

HORNBILL



BOMBAY NATURAL HISTORY SOCIETY

STARRED TORTOISE

The starred tortoise is the commonest among the four species of Indian land tortoises and was popular in the pet trade until the timely ban on its sale. Its distribution ranges from the semi-arid tracts of the Peninsular India and westwards in Gujarat and Rajasthan up to Sind in Pakistan.

Though inclined to be a vegetarian they are known to feed on snails, animal and bird excreta and carrion too. Early mornings and evenings are spent feeding on fallen fruits, grasses, succulents and similar vegetation while the day is spent under cover. Only during monsoon the tortoises are out all day for it is their breeding season. Males shove each other vigorously trying to make the opponent "turn turtle".

The female digs a pit laboriously with her club-shaped hind legs and lays about 3 to 7 white hard-shelled eggs. The pit is filled in and tamped down to be indistinguishable from the surroundings. The eggs hatch within 147 days. By the third rains after its birth the hatchling is big enough to be out all day looking for a mate.

The photograph on the cover is by Mr. I. D. Kehimkar.

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.

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EDITORIAL

If one is to use its potential to cause damage as the criteria for valuation, the Whitebacked Vulture is the most valuable bird in India today. Each Whitebacked vulture is worth at least 25 million rupees, the price of an 'Airbus' plane engine, or 100 million rupees, the price of a fighter plane, for vultures are the major cause for bird strike plane accidents in India. Individuals from vulture flocks in the flight path of the jet planes often get sucked into the jet engines with disastrous results both to the engine and the bird. So far there has been no major accident or loss of human life from bird strike to civil transport planes but the potential remains. In the case of single engined military planes the situation is tragic and many lives have been lost. It is in this context that we view with grave concern the apathy of the authorities concerned with the execution of measures for the safety of the men and machines

that use the Indian air space. The Society has been involved in the search for a solution to the problem and basically the answer is very simple: Keep the environment of the airport clean. But apparently this is an almost impossible task for those charged with this duty: Municipalities and other civil authorities show an appalling callousness in permitting open air dumping of animal carcasses in the vicinity of airports, attracting thousands of vultures and other birds of prey. The most deplorable example of this callousness is in the capital of the country, New Delhi. On any day over 4000 vultures can be seen in the municipal offal dumping grounds of the city. New Delhi still does not have a modern abattoir though one has been in the planning stage for several years. While the authorities procrastinate, sudden death stalks those who man the country's air defence.

Worth millions on the wing



FEEDBACK

“To change or not to change? That is the question”

The President's Letter on the subject of changing the name of the Society, *Hornbill* October-December, 1981 (4) brought in several letters from members. Members from both within the country and outside have expressed their opinion. While some are agreeable to the dropping of the parochial sounding “Bombay” in the Society's name in favour of “something with a wider connotation”, others specially the older members are opposed to changing the name of the Society in any form. Excerpts from letters received are reproduced below.

MOMBASA (NYALI)

To the “very tentative suggestion that the Society should ‘upgrade’ its name to INDIAN NATURAL HISTORY SOCIETY, I would very strongly advise against any such action. Some years ago the South London Entomological and Natural History Society changed its name to the British Entomological and Natural History Society for the same reasons as have been put forward for the change of ‘Bombay’ to ‘Indian’ — a larger catchment area for members and the less parochial name might result in grants and financial support from a wider field. The change was made but none of the hoped-for results came about and the Society lost the advantage of a very old and well-known title.

After all, it is not much use changing a title from ‘Bombay’ to ‘Indian’ or ‘South London’ to ‘British’ if the Society's headquarters and collections remain at the old address.”

D. G. SEVASTOPULO

November 29th, 1981

DIST. KULU, HIMACHAL PRADESH

“I am of the opinion that the controversy over the change of name of the Society is irrelevant. The name has no relevance to the objective and the working of the Society. Its antiquity should be maintained, and the purpose of the Society be better explained to people in all institutions etc. It has the same nomenclature status as the Zoological Society of London. I am for ‘NO CHANGE’.”

S. B. RAIZADA

District Fisheries Officer

May 19th, 1982.

NEW DELHI 110 011

A factor that carries some weight concerns the nature and scope of the Bombay Natural History Society's interests which cannot be confined within political or administrative (or other terms for ‘National’?) boundaries, though such limits are indicative of the concentration of its activities. Our interests can and do cover localities many hundreds of

miles beyond India's borders and these ranges will increase. Changes in the name to indicate All-Indian or South-East Asian scope of our activities do not appear to be called for in an organisation like ours, which is so well known.

This aspect has to receive due consideration before any changes are made.

F. C. BADHWAR

April 26, 1982

SANDUR, KARNATAKA

The Society's name needs to be changed with a wider connotation and I suggest National Institute of Natural History.

Y. R. GHORPADE

April 27, 1982

COLOMBO, SRI LANKA

The name of the Society should not be changed though it may be something of a disadvantage in attracting a larger membership and much needed funds, and though the next year Centenary might present a good opportunity for a name change.

Even with its present and long established name it should be possible to recruit new members from amongst the many thousands in India that could be expected to be attracted to it on the basis of its aims and purposes. The same is no doubt true of fund raising, be it from private individuals, firms, Trusts, State and Central governments. It is after all mainly a matter of putting across the nature and character and

activities of the Society, irrespective of its venerable though somewhat parochial name.

I could be quite happy as a member of, for instance, the Indian Natural History though rather not of a National Institute of Natural History.

T. W. HOFFMANN

May 11th, 1982

DIST MONGHYR, BIHAR

I am of the firm opinion that the Society's name must be changed to National Natural History Society of India in order to provide it a National stature and look.

K. S. SINGH

May 11th, 1982

RAJKOT, GUJARAT

Any institution keen on retaining dynamic qualities must be prepared to change and remain in tune with circumstances. Sentimental attachment to the past inhibits growth. It is meaningless to cite example of Zoological Society of London because India is not England and Indians are not Englishmen.

Change of just one word in the Society's name and making it Indian Natural History Society should be acceptable to all concerned about continuous growth of the Society.

KISHOR K. GOHIL

May 21st, 1982

BALLIGUDA, DIST PHULBARI

Since the Society's activities have extended in several directions of

Natural Sciences it is imperative to give the Society a name and status which will not create the slightest doubt that it belongs to Bombay City or area. I had the same feeling about the Society some years back. It will be rational and judicious to change over the name of the Society at this stage and give it a National and an International connotation.

Such a change will definitely be a substantial help in raising funds. I am of the opinion that the new name should be the Indian Institute of Natural History.

P. K. DAS

June 2, 1982

NEW DELHI

I abhor alterations in Historical names, unless one is assured that the change will cause no injury to the sense of obligation that one owes to the past. In the present instance, if the Society is renamed Natural History Society of India (which I would favour) no such harm will be done. It will only confirm what it has been functioning for the past several decades. I would deprecate a change from 'Society' to 'Institute', or the overt introduction of the concept of Nationalism by using the terms 'National', or even 'Indian' instead of "of India".

BADR-UD-DIN TYABJI

June 8th, 1982

ADYAR, MADRAS

I would prefer the name of the Society to be changed to Indian

Natural History Society.

A. RAJARAM

June 11th, 1982

BHARATPUR, RAJASTHAN

In recent years the activities of the Society have diversified to such an extent that it is worthwhile to think about a change of name. The change from the parochial sounding 'Bombay' to something of a wider nature is worth discussing. I feel that National Institute of Natural History sounds best and is more relevant in the chain of National Laboratories or Institutes coming up all over the country. As there exists no such institute till date the change over to the name suggested will be most appropriate and help draw more naturalists to its fold.

K. K. MOHAPATRA

August 7th, 1982

CAMBRIDGE, ENGLAND

Much as I agree that the present name is misleading, because the Society's activities extend beyond the geographic region of the Bombay area, I feel that change is not warranted on two accounts.

1. The Society has built up an international reputation of some significance over the last century, so that by now its activities are known to those involved in wildlife matters. Therefore, there is no real need to change the name in order to explain the Society's geographic scope.

2. If the name were changed to something more general (e.g. Indian Wildlife Society) greater anonymity might result than is the case at present, quite apart from the confusion

which would be fostered initially.

M. J. B. GREEN

August 9th, 1982

NEW DELHI

I am writing to express my pleasure at having 'discovered' the Bombay Natural History Society. Though I will not become a member till October (on the promptings of Scottish instincts) I felt it my duty to participate in the referendum about changing the name of the Society.

As a new member one should listen rather than opine. All I wished to contribute to the discussion was that I have been a victim of the narrow confines of "BNHS". I assumed Delhiwalas were not wanted, and perhaps the Indian Wildlifer laboured under similar delusions. Having said this in favour of a more inclusive name (though God forbid BNHS is lumbered with the word 'Institution') I feel any new name should be imaginative rather than fuddy-duddy. For example: The Hornbill Society (of India).

WILLIAM MCKAY AITKEN

August 4th, 1982

QUEENSLAND, AUSTRALIA

'To change or not to change?— That is the question', I am wholeheartedly in agreement with the President's suggestion. With the changes in the environmental policy of the Society and the Conservation aspects paramount, I, for one, firmly believe that a Name Change is vitally necessary and that such a change can only benefit the Society

and its Membership.

I would suggest that the Natural History and Conservation Society of India as being the most suitable.

Making the Name Change as part of the Society's Centenary, would be most appropriate. I can remember discussing the Society's name and its inappropriateness, considering its wide coverage, with late Lt. Col. R.W. Burton, at Bangalore, in the 1940's, and he was at that time in agreement, that the word 'Bombay' was not truly descriptive of the Geographical Scope of the Society, covering as it does the Boundaries of Greater India, Ceylon and Burma and the many islands, Tibet and so forth. I would suggest that Members put forward their ideas for a new name, then the Committee pick out those mostly favoured (say 5 names) and then have a proper ballot at the time of the annual General Meeting from which the final winner will come.

ANGUS F. HUTTON

August 2nd, 1982

S. AFRICA

In regard to the proposal to change the Society's name, I feel that it is an Indian Natural History Society, and the title should be in keeping with this.

P. T. FRENCH

August 28th, 1982

NAINITAL, UTTAR PRADESH

In my view Indian Natural History Society would be the most suitable name. The Society has

evolved to high International and national repute—this has to be reflected in its name. At the same time, to satisfy the sentiments of old, staunch members of the Society the above name (INHS) rolls off the tongue in much the same manner as the present name—not too much of a change! I vote for Indian Natural History Society.

