

HORNBILL

1987 (2)



BOMBAY NATURAL HISTORY SOCIETY

The cover picture is of a Baya Weaver Bird (*Ploceus phillippinus*) male in his nuptial dress, photographed by our member Dr Vijay Tuljapurkar.

The baya was the species on which Dr Sálím Ali made a seminal contribution on bird behaviour. We quote from his autobiography *THE FALL OF A SPARROW*. He says: 'It was while living jobless in the seaside cottage of the Latif family at Kihim in 1938 that I got one of my most rewarding thrills of this kind when I fortunately hit upon the first correct interpretation of the extraordinary breeding biology of the Baya Weaver Bird.

'I had grown up only on the traditional accounts of the nesting habits published in literature which had come down to us from book to book. These were interesting enough in themselves for a keen bird photographer, as I was, to want to record on film. But while concealed in a canvas hide perched ten feet up on a step-ladder, a few feet away from the nests, I noticed some unorthodox goings on in the colony which clearly showed that the birds had not read the text books. A few hours in this hide each day, and copious notes and diagrams of the proceedings in the colony, gave me a pretty good hunch of what was probably happening, till at the end of a few weeks it was possible to piece together with some confidence the general pattern of the bayas' breeding biology. Since then the new interpretation has been tested and re-tested and confirmed by myself and other researchers, and with further refinements is now accepted as what might be called the "authorized version".

'In brief, the findings are that the male baya, who in his breeding livery is a handsome little sparrow-like bird, largely brilliant golden yellow, is an artful polygamist. He may acquire any number of wives, from two to four, sometimes even five — not all at once in the harem style but one by one progressively, depending upon his capacity to provide them each with a home. The male alone is responsible for building the nest; the female has no hand in it. Thus the male baya may find himself the happy husband of several wives and proud father of several families at practically one and the same time. It sometimes happens that for some feminine foible, female after female fails to accept a certain nest. Undeterred, the male abandons the half-built structure and promptly tries again. In every baya colony there are usually to be seen a number of such half-built abandoned nests. This is the prosaic explanation for them and unfortunately not the more popular lyrical one that they are for the use of the male to swing himself and sing love songs to his incubating spouse nearby!'

Acknowledgement

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

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 nation, 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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Journal Editors

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

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

Annual and other membership subscriptions

<i>Entrance Fees</i>	Rs	50.00
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The first annual subscription of members elected in October, November, or December will extend to the 31st December of the year following the election.

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1987(2)

April-June

CONTENTS

Editorial	2
A sojourn in Ladakh— <i>Lima Rosalind</i>	3
One, Two, Three... Ten, Twenty, Thirty!— <i>Aasheesh Pittie</i>	7
Prickly Pear— <i>A.G. Sekar</i>	10
Feedback	12
Wild dogs and gaur— <i>R.N. Pandey</i>	13
From my Nature Log— <i>Maj. Gen. Baljit Singh</i>	14
News, Notes and Comments	23
Birdwatcher	26
Common Marine Shells of the Bombay Coast— <i>Manoj Muni and Carl D'Silva</i>	28
Keeping elephants out— <i>C.H. Bassapanavar</i>	31

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Memorial

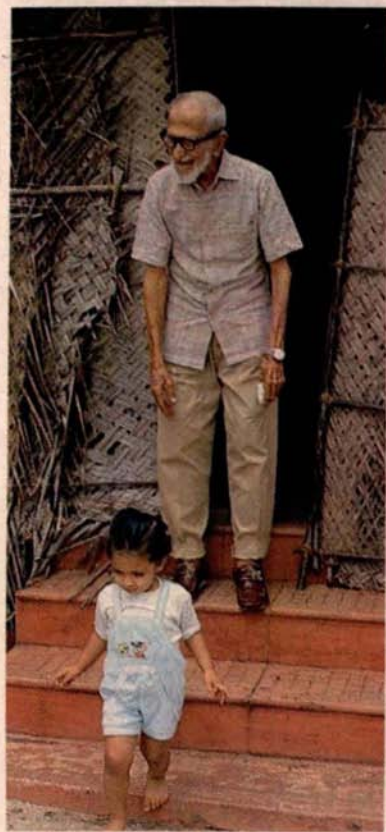
If there has been a death in the family, how does one perpetuate the memory of the person? By erecting a tombstone? By raising an elaborate monument? Or by a

scholarship in the person's name? But why isolate the warmth you knew and which was part of the person with such coldness? For as John Donne says

'No man is an island, entire of its self; every man is a piece of the continent, a part of the maine...any man's death diminishes me, because I am involved in mankind.'

The philosopher in you may feel that life once born never dies and goes on in an unending chain. That there has been no extinction of life as such since it began; only the death of some of its manifestations.

Then let us remember the life that is gone with a living monument. Nothing symbolises more the eternity of life than a tree. So why not plant a tree to preserve a memory. A memorial perfectly suited to a conservationist. Let us give back the green cover to the despoiled land, in the process of remembering those that have gone, by raising memorial forests. What can be more deserving than to be remembered by the flowers on a tree in bloom? One cannot think of better way to perpetuate the memory of a person than by raising a grove of magnificent trees in his or her name.



Mervyn Sequeira

Salim Ali (1896-1987)

For that which is born death is certain and for the death birth is certain. Therefore grieve not over that which is unavoidable.

—*Bhagavad Gita*



Blacknecked Crane—a family group at Hanle

A sojourn in Ladakh

One of the highest passes in the Ladakh Range, Chang-La, lay behind us. With the sun scorching our skins and wind chilling our bones we set out on horseback to find *Tung-tung* as the Ladakhis call the Blacknecked Crane. The summer of 1986 saw Goutam, Eric, Asad, and myself follow Blacknecked cranes at about 4500 m in Ladakh.

As we entered Chushul in the sturdy *Shaktiman* (military trucks common in these parts) we were suddenly treated to the sight of a pair of Blacknecked cranes flying above us. We also found a family—a pair of adults with two chicks—not far from the first pair. Later, another pair again with two chicks was found in Hanle.

We began watching the cranes regularly, traversing the arctic wind-swept sand-dunes, boggy marshes and streams on horses which seemed as unsure of their next step as the rider. Many a times the horse would refuse to cross a suspicious-looking bog, and rightly so because earlier attempts to traverse such bogs had landed us in knee-deep trouble. The water was icy cold even during the hottest time of the day. Many streams had a thick layer of extremely soft mud at the bottom and going anywhere near them had its own disadvantages as Eric and Goutam found out after they splashed in as they lost their balance while collecting fishes, amphipods and snails on which the cranes feed.

