

# HORNBILL

1987 (3)



BOMBAY NATURAL HISTORY SOCIETY

The cover picture shows the Whitethroated or Orangeheaded Ground Thrush, *Zoothera citrina*. The bird's overall distributional range covers Pakistan, India, Nepal, Bangladesh, Sri Lanka and thence east through the Indochinese and Malaysian sub-regions to southern China. Within our political domain four races occur — one each in continental and peninsular India, and the other two in the Andamans and the Nicobar islands.

A habitue of damp forests with plentiful undergrowth, the bird keeps to the vicinity of streams, mixed secondary and bamboo jungles on valley slopes, and groves of trees near homesteads and in cultivated country. Its food — berries and insects — is picked off the ground from among fallen leaf litter, by deligently turning over the debris and often hopping to capture an escaping quarry. Its song is loud, sweet and variable with very high pitched notes, intermingled wih notes from other song birds. It is delivered in the morning and in the evening, sitting low in a tree, with wings drooped and tail lowered. "A very tuneful, remarkable melody" is also recorded as a secondary song. This attribute makes it a highly sought-after cage bird. A true forest denizen, the bird builds its broad, cup-shaped nest in the beginning of June in the fork of a tree at moderate heights. The clutch invariably consists of three eggs.

The photograph is by our member, Mr Oswald Thayil.

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

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### Trade

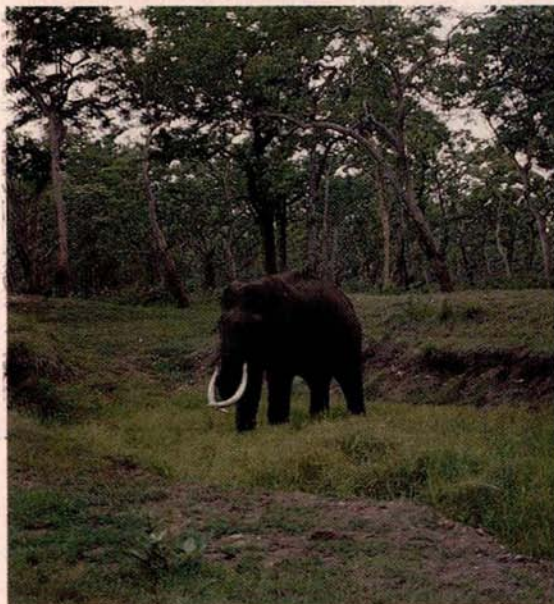
If one were to consider the threats to wildlife in India, the trade in wildlife and wildlife products would be equal in importance to habitat destruction as a major cause. The skin trade brought crocodiles to the verge of extinction before the excellent captive breeding programme by the Government of India and the States of Uttar Pradesh and Orissa in association with the Food Administration Organisation (FAO) brought all the three species back from the brink of extinction. The snakes have had and continue to

have a severe mauling from the trade. Millions of snakes have been legally exported and perhaps an equal amount smuggled out of the country. Finally the legal trade has been stopped, but it will be some time before the snakes will recover. The frog legs trade has also been finally stopped. Strong lobbies had actively worked against the prohibition of these trades and conservationists cannot remain complacent.

The trade which saddens us most is the trade in Ivory for the best elephants in India continue to be sacrificed to it. Recently one of the well-known tuskers in our study

*The cross-tusker aged 26-28 years was usually seen in the tourist zone. It was wounded in June 1986, and finally killed by poachers some time between November 1986 and March 1987.*

Photo: Ajay Desai



area, a magnificent bull with crossed tusks, whose photograph we had presented to Mrs Sonia Gandhi at the time of our project seminar at Delhi was poached. He had survived by staying close to human habitations but competition with stronger bulls had forced him into an area of the sanctuary where he became highly vulnerable and was killed. We had the sad task of confirming his identity by checking the markings on the piece of ear we recovered with his file photographs.

During the years our researchers have worked in South India, many of the best bulls with magnificent tusks have been poached and the situation has become critical in South India to the point where only the *maknas* or tuskless males will

survive unless ivory trade can be more vigorously controlled. The Forest departments of both Tamil Nadu and Karnataka have been vigorous in their anti-poaching programme and lives have been lost. Recently a young Forest Ranger of the Tamil Nadu Forest Department was shot and killed by a notorious and well known elephant and sandalwood poacher who apparently operates under political protection.

This heinous crime has not evoked the response it should have from conservationists or from the general public. It is tragic that people in uniform apparently evoke very little sympathy in our hearts. Perhaps a carry over from the pre-independence days when uniforms were the mark of the oppressor

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The Bombay Natural History Society is the recipient of the Indira Gandhi Paryavaram Puraskar award for 1987 in "acknowledgement of the outstanding work done for nature education, research and conservation of the environment".

1987 happens to be the first year of the institution of this prestigious national award of Rs 100,000/- in memory of Smt Indira Gandhi, the late Prime Minister of India. In the years to follow it will be given each year on 19th November for significant contributions, either by an individual or an institution, in the field of environment.

A.N.D. NANAVATI, M.D.  
*Honorary Secretary*

*Bombay Natural History Society*

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*Slo at large—Photo: Author*

## A loris called Slo

Chapter 3 of The Wildlife (Protection) Act of 1972 lays down that “no person shall hunt wild animals specified in Schedule 1,” and item 20 of that Schedule specifies the Loris (*Loris tardigradus*). The Act defines “Hunting” to include “capturing, killing, poisoning, snaring and trapping.”

Thus some years ago when we bought a pair of Slender Lorises on Brigade Road in Bangalore we may not have been guilty according to the letter of the law but we were an accessory to the crime of trapping a wild animal. The reason for this misdemeanor was the love my two children have for all animals large and small. They were home for their summer vacation and we were strolling down Bangalore’s brightest street when we were accosted by a seedy character selling a bunch of lorises clinging to a branch much

like a bunch of bananas. My wife who is equally fond of all creatures was not around at that moment or we may have been dissuaded from the deed as she knows from the wisdom of her experience that pets cause almost as much heartbreak as children; but she was not around and my son and daughter (and perhaps I) had no hesitation in quickly acquiring two.

Very little is known about the Slender Loris mainly because they are nocturnal and arboreal—and perhaps because they are known not to survive long in captivity. The mammal books seldom devote more than a brief paragraph to the loris where the tiger qualifies for a chapter on its own. All the books agree they are endemic to the forests of south India and that they live on insects, lizards and eggs found in the upper foliage; they possibly never set foot on earth. Their most striking features are their large, round, innocent, unblinking eyes and their slow-motion gait.

