

HORNBILL

1987 (4)



BOMBAY NATURAL HISTORY SOCIETY

The Iora, *Aegithina tiphia*, appearing on the cover page of this issue was photographed by our member, Mr G. C. Patel. The bird is a common habitue of our gardens in towns, of village groves of mango, tamarind and neem, and of light forests from plains level to c. 1000 m in the hills. Its overall distribution in the Indian subcontinent is east of a line connecting the Gulf of Cambay through Mount Abu to Gurdaspur in the Punjab; Bangladesh; Sri Lanka; Burma. Five distinct races on differences in details of coloration are recognized within this area.

Arboreal in habits, the Iora hops from twig to twig, frequently clinging on sideways or upside down in search of insects among the foliage. While so engaged, a pair keeps in touch with each other by their sweet, long-drawn, musical whistles and short chirrups.

The male has a fantastic courtship display. Springing up into the air with plumage fluffed out, emitting all the while a variety of sibilant whistles, he parachutes down in a spiral back to his perch, showing off his colours to the best advantage.

Breeding season is chiefly from May to September with local variations. Nest is a compact cup of grasses, neatly and profusely plastered with cobwebs, and placed in a crotch or fork of a twig 2 to 4 metres above ground. A clutch of 2 to 4 pale, pinky, white eggs, blotched with purplish brown, are laid. Both sexes share in the parental duties.

Acknowledgement

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

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

Membership of the Society is open to persons of either sex and of any 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.

Society's Administration

Justice M. Hidayatullah—*President*
 Mr. Humayun Abdulali—*Vice President*
 Prof. P.V. Bole—*Vice President*
 Dr A.N.D. Nanavati (*Hon. Secretary*)
 Dr Pratap Saraiya (*Hon. Treasurer*)
 Mr J.C. Daniel—*Curator*

EXECUTIVE COMMITTEE

Mr M.D. Agharkar
 Mr M.R. Almeida
 Dr Erach Bharucha
 Mr Debi Goenka
 Mr C.J. Guzder
 Ms Meena Haribal
 Mr Kisan G. Mehta
 Mr Ulhas Rane
 Mr Bittu Sahagal
 Mrs Dilnavaz Variava
 The Secretary, Dept. of Science & Technology,
 Govt. of India.

Members receive during a year three issues of the *Journal of the Bombay Natural History Society* now in its 83rd volume, and four issues of *Hornbill*, the Society's popular publication.

Journal Editors

J.C. Daniel, P.V. Bole and A.N.D. Nanavati.
Advertisements for publication in *Hornbill* are welcome. Rates: Inside full-page Rs. 500/-; half page Rs. 250/-; back cover Rs. 1000/-

Annual and other membership subscriptions

<i>Entrance Fees</i>	Rs	50.00
<i>Subscription</i>		
Ordinary individual membership	Rs	75.00 *
Ordinary corporate membership	Rs	250.00
Life membership	Rs	1200.00 *

*plus Rs25.00 per year for postage of the *Journal* and *Hornbill*; for registered postage Rs15.00 extra.

The first annual subscription of members elected in October, November, or December will extend to the 31st December of the year following the election.

Write to:

The Honorary Secretary
 Bombay Natural History Society
 Hornbill House, Opp. Lion Gate
 Shahid Bhagat Singh Road
 Bombay 400 023

CONTENTS

Editorial	2
Feedback	3
A panther in a well— <i>J. Mangalraj Johnson</i>	5
Bara Bangahal 1985—Into the unknown— <i>Philip McGowan</i>	8
News, Notes and Comments	14
Is the Blacknecked Stork threatened— <i>Asad R. Rahmani</i>	18
Capture and translocation of Bonnet Macaques— <i>Ranjit Manakadan</i>	20
Keeping track of Delhi birds— <i>Pradip Sahdev</i>	21
A heronry at Kandivali, Bombay— <i>Satyasheel N. Naik</i>	25
Brood protection by Murrel— <i>Reza Tehsin</i>	28
Bird antics— <i>Deepak Khemani</i> and <i>Shirish Wagholde</i>	29
The Splendid <i>Amherstia Amherstia nobilis</i> Wall.— <i>A.K. Banerjee et al.</i>	30