There were other interesting bird



Trotting through the sandy plains towards marshes

Blacknecked Crane nest site in Hanle marsh



species besides the cranes. One morning when the day was particularly bright, one of us inched forward for crane close-ups, while another observed them through a telescope. I set out to find the nest of the Horned Lark which was seen collecting grubs from cattle dung near by and vanishing into the bushes. The small deceptive bird would enter into a Tibetan furze bush from one end and come out through the other end; a thorough search of the bush did never reveal any nest. It continued doing so till I gave up my search and went back to observe cranes!

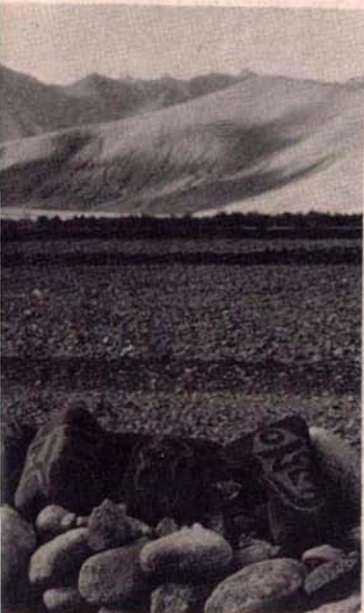
The Robin Accentor's nest was a marvel in itself. A cup-shaped nest embedded in grasses beside a small puddle. The inside of the woven cup was lined with soft wool or goat hair (*pashimna?*), wherein four straggly feathered chicks nestled. They stretched their necks and gaped mistaking us for their parents!



Goats, sheep and yak, the main sustenance of the hardy Ladakhis

Buddhist mantras etched on stones are a common sight around monasteries or gompas

The grassy edge of the saline Pangong Tso provide graze for Ladakhi livestock



The Brahminy ducks with their large brood of up to a dozen ducklings were a nuisance in the crane habitat, often making loud, croaking alarm and thus spoiling our chances of a closer observation of the cranes.

During mid September, Tibetan Sandgrouse with their stockinged feet were in hundreds. Ali & Ripley point out "the birds are usually tame to the point of stupidity, permitting close approach even after being fired at once." We could comfortably go up to about 10 m before the birds got alarmed and took to the air.

Numerous Quetta Voles tunnelled in the marshes. Tiny rodents, covered with greyish hair, they would come out of their holes and face the morning sun with eyes closed as if in obeisance and swiftly retreat into the holes as soon as they sensed any movement, even the slightest tremor on their mound under which they had made their home. We would be watching one hole completely transfixed with a poised camera and bated breath, and lo, one would appear from another hole on another side completely out of the camera's range. Many exposed photographs had only a gaping hole to show as the rodent vanished due to shutter noise even before the camera could take a picture! The Himalayan Marmots were fairly common in the vicinity of the marshes. Sometimes they teased the shepherd dogs into coming close enough to pounce, before

swiftly retreating into their burrow with the dog looking sheepishly at the hole where once lurked a marmot!

Then those handsome Tibetan Wild Asses would stir our hearts with their rare appearances, often running beside our trucks at 50 km p. h. or more and then swiftly crossing the road and running along to cross our path yet again as if we had come to chase them!

The unpredictable weather often gave us anxious moments. While observing cranes in the morning basking in the sun, we would suddenly find ourselves showered with frozen rain drops to be followed soon by snow, when our caps would appear like cotton puffs. Just when we would be halfway to our camp after winding up, the shower would stop and the sun smile back at us.

Today when the pains and aches of highland existence are no more, I wish I were back guzzling *gur-gur-chai* up there, where the handsome Tibetan Wild Ass romps the desert and the geese and duck take to a thousand wings. Ladakh with its snow-capped peaks and silvery streams meandering through the vast sandy plains and marshes is bewitching, beautiful and still an enigma.

LIMA ROSALIND



Blackwinged Stilts

Asad Rahmani

One, Two, Three... Ten, Twenty, Thirty!

They said I would be participating in a scientific experiment being carried out throughout the subcontinent. They said it would be meaningful, purposeful birding, geared towards a finish line they called "scientific ornithology". They said that in the whole of Andhra Pradesh there were such few enlightened folk who were engaged in this essential, this phenomenal task. Imagine your good luck, they said, for being one of them! You will be taking part in a nationwide census of wetland avian populations. Over the years, they said, your contribution will be a part of the history of cooperative ornithology in Asia!

And I fluffed up my breast feathers and rocked forward and backward with the tightness of an

unknown pride inside my body, perched on the ordinary, everyday branch of "just birdwatching". And crooning to myself in subsong I readied my untried pinions for the first flight into the azure realms of scientific ornithology.

The road to Palmakole Tank is a good one for it is 30 km out on NH 7 and I got there by 0745 hours. They had mentioned that waterfowl would be best spotted after 0800 hours. To reach the tank one has to take a *kuchcha* track going away on the left just as you enter the town. It takes you through a lot of ups and downs, minor ones in comparison to those I faced later, for a couple of kilometres. Suddenly through the trees you see the water with out-of-focus pinpoints of sunlight reflected

on the wavelets, and you realize that the waterspread is not at its optimum. For these past three years has been a regimen of drought and the water regime has dwindled. They had insisted that I would see more birds for this very reason. Scarcity of water bodies would concentrate bird populations, were the very words they uttered and I had swelled with a constricting smugness as one who is given a crucial task. And here before me was the water, spread over nearly 15 acres, held there by a man-made bund on the west and by a general, natural, gentle rising of the land all around. And around the water was semi-hard soil of suspicious elasticity cracked up more than the cracked and folded skin of an aged bull elephant—but of the same colour. Evaporating water had done the trick. This strip of land met fallow fields with the dusty brown soil that had not released much of its earth-smell into falling rain for the past three years—and beyond this fallowness stood some beautiful old trees of tamarind, neem and babool. Further on rose the rounded, smoothened, quintessential boulders of the Hyderabadi countryside. Above the 'silences' that pervaded this atmosphere, came the drone of a stone crusher.

But of the birds. Yes, of the birds on the water. There were birds and there was a *shikari*. The three shots put waterfowl up twice, and twice they circled the water and returned to settle. But the third shot got a

flock of ducks up and they did not return. I did not see who fired, but then such a one is good at subterfuge and camouflage! When I had settled down and set up the scope and strung the binocs from my nape and the waterfowl had settled too, after stealthily having put more water between themselves and me with an innocence only they exude, I began the great scientific work I had come for.