Since they are not known to make adorable pets the reason for their sale in a market place had to be something else, and in the course of our stay in the south we discovered what it was. As with any creature about which not much is known—witness the volumes of myth and mythology built around snakes—a belief has built up that the fluid of the eyes of the loris is a cure for diseased human eyes. I shall not tell you how this fluid is extracted.

On discovering our illicit acquisition my wife first read us the riot act and then took the loris under her wing. A bird cage was bought for transporting them back to Madras where we lived those days, and the rest of the Bangalore programme centred around the new pets. My son and I went out and caught grasshoppers which we popped into their cage: it was wonderful to behold the loris, a slow-motion artiste, dart out an arm, grab a grasshopper, and happily munch on it. Those first one or two days with us they emitted tiny squeaks and then never again, leading us to believe that they were cries of hunger.

Back in Madras we named them Slo and Po (Tamil for 'go') and built them a large cage about six by four feet high with the sturdy branch of a tree firmly set in the middle, and a lidless cigar box in one corner which became their bedroom into which they curled every morning to sleep through the day.

Apart from being difficult to catch, it was difficult to feed them the grasshoppers in a large cage: most of them crawled out undetected and escaped. So we experimented with supplementing their diet, first with bread and milk—which somewhat surprisingly they took to quite enthusiastically—and then, more surprisingly, with fruits and vegetables because these certainly did not grow on the tops of trees. Bananas were

their favourite fruit but they liked change and would go onto apples or grapes or sapotas for a while. In vegetables their staple became beans and cabbages (sliced thin so that their little hands could hold the pieces whilst they nibbled) with changes to cauliflower stems, carrots or drumsticks. Most surprising of all was the discovery that they had a sweet tooth and loved to crunch up little cubes of *misri*, crystal sugar. Some inner warning, however, prevented us from giving them this delicacy too often.

The ultimate change in their diet came when nilly they were converted to full vegetarians. Having exhausted the grasshopper population of our lawn and been looked upon with a mixture of suspicion and pity at the Club when we began hunting them there, we were finally reduced to giving our son an empty plastic bag each morning so that he could bring a few back from his college. This supply line finally dried up when he rebelled and said he was not going to incur any further ridicule at college as his friends had begun to look upon him as a lunatic with a penchant for grasshoppers. And that's how Slo and Po became complete vegetarians, perhaps the only such lorises in history.

They were destined eventually to make another mark in loris lore, but of that later. First more about their daily lives. As I said they slept the whole day through and began to bestir themselves by the evening. To make certain that they got enough

exercise and also in an effort to tame them a little further, we took to taking them out of their cage in the evenings and releasing them in our study where they showed obvious pleasure in crawling around and up and down the books and pelmets and curtains. The transportation from cage to study was carried out with heavy gloves having long ago discovered the needle sharpness of their little teeth. They soon learnt this routine and would rapidly climb into our gloved hand when stuck into their cage in the evenings. Like children at play there was always much more reluctance when a gloved hand was presented to transport them back to the cage.

But only three of us, my son, my wife, and I, could perform this exercise (by now my daughter had returned to the States); any stranger caused them to shrink into a corner and looked out with apprehensive eyes, saucer-round, brown and gentle. They had the most exquisite delicacy of movement which was a true reflection of their docile and sensitive nature. And their sense of smell was wonderfully developed—the entry of a lady wearing a strong perfume was enough to send them into their corner. Yet with us they grew to feel secure enough so that when walking around our arms or shoulders they would not panic even if a perfumed stranger got up close.

They got to be greatly admired by many of our friends and we sometimes felt the visit was more on account of Slo and Po than us. They

also developed a strange and touching kinship with our cats of whom we had at the early stages been very nervous: the wire mesh of the cage would have offered little resistance to the deadly paw of a cat whose hunting instincts had been aroused. On the contrary, we frequently found cat and loris sitting a few inches of each other, only the flimsy net between, with nothing more than a comfortable or casual look exchanged. Indeed one of the cats took to sleeping on top of their cage and I once had the privilege of seeing that cat, sitting on a chair next to the cage on the wire mesh of which Slo was wandering, slowly reach out with a paw, claws retracted, and gently tap loris hand.

As we got to know them better we saw they were as different in their character as are two humans. Slo was the shyer of the two but also the more trusting. Po, much quicker in her movements (by now we had discovered they were both females), was also more aggressive and adventurous. Once she found a window open in the study and we only discovered her absence an hour later when it was time to return them to their cage. A frantic search around the house confirmed our worst fear that she must have escaped into the night outdoors, the outdoors which was no longer their element and in which prowled predators like cats and hawks and owls for whom a slow-motion loris would make an easy prey and tasty morsel. A careful search with torchlight of a



tree adjoining the study revealed no lorises and with sinking hearts we began to fear the worst when Miss Po was spotted on the wire netting atop our boundary wall, transfixed by the torch beam. Which means her little adventurous heart had led her across some twenty feet of open ground up to the edge of the garden. For once she scrambled only too happily back onto my hand and into the security of her cage.

Madras has two well-known naturalist writers. One told us to return them fast to the Guindy Park as they were impossible to domesticate and would only continue to bite us to the bone. We did not tell him that by now, a year later, we no longer needed gloves to handle them and were never bitten. The other said he had never heard of lorises living this long in captivity and suggested, as we were breaking the law in retaining them, sending them to the Hyderabad Zoo which was the only one which had any success with the little creatures. This advice also fell on deaf ears—by now more than the law of the land was needed to separate us from our lorises.

Death did. Some eighteen months after we had acquired them we had to be away from Madras for about ten days and returned to be told by an unhappy servant that Po had died. We never discovered why, because Slo seemed well and therefore had been looked after. We blamed ourselves for a long time thereafter for having gone away.



*Our daughter with Slo—Photo: Author*

Little Slo now alone was unable to articulate her loneliness or grief and we debated at length whether to acquire a companion for her or not; we had frequently wished one of them had been a male to see whether they would breed in captivity and here was the opportunity. It took us a long time to decide not to, ultimately because we were against putting cages around creatures of the wild. And so Slo was destined to spend the rest of her days in the company of alien species, far from her own kind. She grew gentler and more trusting and we frequently wondered what wonderful pets lorises born in captivity would have made.