C. L. SAH THULGHARIA
*Hon. Secretary, The Naini
Tal Mountaineering Club*

September 3rd, 1982

CALIFORNIA, U. S. A

To those familiar with its history and present place in the world of natural history, nature preservation, conservation, etc., the name Bombay Natural History Society evokes a sense of recognition of distinguished tradition. It reflects its origins and official centre, and, for those of us who have had the privilege of visiting Hornbill House, it reminds us of a pleasant and friendly place where much serious work is done.

To those not familiar with the Society, however, I think there is a tendency to react to the name by thinking of it as a small and specialized organization. In fact it is

precisely this reaction which amuses me so much when guests of my house see copies of the *Journal* and wonder why! I then have the pleasure of informing them of the nature of the Society and of its international status.

I think that from the point of view of its relation to the international community as well as to India in general, it would be a very fine idea to change the name along the lines suggested in Dr Salim Ali's article. Those of us who take pleasure in the name it traditionally has had will not suffer too much and in any case will always have our memories and back issues of the *Journal*.

BRUCE ROTHSCHILD

August 30th, 1982

BRISTOL, ENGLAND

Might I plead for the retention of the old name? The new suggestions are all limiting, because they all contain the words either Indian or National. Whereas we know that the Society exists for the entire Indian subcontinent, including Pakistan. The name 'Bombay' is not limiting, because everyone knows that this is only the name of its birthplace and home address.

OLIVER C. LLOYD

October 4th, 1982

ACKNOWLEDGEMENT

We are grateful to Seth Purshotamdas Thakurdas & Devaliba Charitable Trust for financial help for the publication of the *Hornbill*

A Letter from the Honorary Secretary

Dear Member

There appears to be a lot of confused thinking about the proposal for an Institute of Natural History, and several rumours appear to be circulating which bear no relation to facts. As a result of this, a few members signed a requisition for an Extraordinary General meeting to discuss the issues raised by the proposed Institute and the meeting was accordingly held on 29th September 1982. Those who attended the meeting were informed of the facts, and it was hoped that controversy on this issue had been set at rest.

Unfortunately, I still find that various issues are being raised, which bear no relevance to the present position, resulting in anxious queries from members. To set members' doubts at rest, I would like to state the facts as they stand today.

1. There are numerous problems concerning wildlife and conservation which urgently require attention and study.
2. The Society's efforts to take up such studies have always been hindered by lack of funds.
3. We wish to raise our own funds for this purpose and are endeavouring to do so. However, it is unlikely in the near future, that we will be able to raise funds on the scale needed.
4. The Department of Environment, from funds allocated for research and educational societies,

has expressed interest in supporting the Society to organise an Institute of Ornithology to be run by the Society, as they believe that ornithology is our main area of strength.

5. There is no barrier in the way of our utilizing our own funds for a larger Institute of Natural History, and making the ornithology school a part of the larger set up. The grant for one segment (ornithology) of the institute's activities can still be obtained from the Department of Environment.
6. As we understand from the talks which have taken place, this is the situation today.
7. No formal clarification or commitment by the Government can now be expected until we put up a proposal to the Department of Environment as a basis for further discussion.
8. A proposal should therefore be put up as early as possible to take advantage of the interest expressed.
9. So far the only suggestion made by the Department of Environment was that they should have two ex-officio seats on the Society's Executive Committee.
10. We have now to formulate the detailed proposal and send it up.
11. The putting up of a proposal *does not commit the Society* to accept any terms offered by the Government.

12. To talk of transfer of assets of the Society, like the library and collections, to the new Institute is sheer nonsense. The question has never been raised. If such a question were to be raised, I am sure the Executive Committee, and any future Executive Committee elected by members, would reject it without hesitation.

13. However, to talk about dangers which have not been and are not likely to be raised, constitutes a sort of scare mongering which should be discouraged.

14. Two controversial points were raised at the Extraordinary General meeting of the 29th September:

(a) That the Society does not have the managerial skills to administer such a large project. This is self evident and managerial skills do not grow in vacuo. If and when the necessary funds are made available, we shall have to recruit the necessary managerial staff to administer it, and provision for trained personnel with adequate administrative experience has to be incorporated in our project proposal.

(b) That such a big project should not be submitted without giving an opportunity to the general body to discuss it. This sounds correct in theory, but in practice it means that a decision would be left to a handful of Bombay members—which is manifestly unfair. Besides where several differing points of view are involved, someone has to have the authority to take decisions, and

this can only be done by a small body, like the Executive Committee. Members are welcome to send in their comments and suggestions to the Executive Committee which will be carefully considered.

15. Government of India, Department of Environment is not going to take a snap decision on receipt of our proposal. They will first, on the basis of our preliminary proposal, decide whether they are interested in supporting the project. If they are, they will appoint some persons from the department, and perhaps some independent experts, to go into the details. They may, after study, suggest some modifications, or may request us to have a discussion with them. In the light of these suggestions and or discussions, a detailed final project will have to be prepared. Nothing will be finalized until all these stages have been passed, a process which will take some months

16. It is important that if we wish to take advantage of the present favourable climate, we should send up a formal proposal as soon as possible. Government faces many demands for grants, and if we do not act quickly we may be left out of the race. There will be plenty of time for modification and alteration during the process of negotiation and discussion, and I do not see any problem in incorporating changes which we consider desirable.

Yours Sincerely

A.N.D. NANAVATI, M.D.

HONORARY SECRETARY

BOMBAY NATURAL HISTORY SOCIETY

A National Park for Kishtwar

The town of Kishtwar perches on a high terrace where the river Chenab emerges after slicing through the Pii Panjal. It is not an imposing place. An avenue of Chinnar trees beside the maidan attests the passage of the Moghuls, but little else appears more than a few decades old. In September when I arrived with my wife, Anne-Marie, the ranges to the north and east were already mantled in snow and we received gloomy forecasts for a trek to Kashmir. Our itinerary had been suggested by Mir Innayet-Ullah, the enthusiastic Chief Wildlife Warden, but several people told us confidently that it was too late in the year and Margan Top, the pass that we must cross from the Marwan valley into Kashmir, would be impassable. In the event Mr Mir proved right, however, and we were able to follow his directions exactly.

The main aim of our journey was to look at the area which the Jammu & Kashmir Wildlife Department hope to make into the Kishtwar National Park. The valleys that comprise the proposed park area are tributaries of the Marwan draining the west side of the Brahma range and the Nun Kun massif; the most imposing mountain knot between Uttar Pradesh and Nanga Parbat. Our walk was to take us through the lower part of the Marwan valley, known as Dachan, and then through the upper area, known as Marwar. The village of Sirshi, two days' walk from Kishtwar, forms the headquarters of Dachan and the centre

of the proposed park.

The trek from Kishtwar to Kashmir via Margan Top takes 5-7 days, with resthouses conveniently situated at intervals of about 20 km and a scattering of tea shops in between to revive flagging spirits. For the most part the well-maintained trail leads through dense forest, only occasionally breaking into the open where terraced rice fields perch on flat areas of ground.

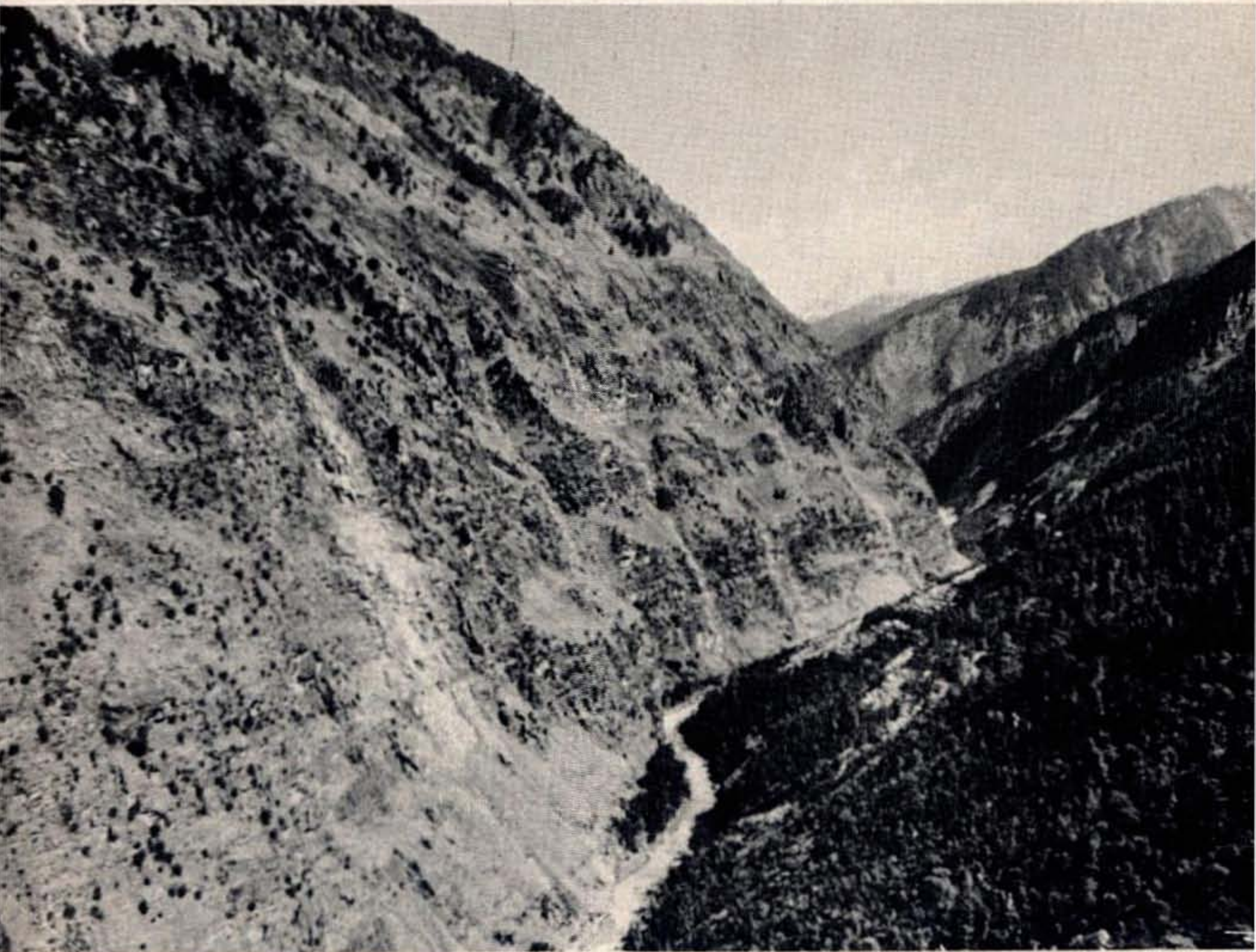
Our first night was at Ekhala, a small hamlet buried deep in Blue Pine and Oak forests on a north-facing hillside. As we approached the village three Hodgson's Hawk Eagles circled over a forested ravine, calling loudly, apparently a pair with a single young of the year. In the pines parties of Crested Black Tits, Pallas's Leaf-Warblers, Greyheaded Flycatchers and Himalayan Tree-creepers moved swiftly, only their low contact calls betraying their presence.