I got the numbers of the larger birds correct first time round. And these were put down as so many large or smaller or little egrets and so many grey herons and so many brahminy duck and so many shovellers. This was good fun and easy arithmetic. It was also an excellent job in science. And then I looked through the binocs at the smaller waterfowl and saw many on the water. They were of colours I could not perceive except the hazy splashes of brightness and dullness that colours take at distances. So I peered with one single eye, through the scope, having shut out the world from the other with an open palm so I could keep that eye open but unseeing. And I saw good colour and I was thrilled and uplifted with my ability to identify birds of different feathers. It was simple. Yes, and again I got them right the first time round. Or did I? Surely something was wrong. I was missing something which could be of vital importance. And then it struck me. Great Auk! Nobody had warned me that amongst all that colourful pom-

posity, amongst all those identification flags that floated across the water in front of me—would also be their spouses! Dull, drab reflections of each other which made identification at that distance mind-boggling. I strained and I stared and very soon the coloured birds began to change and go up in bright spots of orange and so many thingumajigs arose from the water that I took away my eye from the scope. My head reeled and many a fowl image danced on the water right in front of me.

Time heals they say and so I waited and the dancing stopped and the world spun into vision once more. Females should be censured from such censuses I thought. I would tell them! Only I know what chagrin I grinned and fluttered through. They had me baffled, nullified, disheartened, pinioned, hamstrung. And from that distance! I know birding is a hobby of great patience. But this!! It was a hard journey full of cross-winds and troublesome waves of heated air and predatory spots before the eye and unknown, awesome thingumajigs.

When I came to the waders, having dabbled in troubled waters—the going, ironically, was easier. Sexes were alike and species recognisably different. The number of *Himantopus himantopus* was not stilted and god's wit was visible on blackened tails. A large flock of *Calidris minuta* were busily doing a tap-dance stint and a few of their cousins were at Temmincks'. The red and green shanks were also pok-

ing in the squelch, now and then lifting into flight, whistling hauntingly across the waters. Some sandpipers were of the common variety, some were green and some just out of the woods. A dunlin tried to maintain dignity among so many stintsmen, looking down at them over a slightly decurved bill and a more stately feeding gait.

When it was over and I returned to the fold, I asked them! Have you counted female duck, piled upon a narrow strip of shore, one on top of another? Have you tried to identify vague shapes through rising hot air and not cried ugly duckling with disgust? And they quailed at the onslaught and denied the privilege of such experiences. Your talk is cheep I said. We *Philoscopii* should first learn to identify ourselves I said—nondescript sons of warblers that we are! And I fumed and fretted to the extent my bird-brain allowed. Suddenly, why did that quack escape me? Why did I turn pink in the face? Why did I get that pang of ostrichophobia? Echoing on the eddies I had created came a confident, agnostic query. Have any of you tried counting disappearing dabchicks? Have you experienced the confoundment these joyous avian porpoises can put one in?

I thank the bearded vulture—for the next census is still many suns away!

AASHEESH PITTIE



Members trying out the fruits of Prickly Pear

Prickly Pear

During the Nature Camp at Mudumalai in December 1986 members had a visit to Jaidev Avenue. This area was scrub jungle and entirely different from the forest area, though it is very close to the forest region. Apart from thorny bushes and shrubs, cactus plants also occupied the whole area. All plants were fruiting. The camp leader informed the members that fruits of cactus were edible and he demonstrated how to remove the spines on the outer surface of the fruit and to eat. Some of the members who followed the advice to the letter had to keep their mouth open for an hour or so, because the fine spines injured their lips severely. The spines are removed by rubbing the fruit against a tree or some hard object. Then the fruit is cut in

the middle and the top portion of the outer skin of the fruit is removed. Now the fleshy, juicy content with seeds comes out by a single press at the base of the fruit. The fruit has a sour-cum-sweet taste.

The Prickly Pear (genus *Opuntia*) is said to have been accidentally introduced into India by the early European travellers, who used to carry these plants for use as vegetable to prevent scurvy during their long voyages. In India they spread rapidly and became a noxious weed occupying large areas of forest and cultivated lands. Action was therefore taken to eradicate the cactus by chemical, mechanical and biological methods which were all found difficult and unprofitable until insects (*Dactylopius indicus*) were introduced and the plants

biologically controlled to a large extent. However, the destruction was not uniform, that is the insect controlled only one or two species and was ineffective on others.

The species *O. dillenii* occurs only throughout India, but more commonly in South India. It has yellow flowers and deep reddish, purple, pyriform fruits. This thorny cactus is used as fence for the rice fields and as a hedge to mark boundaries between land holdings. The plants were used as fodder for livestock, as one of the control measures. The plants were chopped and mixed with 6% of its weight of cotton seed. The spines, however, had to be burnt off. A report on the analysis of the green plant gave the following values: moisture 85.0; nitrogen 0.14; carbohydrates 3.48; crude fibre 2.15; ash 1.82; phosphate (P_2O_5) 0.015; and potash (K_2O) 0.22%.

Fruit of Prickly Pear



Flower of Prickly Pear

The fruits are edible and contain nearly 8% of fermentable sugar, mainly as monosaccharide. Because of this reason the fruits have been suggested for producing industrial alcohol. An analysis of the fruits gave the following values: moisture 5.67; albuminoids 6.25; fat 3.63; carbohydrates 41.89; fibre 32.0; and ash 10.56%. The baked fruit is said to be given in whooping cough and a syrup of the fruit is also given both for whooping cough and to increase the secretion of bile and control spasmodic cough and expectoration.

A coarse fibre yielded by this plant has been tried as a source of paper pulp. However the plan was given up due to the large amount of reagents required to change the fibre into pulp.

A.G. SEKAR

FEEDBACK

I am very shocked by what has been revealed in the editorial **We accuse** that appeared in *Hornbill* 1986(3) about complicity of government officials in the destruction of wildlife in India.

I would like to join the Society in its protest, which should be an international protest. If you should decide to take legal action, I hope you will let me know and I will be pleased to contribute to the financial consequences.

Prof. C.A. WAGENVOORT

Walborg 6

1082 AM Amsterdam

With reference to the editorial **We accuse** *Hornbill* 1986(3) one wonders if there is any hope for India's fauna and flora. For non-governmental organisations to join together to form a legal cell sounds an impossible task as each body wants to have its say and way. Why not form a Bombay Natural History Society's legal panel to take legal

action where necessary or to advise those who wish to do so.

When one examines cases of fighting government one finds that it is usually one or two individuals who take up cudgels with help from sympathetic organisations, if the individuals are lucky. Take the case of the Silent Valley and the fight put up by Joseph John of the Friends of Trees, who happened to be in Kerala at the time. More recently the case of the Government of Karnataka wanting to carry out mass planting of eucalyptus for paper industries and being resisted by some individuals backed by a small organisation.

