

Hornbill

1988 (1)



BOMBAY NATURAL HISTORY SOCIETY



COVER PICTURE

Tickell's Blue Flycatcher, *Muscicapa tickelliae*, occurs in India, Sri Lanka, Bangladesh, east to Burma and the Indochinese and Malayan subregions, Philippines and the Sulawesi islands.

Partial to broken country and the hills, the bird spreads out over the plains of India in winter. It frequents thick bushes in or near forest and streams, scrub and bamboo jungles, and village gardens, both in deciduous and evergreen biotope. It sits bolt upright on some low twig or on a creeper stem, flicking its tail and uttering a sharp *click-click*, and launches into quick short sallies after flies and midges. Its pleasing little song resembling a metallic trill which is constantly uttered, identifies the bird long before it is seen.

Breeding season is usually from March to August with local variations. Nest, an untidy cup of twigs, rootlets, moss and leaves, is placed in hollows in tree stumps or earth-banks, or up in a bamboo clump at moderate heights.

The picture is by our member, Mr S. Sridhar of Bangalore.

Acknowledgement

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The Society was founded in 1883 for the purpose of exchanging notes and observations on Zoology and exhibiting interesting specimens of animal life. Its funds are devoted to the advancement of the study of zoology and botany in the Oriental Region. The Society also promotes measures for conservation of nature.

Membership of the Society is open to persons of either sex and of any nationality, proposed and recommended by one or more members of the Society; and also to persons in their official capacity, scientific societies, institutions, clubs, etc. in corporate capacity.

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

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Write to:

The Honorary Secretary
 Bombay Natural History Society

1988(1)

January-March

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The new breed

The head of any department or institution in India cannot enter or walk down the corridors of his kingdom without immediately acquiring a tail of minions of varying length led of course by the inevitable *chaprasi* or sepoy carrying the great man's files or attache case. In the caste ridden society of India, the hierarchy in administration and the division of labour therein has been made into a fine art—jobs have been graded statuswise and no one will touch any job below his status level. Therefore when one piece in the machinery fails, the whole organisation is thrown into confusion, and the wheels which normally grind exceedingly slow considering the *labyrinth* they have to move through grind to a halt. No one wants to soil his hands doing a job below his status. This has been and continues to be the bane of Indian society.

Perhaps the only organisation that has broken this pernicious system is this Society. Sâlim Ali in his day invariably burnt off such status tails, which formed behind him, with a flaming tongue of sarcasm. Those who joined his projects and who felt so burdened by their degrees that their dignity would not stand the indignity of manual labour were politely shown the door.

Time had no relevance except for measuring animal activities, the rule was that for all other purposes time must have a stop. It was made clear that animals did not keep office timings and those who watched the clock did not watch animals for long. This rigorous weeding process which Sâlim Ali had used in training his graduate students gave the Society a team of field researchers who worked happily under the most appalling field conditions, moving around the country in vehicles that stubbornly broke down in the middle of nowhere, and living on monotonous diets prepared by cooks who had been put for the job as they were not good enough for anything else.

Those who had gone through the crucible of misery bore a certain élan, a pride in their work and the Society has at the moment perhaps the best group of field researchers in the country.

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The Vengurla Rocks lie in a broken line a few kilometres from the Maharashtra coast at c. 16°N, 73° 30'E. There is a light house and seven or eight houses on the biggest rock. A departmental boat brings supplies from Vengurla town on the coast to the colony on the rock. A smaller *huli* takes passengers, and supplies the last stretch to the rock.

When my wife, Kate, Bruno Boedts from Belgium and I enquired at the Port Office in Malvan we were told that the last department boat had already gone before May 15th. This is the last day insurance covers boats operating in coastal waters. Further, in order to land on the rocks a permission has to be obtained from Vengurla. The *huli*, we were told, would probably not even come out to "inspect" us as the sea was already quite rough.

The rocks and their inhabitants seemed pretty unapproachable. However, a shopkeeper brought us into contact with the fisherfolk of Malvan who agreed to arrange a gill-net boat for us on May 21st, 1988 in the morning. But we reached late and the gill-netter had gone.

Instead, we were offered a ride with *Shivprasad*, an 87 h.p. trawler. The boat was scheduled to be hauled up the next day for the monsoon. It leaked badly and had to have a minor repair before we finally set out past the Sindhudurg Fort at about 12.30. Forced out of the steering house by exhaust fumes, we settled on the front deck.

The first tern we saw was a large

Terns of the Vengurla Rocks

Crested Tern (*Sterna bergii*). Its large yellow bill was enough to identify it, but when seen directly over the boat its tail streamers, held like pincers, also seemed rather peculiar. Then, a bit later, we saw the first Bridled or Brownwinged Tern (*Sterna anaethetus*). Being close to the boat it was easy to see that it was brown and not black. Even the "bridle" could be seen to extend in a fine line toward the neck. And the neck itself had a lighter colour diminishing the contrast between the otherwise dark upperside and the lighter underside. The Sooty Terns (*Sterna fuscata*) I have seen from Goa last monsoon (Madsen, *Newsletter for Birdwatchers* 28 (3-4): 10, 1988) exhibited a stronger contrast between the black upperside and the clear white underside and they also had a more powerful flight—or so it seemed in the strong monsoon gales.

On our way along the smaller rocks we saw 20-25 Large Crested Terns and 15-20 Brownwinged Terns. A few of these birds took a momentary interest in us following

the boat, but most went their own way.

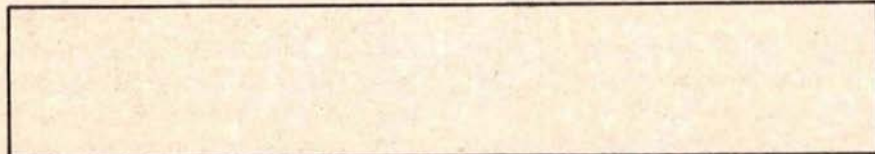
This tendency was even clearer among the smaller terns crossing our way in small groups. These rather busy terns were in their breeding plumage with a blackish underside. A white "whisker" dividing the black cap from the blackish underside was seen on one of them. The groups headed, mostly for the deeper sea and I cannot imagine that these birds were coastal or inland or even migratory species. They seemed as much at home in the open sea as the larger terns. Their bill, noted Bruno, was dark and quite thick. It was not a very elegant tern. Despite the difficulties identifying this species of which we saw around 20, it can hardly have been anything but the Whitecheeked Tern (*Sterna repressa*). But, admittedly, we have some doubts. In retrospect, what struck me most was its purposeful flight. Perhaps this is what Harrison in his book SEABIRDS refers to as its *compact jizz* (Harrison, SEABIRDS. 1985. pp. 375).

The observations made above refer to terns flying near the boat. Only visual observations were made as the birds were silent, or perhaps their shrieks were drowned by the engine noise.

Rounding the rock with the light house, proceeding seawards three smaller rocks came into closer view. The old light house is situated on one of these uninhabited rocks. On the seaward side of this rock a large congregation of terns were flying around in a rather dense cloud not far above the water. Some were resting on the water. Altogether, there were some 300-500 birds. According to Bruno, some of these birds were bigger and darker than others. This would indicate that the Sooty terns, still, may share the colony with the other terns. But we were quite far (about 200 metres) from the rocks and the boat was rolling heavily.

