

# Hornbill

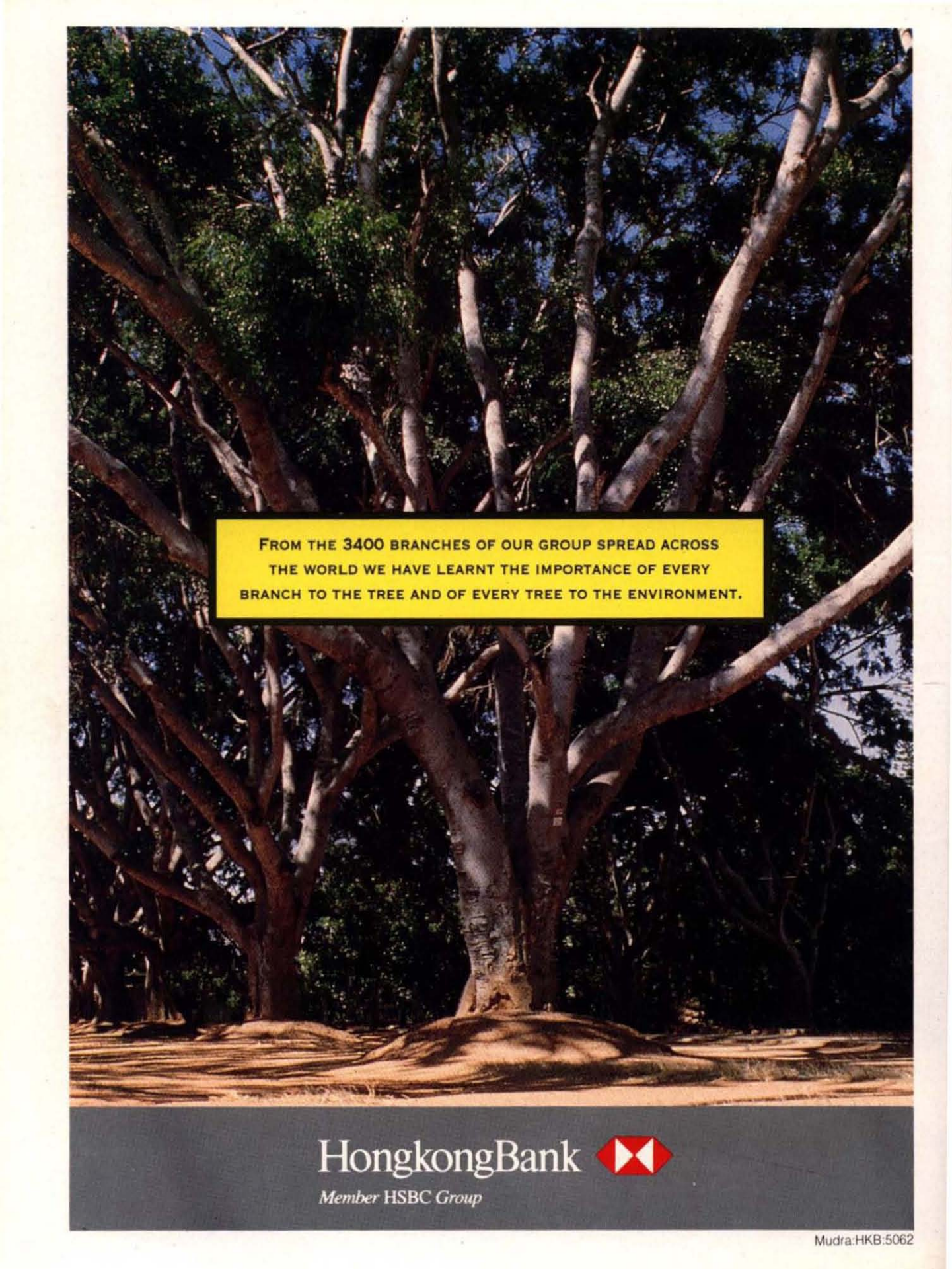


1997 No. 2


*about nature and us*



**BOMBAY NATURAL HISTORY SOCIETY**



FROM THE 3400 BRANCHES OF OUR GROUP SPREAD ACROSS  
THE WORLD WE HAVE LEARNT THE IMPORTANCE OF EVERY  
BRANCH TO THE TREE AND OF EVERY TREE TO THE ENVIRONMENT.

HongkongBank 

*Member HSBC Group*

# C O N T E N T S

**HORNBILL**  
1997 (2)



## BNHS EXECUTIVE COMMITTEE

### President

Mr. B.G. Deshmukh

### Vice Presidents

Mrs. D.S. Variava,  
Dr. A.N.D. Nanavati  
Mr. G.S. Ranganathan

### Hon. Secretary

Mr. J. C. Daniel

### Hon. Treasurer

Mr. V. Haritwal

### Director

Dr. A.R. Rahmani

### Members

Dr. A.M. Bhagwat  
Mr. Humayun Abdulali  
Mr. Ulhas Rane  
Vice Adm. M.P. Awati (Retd)  
Mr. M.R. Almeida  
Dr. B.F. Chhappgar  
Dr. Prakash Gole  
Mr. Sunjoy Monga  
Dr. Erach K. Bharucha  
Maj. Gen. E. D'Souza (Retd)  
Dr. Rachel Reuben  
Mr. K.P. Karamchandani  
The Secretary, Ministry of  
Environment & Forests,  
Govt. of India.  
The Director of Archaeology  
& Museums, Govt. of  
Maharashtra.

### Editors

J. C. Daniel  
Isaac Kehimkar  
Gayatri Ugra  
Sunjoy Monga

### Layout

V. Gopi Naidu

### Cover

Crinum lilies  
Sunjoy Monga  
Porpoise Photostock

Published and printed quarterly by  
J. C. Daniel for the Bombay  
Natural History Society. Printed at  
St. Francis ITI Press, Borivli,  
Bombay, Reg. No. R.N. 35749/79,  
ISSN 0441-2370

## Monsoon Music

4



Frogs and toads are the most harmless form of vertebrate life — neither do they peck, nor do they bite.

— J.C. Daniel

## Saving the blacknecked crane

10

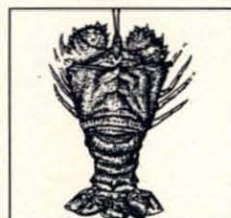


Protecting the endangered blacknecked crane in Ladakh is yet another example of the Indian Army's positive role in environmental protection.

— E. D'Souza

## Seashore Lore

18



### 26. The Bottom Gang

Learn all about lobsters in this issue, from our series on life in the marine environment.

— Beefsea

## The Birdwatcher

29



This new feature begins with the enigmatic whitebrowed bushchat, a denizen of scrubby, arid grasslands.

— Asad R. Rahmani

## and other features.....

Letters .....	13
Indian Wildflowers .....	14

For more information on the Society and its activities, write to The Honorary Secretary, Bombay Natural History Society, Dr. Sálím Ali Chowk, Shaheed Bhagat Singh Road, Bombay 400 023. Tel.: 282 1811 Fax: (91-22) 2837615.

Views expressed by the contributors in the Hornbill are not necessarily those of the BNHS. Unsolicited articles and photographs if lost or damaged in press are not our responsibility and no claims will be entertained.

**I**N a recent article "Saving the tiger — a challenge for mankind" in the Newsletter of the Wildlife Institute of India, one of India's foremost wildlife biologists, A.J.T. Johnsingh, reviewed the status of the tiger throughout its world distribution. The article starts with the inevitable quotation from William Blake's poetic and magnificent obsession with the tiger, which has survived for over two hundred years in the English speaking world. The fascination for the tiger that it has created has made the tiger a high conservation priority species. Will it survive the inexorable increase in human population and demand on natural resources is an open question. Johnsingh is optimistic and hopes that "a handful of dedicated conservationists can brighten the future of the tiger". Having been involved recently in an unseemly and rather ludicrous parody of the fairy tale query "Mirror mirror on the wall, who's the most concerned conservationist of them all?" I feel our predilection for internecine self-destructive activities will neither help the tiger nor the conservation movement. Johnsingh's optimism is misplaced.

Considering the heat generated on behalf of the tiger, a dispassionate look at the conservation movement in India leaves one with the conviction that there is lopsided concern for the tiger. Several other species, children of a lesser God, do not receive the attention they deserve compared to the tiger. The lion, the bustard and the lesser florican, to cite a few, deserve equal if not more conservation concern. The lion survives in a single population which can be wiped out by a catastrophic disease as had happened to a population of the African lion. The quest for an alternate home for the lion moves at an apathetic snail's pace. The tiger, unlike the lion, has 18 tiger reserves for special protection and therefore the tiger has 18 more chances of survival than the lion. It is very likely that the lions of Ashoka may remain only on the country's signet. The bustard and the lesser florican are gravely threatened with continuous loss of their grassland habitat and are well on the way to extinction. Neither the bustard nor the lesser florican occur in tiger country to benefit vicariously from the protection, for whatever it is worth, that the tiger habitat receives.

A proposal from the BNHS drafted by Asad Rahmani to start a Project Bustard was summarily rejected by the Indian Board for Wildlife at its last meeting.

The spectacular jumping display of the lesser florican will soon be a memory only. The conservation movement in the country appears to view its disappearance with equanimity.

The conservation community recognises only the tiger as deserving its attention. Evenhanded enthusiasm is apparently abhorrent.

J.C. Daniel





# Monsoon Music

## The Frog he would a-Wooing Go



J. C. Daniel



The chorus at every pond and puddle varies in timbre and tone from the deep 'awang' of the bull frogs to the shrill peeping of the cricket frogs. You can easily identify each species from the medley of calls, as a birdwatcher can identify birds from the calls of a mixed flock of birds in a forest.