EDITED BY

J.C. DANIEL J.S. SERRAO
 I.D. KEHIMKAR
 DESIGN
 CARL D'SILVA

Altruism

A phenomenon in India of the 19th Century was the many Natural History Societies that came into existence in different parts of the country. There was a Sind Natural History Society at Karachi, a natural history society at Bombay, a Calcutta Natural History Society at Calcutta and a Madras Natural History Society at Madras. Only the Bombay Natural History Society survived and the BNHS is a tribute to the altruism of its members and the extraordinary symbiotic relationship it had with a commercial organisation of the City, Phipson & Company, Wine Merchants. The Company housed the Society from 1884 to 1956, and Phipson not only laid the foundation of the Society but also the tradition that the Managing Director of the Company was either the Honorary Secretary or the Honorary Treasurer of the Society.

It is this tradition that gave the Society the exemplary service and the managerial talents of such persons as Millard and Sir Reginald Spence, both Directors of Phipson & Co. This association finally ended nearly a decade after Independence in 1956. But then the tradition of altruistic service had been firmly established and was carried on by Salim Ali who, though not of a strong financial status, never took a pie as salary or any other perquisite from the Society throughout his long post Independence association

with the Society, and finally left to the Society all he possessed including the royalties due on his many books. Such sustained altruism has been the main strength of the Society, as currently exemplified by the devoted services of Mrs D.S. Variava, for instance, who has without fanfare started a products (Greeting Cards etc.) programme and added Rs 9.33 lakhs to the assets of the Society over a period of three years towards the organisation and recurring support for an independent Natural History Research establishment for the Society. As long as there are such members in the Society, who, if one may paraphrase President J.F. Kennedy's words: "Ask not what the Society can do for them, but what they can do for the Society", the Society will endure and flourish.

It is also well to remember at this point the special rule of the Society which greatly enhances the availability of such altruism. We refer to the selection of the Executive Committee. The outgoing Executive Committee suggests a panel for the new Executive Committee, selecting the best available talent. For over 88 years of its existence, the members accepted the nominations without exception. Since 1971 elections have been held and usually the out-going committee's opinion has been accepted. One hopes this tradition will continue to hold the structure of this unique scientific organisation.

FEEDBACK

UNIQUE DATE PALMS (*Phoenix sylvestris*)

If I correctly remember there were in 1958-59 quite a few trees of two-branched Date Palm at Purani Chhaoni village on the outskirts of Gwalior City on the Bombay-Agra National Highway. My friend, Dr

Vijay Bhatnagar, a resident of that village, who is now posted in Bombay as a doctor with Post Health Authority may even have a photograph of such a tree in his album.

LALIT SURJAN
Daily Desh Bandhu, Raipur 492 001

REPTILE SKINS IN TRADE

In connection with Isaac Kehimkar's article in *Hornbill* 1987(3) on the reptile skin trade, it should be pointed out that the photographs by me were taken in the *bad old days* of open snakeskin trade in 1975 at Pudukkottai for the DISTRICT GAZETTEER. Also the sentence on p. 13 that talks about the Irula Cooperative infers that some of its members still catch snakes for the skin industry, which is not true; they would be quickly ejected from the Cooperative if they did so. The Cooperative has been in operation since 1982, and has been supplying most of the venom for antivenom serum production since then but not yet for the export market. The demand for venoms is in fact very limited.