I should mention that apart from terns a few dozen small, dark swifts were seen wheeling around over the water. We identified them as Indian Edible-nest Swiftlets (*Collocalia unicolor*). These birds are known to have bred on the islands. Their nests were once collected and exported (Ali & Ripley, HANDBOOK BIRDS. compact ed. 1983, 4: 29).

At about 17.00 hours the captain, Yashwant Gunaji Sarang, had steered the boat back to Malvan harbour. We took a few photographs with the camera which
Continued on page 29





The forest surrounding the taal Photo: Author

SINGHRANA TAAL

A little known wetland in the Gorakhpur forest

Wetlands with their abundant birdlife have fascinated me. In April 1985 when we went to Gorakhpur in search of the Bengal florican, the Divisional Forest Officer told us about a beautiful wetland called Singhrana Taal, tucked inside thick forest in North Gorakhpur Forest Division. At the same time he cautioned us about a gang of dacoits who were active in that area at that time and suggested that we go there with armed guards. Later during our florican work, the forest guards were very helpful and took us to all the grasslands but when we asked

them to take us to Singhrana, they refused giving all sorts of excuses. Somehow we managed to convince them that it is worth taking a risk of possible encounter with dacoits to see the 'Taal' which the DFO had vividly described to us. As we got delayed in our florican work, we could reach Singhrana only late in the evening. As it was getting dark, the guards gave us ten minutes to see the birds. While Usha Galden, an experienced birdwatcher and I quickly made a list of the birds, Ravi Sankaran, who had newly joined the Society as a researcher and

was quite a novice at that time, peppered us with a barrage of questions on the many birds that were new to him.

The sight of 45-50 sarus cranes lazily standing or walking, and hundreds of lesser whistling teals noisily flying all over the jheel was unforgettable. Reluctantly we left the area but with a firm resolution that one day we would come back to Singhrana to see it properly. That opportunity came to me in May 1988 when I again visited Gorakhpur in search of the Bengal florican. Though the florican remained elusive inspite of four days search, a visit to Singhrana Taal became the highlight of the trip.

Singhrana Taal, a waterbody more than a kilometre long and three to four hundred metres wide, is located in the forest of Chowk Range of North Gorakhpur Division in Uttar Pradesh. The range comes within the recently declared Soghi Barwa Wildlife Sanctuary. This 428 sq. km sanctuary has typical *terai* and *bhabar* type vegetation, with numerous streams, open grasslands (locally called *chaaphi* or *majhaar*) and thick sal forest. All the major fauna of the *terai* jungle, like tiger, leopard, cheetal, sambar, hog deer, barking deer and wild boar are reported to be present in this range.

The Singhrana Taal is small but compared to its size, its birdlife is quite rich. Most of the Palaearctic migratory waterfowl are seen there in winter. During summer, it serves

as an important staging ground for sarus crane, painted stork, lesser adjutant, lesser whistling teal, purple moorhen and jacanas. During my both visits, I counted about 50 sarus, 300 to 400 whistling teals, 100 to 200 purple moorhens and numerous jacanas, egrets and herons. During my 1988 visit, I saw a pair of blacknecked stork with two immatures. Though I do not have any comparative data, I think this handsome stork has suffered a decline due to destruction or deterioration of wetlands. Its presence in Singhrana indicates that this waterbody is still in a healthy state.

The chief attraction of the Singhrana Taal is its picture-post card beauty. Over-hanging branches of thick trees, clear water and reed-fringed margin make it endearingly



Illegal reed cutters

Photo: Author

beautiful. Greyheaded fishing eagle and storkbilled kingfisher, both birds of forest pools, are seen in Singhrana. In addition to lotus, the stemless, prickly foxnut (*Euryale ferox*) with its showy, deep red flowers and large, rounded, spiny-ribbed leaves is present in some areas. The foxnut is popularly called *makhana* in Hindi, and its seeds are either eaten raw or roasted. Both the lotus and foxnut belong to Nymphaeaceae family of aquatic plants. The species is widely distributed in the freshwaters of southeast Asia, north, central and western India.

Inspite of Singhrana's secluded location inside the forest, it is not free from human disturbances. Il-



Foxnut is common

Photo: Author

legal fishing is common and we found many fish lines left by poachers. Villagers come to cut grass and reeds. We found at least 20 people, each with a head-load of reeds. However, the most insidious enemy of this wetland is the water hyacinth which has covered nearly twenty five percent of the jheel.

As the Singhrana Taal comes under the Soghi Barwa Sanctuary I hope the Forest Department will take some conservation measures to stop fishing, grass cutting and the spread of water hyacinth. At present, Singhrana is unpolluted—both visually and chemically. I did not see any polythene bag or a beer bottle—an increasing nuisance of our waterfowl sanctuaries like Bharatpur, Nawabganj and Sultanpur jheels. Let us hope this 'gem' in the Gorakhpur forest will always remain unpolluted and secluded—fit only for the inveterate birdwatcher or a fugitive dacoit!

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ASAD R. RAHMANI

CONSERVATION ACTION

"We Accuse"

(Editorial, *Loris* Vol. 17(5): 185; June 1987)

MPs and Public Servants are obliged to abide by and uphold the Laws of the land. The Constitution makes it the duty of every person in Sri Lanka to protect nature and its riches.

We are amazed and distressed at the casual and often deliberate manner in which these laws are being flouted. Certain GAs, AGAs and other Officials break the rules that they are employed to uphold, often in order to please their immediate political masters. Some politicians actively encourage lawbreakers and obstruct and intimidate those whose duty it is to protect Conservation Areas, and the police normally fail to assist.

The only remedy for this worsening situation is for Non-Government organisations to join together in order to institute legal action. We appeal to members and non-members alike to join actively in this last ditch stand and invite all Lawyer Members to form a **conservation legal defence unit** under the umbrella of the WNPS.

Some recent examples:

Flood Plains National Park— Total disregard by MPs and highest Government Officials of the ex-

istence of this crucial new Conservation Area, so that its very survival is in doubt through a multitude of illegal activities including brick making, tobacco and other chena cultivation, all organised by absentee mudalalis with paid labour, and even housing construction by the National Housing Authority.

Wilpattu National Park— Near Tantirimalai 1000s of acres from the park have been cleared and settled by the Freedom from Hunger Campaign supported by MPs and Government Departments.

A 400 ft. wide swath has been cut through the park from South to North to make a road for the convenience of the Army, and a timber contractor licensed by the GA has removed the logs. This road dissects the park and threatens its most important elephant habitat. A similar unauthorised road through the park from Mahawilachchiya to Arippu built by the Army was taken over by terrorists when it was completed.

Wasgomuwa National Park— 1000s of illegal gemmers are active under political patronage.

Gal Oya National Park— The Irrigation Department is restoring a tank in the Baduluwela area for fields to be opened up within the park which the GA wants to excise from the park. Another area of 4 sq.

miles (of a total of 100) is to be excised to satisfy a stubborn squatter who has defied government after government for over 30 years since the Gal Oya Scheme was started.