Bright blue vocal sacs of the Indian bullfrog are inflated while calling

ISAAC KETHINKAR

**"A frog he would a-wooning go,  
whether his mother  
would let him or no:  
So off he set in his opera hat  
But as Froggie was crossing  
a silvery brook,  
A sily-white Duck came  
and gobbled him up!"**

**N**O one welcomes the monsoon rains with more joy than the frogs and toads. As the first heavy monsoon shower falls, of an evening, the ditches and puddles, it evokes clamorous rejoicing from the amorous frogs and toads who had till then remained unseen in their summer hide-outs. What the Greek philosopher said of the male Cicada "Happy are the Cicadas for they have voiceless wives" is equally true of the frogs and toads, for only the males call.



ISAC REHMEAR

The fungoid frog is so named from its resemblance to orange-red fungi in its habitat

All this excitement is  
for a limited period  
only, and once the  
mating frenzy is over,  
the frogs become silent  
and unobtrusive as they  
were before love made  
them throw caution  
to the winds! They are  
the most harmless form  
of vertebrate life —  
neither do they  
peck nor do  
they bite.



ISAAC ESTIMAR

The painted frog *Kaloula pulchra* is a narrowmouthed frog, coloured grey with orange and red patches for camouflage

The chorus at every pond and puddle varies in timbre and tone from the deep 'awang' of the bull frogs to the shrill peeping of the cricket frogs. If you are a good and experienced frog watcher you can easily identify each species from the medley of calls that you hear, as easily as a birdwatcher can identify his birds from the calls he hears from a mixed foraging flock of birds in a forest. All this excitement is for a limited period only, and once the mating frenzy is over, the frogs become silent and unobtrusive as they were before love made them throw caution to the winds! Frogs are the most harmless form of vertebrate life — neither do they peck nor do they bite. Their protection is only their camouflaging colour which blends them into their background and their agility which makes them escape from your grasping hands as smoothly as a piece of wet soap.

Frogs have a certain sliminess, usually wrongly attributed to the reptiles which are cold and dry but never slimy. The toad, on the other hand, is dry and stodgy but it has glands, especially the parotid glands with a potent poison, situated above the exposed tympanum, which makes the thoughtless dog that bites it foam at the mouth and give up toad hunting for ever. But nothing in this world is safe, toads are a speciality food for some species of snakes.

In the Bombay area the bull frogs, the males decked out in their bright canary yellow suit and blue vocal sacs struggle and jostle for the sober brown and green females which are attracted by their deep, resounding 'awang' calls. I used to hear them from a small depression near my flat in the first few years of my stay in Bombay. But the depression was first polluted with waste from our local bootlegger and then the depression itself





The Malabar gliding frog is decked out in verdant green, with bright red webs between its fingers.

disappeared under a clutch of hutments, and with that the frogs.

Equally early to breed is the common tree frog, which often spends the harsh summer months communally in hideaways inside houses, preferably in bathrooms, and goes out to breed as the monsoon breaks. Their clapping call is a feature of a wet night in forested areas and a tree or rock overhanging a pool often has their bun-like white egg mass, an egg mass whipped into shape by the movements of the male's legs as they mate and spawn. The developing tadpoles drop into the water, but death awaits at every stage.

Recently our scientist at the new Conservation Education Centre of the Society adjoining the Sanjay Gandhi National Park noticed several spawn masses above the water tank built for the construction of the building. But even in this

new habitat predators were already in residence. The local dragonflies had been quicker off the mark and the predatory dragonfly larvae were waiting for the tadpoles to drop from the foam nest.

Exposure often has dangers for the adult tree frogs also. A tree frog visibly engaged in spawning is likely to fall a victim to the false vampire bat fluttering among the trees in search of prey. Among all the tree frogs the most extraordinary is the Malabar gliding frog, a handsome species decked out in verdant green on the body and bright red webs between its fingers. It occurs from Goa southwards in the Western Ghats and can glide with wide spread legs and webbed toes from tree to tree.

The Sanjay Gandhi National Park has ten species of frogs and toads, each with its own breeding season. Among all these the skipper



S.U. SARAVANAKUMAR

Among the rarest, *Melanobatrachus indicus* was recently rediscovered after years

frogs are the most visible and most common, and can be seen floating in every perennial pool of water throughout the year. They are also an exception to the rule that frogs do not call during the non-breeding season. You can hear them throughout the year. They have also the extraordinary habit, when flushed off the land, to go skittering along the surface of the water before diving, a habit first noted by that observant naturalist — the Mughal Emperor Jehangir.

The fungoid frog, so named from its resemblance to orange-red fungi in its habitat, is a forest species mainly of the Western Ghats. Its black and scarlet orange, or red colour is thought to be aposematic and therefore protective. It is wide-spread in the monsoon but retreats to moist areas in summer.



Frogs and toads in India occur from below the snowline to the plains, all 200 plus species of them. Some are common, some are rare like *Melanobatrachus indicus* which was recently rediscovered after years by Karthikeyan Vasudevan, a young scientist of the Wildlife Institute of India, Dehradun. Some spend most of their life underground like the balloon frogs and other narrow mouthed frogs. But all are above ground for a blitzkrieg of breeding during the monsoon.

Frogs are very good indicators of the effects of water pollution due to their delicate skin and that is one area of study the Society is planning to investigate. □

---

J.C. Daniel was, for many years, Curator of BNHS. He is currently the Honorary Secretary of the Society.

ORIGINAL STOCK IMAGES

COMMERCIAL PHOTOGRAPHY



Photo : Bharath Ramanathan



Photo : Sanjay Monga

Not just images.....



.....a lasting relationship



Photo : Vivek Saha



Photo : Thakur Deep Singh

MOBILE - CALL ANY TIME : 98210 43992

## ACKNOWLEDGEMENTS

*We are grateful to*

**SETH PURSHOTAMDAS THAKURDAS &  
DIVALIBA CHARITABLE TRUST AND  
MEHTA SCIENTIFIC EDUCATION &  
RESEARCH TRUST**

for financial support for the  
publication of Hornbill

## Lake Tsigul Tso in Chushul — the tranquil habitat of the blacknecked crane



# THE INDIAN ARMY AND CONSERVATION

## Saving the Blacknecked Crane

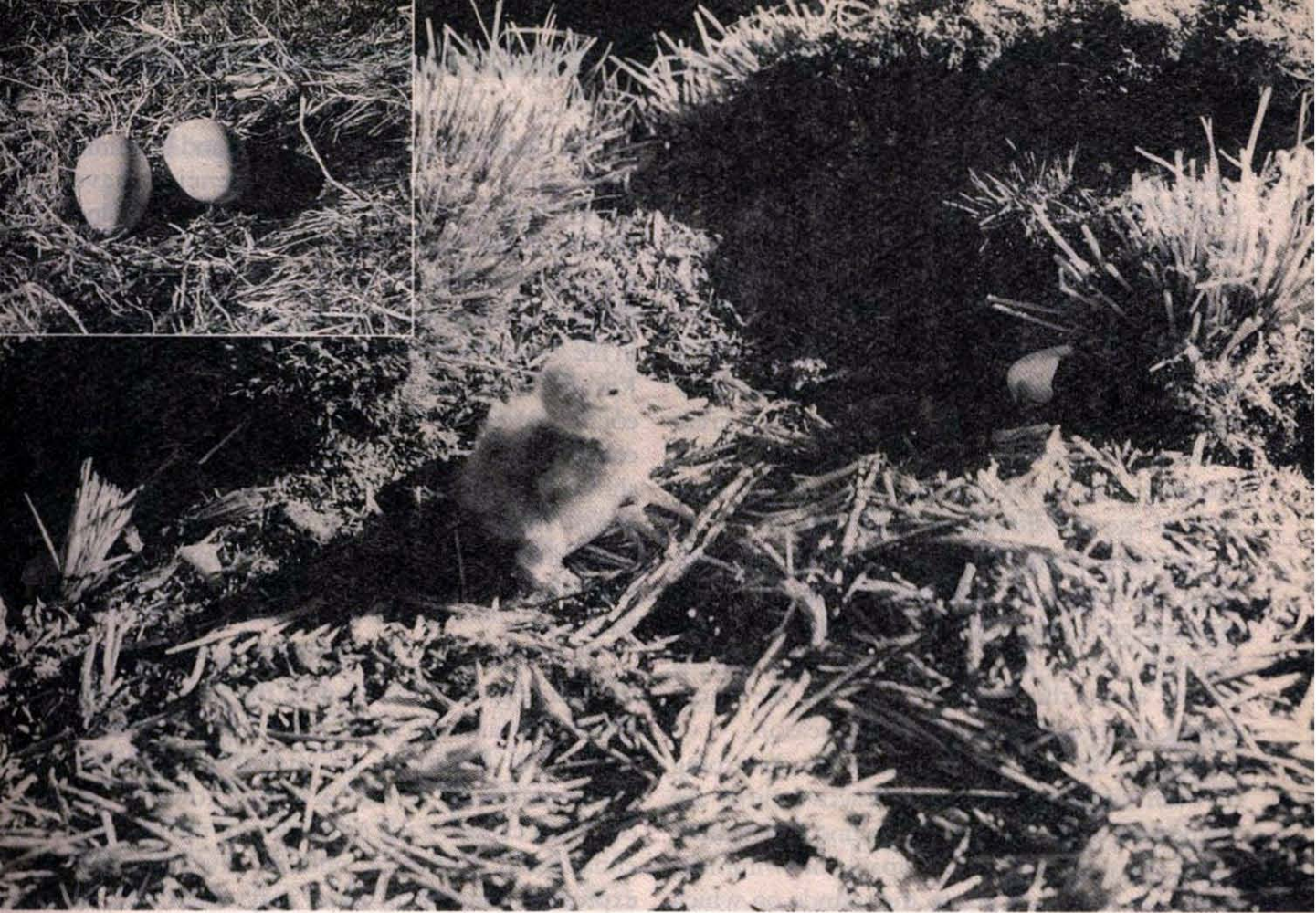
Maj. Gen. E. D'Souza, PVSM (Retd)

Photographs: Col. R.T. Chacko

**T**HE Army's role in ecology, especially in the fields of protection and restoration of our environment, is well known. Protection of the endangered blacknecked crane *Grus nigricollis* in its only known habitat in India, that is in Ladakh, is yet another positive example of the Army's role, exemplified in the activities of the Northern Command, extending from the Shivalik Range to the Himalayas, especially in high altitude and inaccessible areas.

