that appropriate remedial action may be taken in good time if necessary.

The Bombay Natural History Society already has a plan for monitoring hydrobiological conditions in the Bharatpur Sanctuary. However, considering the gravity of the hazards involved, it is generally felt that, other things being equal, it would be prudent to shift the site of the refinery elsewhere rather than expose the priceless monuments and ecological niches to the risk of irreparable damage.



Will Mathura Refinery destroy India's best bird sanctuary, the Ghana in Bharatpur?

Photo:

E. P. Gee

### **Endangered pheasants**

The World Pheasants Association held its second International Convention recently in England and France to highlight the conservation needs of the endangered Galliformes of the world. About 250 participants from 26 countries, including Nepal and Pakistan, attended the meetings. Various problems connected with the conservation of pheasants were discussed and guidelines were drawn up for the future conservation programmes.

The Convention resolved, among other things, (a) to generate regular status surveys of endemic species, habitat studies and preservation ; (b) international collaboration in developing the necessary technology; (c) education of the public by all means; and (d) exercise of great caution in introduction of new species in view of the damage which such introductions have already done in many places.

### **Skin trade**

The volume of clandestine trade in animal products, ironically, can

provide some degree of information on the population status of our wildlife. From time to time Society's services are requested by the Customs authorities to examine confiscated animal skins and other animal products offered for export by commercial establishments.

About two years ago, a customs haul examined by us included 90 freshly tanned leopard skins allegedly confiscated from a country craft off Calcutta coast. Among the confiscated material was a coat flaunting a price tag of Rs. 3000/-, made up of at least three Clouded Leopard skins.

A recent consignment sent in by the Delhi Customs for examination contained about 350 handbags and wallets made out of Ratsnake skins bound for West Germany. There was also an order for 10,000 Whip-snake skins. Both the Whip-snake and Ratsnake are not covered by export ban applicable to snake skins. Export of snake skins is now completely banned.

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**Some Beautiful Indian Climbers and Shrubs**, by N. L. Bor and M. B. Raizada. 2nd (revised) edition.



## Competition in nature

That conditions in nature keep changing and tilt in favour of one or the other of the competing species is well illustrated by the growth of two monsoon plants *Hyptis suaveolens* (Labiatae; *Wilayati tulsi*) and *Smithia sensitiva* (Leguminosae; *Kaola*). The former an alien, native to Tropical America and the West Indies was introduced into Tropical Asia as a garden plant and has been recorded in the early years of the century as grown in gardens or sometimes found as an escape. It has now established itself as a weed in open areas in forest lands where it has been gra-

dually replacing the indigenous *Smithia*. For instance the last year in which the indigenous *Smithia* was the dominant ground cover at the Borivli National Park, Bombay, was 1971. Since then the areas covered by *Smithia* during the monsoon rains were profusely covered by *Hyptis* up to the monsoon season of 1976.

The only checkmate of *Hyptis* appeared to be the parakeet, hordes of which descended on the weed from December onwards to feed on the dry nutlets of the plant. The parakeet too as a check has its



A stand of *Smithia* at Borivli National Park

Photo: S. R. Nayak

limitations. While the Roseringed clambered among the dry stems of the weed prizing open the pods and dropping the damaged nutlets on to the ground thus preventing their germination, the Blossomheaded Parakeet broke off dry stems and carried them to a perch before starting to feed, and in the process widely dispersed the seeds.

*Smithia* has now staged a come back during the 1977 rains. Vast areas once covered by *Hyptis* are

now devoid of the weed, or an odd plant or two stand in areas where *Smithia* now grows in hitherto unknown profusion. Even along the kerbsides of Greater Bombay, a lone *Smithia* hardly a couple of inches high is seen popping up. The factors during the 1977 monsoon which have favoured *Smithia* are unknown. Readers' comments and/or experiences in this or in similar instances are welcome.

EDITORS



Smithia in flower

Photo:

S. R. Nayak

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