If such individuals/organisations can help each other well and good. In the meantime the Society could possibly start a reference section on legal matters relating to the environment by way of cuttings of reports and articles, copies of Acts, etc.

DIANA SINGH ROY

Bandra, Bombay 400 050

*We have from time to time published the response we received from our members in regard to the editorial **We accuse** in *Hornbill* 1986(3). All along the response has been sympathetic.*

The consensus of opinion is that the Society should form its own Legal Cell to fight official apathy against wanton destruction of our flora and fauna. This being the case, the Society calls upon its members in the legal profession to now come forward to discuss the formation of the desired Legal Cell and work out ways and means on how the Cell could be got involved in protecting our National Heritage, and assure its continued existence. - EDS

Kudos to Manoj Muni and Carl D'Silva for their series 'Common Marine Shells of the Bombay coast' now appearing in the "Hornbill".

The articles are informative and help children to get interested in Nature Study as generally the shell collecting hobby in children is very common.

Accessibility to the Society's shell collection for children at Hornbill House would be an aid to pursue the hobby.

MRS RASIKA GADA

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51, S.V. Road
Andheri (W)
Bombay 400 058*

Wild dogs and gaur

Wild dogs if their pack is large enough can kill even large animals like gaur and buffalo. I have seen an instance of this in Palamau National Park, Bihar.

We were camping at the tourist complex in the National Park, when information came that a gaur was being chased (probably killed by that time) about 5-6 km away from the tourist centre. It was about 5.30 p.m. of a late winter evening. We rushed to the spot in a jeep and saw a quite healthy young gaur dying some distance away from the roadside. Wild dogs had already started eating through the animal which had not breathed its last. We approached making noises and saw

that the animal was dead. The pack of seven wild dogs left the kill and moved about 15-20 m from us and kept watch, occasionally giving *pick, pick* calls. I took a photograph of the victim (partly eaten) but not of its killers.

As soon as we left the carcass and reached the road, the whole pack was back on the kill.

R.N. PANDEY

*Dy Director, Project Tiger
Ramnagar (Nainital)*



Spotbill Duck

From my Nature Log

Till the fading days of the decade of '60s, Suratgarh was a sprawling albeit prosperous desert village. On the fringes of the Thar Desert, its surroundings were reasonably desolate and windswept; blistering hot summers and frost-inducing winters. However, that visionary, the late Mr. Jawaharlal Nehru, with the aid of his political allies the late Mr. Bulganin and Mr. Khrushchev, sowed the seeds of taming this desert. Within the passage of these 25 odd years, the transformation has been close to dramatic. No more shifting sand-dunes nor the unbroken stretches of vast tracts of arid desert waste, nor indeed the constant whining breeze, round the clock, mounting to storm velocities by afternoons. The present status may not, in the true

sense, be one of the land of citrus orchards and intensive cereal crops, but it is certainly a rich granary. It may sound unbelievable but it is true that in patches, land in Suratgarh Sub-Division is even given to paddy cultivation. What is more spectacular is the fact that a large area on the fringes of Suratgarh Town would in due course become marsh and wetland.

What is commonly referred to as the Suratgarh Lakes came into existence through a process of taming the flood waters of the Ghagar river. The excess water was channelled to the inter-sand-dunal valleys thus creating a series of large expanses of captive water surrounded by sand-dunes. Over a period of time, some of these inter-dunal valleys got linked through erosion



A view of the Suratgarh Lakes

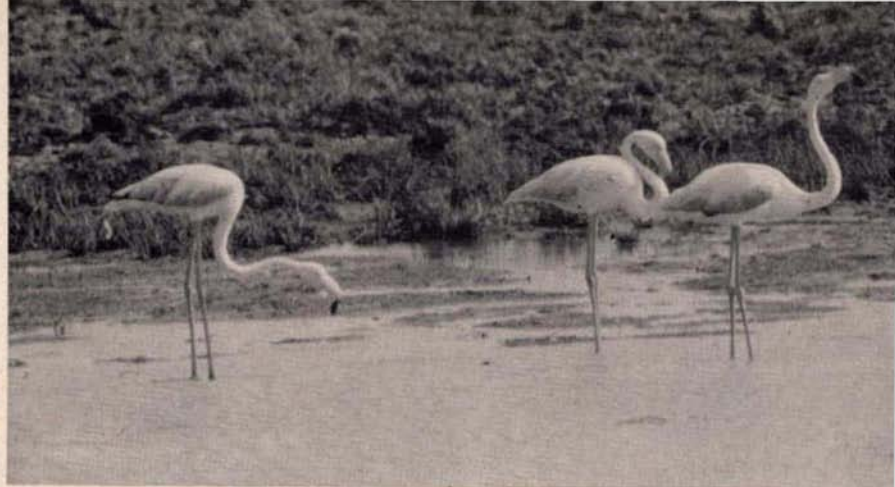
or through human activity thus making a veritable miniature inland sea amidst the desert. As a result of this constant accumulation of water, probably the lake beds have stabilised leading to growth of algae, underwater weeds, grasses and bulrushes, shrubs and trees on the fringes, and a host of water and surface insects and allied life-forms.

In the month of February 1986, on six occasions, I had the opportunity to watch birdlife on and around some of the Suratgarh lakes. The most exciting moment was to have come across a flock of 64 flamingos. I do not know since when flamingos made this their home; I had always associated them with the Rann of Kutch. Talking to the local villagers it appeared that some of these birds may well have become residents of these lakes. Within this flock were five birds whose beaks

were of a uniform milky-grey and their wing-coverts lacked the flamingo pink. They were somewhat smaller than the adults and therefore surely of a younger generation. The water and the soil in the lakes have enough salinity, but I guess in no way near the levels obtaining in the Rann of Kutch. Like anywhere else in Rajasthan or the Bishnoi villages of Haryana, the birds enjoy natural protection, but yet I found them wary of locals as also of intruders like myself. Approximately 50 metres was the closest one could get to the flamingo flock before startling them to flight and a display of that magnificent flamingo-pink spattered across the clear, blue, desert sky. I watched a flock of flamingos on four different occasions in the same lake and the numbers varied each time between 50 and 64. I do not know what

CHICKS OF THE GREAT HORNED OWL
by Maj. Gen. Baljit Singh VSM





Flamingos

A Little Egret



would be the total population of flamingos in these lakes but when on 15th March 1986, in the course of duty I had to fly across these lakes in a helicopter, I saw another very large flock numbering definitely into three figures in yet another lake.