Apart from pioneering pilot projects in such difficult terrain to preserve wildlife, flora and fauna, this Command has also been facilitating work on such projects undertaken by governmental and non-governmental organizations by providing administrative and medical support. It will be recalled that the late Dr. Sálím Ali received considerable support in his studies in Ladakh, as did Vice Admiral M. P. Awati.

Besides fulfilling its two major roles of the protection of our borders and internal security,



A day-old chick of the blacknecked crane with eggs on the nest (inset)

the Northern Army's activities range from social forestry, wetland development, arboriculture and landscaping of our cantonments, to mobilizing resources in checking harmful vehicle emissions, waste disposal and creating awareness among the people. Army families of All Ranks are encouraged to actively participate in nature conservation through the well structured Army Wives' Welfare Association (AWWA), in family planning, the use of solar cookers, garbage/waste disposal, use of vermiculture and avoidance of the use of non-biodegradable packing materials. During the year 1995-1996, a total of one million saplings of endemic varieties were planted and the effect is now readily visible in the form of a green canopy against the backdrop of the barren mountains of the Zaskar Range in Ladakh.

This writer was privy to all these activities, and the encouraging results, during a recent visit

to the Command, where he was also invited to make a presentation on the environment to over 200 officers and their families, teachers and high school children in Udhampur, which was widely reported in the local media.

Since the last few years, Northern Command has been involved in the study of the endangered blacknecked crane, in the Chushul Area of Western Ladakh, where fortunately there are still some unspoilt wetlands. These are known to be one of the breeding grounds for many migratory birds, as will be evident in any checklist of the birds sighted in Chushul. The blacknecked crane is entirely terrestrial, feeding and nesting on the ground. Col. R.T. Chacko, a Bangalore based retired Army Officer and environmental activist, has been carrying out a detailed study of this species for some years, in the Changthang Block of Ladakh (altitude 4265-4570 metres), the only

area in this wild desolation where the blacknecked crane, locally known as *Cha Tung Tseng Karma* breeds. The cranes arrive in small numbers in early April. A few of them breed there and return to their wintering grounds, possibly in Tibet, in October.

Some of these birds build nests of aquatic weeds and grass in marshy areas, while others lay their eggs in a hollow on existing islands which grant them a certain amount of protection from predators. The young gain maturity at two to three years of age and are known to pair for life.

Increased tourist activity in the area disturbs these breeding cranes, by accident or design, as attempts are made to photograph these rare and beautiful birds. Instead, awareness should be created about the problems faced by the cranes during the breeding and hatching season.

Among the factors responsible for disturbing or even eliminating these attractive birds are 'ownerless' dogs living in and around this habitat. These dogs are tough, and capable of swimming in the icy waters to get to the islands on which nests can be pilfered. 20 such dogs have been identified around the important nesting areas in the Tsigul Tso.

The green grass in the wetlands around the two lakes Tsigul Tso and Tso Nyak is an attraction to the locals to bring their livestock for grazing. In doing so, some of these animals inadvertently destroy the nests and often the eggs.

The data collected by Col. Chacko during the working season of 1995, during the fourth year of his study, revealed that the total population of blacknecked cranes in the Ladakh region was 22, of which nesting cranes were about 10. Of the 8 chicks hatched, only 6 were able to survive, underscoring the urgent need for protective measures.

The Ecological Cell of the Northern Command, through the Army Division responsible for Ladakh, is extending full support and administrative cover to Col. Chacko to ensure the successful conclusion of the study.

The Civil Department in Jammu and Kashmir, and allied environmental agencies have acknowledged that the presence of the Army and the sustained interest taken by the officers and men, has resulted in a perceptible curtailment in illegal poaching, illicit grazing and tribal invasion in the lower Dachigam forest, home of the famed Kashmir stag, the *hangul*. The most recent census conducted by the Wildlife Institute of India, in collaboration with the State Wildlife Department, shows a welcome increase of the endangered *hangul* from 115 in 1994 to 290 as this goes into press; the habitat covered in the census included Dachigam National Park, Tral, Dogra and Sanargalla.

The Northern Command Eco Cell is maintaining close liaison with the State Wildlife Protection and Social Forestry Department of Jammu & Kashmir, to coordinate various environmentally related activities towards the common cause — the protection of the rare and endangered species of wildlife. The Army has expressed concern in more ways than one, to provide the necessary impetus to ecology and nature preservation. To bring the desired awareness to the rank and file of Northern Command, presentation and workshops on ecology with the help of trained resource persons from the Bombay Natural History Society, are held annually for middle piece officers, junior commissioned officers and troops, and service families including high school children. The guiding theme throughout the Command, which we have taken care to widely advertise, is:

**“If you want to do something likely to last, plant a tree.”**

*Maj. General E. D'Souza, PVSM (Retd) is truly an "old soldier" of the ecological battlefield. He is deeply involved in the Nature Education activities of the BNHS. This article is written in collaboration with Maj. Gen. Prakash Gokarn, AVSM and Col. R.T. Chacko (Retd).*



## Bombay's Nefarious Pocket

It was by sheer chance that I saw *Hornbill* (1997, No. 1) yesterday at Hingolghadh, which has become synonymous with embattled Nature — a citadel from where an almost last ditch battle is being fought for the cause of nature conservation. Perhaps, like the excellent and very timely write-up on the Borivli National Park, a piece should be produced on Hingolghadh.

"Bombay's Other Jungle" is a lovely article — as indeed is this entire issue of *Hornbill*. Congratulations! In 1971 and 1976, my Bombay interlude, it was BNP which kept me sane. I remember a rather heated discussion as to why the Park was necessary. All the usual rhetorics of species going extinct were aired. My simple assertion was "Borivli National Park is important because Bombay is there." The greatest disservice to the Park was done when it was closed to the public at the behest of a hyper-activist Environment Minister. By keeping people interested in conservation out, the Park is destined to be destroyed. I wonder how many illicit breweries are operating within the Park. On one of my last walks there with the late Dr. Sálím Ali, I vividly remember going up the Yavor Road and seeing a bird flit over a distillery! BNP should stand for Bombay's Nefarious Pocket.

Let us have more such articles and more such beautiful photographs. Above all, the Indian people must never be debarred from partaking of the wilderness, the "Aranya". It would be like closing the Taj Mahal to visitors.

People cannot be motivated for a cause they cannot relate to. Fine words and lovely publications are meaningless unless we have popular involvement. We all, nature lovers, must stand shoulder to shoulder in this desperate fight and we look to the BNHS to lead.

Lavkumar Khacher,  
Hingolghadh.



## Saving the Forest

Thankyou for the *Hornbill* (1996, No. 4). I enjoyed it and I am very impressed by the get-up. I am glad that the BNHS in recent years is beginning to bare its teeth against such abuses as the felling of Arunachal's priceless forest resources.



Bill Aitken

## Survival Stories

Going through "Oddest Ancient Oaf Alive" in the *Hornbill* (1996, No. 4) raises a question — Why do some animals survive for long periods of time, while others die out after a few million years?

Irawati Harshe,  
Bombay.

Why do plants and animals become extinct?

Nutan G. Mobharkar,  
Nashik.

**Beefsea replies:** *Both these questions are two sides of the same problem.*

*The cause for extinction is rarely single. Usually it is a combination of factors that overwhelm a species. There may be a specialisation of habit and habitat, an absence of adaptability to changing environment, a low rate of multiplication, a diminution of the food supply, and the appearance of a new predator.*

*Conversely, a living fossil or relict has survived because it has enjoyed a sufficient supply of food, freedom from overwhelming enemies or competition, and has not had to meet catastrophic changes of climate or geography. If it had the misfortune to face the last factors, it has been able to escape to an isolated or inconspicuous haven, or to make good its losses because of its internal vitality and regain its former abundance and range.*



# Indian Wildflowers

Text and Photographs: Isaac Kehimkar

With the first few showers, tuberous plants begin to emerge. Flowers of some appear first, but soon fade. Thus, with each week of the monsoon, there are always new colours to look for.

5 HILL TURMERIC *Curcuma pseudomontana*  
Hindi: Pahadi Haldi

Bright yellow flowers come packed in each bract, on a purple crowned spike among its 60 cm long, canna-like leaves. Flowering is seen from June to September in Western Ghats. The small almond-sized tubers are boiled and eaten.

6 EDIBLE CHLOROPHYTUM *Chlorophytum tuberosum*  
Hindi: Safed Musli

Clumps of this herb can be seen all along central and peninsular India in suitable regions. The erect scape carrying white flowers is longer than the leaves and this feature distinguishes it from other Chlorophytums. Flowers are seen from June to July. Extracts of the tuberous roots are used as a general tonic. Leaves, sold as monsoon produce, are cooked and eaten.

7 PINK STRIPED CRINUM LILY *Crinum latifolium*

Large showy, fragrant, white flowers with reddish-pink stripes are seen during the first few weeks of the monsoon. This Amaryllis grows throughout India and is cultivated in gardens too. Crushed and roasted bulbs are used as a rubefacient in rheumatism and their juice is used to treat earache.

8 YELLOW GROUND STAR *Curculigo orchioides*  
Hindi: Kali Musli

Bright yellow star-like flowers are seen at the base of the plant that springs from an erect root stock. This herb occurs along the moist Himalayan foothills from Kumaon eastwards to the northeast and in the southern peninsula. Flowers in February, May to July. Ayurvedic formulations of this plant are used as general tonic, diuretic, and for treating colic and diarrhoea.