Hakgala Strict Nature Reserve— Aided and abetted by Government Officials and MPs, lucrative potato and vegetable cultivation on encroached land continues and is extended from year to year. This is a Strict Nature Reserve!

Uda Walawe National Park— Ganja cultivation and illicit gemming are rampant.

Yala National Park— Large portions are not under the control of the Wildlife Department but occupied by 1,000s of illicit gemmers, timber thieves, ganja cultivators and ivory poachers, aided and abetted by influential individuals of the area who prevent the Wildlife staff from doing their duty; the police seem to be on the side of the wrongdoers.

Bundala Sanctuary— Felling of timber is a daily occurrence. Frequent disturbance of birds including large flocks of feeding flamingoes, cutting of illicit tracks for uncontrolled touristic visitation.

Kalametiya Sanctuary— The only place in Sri Lanka where the Glossy Ibis is found today. Illicit digging for sippi encouraged by the nearby Ceramics Corporation lime factory, dredging and interference with natural systems by Irrigation Department; illicit felling of mangroves.

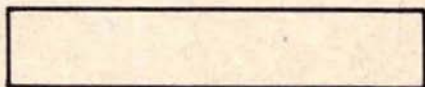
Galways Land Sanctuary— The Army has bulldozed a new road through this Sanctuary in clear breach of the law. Firewood is regularly cut. Neither the GA nor the Police lift a finger to protect this unique Sanctuary within their midst.

Peak Wilderness Sanctuary— Clearing for chena and timber extraction are not controlled.

All Forest— The Conservator of Forests has recently complained that 5,000 acres of forest reserves are lost annually due to political pressure. 100,000 acres of forest have been cut down annually for the past 35 years, making a total of 3.5 million acres of lost forest. Sinharaja is not properly protected.

In 1984 a Committee chaired by Mr. P. Dayaratne, M.P., Deputy Minister, Power and Energy, was appointed to formulate a National Policy for the preservation of Fauna and Flora. This Committee submitted its report with wide ranging recommendations in February 1986. No action has been taken on these recommendations though some are very very urgent and of the greatest importance.

(Based on a similar Editorial in 'Hornbill,' 1986(3) July-Sept., a magazine published by the Bombay Natural History Society.) ॐ





The Gaur,
Gayal & Mithun
in India
Essential Differences

The so called "bison" or wild gaur of Asia is the biggest representative of the world's wild cattle and very likely the number one bovine trophy in the world. In northeastern India where very fine specimens of this great animal may be found there has for long been an uncertainty, even amongst experts, as to the true status of a gaur-like animal which is found in a feral state and variously referred to as either the gayal or mithun. These notes are intended to help in clarifying the doubts and presenting observations made from my personal experience.

Taxonomists had originally classified the Asian gaur itself into three different subspecies, which were *Bos gaurus gaurus* over the Indian subcontinent, *Bos gaurus hubbaki* in the Malayan peninsula, and *Bos gaurus readei* in Burma, Thailand and Indo-China. Possibly it was later correct for them to join up the two last subspecies which are so similar under a common latin name of *Bos gaurus laosiensis*. The South Asian gaur is slightly different from the ones found in India. However, where these two great subspecies meet, in that strategic boundary-line of Malaya-Burma-Tibet-India, the belt of long, low hills which run from north to south from the Himalyan massif almost to the Bay of Bengal above Chittagong in Bangladesh, there exists an

animal which falls between the two subspecies, often found wild but generally in a semi-domestic state like some Burmese Banteng or tsaine as the old British writers referred to them. This creature so like a normal gaur in many ways is the gayal, and its even more confusing hybrid, the mithun. Both have so far been put under the definition *Bos frontalis* or, earlier *Gaveus frontalis*. They deserve separate names now since they are in fact entirely different animals as I will show.

Similarities between the gaur and gayal are that both the animals have a pronounced dorsal ridge which ends abruptly in the middle of the back and runs almost vertically down to the spine. Both animals have a plain chocolate coloured hide with a short coat which runs into a chestnut colour between the thighs continuing under the belly. Both animals have a distinctive white patch on the forehead and off-white stockings below the hocks. That both have a bluish tinge in the pupils of the eyes has been stated before but I cannot testify to it personally. The horns of the adult bull gaur are far heavier than in his gayal counterpart although both gaur and gayal have similar jade green horns with blackening tips. It would at first glance seem that the horns of a gayal are set lower, are lighter, and straighter than the gaur's.

The gayal may bear but slight resemblance to domestic cattle which is due to the faint dewlap,

and some experts believe it is a very ancient cross between the humped zebu cattle of Southeast Asia and the gaur. On the other hand it could be a cross with the Banteng. Why this has occurred nowhere else in Southeast Asia we cannot know, but evidence of it is here where the subspecies meet. Some have claimed that the gayal is simply a domesticated gaur but this theory is even far less likely since nowhere else in the gaur's large range in Asia is the gayal found. I would say that the basic difference between the gaur and the gayal is the dewlap, decidedly a throwback to domestic cattle. The gayal was found wild, especially old bulls, in the Chittagong Hill tracts in the last century. Elsewhere in its long range through the Indo-Burman Hills starting from Tripura, the Naga and Mishmi Hills into the northern snowline forests of Arunachal, it is largely a semi-domestic animal. The question that remains is, is the gayal a product of a mating between a gaur bull and an ordinary cow? I for one would not subscribe to this theory since I do not think it at all possible for the ordinary Indian cow to mate with such an enormously heavy animal such as the wild gaur.

The gaur of these areas in question, however, do mate with the semi-wild gayal which roam freely in the jungles without any herders during the day-time. In my opinion and first-hand experience I believe that the results of such matings produce a true hybrid which is the



Above: *A herd of Mithun in the Mishmi Hills*
Photo: E.P. Gee

Below: *A pipebald Mithun with the Mishmis*
Photo: E.P. Gee



mithun, often confused as being the same beast as the gayal. It is only natural that adult mithun interbreed producing a consistent mithun strain. Often gayal will mate with mithun, and gayal are known to cross domestic cows, again producing a type of mithun. I will attempt to define the differences of these animals from one another.

The gayal is a heavily built animal standing about five feet in height. Its forehead is flatter than a gaur's and the width of the nasal bones is less, along with the fact that seen from the side it has a less pronounced "roman nose". The gayal is kept by Naga villagers primarily as a source of beef, not milk. During the day these animals roam in the jungles, in the evenings returning to the villages where they stay freely, going back at dawn to graze in the jungles. The gayal in the Chittagong Hills follow a similar pattern, returning to receive rations of salt from their "owners" in the village. However, numbers of these animals are milked. These animals producing milk are those mithun that have been bred back to domestic cattle. There must be more backbreeding of mithun with domestic cattle in the Chittagong Hills than in the north. Also, this will account for the undeniably finer specimens of gayal and mithun in the northern regions. It is also possible that in regions where gaur and gayal share the habitat the cross between the animals produces consistently higher standards of mithun.



Mithun in a forest clearing

Photo: E.P. Gee

The mithun is short-statured, squat, with a sturdy build, and even better developed dewlap than the gayal. Its hooves are also more delicate and neatly formed. Its head is also finer, possibly owing to the infusion of domestic blood. The mithun being amenable to back-crossing, quickly develops milk-yields. While gayals breed amongst themselves a mixed herd of these animals will make differentiation between the types difficult.