The next day's walk was also completely forested, with stretches of beautiful deodars and rhododendrons, up as far as Sonder, about 18 km from Ekhala. We took tea in the tiny village of Sawabatti and a gathering of fellow patrons described the local wildlife for our benefit. The most common animal at this altitude (c. 2000 m) is the Goral, known here as *Pijar*, while everyone affirmed that Ibex (*Kras*) are common higher up, among the crags. Among pheasants the Monal (*Nil, Nilwai*) was familiar to everyone. Another, known locally as *Bukal*, I



The Marwan Valley

Photo: Anne-Marie Gaston



Near Ekhalá: Note well-forested slopes facing north and bare hillsides opposite

Photo: Anne-Marie Gaston

was unable at first to identify because everyone asserted that both sexes were black with a long crest. Eventually someone gave a convincing imitation of a Kokla's call. Koklas are certainly rather dark brown, but hardly black to my eye; a good example of how not everyone necessarily perceives the same object in the same way.

The most exciting piece of information for me was a good description by one of the locals of a Western Tragopan, 'the red one, with white spots', known as *Rang rawal* (male) and *Monk* (female). Everyone who knew anything about wildlife in Dachan mentioned the *Rang rawal* and higher up, in Marwar, several people mentioned that they occurred in Dachan.

From Sirshi, the next night's halt, the Brahma range is visible, the white spur of Brahma I standing up on the horizon like a tiger's fang. The valleys to the east of here form the core of the proposed park. They are steep and rugged; good country for Ibex, but we saw many signs of timber extraction in progress, with great slides to carry down the logs and we were left with an uneasy feeling about what damage might be occurring to forests in the interior.

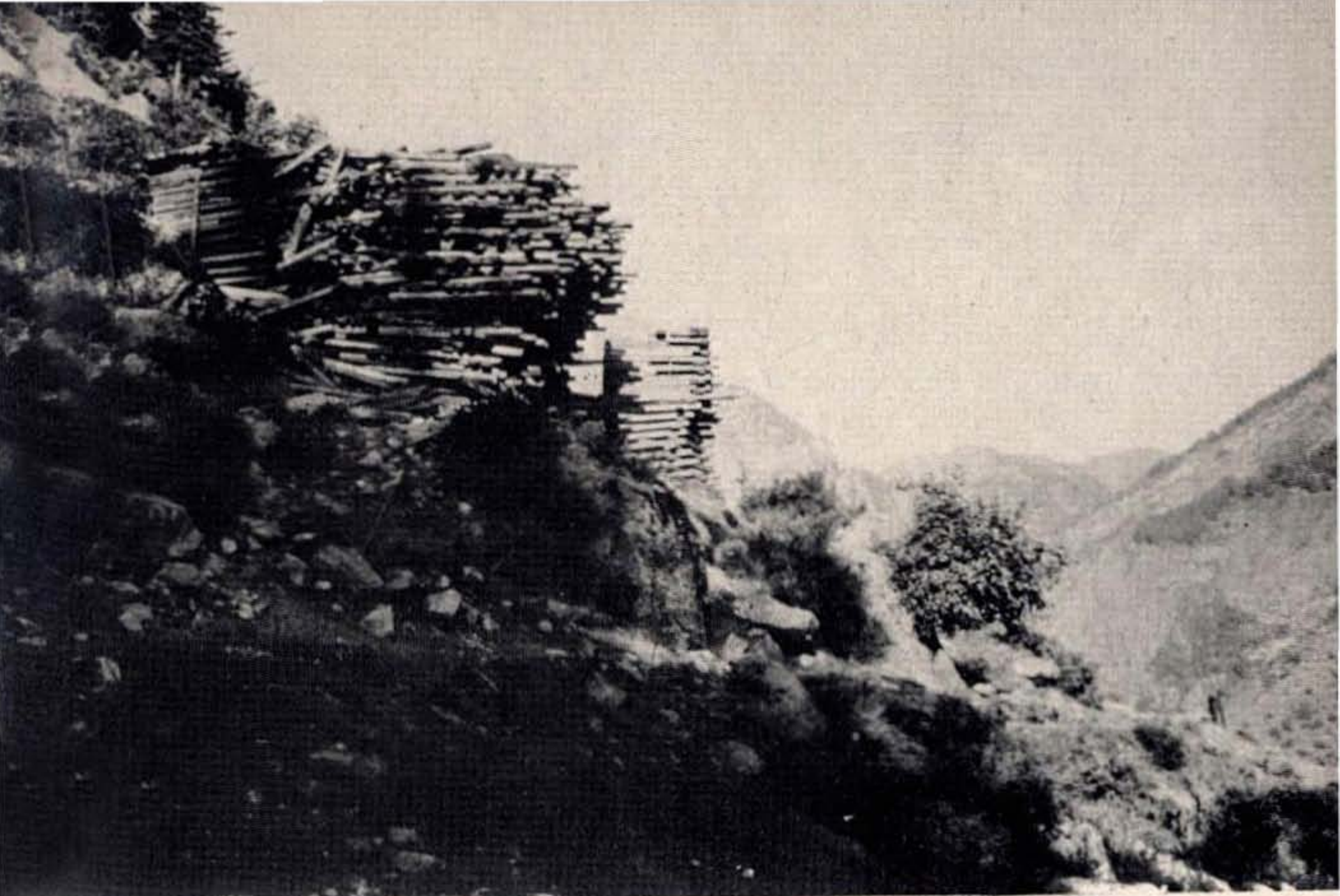
Leaving Sirshi in the early morning there were flocks of Rosybreasted Pipits in the paddy fields and Himalayan Greenfinches, very common in this area, were everywhere. Higher up we entered a superb broad-leaved forest of Ash, Maple and Horse Chestnut. A Himalayan Weasel ran along the

path ahead of us and Koklas called from the hillsides above. In a clearing about 40 Rufous Turtle Doves flew up into the trees at our approach.

Hunzal, the third night, is in no-man's land. It is the same distance from here to walk down-valley to Kishtwar, or to cross Margan Top for Anantnag or Srinagar. Here, for the first time, the local people spoke in familiar terms of the *Barasingh* (Kashmir Stag) which occurs in the valley in winter, driven down from the higher forests by snow. We were particularly interested to obtain information on this animal, which is sometimes said to be extinct outside the Dachigam sanctuary.

At least five people that we met claimed to have encountered stags during the past few years in Marwar. One man claimed to have shot one the previous winter and said that he could have shot more had he been able to obtain ammunition. According to the Range Officer, Marwar, a case was brought against another man for shooting a stag a few years back in Marwar. Two people claimed to have heard stags roaring in autumn, evidence that some rutting activity still takes place in the area. The locality mentioned particularly was Tatopani, a hot spring situated in a valley draining southwest from Nun Kum.

Some further investigation into the status of the Kashmir Stag in Marwar appears worthwhile. The situation in which virtually the whole world population is concentrated in Dachigam is precarious because an outbreak of disease could wipe out the whole stock. If



Timber stacked for export near Ekhala

Photo: Anne-Marie Gaston

the remaining population of Marwar is large enough to be rehabilitated it could form a useful back-up stock in the event that Dachigam suffers from some disaster.

At Yourdu, the headquarters for Marwar, the valley broadens and the river meanders over gravelly shallows. There is a distinct change in the scenery and it nagged at me that I was unable to put my finger on the difference, until I realized that the evergreen oaks, so characteristic of the Himalayan front-ranges, had disappeared. The distinctive brown leaves of the Kharshu oak no longer formed a band near the top of the forest. Instead Blue Pines and Firs dominated right to the tree-line. This change marks the inner limit of the monsoon. In Marwar the monsoon

winds have dropped so much of their moisture by the time that they arrive that they have little effect, while higher still, around Inshan where the trail turns westward to cross Margan Top, the country has an arid appearance heralding the approaches to Ladhak, a proximity emphasized by Yaks grazing in the fields.

It is surely significant that reports I obtained of Western Tragopan were all from Dachan, in the area influenced by the monsoon, while those of Kashmir Stags were from Marwar, where the climate is similar to that of the Vale of Kashmir. Our route had taken us, in a few days' march, across an important biological divide separating the Sino-Himalayan fauna of the front ranges, to which the Tragopans

belong, from the essentially Palaearctic fauna of Kashmir, which includes the Stag. This was an exciting revelation for me and one that I had not anticipated seeing so clearly.

Our only venture above the tree-line came on our last day. We left Inshan at six and began climbing immediately towards Margan Top. Despite the gloomy predictions we had received in Kishtwar we found a dense stream of people and animals travelling in both directions across the pass. Once we got above 3000 m the hillsides were mainly open and covered in short grass and we began to see Choughs and birds of prey in large numbers. Lammergeyiers, Himalayan Griffon Vultures and Buzzards were visible almost constantly and several Golden Eagles put in an appearance, gliding low along the contours. Sparrow-hawks too were common, harassing the flocks of Mountain Finches, Pipits and Accentors that twittered across the meadows.

As we had been warned, there was snow on the pass, perhaps 15 cm, but wet and muddy on the track. At the summit, about 1 p.m., there was a light snow squall and as we began the steep descent on the Kashmir side there was a brisk fall of hail, white curtains travelling across the face of the mountains and briefly blotting out the misty view of Anantnag and the Vale.

The highest birds encountered were Alpine Accentors, at 3800 m.