Slo's ultimate form of showing her trust and returning affection came when she took to giving my



*Loris, the lone lemuroid of Asia*

hand a few licks with her little tongue when I took her out of the cage. This was the creature one of our naturalist friends had said was impossible to domesticate. With the exception of reptiles whom we do not pretend to know, there is ample evidence to show that there is no creature of the wild which will not reciprocate affection and understanding; one only has to learn to understand their language.

Slo died the day before we were leaving Madras. There is no way of knowing how old she was then as we had no way of estimating her age when we bought her in Bangalore, but she lived with us for four and a quarter years and I would like to know anyone who has had one for as long.

Because of the complexity of our move from Madras, which involved

the problematical transportation of our cats by train, we decided to leave Slo in the care of friends who, we knew, would care for her as we did, till one of us could return after we had resettled in Delhi to retrieve her. And so two days before our departure we shifted her as gently as we could in her cage to her new residence near by. They rang the next day in deep distress to say something was very wrong. What was wrong that her rear legs were paralysed and her body had turned yellow with jaundice.

As long as I live I shall not forget the look in those incredible eyes as she looked at me when I was having her put down by the vet. His needle took a long time in finding her great little heart.

D.N. MAZUMDAR



*The vultures at the bathing pool—Photo: Author*

## **Community bathing among Indian Whitebacked Vultures**

The phenomenon was observed while driving down from Jaipur to Delhi on 6.1.87. From a distance, the hovering vultures did not present any reason to stop and take notice. In the normal course we would have driven right on. But having just returned from a successful trip to Jaisalmer where I had been able to see and photograph the Cinereous Vultures almost daily during a five day stay, I was searching for it in this group to ascertain if the species extended this far north and east. It was this desire that took us to the landing spot that appeared to be the common destination of all the vultures in sight in the sky.

The centre of attention was a small shallow pool of water in the otherwise dry river bed of the Sugli river, dammed upstream at this point at Kukkas village, not far

from Amber. The percolation water had created three pools, each leading to the next, and the first two a little bigger and apparently quite deep. The third was fed by a trickle of a stream flowing out of the second pool. It was shallow enough for the vultures to wade into for a dip.

The bath was however more than just a dip. It consisted of a number of steps that surprisingly remained consistent across all the birds observed. A few birds could bathe together at a time. The rest awaited their turn patiently. There was little fighting or aggression in or about the pool, though not altogether absent. Most birds were satisfied with a single bath. But there were those that returned for a second or third. These were distinguishable by a reluctance to stray too far from the poolside after the bath.



*Belly-dipping—Photo: Author*

*Wing-wetting—Photo: Author*

The bath consisted of the following distinct steps. There was first the walk up to the pool followed by a few moments' stand in the water, sometimes a perfunctory dipping of the beak. The bird then dipped its tail section and gave it a thorough soak; then one side, followed by the other. The bird then rose, then dropped again to soak its front and back; finally the beak and head and neck were fully immersed in the water and given a very quick but thorough soaking.

The bath completed, the birds left the poolside. Those likely to return for a second or third dip stayed fairly close but the rest moved away because there was clearly a pressure on the facility. This was apparent from the occasional screeching and swiping that took place at the poolside.



The birds were massed in the depth in small clusters and groups stretching from the bed of the river, to the sand dunes and banks, ascending eventually to the highest reaches of the river bank. Once dry, the birds continued to retain their positions, appearing in no haste to leave. Yet there were birds leaving at intervals in twos and threes, just as there were others flying in in ones and twos and threes.

I perceived the phenomenon as a unique and forceful example of the cleanliness principle in nature.

KR FATEH SINGH JASOL, IAS



*Head dipping—Photo: Author*

*Drying—Photo: Author*





*A snakeskin cache—Photo: Romulus Whitaker*

## Reptile skins in trade

Besides the few cobra skin handbags and belts being sold by hawkers along the Colaba road in Bombay, I was not aware of the big business in reptile skins till the winter of 1980-81, when I was asked to accompany Tim Inskipp of TRAFFIC (Trade Records Analysis of Flora and Fauna in Commerce). He had come from London to investigate the extent of reptile skins trade in India as this country happens to be one of the largest exporters of reptile skins.

On reaching a local five star hotel, we headed straight for the shopping arcade and as we passed from shop to shop, I was awed to see snakeskin covered bags, shoes, belts and other items stacked from the floor to the ceiling. Half the shops there sold leather goods,

where reptile skin items were anything from 70 to a hundred percent of the wares displayed. While I was staring wide-eyed through the display windows, Inskipp pointed out that what I was seeing was only a tiny bit of the billion dollar reptile skin trade, which was partly legal and largely underground. He also informed me that during 1976 alone, before the ban was clamped on the export of raw skins, India exported 3.5 million skins. Ban on the export of raw skins was the first step to phase out this trade, for the Indian Government had in October 1976 signed the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES), which prohibits trade in rare or nearly extinct species, restricts exports of endangered

species, and regulates trade in wildlife products. Today 93 countries are party to CITES.

Inskipp wanted to take a few photographs to support his findings, and posing as representatives of an Italian fashion firm, we approached the shopkeepers, but each time we were denied permission to photograph their wares. Possibly they were not taking any chances, and it also indicated that they were aware of the legal implications involved in the sale of these reptilian products. Finally, when Inskipp's colleague, Sue Wells bought a pair of calf leather sandals from one of the shops, the shopkeeper obliged. He went inside and brought out some 'latest' designs in snake-skin wear! Most of the items had cobra skins with spectacle mark which confined the source to peninsular India. The other commonly used skins were of the Dhaman or the Ratsnake. Only once did we spot a pair of gent's shoes that had the endangered rock python's skin, while the monitor lizard which is equally threatened, was used quite frequently. We did make discreet enquiries

for crocodile skin products, but nothing surfaced. One shopkeeper was very apologetic about it, "*Ab kaida bahut kadak ho gaya hai*" (The law is very strict these days).