9 SOUTH INDIAN SQUILL *Scilla hyacinthina*  
Hindi: Safedi Khus

Purple blotches on its leaves identify this herb unmistakably, though sometimes the blotches are absent. Tiny purple flowers adorn the dainty little scape that can be seen from May to August throughout central and peninsular India. Extracts from the root stock are used as expectorant, cardiac stimulant and diuretic.

10 DRAGON STALK YAM *Amorphophallus commutatus*

Flower stalks appear, often in groups, just before the onset of the monsoon. Flies are attracted by its stink and pollinate this flower. Leaves identical to edible suran, or elephant foot yam, come up later. Adivasis sell flower stalks as monsoon produce. It is essential to cook the chopped flower stalks along with the acidic fruits of *Garuga pinnata* and tamarind to kill the calcium oxalate that can give an unforgettable itch in the throat.



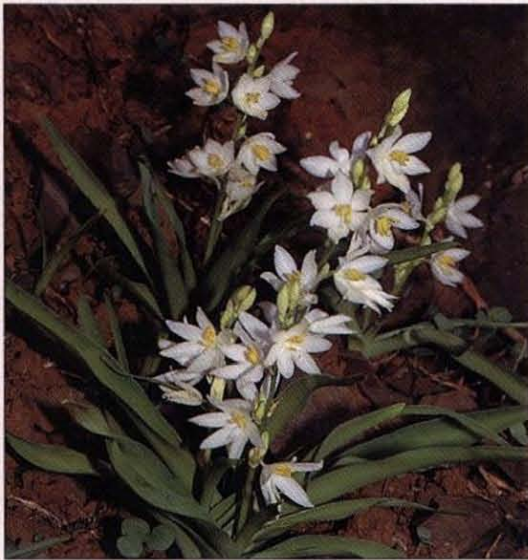
# Monsoon Magic



**HILL TURMERIC**



**YELLOW GROUND STAR**



**EDIBLE CHLOROPHYTUM**



**SOUTH INDIAN SQUILL**



**PINK STRIPED CRINUM LILY**



**DRAGON STALK YAM**



Photo: SUDHEER AGASHE

Pride of the Sunderbans — *Panthera tigris*



The rarest among India's spiny lobsters — *Panullus versicolor* — is also the prettiest. This is a juvenile; the adult is still more colourful, with the lily-white antennae turning pink, and the steel-blue body becoming emerald-green.

# Seashore Lore

## 26. The Bottom Gang

*Of metal was her armour bright,  
With gems of many colours overspread;  
The tawny jacinth, yellow chrysolite,  
The emerald green of hue and ruby red.*

### Beefsea

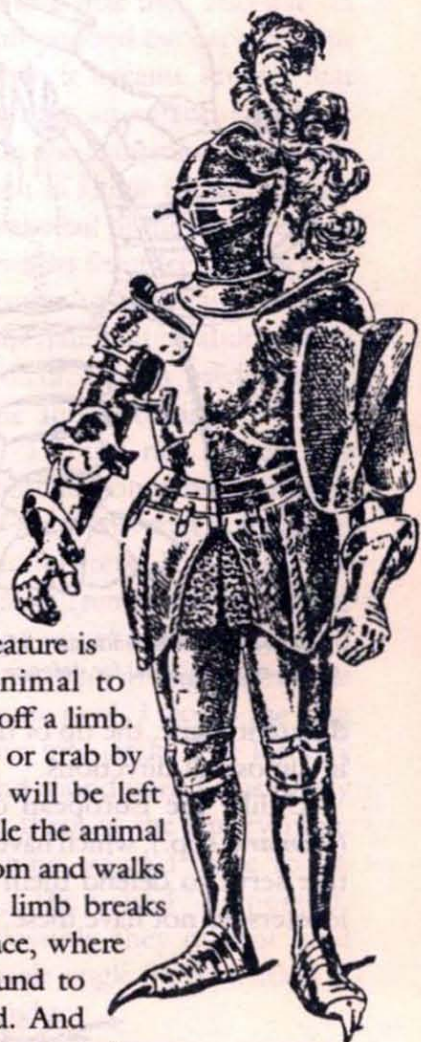
Lumped together as "shellfish" are two diverse groups of animals — one comprising oysters, clams and snails, and the other of lobsters, prawns and crabs.

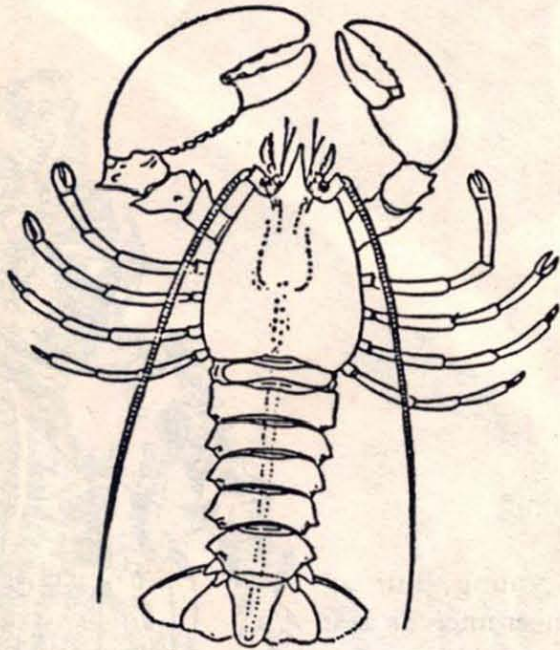
Lobsters are probably the most well known of the latter group, being an epicure's delight. With their cousins — the prawns and crabs — and many other less known jointed-limbed relatives, they form the Crustacea — the creatures with a hard "crust" on the outside. While this outer "shell" is thin in prawns, it is thicker and harder in lobsters and crabs because of the deposit of lime. This hard shell or outer skeleton is wonderful as armour against enemies but constitutes a serious obstacle to continuous growth. While we, with our skeleton inside our body, can grow steadily from babyhood to youth, the shell prevents this in Crustacea. This handicap is overcome in a unique way. From time to time, lobsters and all other Crustacea cast off their outer skeleton. The shell splits, and the soft animal creeps out of it, as if discarding a shirt or coat. While still soft, the animal increases a little in size. At this time, the soft creature is vulnerable to its enemies and therefore hides in a crevice or cranny among rocks. The new "shell" now hardens, and further growth stops until the next moulting. This occurs frequently while the animal

is young, but at longer intervals as it grows older.

Another unique feature is the ability of an animal to automatically throw off a limb. If you hold a lobster or crab by its leg or claw, you will be left holding the limb while the animal drops to the sea bottom and walks or swims away. The limb breaks off at a particular place, where a flap closes the wound to prevent loss of blood. And this autotomy or self-amputation is not a permanent handicap. A small bud appears where the limb was cast off and, at the next moult a fully formed (though somewhat shorter) limb appears. The regeneration of a lost limb is somewhat akin to a lizard shedding its tail and growing a new, shorter one.

The hard skeleton is divided into rings or segments jointed on each other. While the outer shell is continuous, it is thinner at the joints, so that movement can be achieved. Each leg, or limb, is made up of hollow cylindrical segments, each joined to the next, but moving only in one plane. But as each successive joint is hinged in a

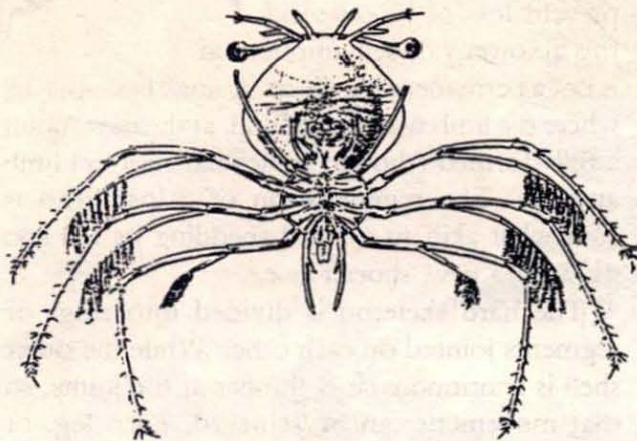




*Homarus*, the true lobster of Europe and America, has massive claws, ideal for defence and the gourmet's delight.

different plane, the tip of the limb can be moved in almost all directions.

Unlike the European or American lobsters (*Homarus* spp.), which have huge claws or pincers that serve to defend them against enemies, our lobsters do not have these. Instead, their body is



This flat, glassy, long legged creature is a phyllosoma, the larva of spiny lobsters.

armoured with many spines, scattered all over the body, with two much longer ones over the eyes. To distinguish them, they are called spiny or rock lobsters (*Panulirus* spp.) or sometimes sea-crayfish or sea-crawfish. (Crayfish are fresh water relatives.)

The lobster's body has two main parts; the front half called cephalothorax, roughly equivalent to the head (cephalus), and chest (thorax) being fused together and bearing five pairs of legs with which the lobster walks on the sea bottom. The rear half — called lobster tail by the gourmet — is actually its abdomen. On its lower side are delicate flaps called pleopods or abdominal swimmerets. While prawns swim with their help, in lobsters they serve as attachment for the thousands upon thousands of eggs in the female. But lobsters can swim backwards for short distances by flapping their abdomen under the body and repeating this flapping motion.

Scuba divers know that the sea is not silent. Contributing to the cacophony of sounds and noises under water are spiny lobsters. They make squeaky, scratching sounds by rubbing the long antennae (feelers) across the forward part of their body.

Like their cousins, the crabs, spiny lobsters hold their eggs under the abdomen. The female mates shortly after moulting, when the male turns her over and sticks two patches containing sperms on her abdomen. Many days later, when the eggs are extruded, she scratches these patches with the tips of her legs, and the sperms fertilise the eggs as they come out. Each egg has a little stalk, and the eggs are stuck to the swimmerets by a kind of glue secreted by the swimmerets. When freshly extruded, the eggs are orange-yellow, and the lobster is said to be berried or in berry. As the young grow inside, the yolk is used up, and the eggs turn black. In due course, they burst and the larvae (babies) come out and drift in the sea over long distances. These larvae are flat, glassy transparent, have long, spidery legs and are called phyllosoma.