The gayal deserves a subspecies status. The mithun, being the hybrid product of a gaur-gayal cross, gayal-mithun cross, mithun-mithun cross, or mithun-domestic cross, deserves to be recognized as the

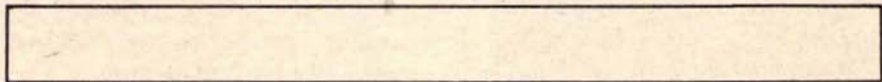
hybrid progeny of either the gaur, gayal or domestic cattle. Whenever an animal is found to be milk-yielding in domesticity it must be taken to be a mithun. Such animals will have less pronounced dorsal ridges and more pronounced dewlaps in reverting to the domestic type.

The gayal as I have said is a basically wild animal, and its feral condition is solely due to the presence of mithun which have yielded to domestication. The gayal deserves to be treated as the great sporting animal that it is and accorded the title of a separate subspecies and given independent ranges to breed and develop in a wilderness condition.

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A.R.H. BULU IMAM

"The Grove", Hazaribagh-825 301,
Bihar—India





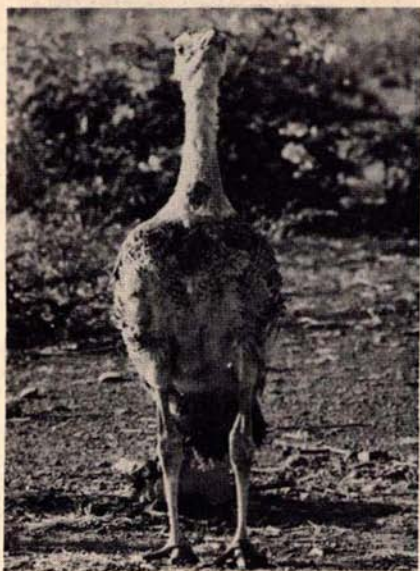
Bringing up **Ramu**

Photo: Author

Most wildlife researchers tend to develop a sort of attachment or sentimentality towards the animal they work with, more so if the animal has an endearing quality about it. The same happened to both my senior colleague, Dr Asad Rafi Rahmani, and myself, two persons, who had worked on the Great Indian Bustard project from the time it commenced in May 1981 to study the ecology of this magnificent species. The project took both of us to a good part of the length and breadth of our country working in remote areas, coming across all sorts of people and most of all, literally speaking, we were eating, drinking and sleeping with bustards the 365 days in a year. In 1988, the project came to an end, but we find it difficult to just forget the bustard and have a guilty feeling, similar to parents who have deserted their children. May be more so with me, since I knew 'Ramu'.

On 23 January 1987, I returned to camp Rollapadu (Kurnool district, Andhra Pradesh) after a small survey and was told that the Forest Department had a bustard chick with them. The chick had been picked up by a villager who found it in his fields during harvest operations. At the watchman's quarters, I was greeted by a 'growling' frightened and hungry, 2-3 week old bustard chick. Thus opened another interesting and memorable chapter in our studies on the Great Indian Bustard. One lacuna in our studies on the bustard was data regarding the growth and development of the bustard chick, since it is extremely difficult to observe it in the wild, being confined most of the time by its mother to tall grass stands. 'Ramu', as we named the chick a few days later, provided us with a golden opportunity to fill this gap.

The next morning, it was a relief to see him readily eat my offering of



This is my patch

Photo: Asad R. Rahmani

Below: *A makeshift dust-bath*

Photo: Asad R. Rahmani

a boiled egg, as according to the watchmen, he hadn't eaten anything since the 21st—not really surprising, as he was offered only raw *chappati* dough. Finding him still hungry, we went grasshopper hunting and fed him all he could eat. Ramu soon took to us, following like a pet dog and changed his 'growls' to one of a softer toned, continuous contact call, which he retained till he was about a year old.

Growth was rapid. When we got him, Ramu weighed 234 g and stood 17 cm tall, had a downy plumage and just emerging primary and secondary flight feathers. By about a month a lot of changes had taken place. Ramu had crossed a kilo in weight and looked like a miniature bustard, with a black crest, whitish neck and underparts, and a brown





mottled mantle. Happily for us, he lived up to the male name we gave him, indicated even then, by his erect walk typical of cocks and a definitely stouter build.

His food intake kept up with his growth. The boiled eggs increased from one, two, three, four and finally five eggs per day, which amounted to about 100 rupees per month. Fortunately, he began to take sorghum mixed with groundnut *chappatis* when about 7 months old and the eggs could be gradually reduced to two daily. He proved to be quite a 'coarse feeder', taking grasshoppers, beetles, wasps, bees, ants, spiders, scorpions, lizards, small frogs, toads and eggs (shell and all) of ground nesting birds like sandgrouse. He also happily ate the 3 small fishes that were offered

Threatening a crow

Photo: Author

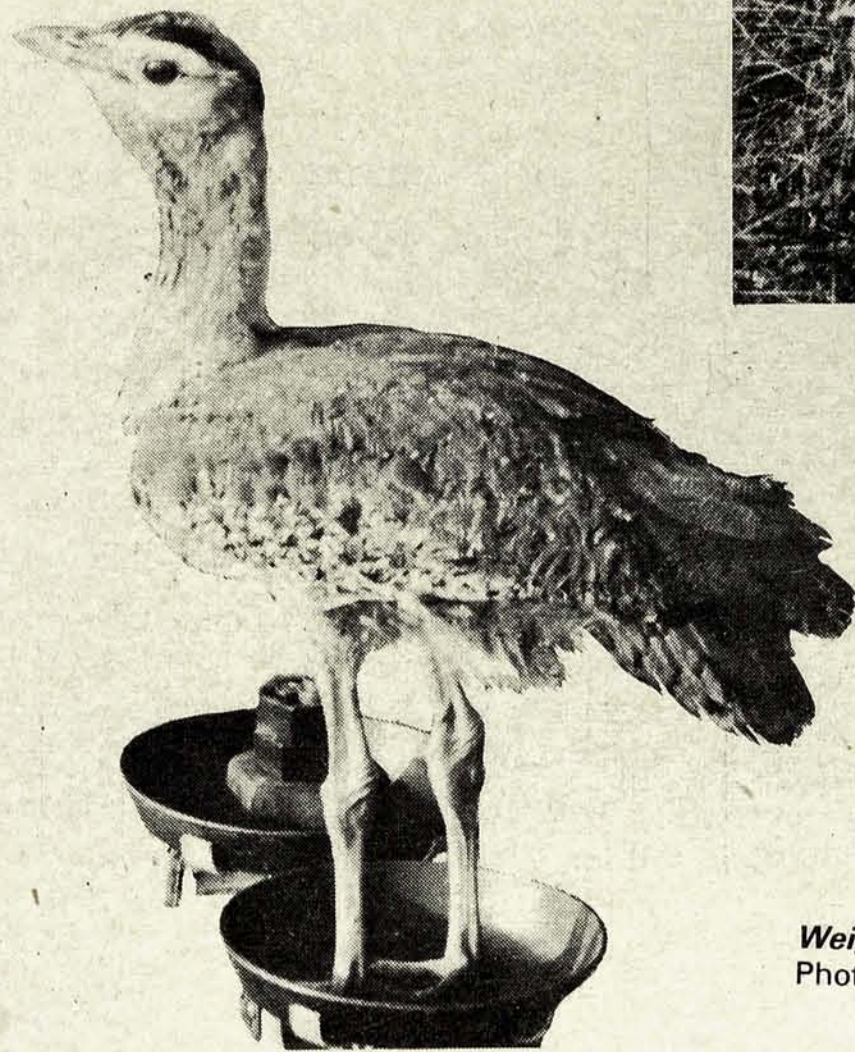
once. During his younger days, he had the habit of picking up and gulping an assortment of stones, broken glass pieces, bangle bits, beads, trouser clips, blade pieces, nuts, bolts, etc., which often made him unwell. Ramu gave up this habit when about 10 months old.