Today these same dealers have only a few months to clear their declared stocks. In fact the government deadline was till January 1987, but having obtained extension from the court the trade lives on borrowed time. Somehow these 'declared stocks' do not seem to reduce, for the dealers' godowns are like magical pitchers. The remedy lies in the government taking over the stocks to clear off and compensate the dealers. Export of finished products has been only through two government agencies, the State Trading Corporation and Bharat Leather Corporation. This has regulated the trade. Moreover, most of the importing countries now being members of the CITES will not accept the goods unless there is a CITES clearance from the exporting country. The reason to allow this regulated trade is probably to undercut smuggled goods in the international market. A lot of people



*The Ratsnake forms the bulk of the trade—Photo: Author*

depend on this trade for their livelihood. Sudden closure of this long existing trade would have an adverse effect on the people involved, especially the tribals whose sole source of income for the last thirty years had been from collecting snakes. Therefore it had to be phased out gradually, so that the people concerned would have some time to rehabilitate themselves. A fine example is of the Irula tribals who know nothing but catching snakes, at which they are masters. The Madras Crocodile Bank has organised an Irula Co-operative, where these tribals who once sup-

*Python skins at a tannery—*

Photo: Romulus Whitaker



plied snakeskins to smugglers (some still do) will bring live, poisonous snakes for which they will be paid. The snakes will be milked two or three times and then released back in the wild. Thus the traditional occupation supports the tribals, and the snakes also survive. The venom obtained has great demand, both abroad as well as in India.

Closing down the trade with stringent laws does not mean that no snakes will be ripped alive for their skins or no monitor lizard smoked out of their holes. Occasional haul of smuggled snakeskins from packages marked as 'Indian Handicraft' or 'Papads' does indicate the subterranean existence of the trade. The problem is to be tackled at the other end, where the markets are. It is here that international agencies like the World Wildlife Fund, the International Union for Conservation of Nature and Natural Resources, Beauty Without Cruelty, the World Society for the Protection of Animals, and the Society for Prevention of Cruelty to Animals can help in convincing the consumers to give up such products. However, efforts are to be made on a priority basis for the trend of the trade since 1950s has always been upwards. According to Bernhard Grzimeck, the late Director of the Frankfurt Zoo, about 12 million snakeskins are involved in trade every year, which is good enough for a snakeskin belt around the world!!!

ISAAC D. KEHIMKAR



## The Demoiselle Crane

Demoiselle Cranes are found in winter in northern India, Gujarat and Karnataka. During the last few years they are regular visitors from December to March to Veer Dam situated south of Pune.

The Demoiselle Crane is the smallest among the cranes and stands 2.5 feet in height. The head is dark greyish black with conspicuous silky white ear-tufts behind the eye. The iris is red, bill olive-green at the base and orange at the tip, and legs dull horn grey. The plumage is bluish ash grey, while the feathers over the neck are long and pointed and fall over the breast. Similarly, the feathers of the tail are long and sickle-shaped and droop over. Both the sexes are similar in appearance. Amongst the adults some immature birds were seen last year. These young ones could be easily

distinguished by their grey coloured heads, lack of ear-tufts, brown coloured iris and lack of drooping plumes over the breast and tail.

The cranes were first seen and photographed in February in 1984, when they numbered about two thousand. Their next visit was much earlier and they were seen on 15th December 1985, and numbered about 5000. In 1986 their arrival was seen on 23rd November, and numbered more than 10,000. Their early arrival and sudden increase in numbers would be due to scarcity of rains and an early drying of the lakes in the north. The second reason could be that the last winter was severe in the north, inducing the birds to migrate down south in such numbers.

The banks of the Veer Dam gradually slope towards the water.

*Demoiselle Cranes—an agitated take off—Photo: A.R. Rahmani*





In monsoon this part of the land is submerged under water. There are hardly any high trees surrounding this area, except for a few scattered acacias. During winter when the water recedes from the sloping banks of the lake the local farmers cultivate maize, gram, *jowar*, sunflower and *safola* crops. The arrival of the Demoiselle coincides with the sprouting of these crops. The tender shoots form a major food of these cranes in the earlier days, and as the crops grow their seeds are consumed. In between feeding, the cranes every now and then walk into the water to drink.

Demoiselle Cranes are shy birds and if one tries to go closer to them they become uneasy and start flapping their wings giving out the characteristic alarm cry *krunk krunk* and fly off. Flocks of these cranes vary in number from 50 to 250, and when such flocks settle down at a particular site the individuals number more than a thousand.

The destruction these cranes cause to crops is great which infuriates the farmer. A large flock settled in an acre of cultivated land leaves it barren as if mowed down by a huge lawn mower. On enquiring of the remedial measures taken to protect the crops, the farmers informed that they stood guard and shewed off the cranes making noises, throwing stones, and beating drums. Another method was to use fire crackers. But as these cranes feed even at night it was impossible

to keep them away all the time. Some of the farmers compared the cranes to soldiers marching through crop fields and bringing destruction, disaster and desolation in the wake. One of the farmers even went to the extent of saying that were he to have a machine gun, he would mow down every single bird in order to protect his crops which were the result of his toil, and were the hope of his food for the future. As sowing depends upon the rains, there is no chance of resowing for the farmers. The frustration and wrath of the farmers was brought to my notice very pathetically by what I saw on 5th April 1987. I found over ten cranes dead without signs of external injury, which led me to the most logical conclusion that they had died by consuming crops sprayed with insecticides. It is difficult to conclude whether the spraying was done with a purpose to kill the birds, or eating of the sprayed crops was an accident. Most of the farmers are poor having small holdings, and such being the case their loss is disastrous. It is therefore small wonder that the farmers look upon these cranes as their deadly enemies and are totally unsympathetic towards the protection of the species. For them our talk on Conservation is high flown jargon, because being friends of the birds (*Vihang Mitra Mandal*) is a way to suicide for the farmer and his family.

*continued on p. 32*

## Asian Mid-winter Waterfowl Count – India, 1987

For quite some time serious bird-watchers individually and in regional groups have been conducting bird counts in their respective areas throughout India. A simultaneous effort was long overdue and thanks to the interest shown by them, the Bombay Natural History Society was able to organise waterfowl count on a national scale in collaboration with the International Waterfowl Research Bureau (IWRB).

The response, though limited in scope, was nevertheless encouraging. Enthusiastic teams fanned out in different parts of the country on 11th and 18th January 1987, and counted the waterfowl in their respective areas. One major spinoff from this exercise was that hitherto unknown wetlands, small and big, received attention. Reports of counts were received from 16 states and Union territories and a neighbouring country (Nepal). Over 164 sites were covered by 95 participants, some singly and some in batches. Punjab, West Bengal, Sikkim, Himachal Pradesh, Bihar, and NE India (except Meghalaya) as a whole went uncensused owing to lack of volunteers. One of the best organised and thorough surveys was done by the Wildlife Association of Ramnad district in Tamil Nadu.