A little below the pass Anne-Marie spotted a Pika among the rocks; our only alpine mammal sighting.

Our six days had yielded no significant wildlife encounters, but I had not expected them because we had stuck to the main trail. It was clear, however, that the area has great potential for wildlife, particularly with the presence of two endangered species: the Kashmir Stag and the Western Tragopan. The idea for the National Park is timely, but may come into conflict with plans for a hydro-electric dam at Hunzal which will certainly drown large areas of forest.

There is nothing intrinsically inimical to Wildlife in the construction of such a dam, but experience shows that the inevitable road and the thousands of imported labourers pose a considerable threat to animals in the area. At present the dam is still in the planning stage. It may be a decade before it is built. If conservationists make their concern known to the planners now it may be possible to develop the dam and the park in an integrated fashion so that some of the inevitable social dislocations caused by the dam can be turned to advantage by creating protected areas cut off by the impounded lake. The building of the dam presents both a threat and an opportunity for conservationists; the latter should not be lost.

A. J. GASTON

A Year at Bharatpur's Keoladeo National Park

The first part of this serial appeared in *Hornbill* 1982 (3), pp. 5-11 . —

EDS



The first flush of the monsoon

Photo: Breedan

The grey days continue well into July and the Keoladeo undergoes a metamorphosis.

It remains cool, about 28°C, on this drizzly July day. The relative humidity is high; between 80% and 90%. The animals revel in the novelty of rain. Sambar, nilgai and chital move out into the open and for hours on end stand with their noses in the air, rain rolling in rivulets down their coats. Doves sit in the tender new grass, raise one wing and almost turn upside down as they twist to let the rain soak the undersides of their upraised wings. After a few minutes they turn over and raise the other wing. A tiny Purple Sunbird bathes in drops collected in a bunch of leaves. Black Drongos

and Redvented Bulbuls fly, wings thrashing into dripping foliage, then sit in the drizzle with drooped wings. High in a dead *Kadamb*, a peacock has spread his train like a skirt around himself and preens. Frequently he raises his head and calls *pee-ow, pee-ow*. Cuckoos come with this rain. Common Cuckoos, Brainfever Birds or Hawk Cuckoos, koels and more Pied Crested Cuckoos. They call and scream for more rain, and a mate with speculative eyes watching out for nest-building babblers.

Turtles erupt from hiding places under logs or deep in the woodland's leaf litter and just sit in the puddles. Pythons, flushed from the flooded burrows of porcupines



Male Baya displaying on nest



Bronze-winged Jacana on nest



Photos: Stanley & Belinda Breedan.



A python on the prowl

Photo: Breedan

in which they lived, snake through the fresh green ground plants and then hoist their muscular coils into shrubs and small trees.

Already in less than two weeks of rain and dripping dampness, the searing heat and cracking dry vegetation of the summer is a vague memory. The woodlands that looked like spare semi-deserts have now put on a mantle of green. Grasses and herbs grow in emerald fields, babuls have tender new foliage punctuated with bright yellow puff-ball flowers. Vines, with breathtaking speed, have enveloped trees and shrubs hiding their hosts' thorns and rough bark in a wrapping of soft leaves. Fungi of all colours have risen in damp corners. Caterpillars and grasshoppers are busily devouring the new growth. Butterflies dip their roll-up tongues in new flowers. The air sparkles

with the glint of dragonfly wings. Keoladeo has put on a veneer of tropical lushness.

Of all the birds that have been waiting for the rains in their bright breeding plumage, the Baya Weaverbirds are the first to be seized by the courting and nest-building frenzy. Sparrow-sized and until six weeks ago sparrow-drab, a group of about 25 males now sing and chatter in the low branches of a babul tree overhanging a quiet corner of a marsh. The bright yellow of the males' heads and chests outshines the babul's flowers. Like so many little flames the Bayas dance amongst the leaves, singing and building their nests. Every now and again the males dash off in a streak of yellow to a clump of tall grass growing at the water's edge. With deft tugs of their strong beaks the birds pull off strips of green and

hurry back to their chosen tree branch. For several days the birds have been frantically stitching and weaving until they have built a dome in the shape of a helmet, complete with a chinstrap. Once this stage is reached building slows down, virtually stops. The males now focus their considerable energies on the females which, no doubt attracted by the songs and flashing yellow, come and visit the colony in increasing numbers. The females remain drab-coloured even in these rousing times. Whenever a female comes near the colony all the males sing in a wheezing whistle and flail their wings. The visiting female eventually flies to the "helmet" nest of her choice, inspects the interior and then sits on the chinstrap. Going into paroxysms of excitement the male flies around the nest and at the female, seeming to drive her away. The two, however, soon settle down on the "helmet" nest. In time they mate and the male completes the nest, building the egg chamber and the long entrance tube. The finished structure looks like a retort of woven grass. Once the male has completed the nest he will abandon it—and the female. He will begin to build a new nest immediately.¹

It is mid July now and the Gambhir and Banganga rivers have filled Ajan Bund almost to overflowing. The sluice gates are opened and water rushes down the canal. It will take several weeks to completely fill the marshes.

One morning, a few days after the sluice gates are opened, darker

clouds roll low over the National Park. A fierce wind springs up and lashes the trees. Rain, like a solid sheet of water floods Keoladeo. Except for the occasional low rise the woodlands are under 15 cm or more of water for a few hours. In late afternoon the clouds are ripped from the sky by a still-strong wind. Briefly there is sunshine. This storm and the rising waters in the marshes are what all those birds that have been standing on the sidelines since May have been waiting for. No longer do they stand desultorily in the shallow water or in the trees. Some move with purpose to the groves of babul trees growing on mounds in Rauji Bund 1. Others fly to a similar place at Sapan Mori. Soon thousands upon thousands of Openbill Storks, egrets of four species, White Ibises, Little Cormorants, Indian Shags and darters with small numbers of Grey Herons and Night Herons amongst them, are busy courting, mating and nest building. Trees are laden with the mostly black and white birds and the air is full of their gurgling, burping, bubbling calls intermixed with the castanets of the beak-clapping

¹*This is rather an exception than a rule. In a study conducted on breeding Baya Weavers in Maharashtra, it was found that polygamous males produced lesser number of fledgling chicks than pair-bound individuals, thereby proving that polygamy has no survival advantage to the species.*

—EDS

Openbill Storks. All is action, shimmering, dancing, swaying, flying. Openbill Storks congregate in groups in a corner of the breeding colony. Pairs have selected their nest sites, the first species to do so. Some stand close beside each other, mutually preening with gentle nibblings of their heavy beaks. New arrivals, bringing nest materials, are greeted by their beak-clapping head-nodding partners. White Ibises too stick closely with their own kind covering a tree here, another there, in masses of white jostling bodies. Their black beaks caress their partners, but lash at neighbours that venture too close. Disputes, which are frequent, are accompanied by the thrashing of wings. Every time the ibises raise their wings they reveal the flashes of scarlet on their undersides. A few individuals have daubs of scarlet on the backs of their bare black necks.

In the trees of the heronry there are points of shimmering white, where pairs of egrets are courting. Only during these first few days of courtship are the egrets at their most splendid. Males stand on prominent perches and spread their lacy, filigree plumes, shuffle and shimmer them, attracting the females. In their passion the colours on their faces and legs intensify, their eyes change colour and fairly blaze. The females respond by landing beside their chosen male and displaying *their* plumes. Male and female bow to each other. They entwine their necks. They preen each other. They mate.

All the egrets, except the Cattle Egrets, are white—but they differ in the arrangements of their plumes and the colours of their faces and legs. The Large Egrets, of which there are comparatively a few, have flowing mantles of long delicate plumes that they raise and spread like fine cloaks. Their faces are turquoise and the upperparts of their legs carmine. Most numerous are the Median Egrets: perhaps 3000 courting pairs. They have plumes on their throats as well as their backs. Their bare faces are yellow. During mating their pale yellow eyes are suffused with dark orange. Little Egrets have plumes on backs and throats but also two long, narrow feathers trailing from the crowns of their heads. While courting, their normally pale grey facial skin blushes a bright coral pink. Cattle Egrets have no long plumes but have added colour to their finery. Their heads, necks and backs glow with orange gold. During courship their facial skins and eyes are bloodred.

Black counterpoints in this array of white are the cormorants, shags and darters posturing and contorting in their courting rituals. As yet only a few Spoonbills and Painted Storks are present. Drab birds by comparison and not yet in breeding plumage.

By the first week of August the marshes are nearly full and Ram Bund is an open expanse of water, fringed with tall reeds and enlivened with floating water lilies. Some of the lilies form carpets of yellow, others rafts of creamy, fringed



Above. *Carpets of flowers on the marshes*

Photo: Breedan.

Below. *Pheasant-tailed Jacana at nest*

Photo: Loke Wan Tho



flowers. Sprinkled amongst them is a profusion of giant water lilies—pure white flowers that seem to dazzle the bumble bees that blunder about the giant cups. By mid morning on sunny, hot days the flowers have folded their petals and withdrawn their brightness.

The water is deeper in this point of Ram Bund, there are no egrets, ibis or storks. It is the domain of ducks, mostly Spotbills, which have come to Bharatpur to nest. Overhead, flying fast circuits and quacking nasally, are courting Cotton Teal. Usually it is a female closely followed by a male. But often two males are in hot pursuit of a single female and even in flight attack each other. Couples that have already established their pair bonds sit in *kadamb* trees around the edge of the marsh. They are looking for hollows in which to lay their eggs. The larger Comb Ducks are also

looking for nest hollows, brushing aside Cotton Teal should these have established a prior claim. Suddenly a flock of fast, small ducks rushes in and settles in the open water. The first Garganey Teal have arrived, forerunners of the thousands upon thousands of migratory waterfowl that will spend the winter in Keoladeo.

The lily pads and other aquatic vegetation in the marshes are the special preserve of the jacanas. Two species stride on outsize feet across the wobbling, floating plants. One species is brown and white with a golden velvet nape and has an elegantly curved, long tail. This is the Pheasant-tailed Jacana. The Bronzewinged Jacana is a dumpy bird with hardly any tail at all, but the sun strikes sparks of deep blue, purple and bronze off its iridescent plumage. In both species the females, which are slightly larger,

Egrets on nest

Photo: E. P. Gee





Sarus Crane on nest

Photo: E. P. Gee

court the males. Once she has deposited her eggs on the floating platform made by the male, she leaves him to care for them and the young. She goes in search of another male.