Because stale fish is used as a bait for catching lobsters, they are mistakenly regarded as scavengers. Actually they prefer live clams, mussels, sea urchins, and a fish if they can catch one. Despite their hard shells, spiny lobsters fall prey to groupers, skates and dogfish. And they should be handled carefully. You can hold them by their thin long antennae (feelers). If holding them by their cephalothorax, be careful not to have your hand wrapped around it, as the lobster will flap its abdomen and badly gash your hand.

Sometimes I have wished that spiny lobsters could be hypnotised just as the true (clawed) lobsters can, so as to hold them motionless. It is somewhat like hypnotising a hen. Place the hen's beak against the floor and draw a chalk line straight away from the tip of its beak. Or a hen can also be hypnotised by tucking her head under the wing and whirling her about. (But don't let the SPCA catch you doing this!) To hypnotise a lobster, stand it on its head, with the claws resting flat. Bend the tail slightly inwards, stroke its back a few times and remove your hands. The lobster will remain motionless, balanced on its rostrum (nose) and claws!

At the Taraporevala Aquarium, we have studied spiny lobsters in great detail, and have also raised some controversies. In the good old days, before the export of lobster tails began, 25 cm long lobsters could be had for 75 paise; now a 15 cm one fetches Rs. 25. As there was no detailed study on their fishery since 1933, I undertook a survey and was fortunate to record a fourth species occurring at Bombay.

Spiny lobsters are caught along rocky coasts, because they can hide in crevices after moulting, while the new shell is hardening. So my colleague raised a hornet's nest when he observed them in

trawl catches. (Trawl nets are operated over sandy sea bottom.) His surmise that they also live on soft bottoms was pooh-poohed by 'experts'. But he was vindicated when it became known that spiny lobsters migrate in an offshore-inshore pattern. Off Bimini, in the Bahamas, thousands of spiny lobsters march in single file over areas. Each individual holds the tail of the one ahead of it by hooking it with its front legs, or flicks it with its antennae to maintain contact.

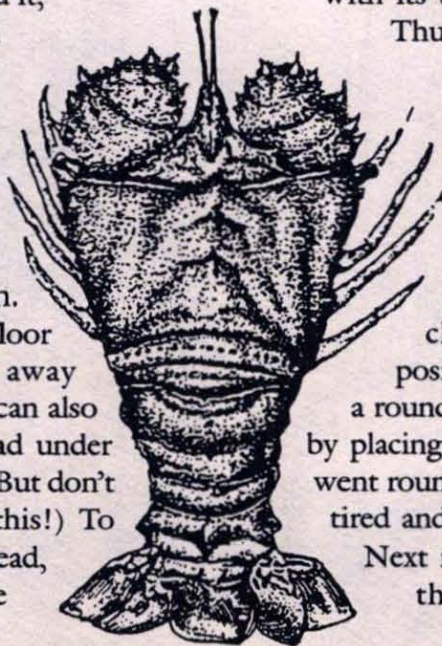
Thus, the vulnerable abdomen is protected from predators by the animal behind.

I could not repress my mischief once when I tried to see if this trait is found in our lobsters. I took several animals (remember they were cheap in those days) and positioned them in single file inside a round plastic pool. I closed the ring by placing them in a circle. The lobsters went round and round until I was finally tired and left them in the late evening.

Next morning, when I came to see them, they had dispersed.

Possibly they do not hold their single file formation at night.

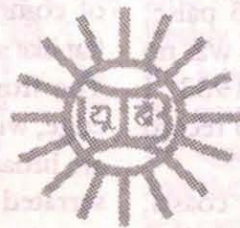
Close cousins to spiny lobsters are the squat lobsters, also called by various other names like flat lobster, slipper lobster, flapjack or, rather inaptly, sea cockroaches. While most (*Scyllarus*) are quite small, one (*Thenus orientalis*) grows sufficiently large to be of commercial value. The front of the body is flat like a spade but the abdomen is quite rounded. The front border of the body forms a straight edge, with the eyes right at the tips. The antennae are broad, flat, and rounded plates with irregular, serrated edges. When disturbed, it rolls up like an anteater and tucks its legs under the flat body. This action, plus its orange brown colour, help it to survive without any special defence organs. □



The squat or slipper lobster *Thenus orientalis* is a flat-bodied cousin of the spiny lobster.



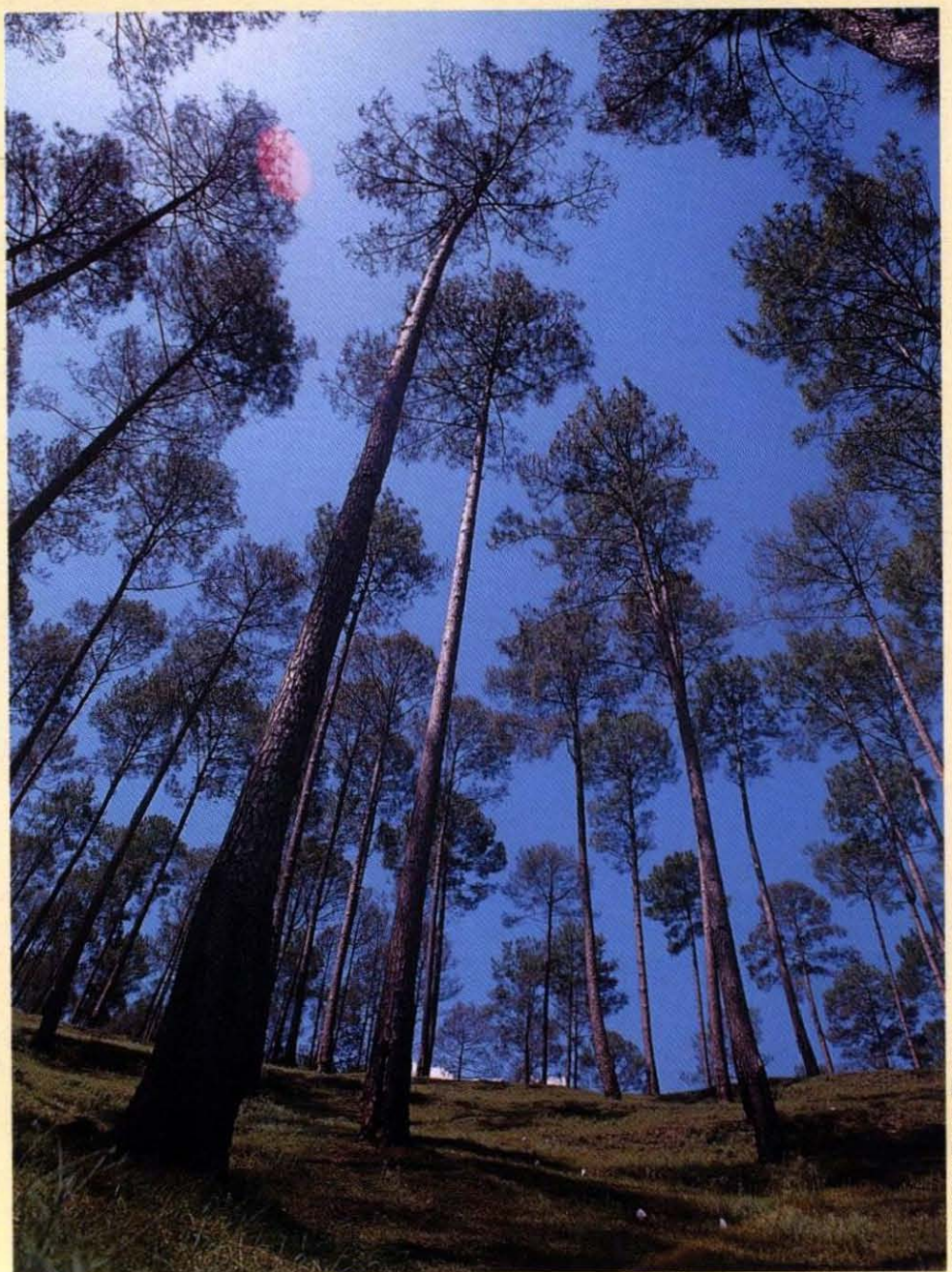
*Your environment friendly bank.*



**UNION BANK OF INDIA**

*Good people to bank with*

**Here are no  
broad vistas or  
stupendous  
views of snowy  
peaks but  
pleasing forest  
glades and  
wooded  
hillsides.**



SUNJOY MONGA/Purposeful Photostock

## An Expedition to Sangla in Kunawar

**M.A. Wynter-Blyth**

(From *JBNHS*, Vol. 47, No. 4, contd. from *Hornbill* 1997, No. 1)

**ONE** of the most characteristic features of the Simla Hills is that the southern sunny slopes are bare whilst the northern slopes are more often than not completely forested.

Consequently from a southern aspect many of the hills appear as grassy slopes curiously topped with a fringe of trees.

From Bahli to Deo, near Sarahan, where the main trade route is joined, the road is very lonely and I have often wondered for what purpose it was built because it is used hardly at all. All the trade between Tibet and India takes the direct and shorter road along by the Sutlej and up to Narkanda. This upper road is only of use for local traffic, which would be served just as well by the ordinary hill track, and for such as myself who



wish for a cool journey in the summer, for the bed of the Sutlej between Narkanda and Sarahan lies at about 3,000 ft and is terribly hot at this time of the year. This, I think, is the solution of the problem. I suspect that in days gone by some Viceroy or Governor-General wished to visit Chini and, wanting a cool journey, gave the order for the road to be built.