A total of 21 families and 137 species were counted during the census. This initial exercise is by no means a true indicator of the

population trends in the country. What is needed now is a wide network of volunteers conducting the counts as a regular annual exercise. Carried out regularly once a year on a particular date it will give some indication of: (a) population counts; (b) dispersal patterns from year to year; (c) species composition and possible increase or decrease in waterfowl numbers, not to speak of the status of wetlands. A concerted effort will not only increase the awareness of the importance of wetlands but also highlight the problems faced by them and thereby promote conservation measures.

Bombay Natural History Society is planning to organise such counts as a regular feature in the coming years. Necessary forms, booklets and reports will be published and made available to the participants as well as others. The exercise will also promote interactions and cooperation among members of the Society, birdwatchers throughout the country, as well as regional wildlife societies. One of the aims of the exercise is to provide a common platform for the interested individuals to get acquainted with one another and form a channel of communication. Suggestions from participants are welcome.

Overleaf —

Hints for Waterfowl Census

## HINTS FOR WATERFOWL CENSUS.

There are various methods for censusing wildlife depending on: (a) habitat; (b) types of animals and (c) type of data required. Some of these techniques are good under certain circumstances, but in some cases one encounters difficulties while applying the techniques in the field or when one sits down to analyse the data collected. There is no *perfect* technique for census, and one cannot make absolute counts when one is looking at large populations of mixed species. At best one can attempt to estimate numbers of individual species in a given area. Such counts, carried out consistently adapting the same methods, help us to monitor the trend of population fluctuations in a given habitat over the seasons. The census figures, when compiled over the years, give us a fair idea of the overall population trends. This enables us to understand and appreciate the problems, if any, faced by the migratory waterfowl, especially in smaller wetlands.

Actual counts should be made leisurely counting such species but quick enough to avoid repetition. Take a most suitable vantage point/or several points as the geographical feature permits, and spend as much time as you think necessary to make a reasonably accurate count.

1. If it is a small wetland such as an irrigation tank, village jheel, or a stretch of an estuary, take a vantage point from where you can see the entire wetland fairly easily. Divide the wetland into imaginary sections and count *all* the birds fairly rapidly in each section. Make a rough total count and note it down. Next, try to identify each species as far as possible and count individual species which you can definitely identify. Those you cannot identify, you simply make a count (e.g. 1450 duck spp.). Take as much time as you want for the counts from the vantage points. Later on you can move to a different point if it helps to get a closer view to identify the species. Depending on the size of the wetland and the distance covered, you can make counts on one or more wetlands in a day.

2. If the wetland is too large to cover from one point, you can either work in a team or if single take up different vantage points to cover the entire area. If there is a team you can divide the area among the participants and carry the counts at different points of the wetland, simultaneously making sure not to overlap each counting territory.

3. If the wetland is too large (e.g. Chilka Lake), you can take a boat and sail along leisurely, counting species as you go along. You can take a whole day to do so, provided there is no overlap in counting areas.

*continued on p. 32*

*Duck at Khabartal, Bihar—Photo: S.A. Hussain*



# NEWS, NOTES AND COMMENTS

## ARACHNOLOGICAL MATERIAL

The Swiss Arachnological Boidata and Information Centre requests readers of *Hornbill* for Arachnological material (all orders except Acari), books, papers, photographs, slides and films, as also preserved specimens including moults, egg-sacs etc. for biological and comparative studies and exhibition. Preferable orders are Scorpiones, Amblypygi, Uropygi, Solifugae, Araneae (Orthognatha and selected Labidognatha). For detailed packing and shipping suggestions for living and preserved arachnid material, please contact

ARACHNODATA  
FRAUENTALWEG 97  
CH-8045 ZURICH  
SWITZERLAND

## THE PLANT KINGDOM IN INDIA

*Area.* 3,166,828 sq. km; *Population.* 746,742,000

*Floristics.* An estimated 15,000 vascular plant species including c. 600 pteridophytes. About 5000 endemic vascular plant species, c. 140 endemic genera, but no endemic families. Areas rich in endemism are north-east India, the southern parts of peninsular India, the Western Ghats and the north-western and eastern Himalayas. Tropical SE. Asian and Malayan elements comprise c. 35% of the flora, also temperate Asian elements (8%), Mediterranean-Iranian elements (5%).

*Vegetation.* Tropical moist deciduous or monsoon forests are the natural vegetation cover much of India between the Himalayas, Thar and Western Ghats. Tropical evergreen rain forest up to 1200 m, in north-east, and along seaward side of the Western Ghats in the States of Maharashtra, Karnataka, Tamil Nadu and Kerala, mostly cleared below 500 m, mangrove forests most extensive along the south coast of West Bengal, particularly the Sunderban region, tropical semi-evergreen forests and sub-tropical broadleaved hill forest below 1500 m on the Himalayan foothills of Assam, and in the Western Ghats. Tropical dry deciduous forest with Teak (*Tectona grandis*) and tropical moist deciduous forest with Sal (*Shorea robusta*) in central and northern India at 450-600 m, but depleted, extensive areas of bamboo forests, especially in south. Montane and temperate forests grade into coniferous forests and alpine scrub in Himalayas over 3000 m. Desert or near-desert conditions in western Rajasthan and Gujarat, extensive thorn scrub in Maharashtra, Andhra Pradesh, Karnataka and Tamil Nadu.

Much of India's natural vegetation has been greatly modified by various forms of agriculture, forestry and urbanization. Over 50% of the land area is cultivated, with rice the most important crop.



*Mr Carl D'Silva of the Society, who won kudos for the new look he brought to Hornbill as its designer is familiar to our readers.*

*Mr D'Silva had the unique honour of getting his two pictures—"Clouded Leopard" (above) and "Indian Scavenger Vultures"—selected by the elite Society of Wildlife Artists for Exhibition in London from July 30 to August 9.*



POMATORHINE SKUA

*This rare oceanic bird was caught at Tarapore, Thane district, by a local school teacher, Mr. H.R. Hambhire, in September 1987. It could not fly and it was allowed to live amongst village ducks and poultry before it died in November.*



Estimated rate of deforestation of closed broadleaved tropical forests 1320 sq. km/annum out of a total 460,440 sq. km. However, according to sources only as little as c. 260,000 sq. km can be considered to be 'adequately stocked forestlands', comprising 21,040 sq. km of tropical evergreen rain forest, 8340 sq. km of semi-evergreen rain forest, 102,000 sq. km of tropical moist deciduous forest and 138,750 sq. km of tropical dry deciduous forest. All forests particularly moist forest types, are rapidly being degraded as a result of population pressure and shifting cultivation.