Tall reeds have shot up on the western edge of Ram Bund. Flashes of vivid blue and scarlet can be seen through the green. Pairs of Purple Moorhens are busy bending the reeds with their stout beaks, fashioning the long stems into nests. Above them, twittering and wheezyly whistling are weaverbirds building their nests; not Bayas but the yellow-capped Striated Weavers.

The monsoon waters are so abundant that Ram Bund has overflowed and invaded the woodland. *Babul*, *ber*, *jambul* and *kadamb* stand in a sea of rank new grass, stimulated by the floodwaters. Sambar, huge and sombre-brown, plod through the water and nibble the new growth.

Where marsh and woodland meet and the water is about 40 cm deep a pair of Sarus Cranes is busy. The birds are plucking grass and other small plants and piling them into a rough mound. Their heads glow a

brilliant red amongst the green. They pause in their nest-building, preen their feathers for a few moments. Suddenly the female points her beak to the sky and trumpets—*preow*. The male responds immediately with a more sedate *preow*. Half drooping, half spreading his wings the male continues in a slow cadence—*preow-preow-preow*. The female calls at a faster beat *prup-prup-prup-prup*. It is their unison call that proclaims they are in firm possession of their territory.

In the evening the woodland around the cranes resounds with the songs of birds—Black Drongos, Baybacked Shrikes, Redvented Bulbuls, Ioras, White-eyes—species that now begin to nest. But as on the marsh, there are already harbingers of change. Rosy Starlings, a flock of about 400 birds containing many young, fly in and roost in a tall jamun. They have just arrived from their nesting grounds in Eastern Europe.

STANLEY and BELINDA BREEDEN

(To be continued)

CONSERVATION ACTION

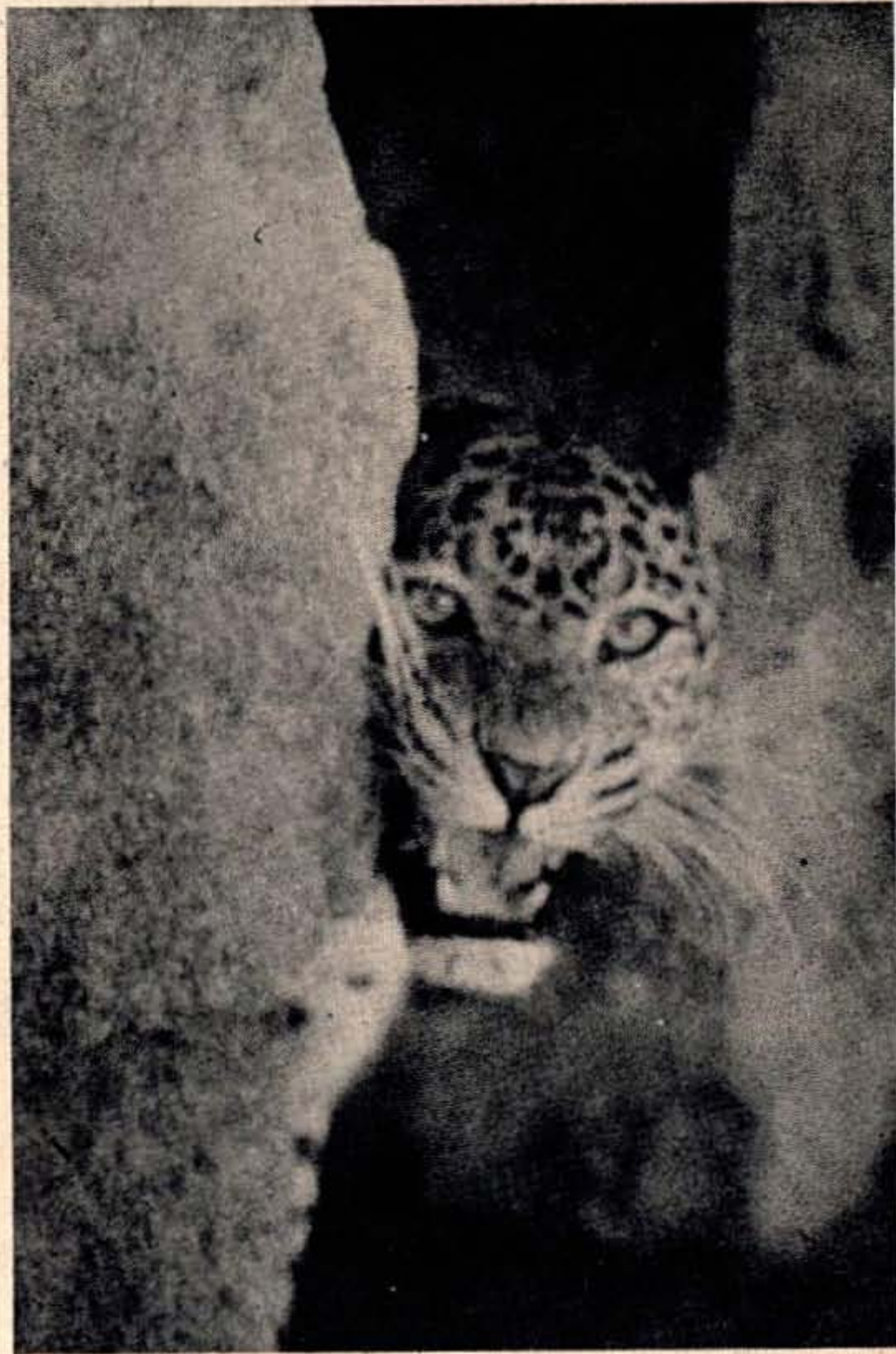
Fur trade in Kashmir

As reported in *Traffic Bulletin*, Martin van den Berg and Resi Damhuis came across an important trade in skins of rare Indian wild cats, while they were in Srinagar, Kashmir during July-August 1980 and 1981.

In 1980, posing as potential buyers they visited about ten fur shops and taxidermists in Srinagar and found that Jungle Cat (*Felis chaus*) and Desert Cat (*Felis silvestris ornata*) were most popular species with the furriers, where many thousands had been made into coats and caps. What was more shocking was the presence of many skins or coats of snow leopard, tiger, clouded leopard and panther, in several fur shops. A rough estimate with three traders revealed 24 skins of snow leopards, 10 of clouded leopard, 55 of panther, 10 of tiger, 60 of lynx and 50 of leopard cat, with the prices ranging from U.S. \$15 for a leopard cat to \$350 for a tiger skin —snow leopard, clouded leopard and panther being sold at anywhere between U.S. \$120 to \$300. The prices could be bargained and could be reduced by 25-50 percent. Each shop had hundreds of skins of smaller species like Jungle cat, Fishing cat and Desert cat.

In 1981 they revisited the same fur shops and taxidermists and found no reduction in the number of skins offered for sale. On request the furriers showed them a coat of tiger

skin and unlike the previous year, snow leopard coats were offered for sale openly. The fur of the coats (3 to 4 individual skins for one coat) did not look old and were of ex-



A leopard looks at the world

Photo: G. R. Edwards

cellent quality.

Most of the species mentioned are no longer to be found in the Kashmir valley and the adjacent areas, but their presence in fur shops explains that the traders of Kashmir obtain the skins from other parts of India or even the neighbouring countries. For instance desert cat (*mulam*, Kashmiri) is obtained from hunters in Rajasthan.

It was also revealed that traders can arrange for the payment through foreign banks of the customer's country and on payment they would arrange to send the fur by mail!

This report does project a bleak picture of wildlife conservation in India as it is indeed sad that skins of such rare cats can be bought so easily, but this is because unlike other Indian states Jammu and Kashmir has not implemented the Wildlife (Protection) Act of 1972.

Herb exports

The Bulletin cited above carries a note on Herb exports from Bangladesh as reported in a local paper, *The New Nation* of January 1, 1982, and what follows should alert the conservation minded in this part of the subcontinent. It is claimed that tons of rare medicinal plants are being exported with no arrangement made for their restocking and that bulbs, roots, leaves, stems and seeds of plants containing active principles for medicines for common and rare diseases are mainly ex-

ported to Pakistan and West Germany. The government it is alleged supplies these plants in bulk to various international research institutions and allows an export incentive on their export in order to boost the trade.

It is stated that according to an eminent Bangladesh botanist, plants like *Urginea indica*, useful in producing a cardiac tonic, *Hydrocarpus kuzzi*, used in the cure of leprosy, and *Psoralea corylifolia* used in leucoderma and other skin diseases were once common in the Cox's Bazaar, Sylhet and Rajshahi districts, but are now rare. Similarly plants that were common a decade ago in Dacca and Chittagong areas, such as *Marsdenia tinctoria*, with contraceptive properties, is now scarce. Same is the fate of *Gloriosa superba* and *Plumbago rosea*, both abortifacient plants, *Andrographis paniculata* used in the treatment of hepatitis, and *Hemidesmus indica* used against rheumatism and skin diseases.

While the export of these herbs brings in a negligible sum of £6000/-to the country by way of foreign exchange earning, the keenness with which the collectors of these herbs plunder the countryside, totally destroying the plants' habitats and the possibility of further sprout, deprive the poor, who are without the chances of availing modern medical facilities, a source of indigenous medicine, and depletes Bangladesh of its herbal wealth.

I. D. KEHIMKAR

Rediscovery of a rare turtle from Kerala Forest



The Cane Turtle rediscovered after 79 years

Photo: J. Vijaya

In a recent survey in Kerala forests by the Madras Snake Park, a small and poorly known turtle, *Hosemys silvatica*, has been found.