After five miles the road descends abruptly, first through oak forest and then through a rich growth of deciduous trees with a thick bamboo underwood. Lower down this gives way at 6,000 ft to an open forest of *Pinus longifolia*.

Taklech lies in a narrow valley, thickly wooded on the protected side, down which a little river runs steeply to join the Nogli Khud some 800 ft lower and a mile away. Its waters ran crystal clear until the late afternoon when they became cloudy, due, I believe, to the melting of snow high up near their source.

Taklech, and the hillside before Dharangati, is a home of the *jaldi aru*<sup>1</sup>, the tree that provides the little round apricots that ripen early. They were not yet ready but I made of them an admirable addition to my diet by boiling them with honey.

That evening, just as it was becoming dusk, a Spinetail swooped down towards the bungalow and was gone in a flash. These are the fastest of all birds and with their robust bodies and pointed wings, shorter than in other swifts, are easily recognised and curiously resemble some of the more modern fighter planes.

Two and a half miles away from Taklech and at a height of only 4,309 ft, the lowest point reached on the expedition, the road crosses the Nogli Khud, a turbulent little river that here runs through a considerable gorge. The Upper Link Road, however, soon atones for this fall from grace by climbing 5,121 ft in the next seven miles to attain an altitude of 9,400 ft at Dharangati.

For five tedious, tiring, interminable miles the track twists up a shadeless hillside towards a ridge

<sup>1</sup>*Zardaalu* is Persian for apricot. *Jaldi aru* translates as early ripening peach — Eds.

that looks deceptively like the end of the climb, but when I reached it I was horrified to see that Dharangati was a further two miles away at the top of a sort of pass over another and higher ridge.

The view from Dharangati compensates for the endless climb. Dharangati looks across the deep valley of Mangalad Khud to Hansbeshan (17,500 ft), a magnificent mountain whose sharp peak rises above precipices ... To the right is a long ridge, which runs in a wooded semi-circle to join a spur of the great mountain itself, and to the left is a fine view of snow-capped peaks. Around the bungalow is forest, the home of Monal, Koklas and Kalij pheasants, all of which may be seen close by.

On our arrival there was no rest-house keeper to be found, so we sat ourselves down on the hard boards of the verandah and shivered, for there was a cold wind blowing. After half an hour the chowkidar turned up, opened the place and boiled me some water. I sat in peace, drinking coffee and admiring the view.

The rest of the afternoon was not peaceful. Sheba discovered a remarkable triple echo and spent two happy hours barking at three imaginary dogs which invariably hurled back her abuse word for word from the forest over the way.

It is an easy descent of 3,000 ft through forest to the bridge over the Mangalad Khud. After crossing it the track runs across precipices and steep sunny slopes to join the main Hindustan-Tibet road at Deo. It was a hot and thirsty walk.

Sarahan is in two parts. Below the road is old Sarahan, a typical hill village: above the road is Durbar Sarahan, the summer capital of Bashahr State. The bungalow is situated between the two. The Sutlej Valley is wide here and gives a fine view of snowy peaks. Beyond Sarahan the road enters the Sutlej Gorge and runs fairly level at about 3,000 ft above the river bed. The scenery is impressive but the valley is so narrow and the sides are so high that views of the snowy peaks are limited and remain so until Sangla is reached.

The bungalow at Chaura, although, like all these forest rest-houses, situated in a place of great



VIVEK R. SINHA/Porpoise Photostock

The Monal pheasant provided colourful feathers to decorate the headdresses of royalty.

natural beauty, is rendered almost uninhabitable by the swarms of flies that infest it. With the notable exceptions of Narkanda, Bagi and Sangla, all the bungalows along my route were swarming with flies, and they are the one great drawback to this trip.

Finally there are good apricots to be had here and having at last found something good to say about the place let us hasten to leave it.

Four miles from Chaura there is a fine view down the Sutlej Gorge and from there for a couple of miles the road is bad and crosses some uncomfortable precipices which are especially unpleasant as the road has no parapet. After this

there is a steady descent to Soldanga Nullah with its squalid serai, close to which is the first sign of Tibetan influence, a prayer wall.

After a long two miles climb Paunda was reached at the end of a most exhausting day's walk. The transport was miles behind and did not arrive until dusk, as it had been badly held up by the flocks of sheep and goats, and it had been a hard task to manage the mules over some of the difficult stretches of road.

As the transport was still tired from the previous day's exertions I decided to have an easy day on the 28th and to make for Nachar, only four and a half miles up the road.



KRUPAKAR-SENANI/Popoise Photostock

The musk deer was seen in the Baspa Valley — a naturalist's paradise.

It was a pleasant early morning's walk and by ten o'clock I was sitting on the verandah of the Nachar forest bungalow eating luscious white cherries from the garden. The bungalow is an attractive two-storied building and struck me as being palatial ... subsequently I was surprised to learn that it had been condemned as unsafe some years ago!

As the southwest monsoon proceeds up the Sutlej Valley its influence decreases so that it is possible to divide the adjacent regions into three climatic zones — a wet zone which extends to Paunda, a dry zone (where the influence of the monsoon is slight) which begins there and

extends to within 30 miles of the Tibetan frontier, and an arid zone (where the monsoon disappears) beyond that.

As a consequence of this change of climate the vegetation and butterfly fauna of the dry zone is very different from that of the wetter regions nearer Simla. The rich forests of Spruce and Narkanda Pine are now replaced by Cedars (Deodars), and lower down the characteristic tree is the Chilka Pine, of which more anon.

There is thick cedar forest round the bungalow and a pretty view over the treetops to the mountains on the other side of the valley. Close by is the local school, doubtless an admirably

conducted institution but apparently run on non-repression lines; a little beyond is a picturesque building which I took to be a monastery, for it bore a clerical air and, unlike the school, was wrapped in monastic calm.

The building did not collapse during the night and shortly after dawn we set off into the great unknown. Being by this time in good training I trotted down the steep road to Wangtu... much to the astonishment of Sheba, who is unaccustomed to such levity on my part. However, there was method in my madness as I rightly suspected that the 5 or 6 miles along the Sutlej Gorge would be unpleasantly hot later in the day. It must be admitted that I did not trot up this stretch on my return journey, for a more unpleasant climb during the middle of the day it has not been my lot to experience. The hillside radiates the heat like the outside of a furnace, the road is steep, so steep that most of it is stepped, the steps being placed just so far apart that it is impossible to climb with any rhythm, the surface is loose and rough and I was tired at the end of a long walk. How I should have loved a quart of beer when I arrived at the top. All I had was Nescafé and that was as nectar!

If I were to write a murder story without any doubt at all I should make its setting the Wangtu bungalow, for a more forbidding spot I have never seen. It stands stark and lonely on the bare craggy hillside above the Wangtu bridge, where the Sutlej rushes with incredible fury through the gorge, penned into a width of a mere 25 yards between the cliffs. I made no stop here but hurried past.

The Sutlej is a frightening river. Its fury and power must be seen to be believed. Looking down upon it from near Taranda I had wondered how it had cut this terrific gorge straight across the Himalayan ranges. On seeing the river at close quarters it was no longer hard to understand.

The road runs along the gorge and for seven miles keeps close to the Sutlej except for one stretch where it climbs steeply over a bluff. The scenery is bare and grim and the noise of the river is deafening. At the seventh mile the track

turns left up the hill to Urni and almost immediately the forest road to Kilba branches off to the right, descends for a mile and, after crossing the river, begins the stiff ascent of four miles to Kilba.

From the Shirang La (18,000 ft), ten miles beyond Shipki, we also obtained a long series of a hitherto undescribed race of *Parnassius stoliczkanus*.

A little beyond the Choltu bridge the road climbs steeply to Kilba. Here for the first time I saw the Chilghoza Pine (*Pinus gerardiana*), the tree that produces the oily edible nuts (more correctly seeds) known as chilghozas. The tree looks very like the Blue Pine (*Pinus excelsa*) of Simla but the bark is smooth and the needles are in clusters of three. The wood is soft and only of use as firewood, but is admirable for this purpose as it is very oily.

The rest house at Kilba is about 800 ft above the river and some 300 ft above the village which is the range headquarters and like Nachar has a dispensary and a sub-post office. Urni is to the left across the valley and behind it is the high snow peak of Pandusar (19,000 ft). Straight up the Sutlej Valley to the right is a fine view of the Kailas Peaks. In front of the bungalow, on a lower terrace, are walnut and Spanish chestnut trees, the latter an importation that does well in these parts.

Having left the main road with its slight but pernicious taint of civilisation I was now in unspoilt country among a primitive and courteous people. Certainly, the atmosphere at Kilba was friendly for not only did the resthouse keeper refuse his legitimate dues for supplying me with a hot bath and firewood, but the range officer was most helpful and the compounder's son insisted on feeding me, giving me eggs for breakfast and a monal for dinner (let us forget that it was the close season for the latter), and generally entertaining me.

Early on the morning of the 30th we set off for Sangla. The road descends steeply to the Sutlej and then runs for two miles close beside the river, a comparatively tranquil stream here. Not far from

its junction with the Baspa River is one of the celebrated 'jhula' bridges, a form of structure which fortunately I had no occasion to use. A strong wire is stretched tightly from one bank to the other and along it runs a wheel from which is suspended a wooded seat. The traveller, having commended his soul to providence, sits on this and, hanging on for his life, is pulled across the river. Sometimes rope is used instead of wire and this is even more alarming as the rope sags badly in the middle and sways violently from side to side.

The road turns up the Baspa Valley close to the point where the two rivers meet, a sombre but beautiful spot. The contrast between the waters of the two rivers is interesting: those of the Sutlej are dirty brown but those of the Baspa River are milky grey (a sign that they have their origin in a glacier), and after their confluence the two streams continue to run separately for a hundred yards or so before mingling.

The lower part of the Baspa Valley is very like other tributary valleys that I had seen. It is narrow and steep and the river rushes down it in a series of cascades and rapids. For the first thousand feet the track climbs through a sparse growth of Chilgoza pines but above that cedar forest is entered and it continues to run through this until the middle valley is reached.