Ramu was happiest during the evenings as it was the time for his daily walks. He would follow us gulping the insects that we caught for him—he learnt to catch prey on his own at about 8 months. Clowning was a part of him and his comical, mock threat-cum-frolic dance would send us into peals of laughter. Ramu made no attempts to fly away and my earlier effort to

make him 'take back to the wild' failed. Ramu seemed terrified of other bustards and would come running back to us like a frightened baby, whenever we managed to manoeuvre him near or among a flock of bustards. Later, we stopped these attempts, realising that it would be very difficult for him to survive in the wild, especially due to his lack of fear of humans. Some moments with Ramu will remain for ever. The evening walks with him in the grasslands with the sun setting in the background; the day a drop of blood fell from a wound on his bill onto my hand, making me wonder about my meat eating habits; and



From an 'ugly duckling' to an adult
 Photo: Asad R. Rahmani



Weight conscious
 Photo: Asad R. Rahmani

the day he startled us by his sudden appearance through tall grass to where we crouched examining a bustard nest, with a puzzled look on his face which seemed to say: 'Where have you been and what's up gentlemen?' Ramu is now almost a metre tall and weighs 7 kilos. In March 1988, he started to indulge in courtship displays, but it was obvious that he was still very much a 'teenager' and

it would take years before he reached the grand proportions of 14 kg cocks with their huge pouches extended during courtship displays. The project came to an end in May 1988. We leave with experiences and memories that have made our lives richer, and hope that Ramu and the other bustards of our country will see a better future.

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 RANJIT MANAKADAN
Bombay Natural History Society.

NEWS, NOTES & COMMENTS

To bring home the importance of the Sahyadris in the economy of the country, Save the Western Ghats March (*Padayatra*) was organised by Save the Sahyadris Committee. The purpose of the March was:

- i. to protect whatever that remains of the forests in the Western Ghats on a war footing;
- ii. to work intensively for regreening of the hills using endemic species;
- iii. to work against big projects in the hill ranges which were mainly responsible in recent years for large scale devastation of the forests and displacement of the

hill people who received no benefits from the projects;

- iv. to undertake awareness programmes among the hill people in the surrounding areas using traditional and modern media.

Two groups of participants set out from the northern and southern extremities of the Sahyadri range, and converged on Goa on 30th January 1988. There were over 2000 participants in all.

The most important outcome of Save the Western Ghats March is the awareness it has brought to the hill people and to the general public as well.

Apiko leader heading the march at Nawapur

Photo: Ulhas Rane



As a part of the World Forestry Day celebrations a quiz on Wildlife was organized for the junior college students and school students (VIII & IX std) at the Society on 19th February 1988.

25 schools and 10 junior colleges participated. The semi-finals and the finals were held on 23rd February 1988.

Among the junior colleges, B.N.

Among the several sub-committees which form the operations arm of the Executive Committee of the Bombay Natural History Society, the Natural History Sub-Committee under the Chairmanship of Dr E. Bharucha, M.D. caters to the Natural History interests of members.

Realising that not everyone is interested in every aspect of natural history, the Sub-Committee decided to form sub-groups to cater to

The Centre for Action, Research and Technology for Man, Animal and Nature, a voluntary non-profit organisation dedicated to fostering and facilitating the harmonious development of man, animal and nature, is publishing a bi-monthly journal entitled *Cartman* to further its objectives. The journal among other topics features articles and write-ups on Animal Welfare, Improvements to Draught Animal Power (DAP), Prevention of Cruelty to Animals, Nature, Environment, Ecology, Rural Development, the Non-organised Sector, Ap-

Bandodkar College won the 1st prize and Cathedral and John Connon were the runners up.

St. Thomas School of Goregaon was the winner and I.E.S. English School were the runners up respectively.

Eight schools which came up to the semi-final level will be taken to Tansa Sanctuary for a day's Nature excursion.

special interests.

The following sub-groups have been formed:

Botany; Forest Ecology; General Ecology; Ornithology; Mammals; Herpetology; Insects and Arachnids; Aquatic fauna; Geology

If any of these groups cover your natural history interest do write to the Convenor: Mr S.A. Hussain of the Society.

appropriate Technology, Symbiotic relationship of man, animal and nature, our heritage etc. to mention a few. It also endeavours to promote National Integration in every possible way.

Cartman welcomes contributions on any of the above or any related subjects, with coloured or monochrome photographs. Please contact Prof. N.S. RAMASWAMY
President, CARTMAN
870, 17TH MAIN
KORAMANGALA VI
BANGALORE 560 034



FEEDBACK

In *Hornbill* 1986(2), I was reading the anguish of the Editors over the incidents of management's resenting attitude of wildlife researchers and poaching. Here, I could remember the instance which happened during my research on wildlife for the Master's in Wildlife Biology. In spite of my several requests, a Forest Guard refused to carry an injured chital hind to the veterinary doctor of the Sanctuary and the poor animal died. To my dismay, immediately the animal was cut up and taken away to be eaten by the Guard. So it is obvious that unless the people in the Forest Department are sincere and responsible, the conservation policies of the government would be futile.

B. RAM MANOHAR

University of Rajasthan, Jaipur

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"We Accuse"

I write to you regarding your Editorial "We Accuse" which appeared in *Hornbill* 1986(3). On the basis of the *Hornbill* editorial, the Wildlife and Nature Protection Society of Sri Lanka composed and published a similar Editorial in its journal *Loris* (June 1987, vol.17(5): 185), of which I am sending you herewith a copy. You will see that the issues are the same here in Sri

Lanka as they are in India: utter disregard by politicians and bureaucrats alike of the existing conservation laws and regulations, not only connivance with but actual support for unlawful elements who degrade and despoil declared national parks, nature reserves and sanctuaries, deliberate lack of law enforcement, secrecy and deviation from plans in land use, in forest policy and the like, as well as lack of planning which would take into consideration the essential concerns of conservation in the development of the country.

There is one distressing difference, however. Whilst the *Hornbill* editorial has obviously provoked a considerable response from amongst its readership, there has not been a single letter to the Editor of *Loris*, expressing support or indignation at the prevailing situation, nor have the media or the decision-makers taken any note of it.