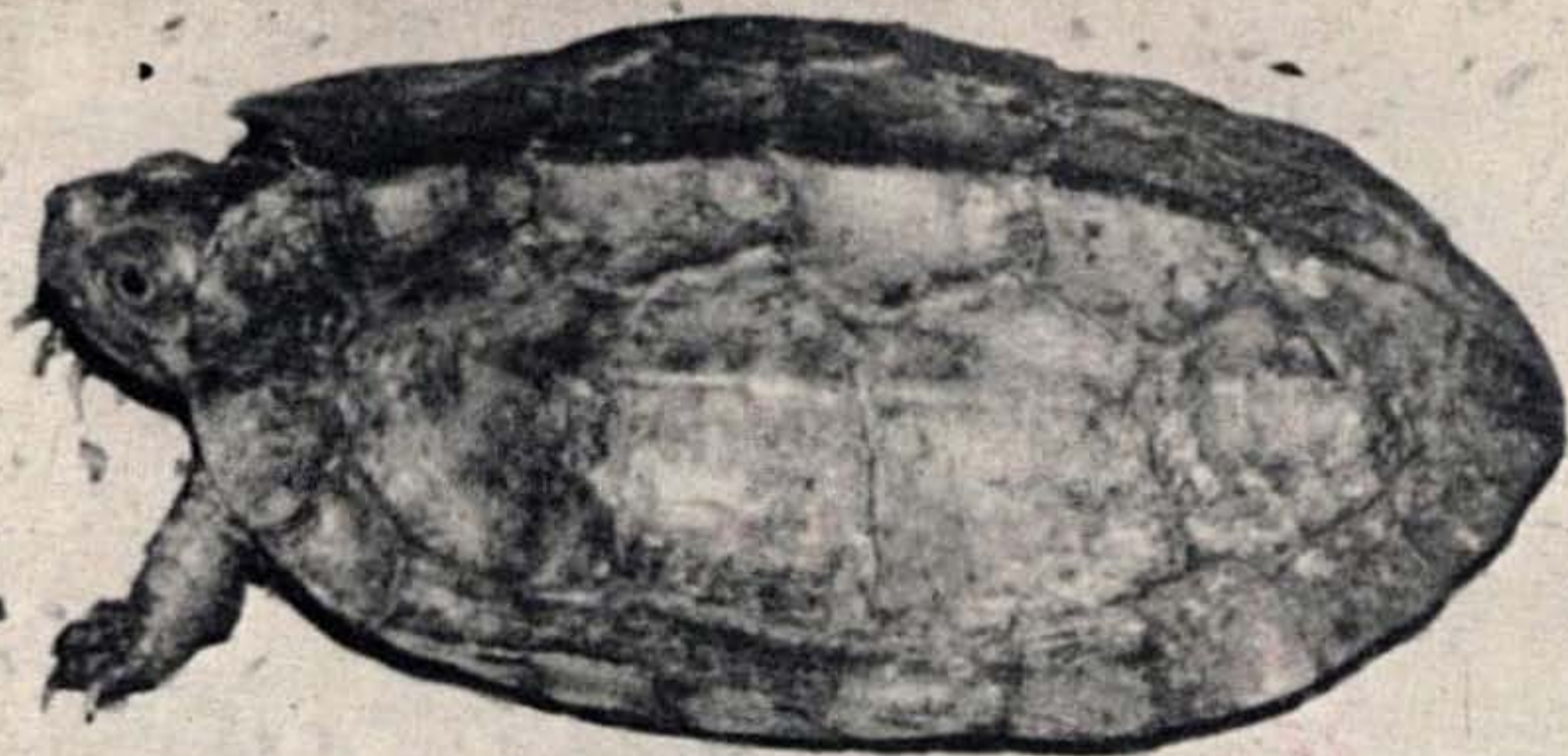
This turtle was first discovered in 1912 by Dr Henderson to whom they were presented by the local hill tribals, the 'Kadars'. Since then for a period of 69 years it has been practically unknown to the world of science.

In June this year, we found a single male specimen with the help of tribals in the adjacent range of hills from where Henderson found them more than half a century earlier. *Hosemys silvatica*, the forest cane turtle, is found within a small stretch of evergreen forests of the Western Ghats in Kerala State at an altitude of about 1500-2000 ft.

This elusive turtle is called the

churel amai (=cane turtle) by the tribals as they are sometimes found under these spiky-leaved plants (*Calamus rheedi*). Cane turtles attain a small size of only about 13 cm at maturity. They have a low, domed, orange-brown shell, which could be easily mistaken for a fallen leaf among the detritus in the forest. Their long neck is deep brown, the limbs and tail are a pale brown and the head is a contrasting pink colour. These colours serve them well as an effective camouflage.

In the early part of this century the forests in the region where these turtles were found were easily accessible because of the tramways run by the lumber industry. However, the tracks have now been removed due to the high cost of maintenance. These are probably



The Repuscular Cane Turtle

Photo: J. Vijaya

the factors why the cane turtles have remained poorly known and unobtainable. Only the hill tribals who constantly visit the jungle for their subsistence seem to have been aware of their existence.

The cane turtle seems to avoid bright, sunny places, preferring to move about in the shade. It is surmised that in the forests they are active in the cool dim hours of the early morning and at dusk. They feed purely on vegetable matter. It is surprising that though they lead a terrestrial life, they do not belong to the tortoise family but to the allied emydids which are hardshelled and aquatic in their mode of life. Cane turtles still retain partially webbed hindfeet though they are not aquatic.

In the jungle these turtles are said to be preyed upon by carnivores like wild dogs, leopards. The tribals consider them tastier than the more common travancore tortoises (*Geochelone travancorica*) which share their habitat. They usually come upon them by searching under

cane bushes, the reed bamboo groves, under fallen logs, in rock crevices and similar nooks and corners of the forests. Often hunting dogs are used to "smell" them out.

The cane turtles feed on fallen leaves and fruits in the jungle like *ponna*, a small yellow fruit which is in season in May/June, the small red fruits called *mukkuthuri* which grow conveniently low on the bark of the tree within reach and other vegetable fare.

In captivity they are more or less nocturnal, remaining immobile, with closed eyes during the day and with the legs withdrawn into the shell, and then resemble a small rock. As darkness sets in they become active and begin moving around. However, they are extremely timid, retiring at the slightest movement into the protection of the shell. Unlike the tortoises they do not seem to get tamed easily. In captivity they feed on bananas, jak fruit and pineapple.

J. VIJAYA



*A subadult male Great Indian Bustard
Korera (M. P.)*

Photo: A. R. Rahmani

BNHS Endangered Species Project

GREAT INDIAN BUSTARD

In Maharashtra, besides Nanaj, Mada, Bhotasht, Kavitgaon, Kandhar, Karmala, Kamuni, Ajapur, Mirajgaon, Godhegaon, Duelgaon and Arangaon were surveyed for the Great Indian Bustard. Arangaon which is near Ahmednagar is a new addition to bustard areas, where eight bustards were sighted. Nine bustards were seen in Nanaj where the Bombay Natural History Society's field station is, and eight in Karmala-Kamuni area.

At Karera in Shivpuri district, Madhya Pradesh, where the Society has its second field station for bustard study, fifteen bustards were seen during June-July of this year.

At the end of this year's breeding season four chicks were seen to have

been added to the bustard population.

As a part of the project, the entomology and botany of bustard habitats is being studied in detail.

LESSER FLORICAN

The initial survey of the Lesser Florican habitat in the Sailona grassland area of Sardarpur, Madhya Pradesh, has revealed that hens while incubating or while with brood are most vulnerable. The Lesser Florican is under severe strain as far as breeding is concerned as heavy toll is taken by the local tribals, who hunt them at night.

Wildlife Week

During the Wildlife Week an exhibition on wildlife was held at the Society's premises from 4th to 8th October 1982. More than 3000 students visited the exhibition in-

cluding a batch of spastic children who were found to be well informed about Indian wildlife and were able to identify many of the Indian animals and birds.

Travel Fellowship Grant

The Indian National Science Academy invites applications for grants of financial assistance to scientists including young research scientists for attending International Conferences abroad. The Conferences to be supported by *Indian National Science Academy* (INSA) are those sponsored by International Council of Scientific Unions (ICSU) and affiliated bodies, International Conferences sponsored by other agencies (non-ICSU) and travel fellowship grant to young scientists (below 35 years of age).

For ICSU conferences the prescribed application form duly filled in should be despatched latest by 31st January 1983 and for the non-ICSU conferences, the application should reach three months before the date of the conference. The applications will be considered four times a year: March, June, September and December. As for the young scientist category, those who intend to participate in the International Conference's symposium, short-term training programme (not exceeding two months) and workshop should send their formal request on prescribed proforma at least three months before the conference. The applications will be screened once in a quarter during 1983-84.

Intending applicants may write to

INDIAN NATIONAL SCIENCE
ACADEMY (INSA)
BAHADUR SHAH ZAFAR
MARG
NEW DELHI 110 002

Wildlife Biology

Madras University has introduced a special M.Sc. course in Wildlife Biology at A.V.C. College, Manampandal, Mayiladuthurai, since 1979-80. The duration of the course is two years and at the end of the second year students have to submit a project on a selected subject. The first batch of students who graduated in 1981-82 showed promise. Unfortunately this post-graduate degree course is not yet recognised by the local employment authority.

Lion-tailed Macaque

Dr Rauf Ali in his summary on the status of the Lion-tailed Macaque has indicated in the *IUCN/SSC Primate Specialist Group Newsletter* that there are only 61 known groups of this species which occur among five main areas in the Western Ghats range of South India. Each group has about eleven individuals to make a minimum total of 670 animals in the wild and the total population in the wild may not exceed 2000 animals. The following areas probably contain about 75% of the total population and have been earmarked for conservation action.

1. Agastyarmalai, the southernmost part of the Western Ghats
2. Western slopes of the Nilgiris
3. Anaimalai Hills
4. Periyar Tiger Reserve and adjacent areas.

Habitat destruction is one of the major causes that threatens the survival of the macaque. Tea, coffee, and rubber plantations coupled with selective tree felling and hydro-electric projects have contributed substantially to habitat destruction. Poaching is another factor, mainly because of the mistaken belief that the flesh of this macaque has medicinal properties.

A research project has already begun to gather information on the demography, ecology and social behaviour of this macaque in the wild by a Primate Specialist Group member, Mr Ajith Kumar to whom the Society (BNHS) has extended institutional sponsorship for his study. An educational campaign is also planned as part of this project by Mr J. Mangalraj Johnson. Stickers, posters, t-shirts and other materials will be used to create awareness about the importance of this macaque's survival at local, regional and national level.

XIX International Ornithological Congress

(FIRST ANNOUNCEMENT)

At the XVIII International Ornithological Congress in Moscow the International Ornithological Committee accepted the invitation

of the National Museum of Natural Sciences of Canada and of the Canadian ornithological community to hold the XIX Congress in Canada. The Congress will be held in Ottawa, Canada, from 22-29 June 1986. It elected Dr Prof. Klaus Immelmann (West Germany) as President of the Congress. Dr Henri Ouellet (Canada) was designated as Secretary-General.