The track is bad and only just passable for mules, especially in one place where it has been overrun by a fine scree.

After seven miles the river rushes down between two cliffs in a series of waterfalls and the track zig-zags steeply over the hillside close to the right. At the top is a small tree-covered plateau and beyond and a little below me lay the beautiful valley I had come to see.

Without a doubt the valley was once a chain of lakes, probably formed by the moraines of glaciers flowing down from the south. I do not think that anything else can account for its topography which is so different from that of any other valley in this part of the Himalayas, for its floor is wide, perhaps a mile across in places, and is fairly level and set at a gentle slope.

It is well cultivated and dotted with fruit and walnut trees. The northern side is dominated by two great peaks, the first (19,500 ft) above Sangla, and the second (21,150 ft), a very graceful mountain, some ten miles further on. This side of the valley is too steep to support much vegetation but the southern side, where the slopes are more gradual and the mountain tops are hidden, is thickly covered with fine cedar forest.

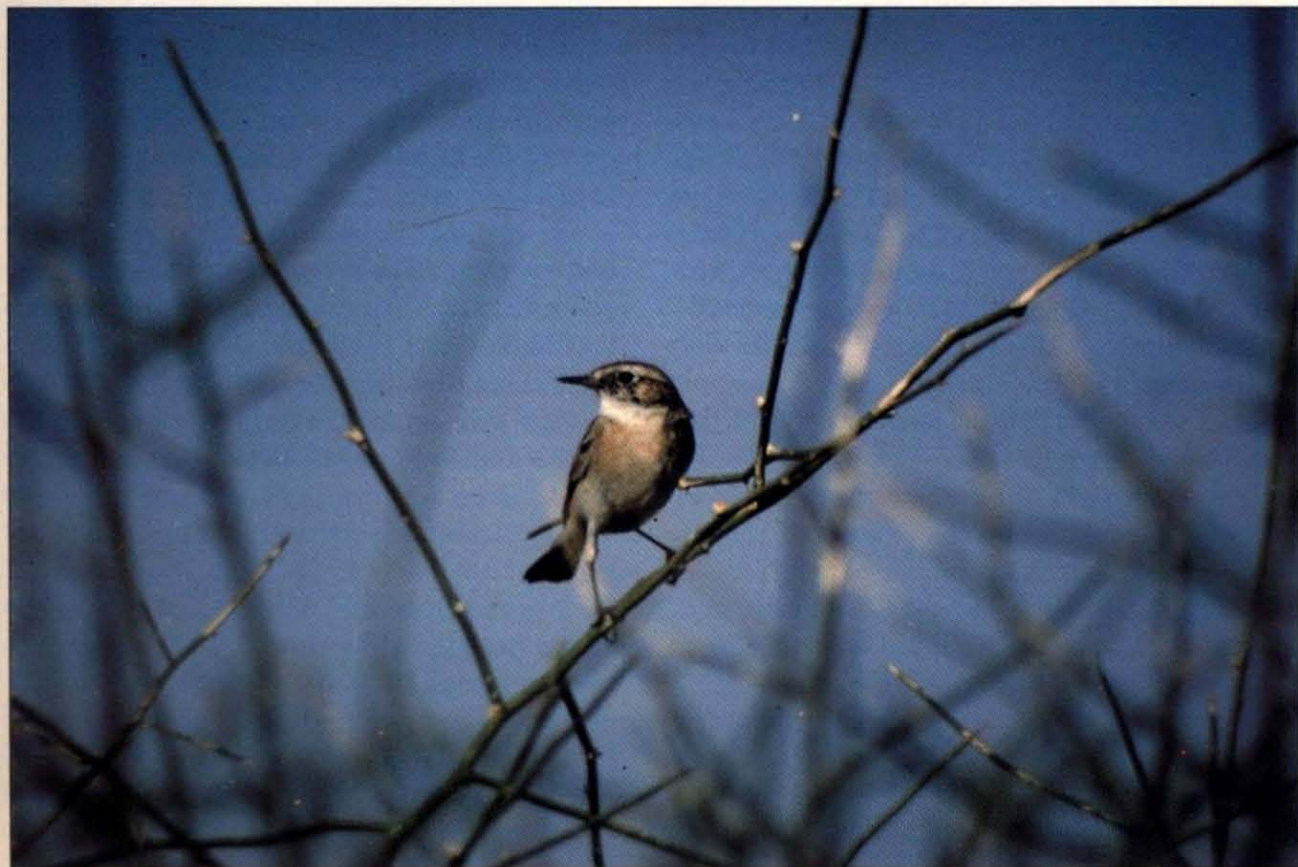
The valley is a naturalist's paradise, for in addition to fish in the river, there are Panther and Black Bear in the forest, as well as Koklas, Kalij, Monal and Tragopan Pheasant; and Brown Bear, Snow Leopard, Bharal, Musk Deer and Snowcock high up on the hillside. Furthermore, if anyone were hardy enough to shut himself up here for the winter (the valley is snowbound for three months), he would find fine skiing slopes on the southern side of the valley.

The bungalow, which is situated where the valley narrows and where the second of the lakes probably ended, is large and solid and was undoubtedly built as a fishing lodge for the recreation of lonely DFOs from Nachar.

The obvious and most direct way home, had I known about it when I planned my journey, was over the Rupin Pass (15,000 ft) directly opposite Sangla and to Khadralla via Rohru. But coolies are needed for this and also a tent. There would have been little difficulty over the former, but the latter I did not have with me.

There are also three other tracks leading out of the valley, all of which are impassable for mules, of which one leads over the shoulder of the Sangla mountain to Shongtong on the Sutlej, and thence across the river by jhula to Chini; a second crosses the Dhauladhar range above Chitkul to join the Rupin route, and a third goes to Gangotri over the very high pass at the end of the valley.

The return to Chharabra by bus was even worse than my outward journey, as the driver was a popular soul with many friends on the road. However, every journey comes to an end sometime and I arrived at Wildflower Hall just as the sun was setting. □



## The Enigmatic Whitebrowed Bushchat

Text and Photographs  
Asad R. Rahmani

**D**uring the last twenty years there have been very few sightings of this rare bird. A denizen of desert areas with scattered shrubs, it was believed to be limited to eastern Rajasthan and Gujarat. But it appears that there are more birds than meet the eye — the whitebrowed bushchat requires you to venture into its arid, scrubby terrain.

The future of this small, grassland bird is closely linked with the Indira Gandhi Nahar Project, which has brought in its wake large scale ecological changes. Due to misuse, water logging and salinity is increasing all along the IGNP, with the result that purely desert and dry grassland birds, including the whitebrowed bushchat, are decreasing at an alarming rate.

**A**MONG the 1200 species of birds of the Indian subcontinent, 71 species have been listed as threatened in India in the book "Birds to Watch" published by BirdLife International. Stoliczka's whinchat or the whitebrowed bushchat *Saxicola macrorhyncha* is one among them. It is so named after Ferdinand Stoliczka, who first described it in 1872 from specimens collected at Rapar and Bhuj in Kutch.

This bird is found from Pakistan, east of the Indus river through Haryana, Aligarh and Meerut in Uttar Pradesh, eastern Rajasthan and Gujarat (Deesa, Kutch and Kathiawar). Twice it has been recorded from Afghanistan.

When I joined the Centre of Wildlife and Ornithology at Aligarh in 1991, I started Aligarh

district surveys. Practically no work on birds had been done in this area. I made a rough list of birds which were likely to be found in the district, especially the uncommon ones. I was intrigued by a remark in the HANDBOOK that Stoliczka's whinchat was found in Aligarh district (Incidentally, the HANDBOOK erroneously mentions that Aligarh is in east Uttar Pradesh while it is actually in the western part of the state). I searched all the likely areas without success. Then I went through all my bird records of the Rajasthan surveys done in the 1980s in search of the great Indian bustard, but there again I drew a blank. Even while searching for bustards or floricans, I used to keep records of all the birds seen, especially the rarer ones, but I had not seen this species anywhere. The next step was to enquire from other ornithologist friends, but



A seepage wetland near IGNP — this modified habitat has already begun to decimate the numbers of Stoliczka's whinchat

none of them had seen this elusive little bird.

During the last 20 years there have been very few sightings of this rare bird. A team of Dutch ornithologists saw a male and several juveniles near Khara village, between Phalodi and Pokharan in western Rajasthan on 2nd August, far back in 1978. Khara is the very same area where I had stopped many times in search of bustards, but I had not noticed this species. Ben King, the intrepid American ornithologist and entrepreneur saw it in the Desert National Park in Rajasthan and Richard Grimmett of BirdLife International saw "a male (and probably a female)" in the Sudasari bustard enclosure inside the Desert National Park on 17th February, 1982. Sudasari is another area where I had camped many times. How did I miss this bird? The answer was not difficult to find.

The whitebrowed bushchat is similar to other *Saxicola* species found in the desert region. T. J. Roberts, the famous ornithologist from Pakistan, thinks that it is very similar in general appearance to the whinchat *Saxicola rubetra*, while juvenile males are probably inseparable in the field from female or subadult males of the whitetailed stone chat *Saxicola leucura*, another chat of the Indus and Gangetic river systems. The tail pattern of males in flight is similar to wheatears (*Oenanthe*), commonly found in the deserts. Considering its habits and habitat, the whitebrowed bushchat comes closest to the collared bushchat *Saxicola torquata*. However, the male *torquata* is distinguished from the male *macrorhyncha* in having a black chin, black tail and in the lack of a white supercilium. Moreover, *torquata* is slightly smaller than *macrorhyncha*, but the females and juveniles can be confused in the field. The illustration in the PICTORIAL GUIDE TO THE BIRDS OF THE INDIAN SUBCONTINENT is not accurate. I must have misidentified this species as the juvenile of some other chat.