Flamingos apart, these wetlands are beginning to support a host of waterbirds and waders. My checklist reads of Pied Wagtail, Yellow Wagtail, Red-wattled Lapwing, Little Ringed Plover, Kentish Plover, Lesser Sand Plover, Blackwinged Stilt, Redshank, Marsh Sandpiper (?), Fantail (?) Snipe, Terns and Ducks (at this time the most predominant were the Shoveller with a few Wigeon, Common Pochard, and a large number of Spotbills). A few Painted storks, including two young, on a partially submerged tree perch, a flock of Black Ibis, the Large and Smaller Egret, the Tawny Eagle and other raptors, Darter, Little Grebe and

Cormorant were among the other chief sightings. All the plovers in this checklist were my first-conscious identifications and therefore an exciting event. The Little Ringed Plover were the most numerous and bouncy. The shiny, translucent, lemon-yellow of the iris of their eyes is most vivid in my memory. I was also lucky to watch two birds mate. At first the male made a few aggressive charges. The female sort of submitted by flattening her body laterally but without squatting or bending her legs. The male closed in, tip-toeing on stilt legs like a ballerina, hopped on the back of the female tilting a little backwards but without bending the legs. I guess the whole act did not last more than a minute.

Asad Rahmani



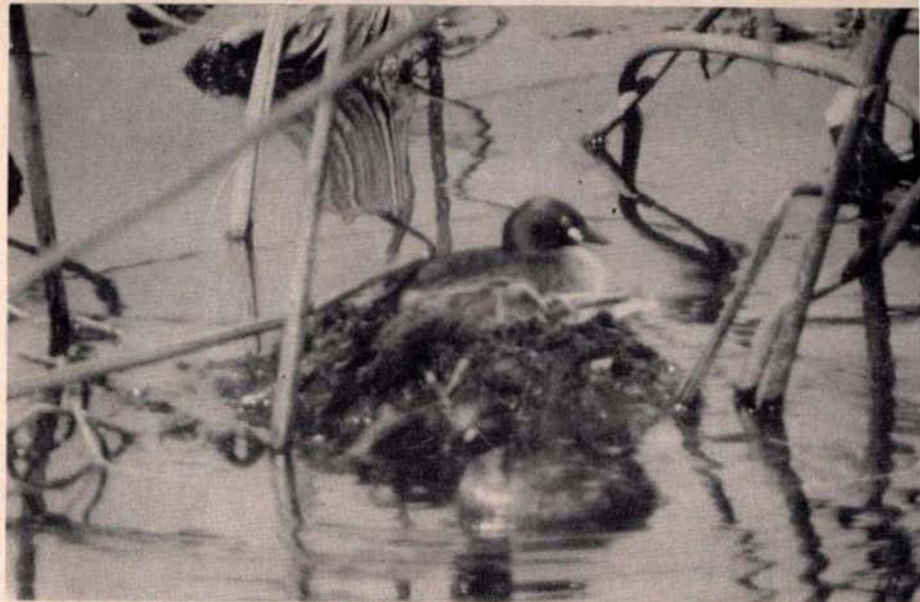
Scanning around

A Common Teal drake



Ravi Sankaran

I had discovered that the flamingos were less suspicious of a covered jeep, so I drove up one day to within about 30 metres of the flock and sat watching them through my binoculars. Just behind the flock was a tiny little mound of earth in the water which I later found to be not more than about 2 metres in diameter at the base and a metre in height above the water line. Right on top of this mound I thought I saw the outline of a Horned Owl. Before I could focus my binoculars, the bird vanished. Approximately half an hour later and on the sunny slopes of the mound I discovered two brown, fluffy objects, wobbly on their legs. It was difficult to say what species of owls



The Little Grebe or Dabchick on nest

they were but because of the earlier sighting I was quite sure that they were the offspring of the Horned Owl. This was indeed the climax of all the exciting birdwatching I had snatched during the month. I returned the following day and on the dot, at 4.30 p.m., the parent bird was right there on top of the mound. Feathered horns were unmistakable this time but it was difficult to say which owl it was because of the distance and the poor resolution of my binoculars. Shortly thereafter the two fledglings also appeared on the same sunny side of the mound. It appeared to me that the birds wanted to catch the last warmth of the sun every evening before nightfall. However, it was a windy day, so they moved quickly to the leeward of the mound.

A few days later I returned to the same lake and made my way to the far bank leaving the jeep behind. I stalked to within 15 metres of the mound. The time was around 4 p.m. and I found both the fledglings sunning. I like to believe that they had not noticed me as I was able to observe them to my heart's delight. Between me and the mound was water two to five feet deep and there was no possibility of getting closer without alarming the birds. However, within minutes the parent birds had spotted me out and therefore called in alarm. Frankly, I had not quite noticed the call but only when I saw the fledglings freezing flat on the ground did I realize the purpose of the call. The call came again and from closer behind me; there was one of the parent

birds atop a sand-ridge about 10 metres away. The second parent was also visible in the near vicinity. Because I had turned about, the parents made very aggressive gestures including flying as though straight into me and just at the very last moment veering away. By now the fledglings had gone to the far side of the mound. As I did not respond to their aggression, the parent birds came to terms and settled down once again about 10 metres away but kept a constant eye on me.

Although I had observed the fledglings and the parent birds for close to one hour, on account of the excitement I failed to notice those minute, essential details which alone can lead to sure identification. Despite repeated references to Salim Ali's books, Whistler's book and THE ENCYCLOPEDIA OF BIRDS, I am still not sure whether the birds are the Indian Great Horned Owl or the Tawny Fish Owl? Hopefully, I shall have a few slides shortly and will be able to resolve this doubt.

Ravi Sankaran



A Shovellor in the shallows

A Laggar Falcon on the look-out



Asad Rahmani



Asad Rahmani

Redwattled Lapwing on nest

I returned the following afternoon armed with my Asahi Pentax with a 200 mm telelens and a rubber dinghy boat. The fledglings naturally froze flat in the midst of weeds, at the edge of the mound, barely few centimetres above the waterline. I did not realise what an impossible task it would be to steady the camera from the constant sway of the rubber dinghy boat. On the other hand I found water nearly five feet deep and therefore impossible to leave the dinghy for photography. The fledglings continued to remain in their frozen state in the total belief that they were not visible to me. I looked for what could be their nest but there were no obvious signs. Just at the crest of the mound, a tiny triangular platform approximately 16 inches by 12 inches appeared to have been flattened and cleared of grass. There

were a few feathers but no other indication by way of pellets etc. that this was their nest. However, by the process of elimination there was no doubt that this was indeed the nest. The parents made several aerial attacks, but I came to no physical harm whatsoever.