Details about the general and scientific programmes, field excursions, and other activities during the Congress will be available later.

Those interested in participating in the Congress are urged to inform the Secretariat in order to obtain announcements and application forms. Correspondence should be addressed to

DR HENRI OUELLET
 THE SECRETARY-GENERAL
 XIX INTERNATIONAL OR-
 NITHOLOGICAL CONGRESS
 NATIONAL MUSEUM OF
 NATURAL SCIENCES
 NATIONAL MUSEUM OF
 CANADA
 OTTAWA, ONTARIO, CANADA
 KIA 0M8

Reaction of animals

Dr P. H. Umadikar of The Institute of Science, 15 Madame Cama Road, Bombay 400 032 writes:

"We have observed the effect of noise on some animals, namely lions and jackals. A lion and a lioness housed in adjacent cages were carrying on a sort of 'conversation'. The time was early in the morning. There were very few people around



Blessed silence

Photo: R. K. Shirgaonkar

them. As more and more people gathered around, the level of the noise increased. It seems this affected the lion for he began to roar.

“To find out whether this was due to the visual effect only or due to noise also, we played recorded noise next time. At that time there were no spectators. As the intensity of the noise increased the lion looked irritated and began to roar when the intensity was raised to about 75dB(A).

“Another fact, that we noticed concerning jackals is that whenever a siren is sounded only jackals among all the animals started howl-

ing. This does not depend upon its intensity. Even at such a low intensity, when we are not able to hear the siren due to the normal noise level of the city, the jackals are affected and they begin to howl.

“We are continuing our work in this field. We request the members of the Society either working or interested in this field to communicate with us at the following address:

DR P. H. UMADIKAR
DEPT OF PHYSICS
THE INSTITUTE OF SCIENCE
15, MADAME CAMA ROAD
BOMBAY 400 032

BIRDWATCHER

Association between Alexandrine Parakeets and Brahmini Mynas

On 5th September, 1982 at about 9 a.m. I saw in the courtyard of my house at Udaipur, two Alexandrine Parakeets (*Psittacula eupatria*) perched on a pomegranate tree. Three Brahmini Mynas (*Sturnus pagodarum*) were also sitting under the tree. The parakeets slowly crept towards the fruits and digging their beaks into the fruits started eating. As is the habit of the parakeets pieces of fruit started falling on the ground, and these tit bits were picked up by the scavenging mynas which quarrelled over the spoils. Some times they tried to catch the falling pieces in the air. This went on for about seven minutes. Then

the parakeets flew and settled on a nearby guava tree. The mynas followed and sat under the guava tree looking up intently towards the parakeets. The parakeets crept towards the unripened guavas and started tearing at the fruits. The mynas again became active darting and quarrelling over the falling pieces. This went on for some time, then the parakeets flew away closely followed by the mynas and all of them sat in an *amla* (*Emblica officinalis*) tree but for a short while. From there the parakeets flew away with the mynas in close attendance and disappeared from my sight.

RAZA H. TEHSIN

WANTED

Sharp black-and-white photographs and/or good colour slides of:
Paradoxurus hermaphroditus—Common Palm Civet or Toddy Cat

Paradoxurus jerdoni — Jerdon's or Brown Palm Civet

Paradoxurus zeylonensis—Ceylon or Golden Palm Civet

Paguma larvata — Masked Palm Civet

Arctogalidia trivirgata — Small-toothed Palm Civet

Arctictis binturong — Binturong

Macrogalidia musschenbrooki — Celebes Palm Civet

for eventual publication in articles or a book. Write to

DR. H. VAN ROMPAEY

JAN VERBERTLEI, 15

2520-EDEGEM

BELGIUM.



82



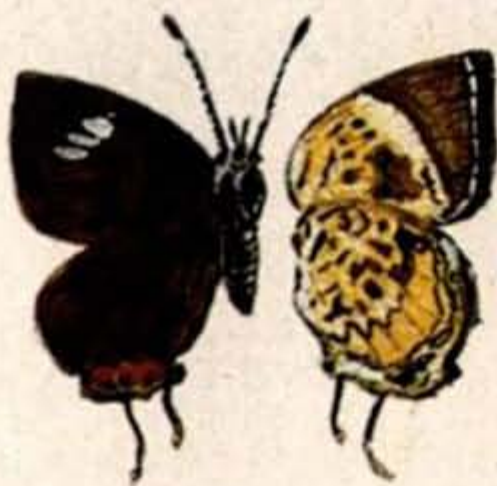
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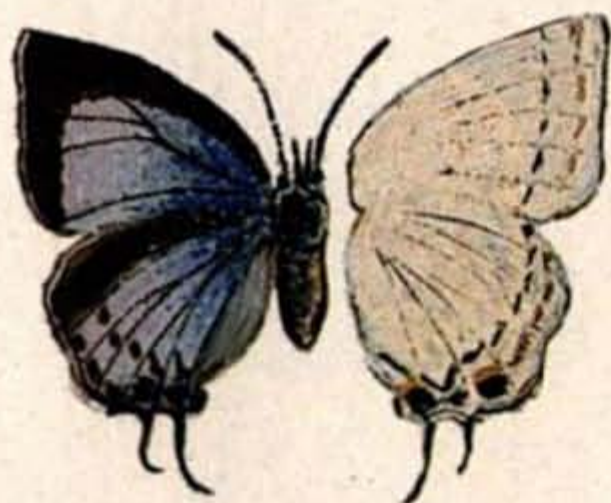
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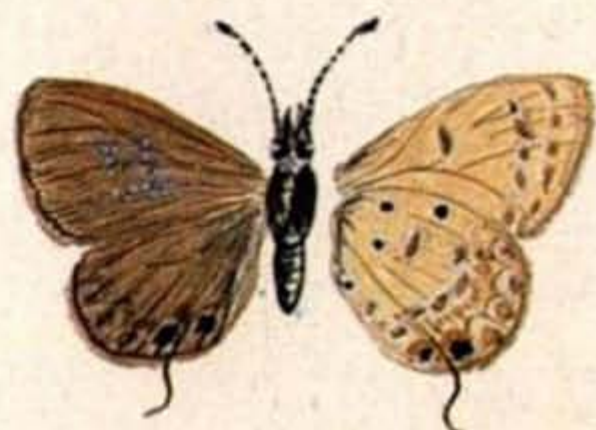
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M. Satish

Butterflies of Bombay-11

In continuation from page 39 *Hornbill* 1982 (2) we are describing 8 more species of the family Lycaenidae.

THE LINEBLUES: Butterflies of the genus *Nacaduba* are commonly known as Lineblues. They can be seen flying in thick scrub or heavy jungle at moderate elevation. They are strong fliers and frequently settle on cattle droppings and damp patches.

82. TRANSPARENT 6-LINEBLUE *Nacaduba kurava* Moore. Not common. Seen in August and September. *Embelia robusta* and *Ardesia humilis* are recorded as larval food plants.

83. COMMON LINEBLUE *Nacaduba nora* Felder. Common on the wing from July to October. Larvae feed on *Acacia* spp. and plants belonging to families Combretaceae and Myrtaceae.

84. TAILLESS LINEBLUE *Nacaduba dubiosa* Evans. Common. Can be differentiated from the Common Lineblue by absence of tail on hind wings. Larval food plants not known.

85. PEABLU *Lampides boeticus* (Linnaeus). Very common; on the wing from July to December again in February/March. Larva

feeds on the pods and flowers of *Pongamia*, *Butea*, *Crotalaria* and other leguminose plants.

86. MONKEY PUZZLE *Rathinda amor* (Fabricius). Common. Appear at the end of rainy season. Seen in September-October. Larvae are green in colour with the upper side of median segments red; have several fleshy protuberances of varying length, hence the name Monkey Puzzle. Larval food plants are *Ixora*, *Croton*, *Dendrophthoe*, *Eugenia* etc.

87. WHITE ROYAL *Pratapa deva* (Moore). Common from July to November. Larvae feed on *Dendrophthoe* spp.

88. PLAINS BLUE ROYAL *Tajuria jehana* Moore. Like White Royal this butterfly also feeds on *Dendrophthoe* and can be seen near the trees having *Dendrophthoe*. Common from July to November.

89. GRAM BLUE *Euchrysops cnejus* (Fabricius). A rapid flier often settles on damp patches; common from September to November. Larvae feed on varieties of leguminose plants and are pest of gram crops.

NARESH CHATURVEDI
S. M. SATHEESAN

ENVIRONMENT

Mahim Bird Sanctuary

At the garden end of the Mahim Bird Sanctuary, Bombay, mangroves up to the creek mud flats have been cut down. A part of the cleared area, has been filled up with gravel and mud, levelled down and ringed with a barbed wire fence. On previous visits to the Sanctuary, a visitor could watch migratory birds feeding on these very same flats in their hundreds during the low tides. The development of the filled-up area has now provided a ready made footpath for the nearby hutment dwellers.

The information boards, on the birds that visit Mahim, are now half buried and the hide has totally disappeared.

Numerous weeds have taken over at the edges of the mangrove region. Garbage is also being dumped here. The trash and dried leaves swept in the garden are also thrown into the mangroves.

Ironically at the entrance to the filled-up area, an old instructions board still advises visitors to 'quietly position yourself in one of the bird-watching hides', and follows it up with "and now, you are a birdwatcher".

Another alarming development are the pariah dogs that roam about in the mangroves. The locals claim that these dogs are owned by the bootleggers operating in the Mahim Bird Sanctuary. There are three stills in the mangroves, where local



The Bootleggers' barrel Photo: B. Bhushan
'navsagar'—a brand of illicit liquor — is brewed, they claim.

According to the locals, the bootleggers have trained the dogs to warn them of police arrival. Most of the time, the dogs spend their day flushing out egret nests and eating up their brood.

The mangroves and the mudflats on which the migrant birds feed on seem to have little chance of survival.

BHARAT BHUSHAN



Above. A view of the mangroves cleared and encroached upon.

Below. Half buried information boards

Photos: B. Bhushan



The little Veli Swamp disappears

Till very recently, the city of Trivandrum had been one of the few cities in the south, with its greenery still intact. But of late, things have been changing for the worse, as everywhere else.