Champion and Seth in their *A REVISED SURVEY OF THE FOREST TYPES OF INDIA; 1968*, give a comprehensive account of vegetation, and the summary accounts for each State are contained in the *Bulletin of the Botanical Survey of India* (1977), Vol. 19 (1-4).

A series of vegetation maps has been prepared for peninsular India at 1:1,000,000, showing degradation

status, available from the Scientific Section, French Institute, Pondicherry, India.

#### CRANES AND GEESE

Mr Prakash Gole, Co-ordinator for Crane & Geese for the Indian Sub-Continent, appeals for accurate information on the numbers of cranes and geese wintering in India.

He appeals especially to those who participated in the waterfowl count of 1987-88 to keep a look-out and carefully count the number of cranes and geese occurring on wetlands. Some of the species of cranes and geese are rare, endangered or are feared to be on the decline. Siberian crane is known to be an endangered bird, but few people seem to be aware that Barheaded goose numbers are declining. Accumulation of accurate information on the numbers of cranes and geese is invaluable for the conservation of these species. Co-operation of all birdwatchers and ornithologists is earnestly solicited in this task.

A semi-evergreen vegetation—Photo: B. Menezes



## FEEDBACK

A UNIQUE DATE PALM (*Phoenix sylvestris* Roxb.)

Recently I came across a date palm (*Phoenix sylvestris* Roxb.) which is unique in its structure. It has two branches instead of being single stemmed. Perhaps it is the only tree of its kind in India, as no record of such palm trees is available. It can be observed at Banmore along the Agra-Bombay National Highway between Gwalior and Morena in Madhya Pradesh.

As most of the people living at Banmore do not understand its importance, it can be felled or any damage can be done to it any day. It should be fenced and captioned "A Tree of National Importance".

RAJIV SAXENA

Hanuman Nagar

Phalka Bazar, Gwalior 474 001

*The photograph of the branching date palm which appeared in Hornbill 1986(4) at p. 8 was taken by Rajiv Saxena, but not acknowledged at the time of publishing. The error is regretted.—EDS.*

BRANCHING IN COCONUT (*Cocos nucifera* L.)

The coconut palm is generally tall, unbranched, slender spineless trunk with terminal pinnatisect leaves. In palms the only genus *Hyphaene* gives branches or forking trunk naturally. However, abnormal forking in a few palm species have been also reported by Davis (*Cocon.*

*Bull.* 9: 197-200; 1956), McCurrach & James (PALMS OF THE WORLD; 1960), Milae (DATE PALM AND ITS CULTIVATION IN THE PUNJAB; 1918), and Munro & Brown (A PRACTICAL GUIDE TO PALM PLANTING; 1916), namely in *Sabal* with four heads, in *Phoenix dactylifera* with five heads growing in Taleribagh, Muzaffargarh and in *Cocos* from Federated Malay States consisting of Malay Archipelago, Sumatra and Borneo. In the Indian Botanic Garden, Howrah, one of the healthy *C. nucifera* L. tree became a curiosity as it branched suddenly at a height of 13.96 m into two branches and one of them further forked into two branches after 0.58 m of growth. All the three heads of this particular tree are growing luxuriantly and giving fruits.

The probable reasons behind this abnormal branching may be either due to some natural damage or damage caused by rhinoceros beetle to the growing meristematic tissues of the tree (McCurrach & James, 1960; Milae, 1918; Rao, *Curr. Sci.* 47(4): 134 to 135; 1918) and Samson, THE COCONUT PALM; 1928) and we also agree with the above opinions.

A.K. BANERJEE

A.P. BHATTACHARYA

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Indian Botanic Garden  
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Howrah 711 103

## A tiger that climbed a tree

*Mr. E. A. Smythies of the Indian Forest Service, tells how his wife was attacked in her machan by a large tiger while he himself, in a neighbouring machan, had only one cartridge left. The tiger fell off one side of the machan just as Mrs. Smythies stepped back and fell to the ground also.*

*Reproduced from BIG GAME ENCOUNTERS, edited by Stanley Jepsen, Editor of The Weekly Illustrated of India, pp. 3-9. Witherby, London. 1936 - EDS.*

An adventure that in several aspects is believed to be unique and is certainly one of the most exciting in the annals of big game shooting in India, happened to my wife and myself on the last day of 1925. Many garbled accounts of this incident have been published in the press in Europe, Asia, America, and Australia, but the following is an authentic first-hand account, based on an article which I wrote at the time.

As a prelude to the story, it may be of interest to describe the general theory of tiger beating as practised in the submontane forests of the United Provinces, with two or three elephants, and a few stops.

The first essential is to locate or fix a tiger in an area suitable for beating and where he is likely to lie up undisturbed. For this a young buffalo (*katra*) is tied up night after night until a wandering tiger finds

and kills it. In this particular beat, the *katra* was tied up at the junction of two bare stony streams as they issued from the foothill.

When a tiger has killed and dragged the carcase into the heavy cover in the beat, the chances are that he will lie up nearby during the day, and can be beaten out at leisure. The whole art of the beat lies in anticipating his most probable line of retreat, and by the judicious use of stops on either side bringing the tiger up to a *single machan*, placed on the natural line of retreat.

In this particular beat, one of the most famous death traps in the province, where to my knowledge over thirty tigers have met their doom, the left side was naturally protected by a bare stony stream, which no tiger would willingly cross, and where therefore stops were superfluous. The right side, however, was a well-wooded slope, at the foot of which a line of stops was necessary to prevent the tiger from slinking off into the hills.

A tiger, lying up near his kill, when disturbed by the approach of the elephants, either slinks off through the thick undergrowth in the direction of the first machan, or if he goes off towards the hill, is faced with a line of stops, who turn him back into the beat, and the elephants drive him slowly and inexorably on to his doom. This is the famous Riala beat of the Jaulasal shooting block.

Let the reader imagine himself on a brilliant cold-weather morning in that glorious country where the first rampart of the Himalayas without warning leaps out of the great alluvial plain of northern India to form a broken medley of ridges and foothills, cut up by deep ravines and boulder torrents. Here in the subtropical vegetation, with trees festooned with orchids and entwined with gigantic creepers, the sambur swarm in their natural habitat, and nightly the boulder-beds, paths, and firelines are patrolled by the great carnivora seeking their meat from God.