I wondered as to how these fledglings surrounded by raptors and with practically no cover whatsoever, continued to survive and grow.

The Suratgarh lakes were created in an arid desert waste. For once there are no competing claims between agriculture, grazing and an exclusive place for water birds, waders and so on. May be, there is a strong case for developing this wetland or wilderness into a sanctuary.

MAJ. GEN. BALJIT SINGH, VSM

NEWS, NOTES AND COMMENTS

WOLVES IN PORTUGAL

Grupo Lobo (Wolf Group), Departamento de Zoologia e Antropologia, Faculdade de Ciencias, 58 Rua Escola Potitecnica, 1200 Lisboa, Portugal appeals for donations of Sterling £5 per annum or its equivalent from each member of the Grupo Lobo. These donations are needed to save the remnant population of the Wolf in Portugal, which is about 150 individuals. The population is in danger of total annihilation owing to indiscriminate hunting and intense persecution of the wolves—trapping, snaring and poisoning. Cubs are often killed in the dens. Portugal is one of the last refuges of the wolf in Europe. The Wolf Group appeals to readers for help by contributing to the campaign fund or by joining the Group.

The Wolf—a victim of human pressure

SYMPOSIUM ON TROPICAL STUDIES

The Organization for Tropical Studies (OTS) is convening a major international symposium on tropical studies in June 1988 to celebrate the Silver Anniversary of its founding. The symposium will last one week and will consist of North American sessions and a second component in Costa Rica, where most OTS field activities have been located. The theme of the symposium is 'Resource availability and the structure and functioning of Tropical Ecosystem'. The Costa Rican sessions will highlight conservation of natural resources in that country.

For further information, contact
DR JAY M. SAVAGE
SILVER ANNIVERSARY SYMPOSIUM
DEPARTMENT OF BIOLOGY
UNIVERSITY OF MIAMI
P.O. BOX 249118
CORAL GABLES, FL 33124, U.S.A.



BAT RESEARCH CONFERENCE

The Eighth International Bat Research Conference is being organised under the auspices of the Royal Zoological Society of New South Wales, Australia at Sydney from 9-15 July 1989. Details can be had from either

DR MICHAEL L. AUGEE
CONVENER

VIII INTERNATIONAL BAT
RESEARCH CONFERENCE
ROYAL ZOOLOGICAL SOCIETY OF
NEW SOUTH WALES
P.O. BOX 20
MOSMAN, NSW 2088, AUSTRALIA,
or

DR A. GOPALKRISHNA
39, VIJAYANAGAR
CHAONI
NAGPUR 440 013, India

LEPIDOPTERAN TRANSACTIONS

When word spread that a rare Peruvian butterfly (*Anaemorpha splendida*) was in the lot of 500, bidding became fast and furious bringing a final bid of \$3,300. (The other butterflies were not commercially valuable.) Only a few specimens of this butterfly probably exist in scientific and private collections.

According to the IUCN publication THREATENED SWALLOWTAIL BUTTERFLIES OF THE WORLD (1985), this is not the highest price ever commanded by a lepidopteran. One subspecies of the endemic stringently protected, New Guinean Paradise Birdwing (*Ornithoptera paradisea*)

is being internally advertised at U.S. \$7,000. In the United States alone, the annual butterfly market is conservatively estimated at between \$10 million and \$20 million.

TRAFFIC USA, Vol. 7: 2 & 3,
Feb. 1987

NATURE V HAZARDOUS WASTES

Bacteria have been used to treat municipal wastewater for almost a century. However during the last few years biochemists have been showing that nature can provide organisms capable of metabolizing some of our most troublesome toxins which are being strewn around.

John Wood, a researcher at the University Minnesota's Gray Freshwater Biological Institute is experimenting with an alga that can convert dissolved heavy metals such as lead and mercury into insoluble forms, thus keeping them out of the food chain.

In another promising development, Michigan State University Biochemists Stevan O. Aust and John A. Bumpus recently reported that the same enzyme that enables the fungus *Phanerochate chrysosporium* to decompose dead trees is also capable of reducing several deadly and persistent poisons like DDT, lindane, PCBs, dioxin and even carbon dioxide.

These lab triumphs have demonstrated the feasibility of using biological methods to clean up hazardous wastes.

Sierra Club Bulletin,

March/April '87

ORNITHOLOGICAL CONGRESS 1990
NOTICE NO. 1

The International Ornithological Congress will take place in Christchurch, New Zealand, from 2-9 December 1990. Professor Charles G. Sibley (USA) is President and Dr Ben D. Bell (NZ) is Secretary-General. The anticipated Congress programme will include plenary lectures, symposia, contributed papers (spoken and posters), workshops, discussion groups and films. There will be a mid-Congress excursion day. Pre- and post-Congress excursions are planned to interesting ornithological sites in New Zealand and adjacent regions. Requests for the First Circular and suggestions regarding Congress organisation should be addressed to:

DR BEN D. BELL
SECRETARY-GENERAL
XX INTERNATIONAL
ORNITHOLOGICAL CONGRESS
DEPARTMENT OF ZOOLOGY
VICTORIA UNIVERSITY OF
WELLINGTON, PRIVATE BAG,
WELLINGTON, NEW ZEALAND

WILDLIFE VIOLATION

An unnamed Saudi prince, "a falconer devoted to conservation", has apologized and paid compensation for ordering and receiving three shipments of gyrfalcons (*Falco rusticolus*) from the United States.

According to a statement prepared by an attorney of the prince and released by the U.S.

Department of Justice on 7 August 1986, the prince was unaware of the illegality of the shipments that were received in 1983 and 1984. The prince has pledged not to repeat the offence.

The \$150,000 civil settlement to the U.S. Fish and Wildlife Service is the largest known sum ever paid in compensation for illegal wildlife trafficking.

Traffic USA, Vol. 7: 2 & 4, Feb '87

INSA BURSARY GRANT SCHEME

The Indian National Science Academy would entertain applications from individual scientists for a *one-time* Bursary Grant to be utilized exclusively for equipment components and accessories, chemicals and such other items concerned with research. The amounts range from Rs.10,000/- to Rs.20,000/- and in exceptional cases up to Rs.40,000/- Under no circumstances the grant could be used for attending conferences either abroad or in India.

Application forms, which are screened once in three months, may be obtained from

THE EXECUTIVE SECRETARY
INDIAN NATIONAL SCIENCE
ACADEMY
BAHADUR SHAH ZAFAR MARG
NEW DELHI 110 002.