The photograph below shows a little thickly-wooded swamp at a place called Veli, only a few kilometres away from the city. Beyond the swamp, further inland, stands Veli Hill, which till about 50 years ago was a haunt of leopards and jackals. In course of time the jungles and jackals disappeared and now the huge concrete monstrosities of the VSSC (Vikram Sarabhai Space Centre) lie sprawled on the hill.

Veli swamp was a haven of bird-watchers and botanists. It won

recognition as a haunt of birds as early as 1890. Ferguson, who was for a time in charge of the Trivandrum Museum, used to send his collectors to this swamp to get specimens. It was also a favourite snipe shooting centre for Ferguson and other Britishers of the time. The flora of this area was the subject of a study by Shri K. J. Thomas who published an interesting paper on it in 1962 (*Journal of the Indian Botanical Society* 41, No. 1).

The vestiges of the pandanus and mangrove thickets still found here are sure proof that the swamp was once a stronghold of these plants. Taken by itself, each of the 'facies' like the abandoned coconut grove and paddyfields, screwpine hedges, patches of laterite, and dry beach

Veli lake and swamp with VSSC building in the background





The road through the heart of the swamp

Photo: Suresh Elamon

sand, may appear insignificant, but taken together they form an uncommon and complex system catering to a large variety of bird and aquatic life. The more enthusiastic birdwatchers of the city have been able to identify no less than seventy different species of birds in and around the swamp area. I myself have watched the Purple Moorhen, the Pheasant-tailed Jacana (in breeding and non-breeding plumage), Purple Heron, Blackcapped Kingfisher, etc. to my heart's content in the Veli area.

In 1979 I was able to see the Goggle-eyed Plover, spot its nest, and photograph it under a *Calotropis* bush.

The first death-knell of this mini-sanctuary was sounded when the whole area was acquired by the VSSC authorities. When it was

rumoured that they planned to lay a road bisecting the swamp, members of the Kerala Natural History Society sent an appeal to Prof. Dhavan, Chairman of the ISRO, Bangalore, to save the swamp. We received a very encouraging reply from him, promising all help. We had reason to hope for a sensible compromise between development and conservation, because at Sriharitkota in Andhra Pradesh, the ISRO establishment was reportedly giving protection to the wintering birds and their habitat.

But as the photograph shows, the road was finally laid straight as a lance through the heart of the swamp. The lesson we have to learn is that this is the Space Age and that there is little space left for such ecological luxuries!

SURESH ELAMON

The Himalayan Tahr on Table Mountain, South Africa

Mr P. T. French, an old India hand and an old member of the Society (joined in 1944), now settled in South Africa, has sent us information on the Himalayan Tahr which shows clearly the dangers of introducing an exotic into a new environment either deliberately or inadvertently. The Himalayan Tahrs on the Table Mountain are, according to R. Bigalke of 183, Alexander Street, Pretoria, descendants of a pair which he sent to the Groote Schuur Zoo from the National Zoological Gardens at Pretoria on 2nd September 1935. Bigalke states that: *'Either these animals, or some of their progeny, escaped from that zoo resulting in their rapid increase in Table Mountain at the cost of its flora. Although considerable damage has already been done to the montane vegetation, it is to be hoped that the steps now being taken to eradicate the tahrs will not be relaxed until the object has been attained.'*

'Like the klipspringer, in earlier times a common little antelope on Table Mountain, the tahr is an agile climber and jumper in rocky terrain. At Groote Schuur the animals were obviously not so securely housed that they could not escape. Their rapid increase in numbers shows that they found Table Mountain at least as favourable an environment as their normal home in the Himalayan mountains.'

Mr P.H. Lloyd, Research Officer (Mammalogy), Department of

Nature and Environmental Conservation, of the Provincial Administration, Cape of Good Hope, has in letters to Mr French explained the steps taken to eradicate the alien intrusion. In the following two paragraphs we quote from two of Dr Lloyd's letters, the first on the recommendations he had made to the concerned authorities and the second letter probably in response to Mr French's suggestion that the Tahr be shifted elsewhere, explains precisely the dangers of introducing exotics.

'My work on the Himalayan Tahr was completed in 1975, when I prepared a departmental report which was followed by a briefer report consisting mainly of management recommendations to the municipality of Cape Town to whom Table Mountain Nature Reserve belongs, and who were responsible for the culling. Our population estimate for the end of 1975 was between 600 and 700 animals with a growth of approximately 23% per annum. The recommendations included shooting daily in the initial stages to reduce the population rapidly and to avoid any possible stimulation of reproduction caused by sporadic hunting, as has been shown for certain other species. This advice was unfortunately not followed. The most recent cull figures I have received were in the vicinity of 600 animals. Because of the varying rate at which the animals were culled,



Himalayan Tahr on Table Mountain, S. Africa

Photos: Robert Boycott



and because age-classes were not recorded, it is difficult to estimate what the present live population is, but we estimate it to be much higher than it would have been had the management proposals been followed to the letter."

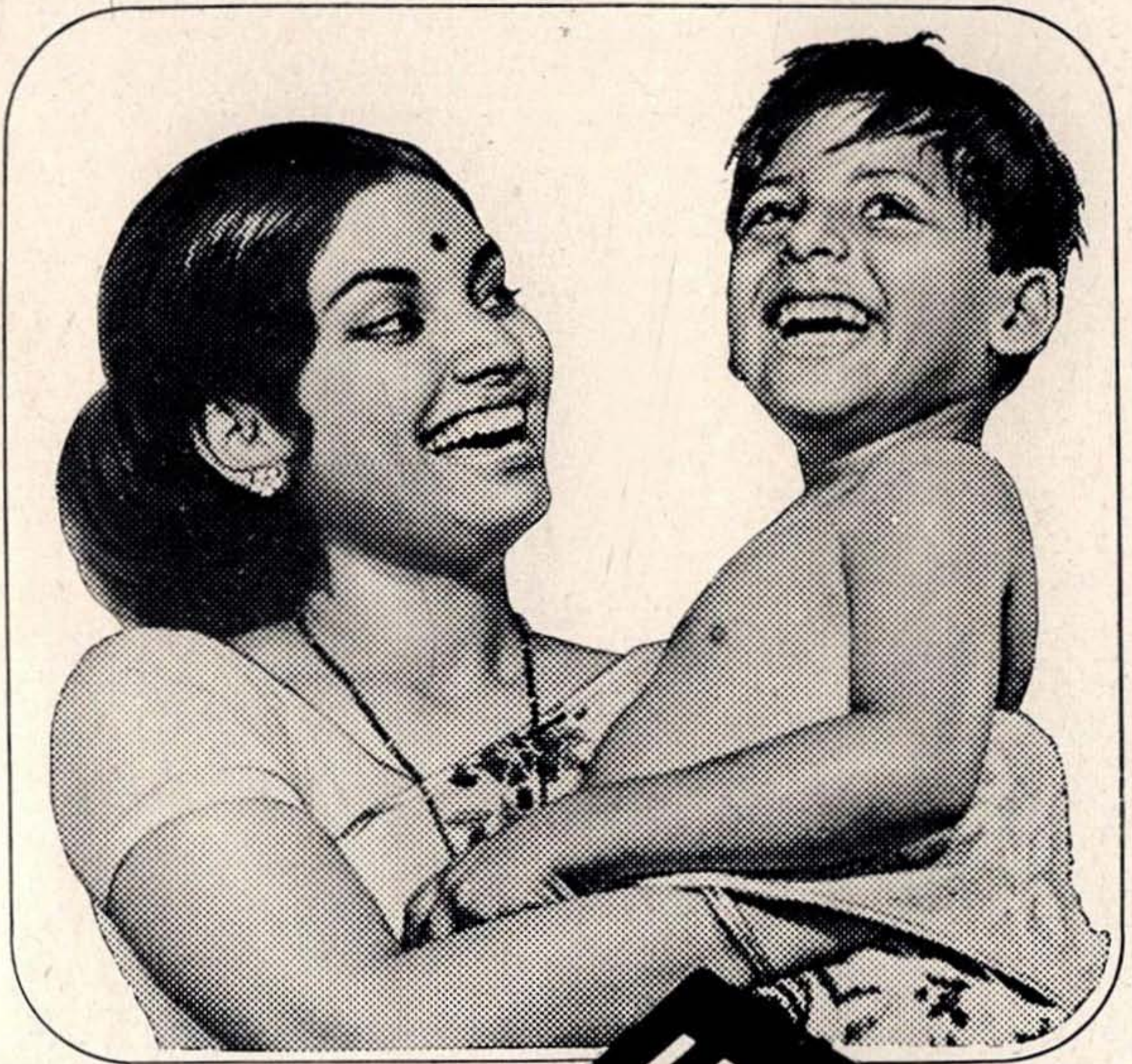
"I forgot to mention in my earlier letter that we would be very much opposed to transferring tahr to other parts of Southern Africa, including those you mentioned, namely the Drakensberg or the new Pilanesberg Game Reserve, for a variety of reasons. Firstly, in terms of zoogeographic principles (talking of wild animal populations) it is highly undesirable (philosophically). Secondly, because Himalayan Tahr is such a hardy and adaptable animal, the chances are that it would do very well and because there are no built-in limiting factors (ecologically speaking) in these areas which would act specifically against tahr, we would probably again get a rapid build-up of numbers, with the resultant destruction of vegetation, ultimately leading to a new artificial balance of lower numbers of tahr and a depleted environment in terms of vegetation (palatable species would disappear first) and fauna (those which could not compete with tahr would ultimately disappear). Please

don't misunderstand me, I am very much an admirer of tahr — one cannot but be impressed with their agility for so large an animal and the striking appearance of males in the winter season — but they are animals adapted for the Himalayas. If I could put it another way, they are so well-adapted to survive in an incredibly harsh montane environment, that when faced with a much milder mountain environment they are ever-well-equipped and then tend to dominate over everything.

"Our conservation responsibility is naturally to conserve indigenous species in their local environments. I admit that there are many species which taken out of their natural environment and placed in another apparently similar and suitable environment, do not dominate or even struggle to survive, but this is generally because their own natural environment in which they have evolved, holds more advantages, some of which are not immediately obvious, for them than does the new. It is seldom true that a new environment offers more advantages but in the case of the Himalayan Tahr on Table Mountain (or any mountain in the R.S.A or most of the world for that matter) this is the case."

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