Under this shattering impression various NGOs who earlier had followed strictly separate paths have now at long last got together and formed what might be called a united front against political and bureaucratic indifference to conservation issues. With the invaluable assistance of the Environmental Foundation Ltd, an NGO compris-

ing of Lawyers, several matters have been taken to the courts already and others will shortly be taken up. Like you, we have come to realise after all these decades that lobbying and persuasion alone will not lead us anywhere, that a friendly, gentlemanly give and take does no longer exist in these spheres, and that we have to revise our strategy and make use of other means.

T.W. HOFFMANN

Sri Lanka

The editorial in *Loris* (June 1987, 17(5): 185), under the title 'We Accuse' is reproduced under Conservation Action of this issue. — EDS.

* * * *

Hornbill 1987(3) comes up to the usual high standard and is full of interest, in this case particularly so for a Coffee Planter, but the connection is not at first obvious.

Mr Oswald Thayil's beautiful coloured photograph of the Orangeheaded Ground Thrush 'rang a bell' and stirred up some old memories.

In 1938 and more recently in 1950, the late Ralph Fremlin, who was my guide, mentor and *guru*, pointed out to me this active little bird 'fossicing' about under coffee trees and said to me "there goes one of the tireless workers who never gets thanked. He is the only bird, I know, who lists the White Stem Borer on his menu, both grubs and beetles."

In this day and age when we are rightly encouraged to take up the cudgels against Chemical Warfare in agriculture, I feel that the added rearing of man-assisted birds on a large scale would be a very great aim to pursue. After all, look at the way the Chinese Pheasant is bred in partial captivity in the United Kingdom and these boosted stocks soon revert to the wild if left alone.

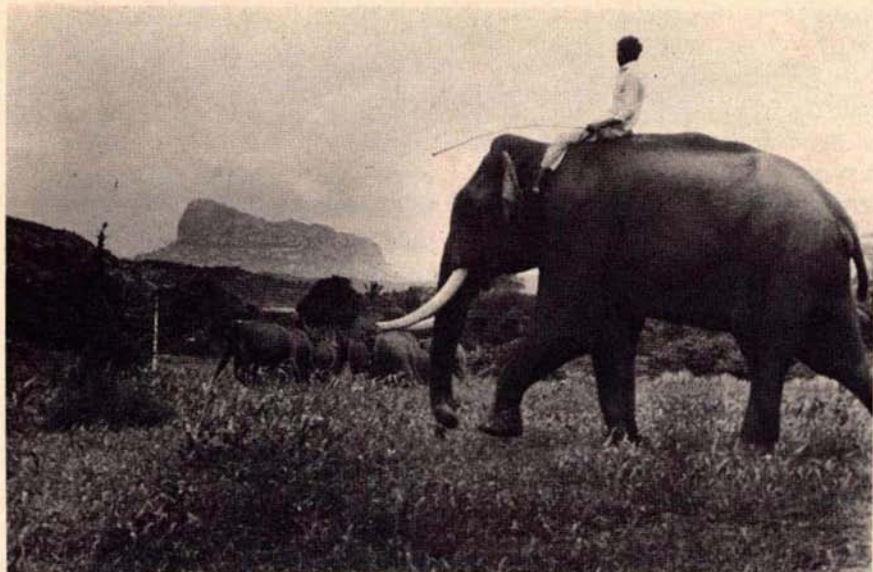
Just how one would be able to catch up wild thrush and augment the natural stock by protected rearing is the thing I would ask the Society to advise. Financially one will have to beg at the door of the Coffee Board, but they have plenty of money and all it requires is the right approach by such a venerable institution as the Bombay Natural History Society. I will try and influence some dozen or so coffee planters.

This little Stud is already the recipient, on a purely voluntary basis, of 'Bird Bounty', in the form of the Cattle Egret. We are blessed with about 100 every year who follow round the cattle and horses and must account for half a tonne of grubs, hoppers, caterpillars and other pests. Our egrets are local migrants and fly west arriving here sometime in October and departing in mid May. They hate the heavy SW monsoon rain. So do I! Any advice would be welcome.

✍

FRED FOSTER

*The Byerly Stud, Hassan Dist.,
Karnataka.*



Herding the elephant

AN ELEPHANT DRIVE

Text & Photographs
by
Ajay A Desai

In October 1986 a herd of 32 wild elephants left Bannargatta forest near Bangalore city in Karnataka and moved east, seeking a new habitat. They were not moving because the population had increased in Bannargatta, but because the forest had become degraded. This was not an isolated case; elephants in the belt of forest from Bannargatta to Hosur have been moving out since 1984. During their move east they came across no suitable habitat and had to subsist mainly on agricultural crops. The herd finally split into two groups and the larger group moved into Andhra Pradesh, while the smaller group of 9 elephants moved southeast till it came to Tograpalli village in May 1987. This village lies 15 km

southeast of Krishnagiri town in Tamil Nadu.

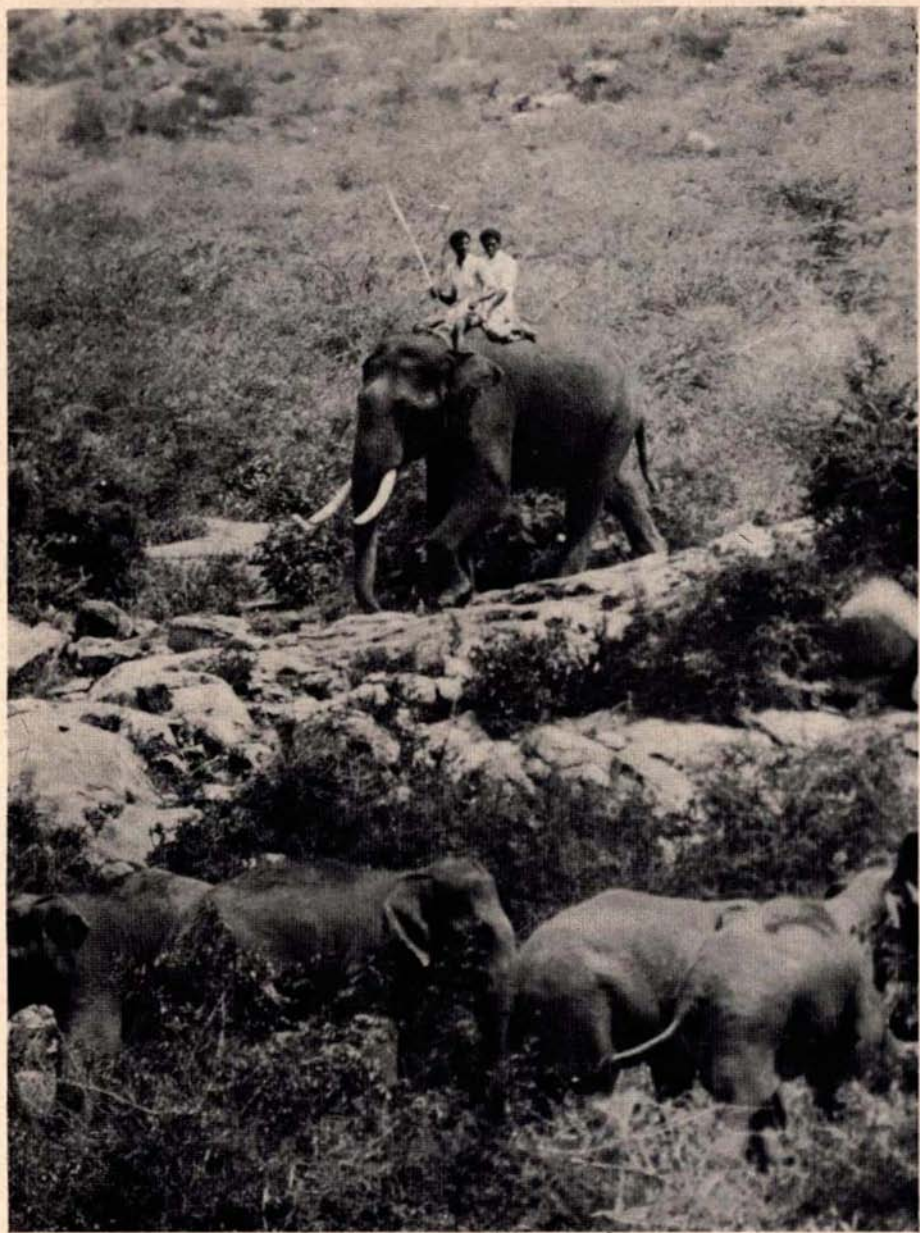
Close to the village lies the Togarapalli Reserve forest (area = 440 ha) which has a well-grown bamboo plantation (area = 50 ha). This was an ideal area for the wandering elephants. The bamboo plantation provided enough shade, cover and fodder during the day. At night the elephants raided the crops in the surrounding agricultural lands, causing extensive damage. Several people were also killed, but later our own experience was to show us that this herd was very docile. It was the local people, with no knowledge of elephants, who invariably asked for trouble. One man was killed when he walked into the herd to offer them bananas!