Let him join us in spirit at the forest bungalow a few miles away, when the news that a tiger has killed and dragged into the Riala beat, and all is bustle and excitement, collecting the stops, elephants, rifles, and the inevitable rope ladder for my wife. We started off, and when still a quarter of a mile, we dismounted from the elephants, and made a long detour quietly in single file on foot, to get to the top of the beat without disturbing the tiger.

\* \* \*

Arrived at the spot, hot and dishevelled from the rough scramble I fixed up my machan in position of the first machan (as my wife had shot a tiger a few weeks before, and wanted me to shoot this one) and selected a tree for my wife's machan in the position of back stop, about forty or fifty yards behind, so that if the tiger went away wounded she

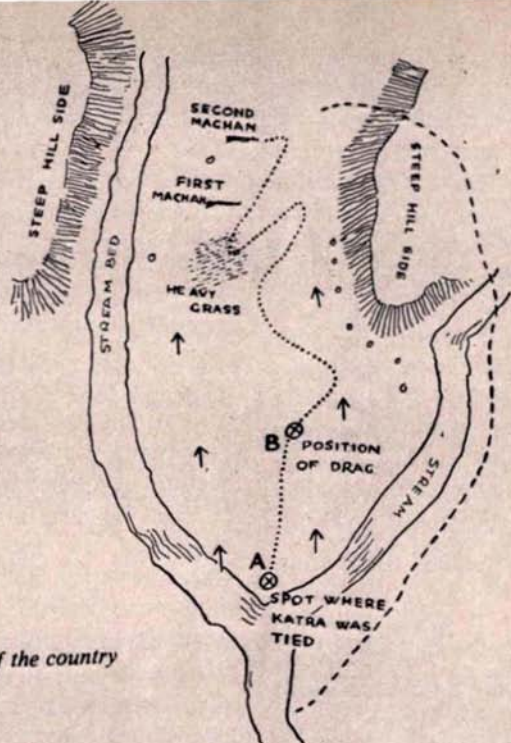
might see where it went and possibly be able to finish it off.

#### FOURTEEN FEET HIGH

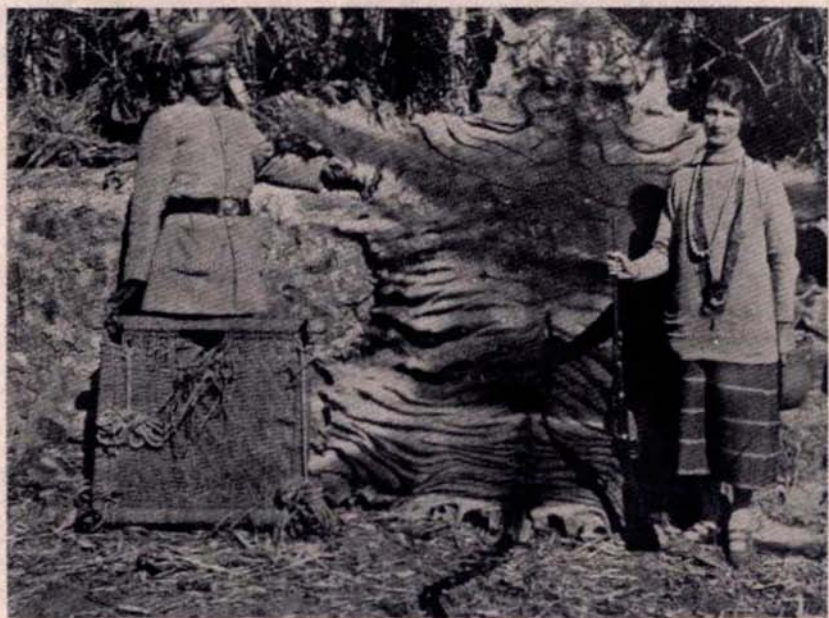
The tree selected was a stout *tun* tree, four feet to five feet girth, and the machan was tied up at first fork *fourteen feet above the ground*. She sat in the machan with her back to the tree and her legs dangling over. These details are important in connection with what followed.

When we were both comfortably ensconced, the orderly went off to place the stops, and we waited for the beat to begin. Presently away in the distance I heard the elephants moving through the grass and trees, and almost at once a stop started clapping and a tiger roared twice. Just in front of my machan was a patch of very heavy *narkul* grass about twenty-five yards in diameter; after a few minutes I heard the tiger coming through this patch, and presently it broke cover in a fast slouch. I fired and, quite inexcusably, clean missed one of the easiest shots imaginable—a tiger broadside on at about twenty-five yards!

Instead of dashing away he turned round and bounded back into the patch of *narkul*, with a second shot (also a miss) to hurry him on his way, and lay up—invisible but quite close to me—snarling hideously. When the elephants came up to this patch, things began to get painfully exciting.



*The lay of the country*



*The wife, the trophy, and the machan*

The tiger refused to break again, and vented his anger in continuous and terrific roars, one of the elephants of a somewhat timid nature was trumpeting shrilly, and both were crashing down young saplings and poles to try and drive him out. Then one of these saplings crashed down right on top of the tiger, and with another terrific roar he charged the two elephants. The timid one tried to fly, but was gallantly stopped by her mahout, while the other, as staunch an elephant, with as brave a mahout as one could wish to have, surged forward to the attack. Whereon the tiger turned and once more galloped past me; and yet once more I made an exhibition of rank shooting and missed him clean.

He went flashing past my wife, about thirty yards away, and as it was nearly past her, she fired and I saw the brute drop, the bullet just missing the spine. I saw her fire again, but the second shot appeared to miss.

It is here that the incredible part of the episode begins, which lifts it from the commonplace into the region of the unique. As she fired the second shot, apparently some movement attracted his notice, for with a crescendo of the most appalling roars I have ever heard he turned round and charged towards her, climbing the tree for all the world like colossal domestic cat, with his gigantic forearms almost encircling it!

"Good God," I shouted a warn-

ing, "look out, it's climbing your tree," and I turned round hurriedly, I knocked all the loose cartridges out of my machan to the ground.

As things were, I had no option but to take the risk of hitting my wife. I fired at the brute, when it was half way up the tree, but only grazed it. As I looked down to work the bolt and re-load, I realized I had one cartridge left, and looking up again I saw my wife standing up in the machan with the muzzle of her rifle in the tiger's mouth—his teeth marks are eight inches up the barrel—and he was holding on to the edge of the machan with his forepaws and chin.

In this position she pulled the trigger—and had a misfire.

\* \* \*

You must realise that, at least, two-thirds of the tiger's weight was now on the machan, for except for his back claws, he was hanging out from the tree by the width of the machan which was rocking violently from his efforts to get on to it. The next thing I saw was my wife lose her balance and topple over backwards, on the side away from the tiger.