My friend M. K. Himmatsinhji of Kutch, one of the most experienced ornithologists of India, wrote that he had never seen this bird in the wild,

although it was first described from a specimen collected in Kutch district. The much travelled Dr. M.K. Ranjitsinh, celebrated for his prodigious memory of rare animals and rare sites, had also never seen the whitebrowed bushchat. Dr. T. J. Roberts said that he had not seen the whitebrowed bushchat during the 28 years of his ornithological work in Pakistan. So, the question was: What happened to the whitebrowed bushchat in most of its distributional range? We know that many species have become rare or have disappeared due to hunting, habitat destruction or bird trade, but who would kill an uncommon, mouthful of a bird for food? Its dryland habitat has been modified due to irrigation, but not everywhere. There are still vast areas in Rajasthan and Gujarat, and even in parts of Uttar Pradesh, the so-called wastelands, where this bird should be present. It was not selectively trapped for trade, which is another cause for the decimation of many song and cage birds.

I submitted a small project to the Oriental Bird Club which readily agreed to fund it through money given by Cygnus Wildlife Holidays. I did my first survey in February 1993 in the Thar desert, during which I was able to spot only four individuals of this enigmatic bird. Later, two more surveys were conducted under a project on the wildlife of the Thar. This project was funded by the World Wide Fund for Nature-India. The fourth survey of the Thar desert was conducted in May 1994, under a project on Grassland Ecology, funded by the U.S. Fish and Wildlife Service. I covered all the four seasons, and searched all the 11 districts of the Thar desert, and Kutch, except Bhavnagar, Jamnagar and Rajkot in Gujarat.

During the first survey in February-March 1993, I saw four whitebrowed bushchats near a small village called Undu, at the border of Jaisalmer and Barmer districts. During the second survey in July-August 1993, one whitebrowed bushchat was seen in the Desert National Park, on 25th July, 1993, in a small green patch in an extremely dry area, 15 km before Phulia on the





The arid, scrubby grassland which is the natural habitat of this bushchat is typical of Rajasthan and Gujarat

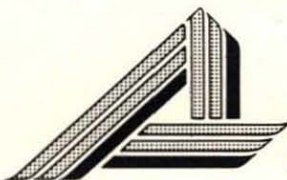
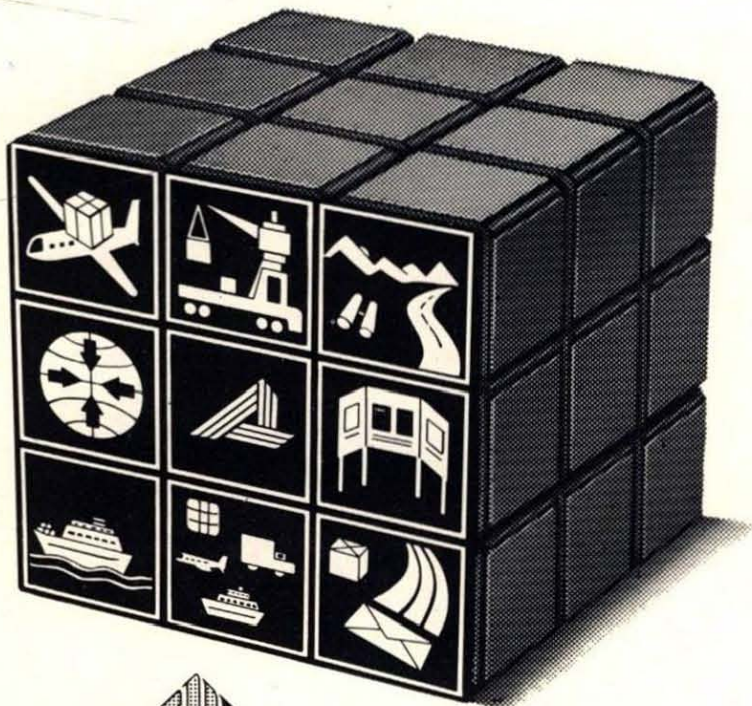
Khuri-Phulia road. Another bird, perhaps of the same species, was seen in flight for a few seconds on the same day near Bhiyand village on the Shiv-Kanasar road in Barmer district. It disappeared into a roadside plantation and could not be located again. These sightings were short, so not much could be learnt about the behaviour of this rare species.

Six months later, we set out on a third survey, during January-February 1994 which was the most productive, as 81 individuals of this species were located at 16 different sites. Once we had identified the species, and got familiar with its behaviour and habitat, it was not difficult to locate. In Diyatra area of Bikaner district, where we watched this bird for two days, 25 individuals were seen in one day. In Sam and Sudasari areas of the Desert National Park, 13 individuals were located in four days.

The typical habitat of the whitebrowed bushchat in the Thar desert is dry and sandy with low herbs and shrubs of 50-70 cm height and scattered bushes, as is present in the greater part of the Thar. I realised then that this whinchat is not such a rare species as was supposed. It inhabits dry, arid areas where not many ornithologists go. It was always uncommon and patchily distributed, as is the case even now. It might have disappeared from many marginal areas of its distributional range, such as western Uttar Pradesh, eastern Rajasthan and Haryana. I must admit, however, that no proper survey has been done in these districts, but in the Thar, which must be its stronghold, it is fairly common in certain areas. We only need ornithologists to look for it. Any takers willing to do a thorough study on this species?

*A.R. Rahmani, has been a professional ornithologist for over 20 years, and is currently Director, BNHS.*

# We've got it all worked out for you



## **AIRFREIGHT** LIMITED

— the single-source service advantage.

Airfreight Limited, an enterprise with over 80 offices in India, presents a complete package of services. All conveniently under one roof.

When you have to freight anything, anywhere in the world, by air or by sea, just leave it to us. We'll take care of all the details. Whenever you need to despatch any official or business-related documents or parcels, desk-to-desk, just call us.

DHL, our Express Division delivers anywhere in India and abroad.

Planning a trip or a tour? INDTRAVELS, our Travel & Tours Division will organise one for you, anywhere on earth. We organise trade fairs, exhibitions and conferences as well, through our Trade Fairs, Exhibitions & Conferences Division.

### We deliver the goods.

## **AIRFREIGHT** LIMITED

AIR & OCEAN  
FORWARDING

## **ACE**

EXPRESS DISTRIBUTION  
SERVICES

## **INDTRAVELS**

TRAVEL & TOURS

## **DHL** WORLDWIDE EXPRESS®

Regd. Office: Neville House, Currimbhoy Road, Ballard Estate, Mumbai 400 001.

To contact us, please refer to your local Telephone/Yellow Pages Directory.

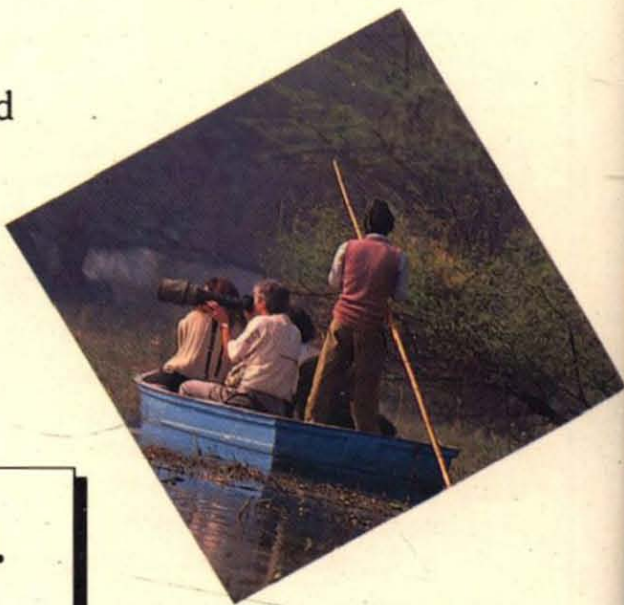
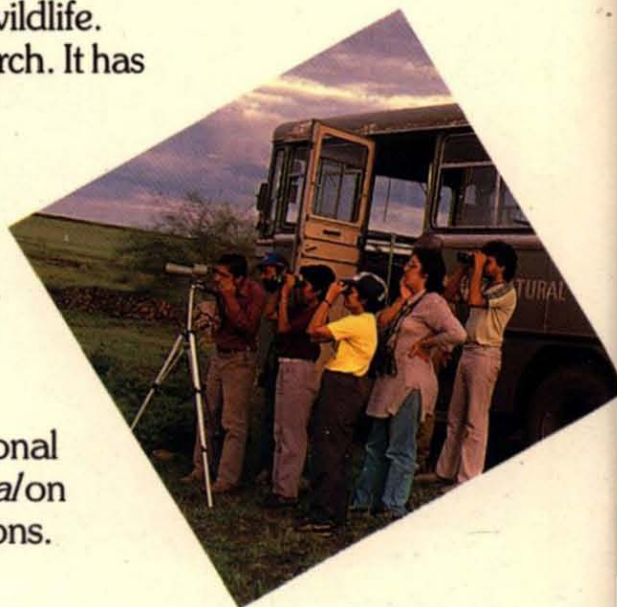
# Join the BNHS

Support  
Conservation

Today, the BNHS is Asia's premier conservation organisation, with members in over thirty countries and an international reputation as an authority on Indian wildlife. The Society's work is not restricted to wildlife research. It has published a series of books on natural history. The Environmental Impact Assessment Cell undertakes EIA studies. BNHS runs a nature education programme, propagating conservation through film shows, lectures and nature camps.

## Membership benefits

- ❑ A free subscription to *Hornbill*, and concessional subscription for Asia's oldest scientific *Journal* on natural history. Discount on BNHS publications.
- ❑ Trips to sanctuaries and national parks at concessional rates.
- ❑ Access to India's finest library of wildlife and shikar books.
- ❑ The use of BNHS's National Heritage Collection of natural history specimens.



India's natural heritage is endangered.  
Help to protect it.