With the mounting pressure from local people, the Forest Department tried to drive the elephants from Togarapalli Reserved Forest to the Cauvery river basin near Anchetty. The elephants, constantly exposed to people, fire and fire crackers for over a year had little fear of man and all the attempts to drive them ended in failure. In September 1987 the Mudumalai Sanctuary staff was asked to help in the drive with men and *koonkie* elephants. The two *koonkies* selected were *Mudumalai*, an aggressive and dangerous tusker, but well controlled by its mahout 'Mara', the other *koonkie* was *Inder*, a cool and well-behaved tusker. These elephants were accompanied by 13 elephant men (mahouts and Kavadies = grass cut-

ters) and the Bombay Natural History Society team, which included Krishna our able tracker, Ramesh Kumar, and myself.

The *koonkies* were transported from Mudumalai Sanctuary to Krishnagiri by lorries. The elephant men, all of whom were tribals, were awe struck at the sight of Bangalore city. I am sure the Bangaloreans must also have been equally amazed to see two huge tuskers in lorries slowly making their way through the city. But then, in India you tend to expect the unexpected. On reaching Togarapalli the elephants were rested for 3 days at the Forest Department plant nursery. Those three days were carnival time in Togarapalli, people from all the surrounding villages came to see the tuskers. The tuskers were feeding under a huge tamarind tree where they were chained and most of the people just sat and watched the feeding elephants, the whole day long!

On 21st September we attempted the drive, but news of the elephant drive had spread and people from all the surrounding villages gathered to see it. Over a thousand people were scattered all over the Reserve Forest. Our attempts to get the herd out of the reserve forest failed as there were people all around and the elephants kept going in circles in the forest. We gave up the drive at 3 p.m. and went back. The next day we started off at daybreak before the people could gather and succeeded in driving the herd out of the



Lording it over the wild ones

reserve forest. From then on we kept the herd on the move. But everywhere we had to face obstacles, the major problem was always people. They came from all directions and would end up in the path of the elephants which usually changed their direction creating problems. At times the local people also would join the drive and invariably drive the elephants into areas where we did not want them. All these only increased our work load, for if it were not for the interference of the local people we would have finished the drive in half the time we took.

Every day we started off just before day break and an advance team would track down the herd. When the *koonkies* arrived, we would begin our drive. Once on the move we rarely stopped till it got too dark to continue the drive. At times we kept driving up to 7-8 p.m. We rarely stopped for lunch and after the drive we made our way to the nearest village to spend the night, usually we had dinner only at 10 p.m. or later.

Akram Reserved Forest created a real problem for us, where the entire area was planted with *Acacia planifrons*. We had been warned not to let the elephants enter this thorn forest, but wrong directions from the local staff and interference from the local people ended up in the herd entering the thorn forest. It took us one and a half days to get the herd out of this forest. I remember when we finally got the herd out on 25th September evening, a forest guard

and I were blocking an escape route with a fire torch. When the matriarch moved towards us, the guard threw the torch and ran away leaving me as the target for the enraged female. I must have run the fastest 100 m of my career, but even then the female caught up with me within 50 m, and but for some reason stopped when she was within 10 ft of me and could have easily struck me. Why, I cannot say. It could be because I was using the mango saplings in the field for cover while running, or it could be the female realized that Mara on *Mudumalai* was charging towards her even though he was over 100 m away. More likely, it just wanted me out of the path, and having accomplished it, it stopped. No killer elephant would give up at this stage, that is why I feel these elephants were docile and only charged when forced to. During the drive we actually saw someone catch the tail of a fleeing elephant! This we were told, was done in the previous drives also!

September 25th was also one of those days when we were out late and we could go to bed only at 2 a.m. We were again up at 4.30 a.m. to begin our drive, and most of us were driving the elephants in our sleep that morning. September 20th was also bad. After driving the herd till 6 p.m. we stopped due to the rain and had to return to a village 10 km away. It rained all the way back and we all were drenched. I was surprised my camera survived the ordeal, if

only temporarily.

The local people were troublesome but fascinating. In all the villages we passed, usually the whole village turned out to see the elephants. I remember asking some school kids if their teacher had allowed them to skip school to see elephants and they replied that the teacher was the first to run out of the school to see the elephants go by. Near Akram Reserved Forest an old lady barely able to walk was standing in the middle of a barren field and watching the herd about 200 m off. When the elephant men told her that she would definitely be killed if the herd moved her way, she said that at her age, life and death did not matter much to her but to see elephants at least once in her life time, meant a lot to her. Like her they all came to see the

elephants, young and old, men and women, many even carrying their babies along. Probably the elephants understood this and no one was injured or killed throughout the drive, even though we went right through villages and fields. At times the herd passed quite close to people standing in the open without even bothering to look at them. The only incident was at Panjapalli on 27th September, when the elephants entered a sugarcane field. The people entered the tall sugarcane blindly and from all sides; one man went too close to the herd and the matriarch gave him a light swat on his hip. That was enough for him and had to be carried out as he could not walk due to pain.

The people were also very
Through man's "wilderness"



hospitable, they would ask us to allow the *koonkie* to feed in their fields and would start up their water pumps so that the *koonkies* could drink water. One village even presented a goat to us.