The beast did not seem to notice her disappearance, and as I again aimed at him, I saw him still clawing and biting the machan—the timber was almost bitten through, and the strings torn to shreds. I fired my last available cartridge, and by the mercy of Heaven the bullet went true.

It took the tiger in the heart and he crashed over backwards on to the ground immediately below the machan, where he lay hidden from view in the grass. I did not know at the time he was dead; nor, of course, did my wife.

All I knew was that my wife had disappeared from the machan on one side of the tree, and the tiger on the other, that I had no cartridges left; and that I was helpless for the moment to give any further assistance. In fact, I expected every second to hear her screams, and to hear the awful noise of a tiger killing his prey.

\* \* \*

#### WIFE'S OWN STORY

Whether my predicament was as bad as my wife's can be judged from her view of the incident. I quote her words:

"As I fired again, apparently my movement caught the tiger's eye, for he turned round and charged straight at my tree, roaring worse than ever. I thought he was dashing past, but *suddenly realised he was climbing up the tree vertically under my machan*, and had just time to scramble to my feet, when his huge striped face and paws appeared over the edge and he was evidently attempting to climb into the machan itself.

"His great mouth was open and all his teeth were bloody, and bloody foam came up at me with his roaring and spattered my hat and clothes. I pushed the barrel of my ri-

fle into his open mouth and well down his throat (his teeth marks are eight inches up the barrel to this day) and pulled the trigger, and *had a misfire*.

"Then I really began to feel desperate, and did not know what to do. We were having a regular tussle with the rifle, and he was shaking me about with it, when suddenly his huge paw came up through the bottom of the machan, cutting the strings to shreds, and in stepping back to avoid it, I must have stepped over the edge, for the next thing I knew I was falling.

"I thought I was falling straight on to the tiger, and it flashed through my mind, 'surely I am not going to be killed like this.'

"I never felt hitting the ground, but my next conscious impression was that I was running madly through the grass and undergrowth and over fallen trees, expecting at every step to feel the tiger leaping on me and (I don't mind confessing) feeling absolutely terrified."

\* \* \*

Meanwhile I was yelling myself hoarse for an elephant, when suddenly my wife appeared at the foot of my tree apparently unhurt, and we stared at each other speechless. Almost simultaneously one of the mahouts arrived, who had rushed up his elephant regardless of wounded tigers or anything else, and she hastily scrambled up, and cleared off into safety, unhurt but

*continued on p. 32*

## A confiding Chital

In November 1983, Dr A.J.T. Johnsingh pointed out a free ranging pregnant chital doe near the rest house in Mundanthurai Wildlife Sanctuary, Tamil Nadu. I was taken aback by the manner in which the animal, apparently a truly wild one, sauntered up to me and accepted the leafy *Delonix regia* branch I offered. In all the months of my stay in the forests, I had never seen a deer as confiding as this, and I was delighted.

The story is that, some time in the past when it was a fawn, it was brought to the rest house after its mother was killed by wild dogs. In the initial stages, it had subsisted largely on the milk offered by the local folk but eventually it started thriving on the grass and herbs about the house. As it grew up it started moving amongst the herds of deer in the day time, only returning to the rest house at nights. After attaining maturity she mated and gave birth to four fawns over the years, one of which, sadly enough, was killed by wild dogs.

Taking advantage of this tame, yet wild animal, I started observing it intensively as it foraged about and prepared a list of the plant species she consumed. It was, most of the time accompanied by other deer, and thus I was able to keep track of an entire herd. By constant 'trailing' and patient observation the food list I prepared swelled up to a



*Chital accepting food—Photo: A.T.J. Johnsingh*

phenomenal 143 species. In addition to this, I also tried the 'cafeteria' method in which, I offered a wide variety of plant forms to it (much like feeding a zoo animal but without the intervening bars!). This enhanced the food-list further by 25 species.

Apart from the plants, I found that jaggery was one of her most relished food items. So much was her attraction to this stuff that all that I had to do to summon her was to make beckoning noises with a lump of jaggery in hand. As though by magic, she used to materialise promptly from the jungles around.

I became so attached to this petite animal, that when the time came for me to leave Mundanthurai north for Bharatpur, I felt very depressed. But that sadness is nothing compared to what I felt when, quite recently I heard from a friend that she was killed and eaten by wild dogs some time back.

K. SHANKAR



*tiger.....*

for a slightly sprained wrist and a few minor scratches and bruises from her fourteen-foot fall.

One of the back-stops, who had seen the whole incident (and had in consequence climbed up to the top-most twig of a sixty-foot tree) was shouting that he could see the tiger lying dead.

E. A. SMYTHIES I.F.S.

*waterfowl.....*

Always use a rough sheet of paper to note down numbers. Enter the final figures in the given form only at the end of the day.

Quite often birds other than waterfowl are also seen at wetlands. Though these are not to be mentioned in the count form, it would be useful to record their presence and their number.

S.A. HUSSAIN

*National Co-ordinator.*

*Asian Waterfowl Census*

*Bombay Natural History Society*

*cranes.....*

In this contest the farmer has my full sympathy, because crops destroyed at such a critical time mean no yield in the season, resulting in hunger and greater poverty in the forthcoming year. But I also feel equally concerned

about these cranes. They should be given proper protection. This is being done by the Forest Department no doubt, but I have suggested a further step. There is plenty of land lying barren around this area belonging to the government. This could be cultivated with maize, gram, *jowar*, etc. for the cranes. This could be an ideal compromise between the farmers and the cranes, the "friends of the birds" would also remain "friends of the farmers".

For bird lovers here is some information. Veer Dam is situated 61 km from the city of Pune. It is approachable from Shirval on the Satara road. A mile from Shirval is a fork leading to Pandharpur. Down this road about 12 km away is the Veer Dam. The best time to see these birds is early dawn or at sunset from December to March. When these birds fly to neighbouring places a number of formations are seen—an arrow, a straight line, V, and an inverted Y. If one is lucky one can see them descending in whorls from a great height in the sky. The birds start migrating with the onset of the summer, when the crops are harvested, because of scarcity of food. At this time owing to the onset of heat the make-up of the area changes from the lush green of winter to the dry, brown and barren of summer. And bird lovers once again eagerly await for winter to come and bring with it the Demoiselle Cranes to Veer Dam.

SATTYASHEEL NAIK, M.S.

## 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.

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