BIRDWATCHERS

The Indian House Crow

The Indian House Crow *Corvus splendens* is undergoing a ship-borne expansion of its range which has probably not been equalled since the Norwegian rat and the house mouse spread across the globe. It is now established throughout the Indian Ocean region from Durban, Dar-es-Salaam, Mombassa, Djibouti, the Gulf and down into Malaysia and Singapore. The House Crow is also present in Iran, Sudan, Egypt and on many islands including the Andamans, Maldives, Mauritius, Zanzibar and Pemba Island. It has also arrived in large numbers in Australia.

The crows forage on and around the ships while in port. When the ships depart, the birds often ride along for hours or even days, if the pickings are good. If the weather

turns bad they may choose to stay with the ship. They are cheeky and intelligent and can easily win over a kindly cook to obtain scraps, or raid garbage bins. They can even pick up scraps of food from the surface of the water. They can, thus easily survive a sea journey of days or weeks. The birds repeatedly arrive in Australia on Indian vessels, a voyage of 5000 kilometres lasting 10 to 14 days. Fortunately, the Australian authorities are prepared, and they kill all these unwelcome visitors.

In 1977 five house crows arrived in the Seychelles—in Victoria on Mahe island—on an Indian cargo vessel. The authorities shot two but unfortunately left three to breed. Conservation authorities estimate that there are now about 25 birds, although the police have shot a fur-

The ubiquitous Indian House Crow





A rabble of crows over a roost

ther nine birds. They live mainly at the La Retraite rubbish dump, north of Victoria, which they share with Indian mynas and egrets (species that have proven to be innocuous). However, a limited amount of shooting seems to have made the crows more cautious and some have dispersed southwards to Mont Fleuri. Another pair has been building a nest on Silhouette, a single crow has been seen raiding nests of sooty terns on Bird Island; other isolated birds have been reported on Moyenne Island and Ile aux Vaches. The authorities in Seychelles can act now to eradicate the house crow from its shores while their number is still small.

Crows arrived in Mombasa around 1947, but were little noticed until mid-1950s. By the mid-1960s, even in the presence of predators such as peregrine falcons and greater sparrowhawks (which are absent from the Seychelles), they had seriously reduced or displaced native population of birds, including weavers, and pied crows. By the end of the 1970s the house crow had become a serious pest. They now number between 100,000 and 200,000, and are dispersing

throughout much of the Kenyan coast and spreading inland too.

Once established, the house crow rapidly reaches the status of a pest. They cause a number of problems, by destroying and displacing the native birds and other animals through predation and harassment. Mombasa Island in Kenya is now almost devoid of native species because the crows raid the nests of smaller species and systematically mob raptors and other large birds. The crows also kill fruit bats at their daytime roosts and eat geckos as well as palm spiders and a wide range of other invertebrates, including marine species exposed at low tide.

Speaking about the crow control campaign in a letter dated 22nd March 1987 in Mombasa, the author indicates destruction of the eggs and chicks forms the main thrust. This is primarily because so far no funds have been made available. The latest figures are 19,000 eggs/chicks destroyed in the last breeding season (October-January 1986).

COLIN RYALL
from *New Scientist*, 2 October 1986

This is the eighth part of the series and is continued from p. 31 of Hornbill 1987(1)—EDS

Dove shells (family Pyrenidae) are small, spindle-shaped and variable in colour. Aperture narrow and elongated; umbilicus absent. Outer lip thickened and toothed inside. Carnivorous; inhabiting the muddy rocks between tide marks.

51. *Pyrene terpsichore*

A small and shiny spindle-shaped shell up to 13 mm in length. Spire short but sharp; anterior canal open. Shell surface sculptured with brown transpiral ridges. General colour creamish or yellow.

Whelks (family Buccinidae) are carnivorous, feeding on bivalves and dead fish. Shells oval in shape having horny operculum and oval aperture. Anterior canal abruptly reflected, producing a kind of varix on the front of the shell. Inhabit oyster-covered rocks.

52. *Engina zea*

A medium sized conical shell with pointed spire and small operculum. Intervening space between the whorls occupied by spiral rows of small and smooth brownish tubercles. The species can be identified by a conspicuous white band which runs along the centre of the last whorl. The band carries a number of white transverse tubercles. Attains a size of 13 mm in length. Littoral in habitat.

The empty shells are common along the shores and are collected in large numbers for manufacturing necklaces.

53. Ivory shell (*Babylonia spirata*)

A short-spined, massive shell covered over by a rough membrane called *periostracum*. Umbilicus present at the younger stage. Suture squarish, upper edge of which is sharp and sloping inwards forming a spiral channel. Aperture large; outer lip thin and operculum pointed. Shell surface ivory-white in colour, interrupted by large reddish brown blotches, streaks and spots. Lives buried in sandy mud near the intertidal rocks. Length about 50 mm. Carnivorous.

Empty shells are plentiful on the shores. Whistles made out of these shells are extensively sold in the toy shops in Bombay and Madras. Freshly collected individuals are considered a delicacy.

54. *Cantharus spiralis*

Lives in the intertidal areas of rocky shores. Shells thick and spirally ribbed. Ribs closely set, 3 on the upper whorls and many on the last whorl, giving an appearance of shoulders along the transpiral ridges. Colour white, interrupted with burnt markings. Aperture oval; columella arched; outer lip thick and grooved inside.

Chanks (family Xancidae) are large and solidly built pear-shaped



Xancus pyrum



Babylonia spirata



Cantharus spiralis



Nassarius lentiginosus



Nassarius nodifera



Pyrene terpsichore



Bullia lincolata



Nassarius jacksoniana



Nassarius ornatus



Engina zea

e. L. Pöhlva

shells. Columella often with number of folds.

55. Sacred Chank (*Xancus pyrum*)

A moderately spired, heavy shell with at least 3 folds in the central pillar. Outer lip simple; mouth wide and prolonged anteriorly into a long, deep, canal lodging the great siphon used in sensing the presence of the worms on which it feeds. Shell surface smooth and shiny white under the thick periostracum. Individuals inhabit the sandy sea bottom at depths of 8-10 fathoms.

Though the Chank is to be found rarely on the Bombay coast, we are including this species due to its high religious and economic value. It has played a major role in Hindu mythology. At one time the value of sinistral (left-handed) Chank is said to have been assessed at their weight in gold. It is believed that the blowing of a *Chank trumpet* usually celebrates a joyful event. It is also blown during the acts of worship. Its thick and heavy shell lends itself to the manufacture of several different kinds of artifacts. A complete shell may be buried in the foundation of a new house. Chanks are also being used in the indigenous system of medicine. After burning, the residual lime is used as a cardiac stimulant.