When we started in Mudumalai they had told us that the drive would be for 17 km and we thought that it would last for 2 days at the most. Fifteen days and 267 km (92 km linear distance) later we realized just how wrong we were. This was the longest drive after the one in Sri Lanka, but then unlike their massive infrastructure our team consisted of only two *koonkies* and 16 men from Mudumalai. The local staff did help, but without previous experience with elephants, they were not very effective, but they did work hard to arrange facilities for us.

After undergoing all the hardships and problems, when I look back and think, I realize I enjoyed every bit of it. We had accomplished something really extraordinary. I was also able to collect a lot of data on the herd and its behaviour. The drive also gave us a lot of ex-

perience, and now we will be able to handle any other drive much better. The scenery was also very beautiful at times—elephants moving past barren rocky mountains, or elephants climbing over rocky hills and moving through the thorn forest. One of the best was when we drove the herd to the K.R.P reservoir, the herd swam across and even the one year-old calf swam for over one hour and 15 minutes. It was late in the evening and the elephants were swimming toward the setting sun. It is one of those beautiful pictures, I cannot share with others because I carry it only in my mind, as I was not carrying my camera. The tracks of a jackal and a monitor lizard, the feather of a peacock and the quill of a porcupine were pointed out to me by the excited elephant men. These were common creatures; we were not excited by these animals themselves, but because the forests were talking to us in a language we understood and they were telling their story. With those memories, I'll always remember the drive.

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....page 4

I had been unable to use while at sea. Therefore, the terns of Vengurla Rocks still remain to be documented by photographs. But, at least, we saw them. When A.O. Hume and Humayun Abdulali visited the rocks in February 1875 and 1938 respectively, they did not see the living terns (Hume, *Stray*

Feathers 4: 413-38; 1876; Abdulali, - *JBNHS* 41: 661-5; 1940). Instead, they based their accounts on the dead terns and addled eggs they found. May be the Bombay Natural History Society could inspire the staff of the light house to take a closer look at their neighbours. They would find it much easier than we did.

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STIG TOFT MADSEN

Common Marine Shells of the Bombay Coast-9

This is the ninth part of the series and is continued from p. 31 of Hornbill 1987(2)

Olives (family Olividae) are thick and variable in size having large, greatly elongated, somewhat barrel-shaped, body whorl. Spire short, with pointed or sometimes depressed apex. Aperture elongated; operculum absent; columellar callus smooth or provided with feeble oblique ridges. Carnivorous, and active at night. Inhabits sandy shores.

61. *Olive nebulosa*

Shell thick and relatively slender growing to about 38 mm in length. Spire comparatively narrow and elevated. Mouth long and narrow, widest at the base. Shell pale bluish grey or whitish, mottled with greenish blue markings. A broad yellow encircling band passes through the last whorl of the shell. Columellar callus white.

62. *Olive oliva*

Shell thick and elongated, more or less cylindrically oblong. Spire depressed, very small in proportion to the greatly enlarged body whorl. Body whorl produced in to a marked, projecting, slightly curved, beak-like callus thickening at the posterior end of the aperture. Sutural groove and aperture narrow. Shell colour varies from white-black to yellow through brown and chestnut with various patterns like spots, zigzag lines, blotches etc.

Columella white; interior of the shell usually brown.

Nutmeg shells (family Cancellariidae) resemble Dog whelks in structure. The shell is moderate in size with small transpiral ribs. Inhabit sandy shores.

63. *Cancellaria costifera*

Found commonly attached to the sides of mud covered rocks. Transpiral ribs thick and widely spaced. Suture deeply sunk below the shoulder. Outer lip dentate from inside; columella possesses 3 teeth; umbilicus deep; operculum absent. Shell colour dark brown. A light yellowish spiral band passes through the centre of the body whorl.

Margin Shells (family Marginellidae) are ovate, smooth and polished little shells. Shells have conical spire, narrow aperture and thickened outer lip. Columella with folds; operculum absent.

64. *Marginella mazagonica*

A small, white shell that resembles *Ovula* in outline. It is found plentifully in shell-sand along the Bombay Coast.

Cone Shells (family Conidae) are brilliantly coloured heavy shells with depressed conical spire and a large body whorl. Shell tapering with a long, narrow mouth which is widest at the base. Outer lip notched at or near the suture. Carnivorous, inhabiting the rocks and corals in the sandy areas of the intertidal zone.



Conus lentiginos



Conus monachus
var. *achatinus*



Conus mutabilis



Surcula fulminata



Marginella mazagonica



Clavatulula virginia



Surcula javana



Surcula amicta



Oliva oliva



Cancellaria costifera



Oliva nebulosa

65. *Conus monachus* (not illustrated)

A conically spired shell that grows to about 50 mm in length. Shell surface light brown, interrupted by grey-white streakings and blotches which are prominent towards the centre.

66. *Conus monachus* var. *achatinus*

Distinguished from *C. monachus* by its rounded shoulders and highly striated convex sides. Spire moderate; spiral lines on the body whorl are tinged with black.

67. *Conus mutabilis*

A common Bombay shore species which is uniformly coloured with yellow. Spire short and pointed, usually light in colour. Body whorl shows a number of prominent encircling lines.

68. *Conus lentiginosus*

A beautiful, spired shell about 38 mm in length. Ground colour white or pale yellow interrupted by reddish brown dots or patches.

Slit Shells (family Turridae) are fusiform in shape with strong, elevated spire, and extended siphonal canal. Outer lip bears a distinct notch at its upper end; operculum horny.

69. *Clavatula virginia*

A beautiful, yellowish brown shell about 26 mm in length. Ridges on

the shoulder and on the region immediately below it are ornamented by beautiful nodules.

70. *Surcula javana*

A high spired, long, brownish shell that has a twisted siphonal canal and angular whorls. The whorls possess obliquely set nodules which are light in colour. Inhabit sandy or muddy areas of the littoral zone near the low-tide mark. Empty shells are found plentifully along the Shivaji Park area of the Dadar coast in Bombay.

71. *Surcula fulminata*

Shell size smaller than *S. javana*. Shell surface smooth and polished, white with rich yellow markings. Widest parts of the whorls are obscurely noduled or ribbed. The species can be recognised by its spiral band which is formed by the upper part of each whorl overlapping the one preceding it.

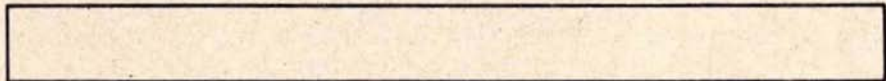
72. *Surcula amicta*

An equally abundant species which can be distinguished by its even spire and regular spiral ridges. Shell surface smooth and polished brownish in colour interrupted by white oblique markings.

MANOJ MUNI
CARL D'SILVA

(To be continued)

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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.

Our members enjoy :

1. A four-monthly natural history journal acknowledged to be the finest of its kind in Asia, and a popular quarterly.
2. A library with many rare books on shikar and natural history unavailable elsewhere, which may also be borrowed by outstation members.
3. One of the finest research collections in India on Mammals, Birds, Reptiles, Butterflies and other forms of animal life. These are available to members for study on the Society's premises.
4. Up-to-date information and advice on birdwatching, wild-life photography and fishing; natural history field trips and information on possible areas for field trips.

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)