Dog-whelks (family Nassariidae) are the best scavengers, found living in the muddy sand. They possess a medium sized shell of the outline of a Chank in miniature. Whorls are rounded, smooth or ribbed or tuberculated. Outer lip thickened, often armed with prominent teeth.

56. *Bullia lineolata*

A smooth and thin, shiny tapering shell with slender spire and rudimentary anterior canal. Whorls rounded, 7-8 in number and bluish towards the apex. Colour yellow with grey tinge, streaked with longitudinal brown lines. Grows up to 20 mm in length.

Animals when handled, squirt a quantity of water through an aperture in front of the mouth and then only can the foot be retracted and withdrawn.

57. *Nassarius nodifera*

A large sized polished shell that reaches up to 32 mm in length. Whorls transpirally ribbed. Last one carries a few spiral lines near the mouth. Spire slightly noduled. Aperture ovate; outer lip thickened and dentate. Shell surface grey-green in colour with yellowish hue and a white indistinct band that travels through the middle of the last Whorl.

58. *Nassarius ornatus*

Shell shorter and stouter than *N. nodifera*, about 20 mm in length. Outer lip thickened from the outside having whitish rim. Whorls ornamented by strong longitudinal ridges. It can be recognised by its purple-brown colour and a distinct white medium band which runs through the last whorl. A group of individuals are often seen on the shoreside scavenging dead crabs or fish.

59. *Nassarius jacksoniana*

Allied to *N. ornatus* except in hav-

ing the smaller size and lighter background. Longitudinal ridges are widely spaced. Empty shells are common along the Shivaji Park area of the Dadar Coast.

60. *Nassarius lentiginosus*

Shell larger than *N. ornatus*, with acuminate apex and shallow

suture. Apex carry thin transpiral ribs. Columella calated and outer lip toothed within. Colour mottled-grey with faint brown spiral lines. Region adjoining the suture carries obscured tubercles.

MANOJ MUNI
CARL D'SILVA

(to be continued)

Keeping elephants out

How to keep elephants out of sugarcane fields can be a major problem to the farmers adjoining National Parks, Sanctuaries and Reserves. It is a major problem for farmers in all elephant country, especially to those on the edge of the forests; it is one that brings farmers and wildlife managers into conflict. Around Bandipur Tiger Reserve, the elephant proof trench which is being tried looks like the answer to end this conflict. The dimensions of the elephant proof trench is 2.5 metres width at the top, 2.0 metres depth and 50 cm bottom width. The continuous trapezium-shaped trench costs about Rs.25,000/- to Rs.30,000/- per km. The work of elephant proof trench being labour intensive provides regular work to the unemployed rural youth. In addition to keeping away the elephants from raiding crops in the adjoining fields it also helps in preventing stray cattle from entering into the forests. It forms a permanent boundary demarcation line between the

forest and the cultivation, thus preventing any possible encroachments. It also helps in preventing any bullock carts or vehicles from entering the forest for smuggling firewood, timber and other forest produce. Finally it works as a barrier against fire entering from outside the forests.

Every year agricultural crops worth lakhs of rupees are being damaged and the Forest Department is liberally paying compensation to the owners whose crops are damaged by elephant raids. If the elephant proof trench lives up to its promise of course, by regular maintenance and care it would help in the improved relationship between farmers and the wildlife managers and bring many more farmers to support wildlife conservation. But, of course, the trench alone cannot solve the problem of elephant menace unless encroachments on the forest lands are stopped. Depletion by over exploita-

tion, repeated fires, regular grazing, etc, are the causes for destruction of habitat of the elephants, and there is no where else for them to go.

Electric fence, of course, is by far the most ideal barrier to keep out the elephants from straying into agricultural fields provided its upkeep is assured. With the available modern technology, the electric fence could serve as an effective medium to improve the relationship between farmers and wildlife managers. The whole equipment is quite simple where a 12 volts battery is connected to two to three strands of galvanised wire. The electric current that is produced gives mild shock to the animals; a single shock and they never venture again to approach it. The animal that gets a shock treatment remembers throughout its lifetime. And the reaction as to its danger is passed on to other animals of the same species through telepathy.

The main problem in this is that the galvanised wire that is used in electric fencing might be mischievously cut or pilfered with a view to let in the cattle inside the enclosure. In case, necessary safeguards are ensured against pilferage, electric fence would also be the cheap, effective and an ideal barrier between the wildlife and the crops. The electric fence should always be activated by the flow of current, so that animals should never lose the respect for it.

The approximate cost on electric fencing would work out at

Rs.4,500/- to 5,000/- per kilometre as against Rs25,000/- to Rs30,000/- per kilometre for elephant proof trench.

However, the electric fencing is worth trying in smaller areas, especially around estates, where intensive management is possible. Around the National Parks and Reserves, the boundaries of which extend over hundreds of kilometres and where the lapses on the part of the field staff in the maintenance of electric fence are quite common the elephant proof trench is only an alternative.

In case of elephant proof trench regular upkeep is very essential, the concerned man in-charge of its maintenance should go round periodically and check up as to its good condition against any breaching, sliding or pushing the soil into the trench by elephants in their attempts to cross over to agricultural fields. Any slightest damage to the trench should be corrected promptly.

With a view to prevent elephants pushing the excavated loose soil into the trench, it is heaped on the outer edge of the trench. The soil so heaped is formed into mound which is consolidated by growing *Agave* and *Prosopis juliflora* which form a live hedge. The hedge will help in the prevention of possible attempts of jumping over by animals other than elephants.

C.H. BASAPPANAVAR
Field Director, Tiger Project
Mysore

THE SOCIETY'S PUBLICATIONS

The following books can be purchased by the **Society's members only** at the prices shown thereagainst. Packing and postage will be extra at actual cost. Payment must be made in advance by Money Order/Bank draft or Cash. Non-members, for their requirements, are requested to approach our Sole Selling Agents, Oxford University Press, Oxford House, Apollo Bunder, Post Box 31, Bombay-400 039.

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P.S. Back numbers of the Society's Journal can be obtained at rates to be quoted on application.

Contributors to *Hornbill*

Please send minimum six photographs with every article to select from. It is difficult to illustrate articles in the absence of photographs. — EDS.

BOMBAY NATURAL HISTORY SOCIETY

The Bombay Natural History Society is one of the oldest scientific societies in India and has been publishing a journal since 1886, which is recognised throughout the world as an authoritative source of information on the fauna and flora of this subcontinent.

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

Please write for a membership form and also introduce your friends to :

Bombay Natural History Society
Hornbill House
Shahid Bhagat Singh Road
BOMBAY 400 023 (INDIA)