ROMULUS WHITAKER
President

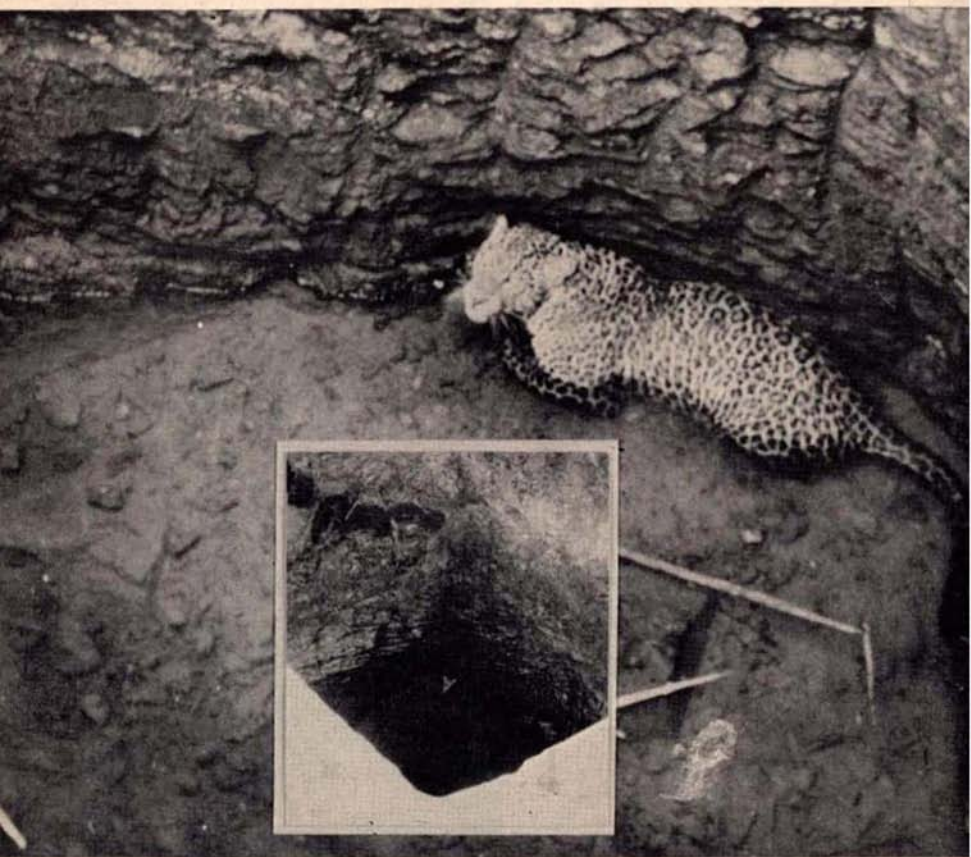
*Irula Tribal Snake Catchers' Industrial Cooperative Society Ltd.,
Madras 603 104*

Another picture taken in the bad old days

Author



A panther in a well



*A close-up of the animal cowering in the well.
The panther as it appeared from the top (inset). Author*

On 8.vi.1987, Subramania Gounder of Pakkothipalayam near Pollachi was surprised to hear roars and see the rosettes of a panther in a 40 feet deep well, dry except for 3 feet of water. He immediately approached me and I rushed to the spot to organise the rescue operation. Water was pumped out of the well to keep the level low and safe for the panther, a special emergency permission being granted by the Tamil Nadu Electricity Board authorities to supply electricity throughout the operation. The police was brought for protection and control of the swelling crowd of villagers.

Men, women with children in arms, a crowd of over 10,000, gathered around the well. In their anxiety to see the animal, they made

a great noise and many were in imminent danger of tripping over into the open well, but generally the people behaved well and wanted to save the animal and to release it in the jungle.

I contacted Prof. Jacob Cheeran of the Veterinary Animal Science College, Mannothy, Kerala. Dr Cheeran is a world recognised expert, and has behind him experience of controlling over 125 tuskers and more than 50 large cats, lions, tigers and panthers, both in zoos and in the wild. When I talked to him on the phone he immediately started for Pakkothipalayam, reached the spot at 1.00 a.m. on 9.vi.1987, and we started the rescue operation later in the morning. After estimating the weight of the panther, the drug

The crowd which gathered round the well

Author





Dr Cheeran aiming at the panther to shoot the projectile syringe Author

Rompan was injected into the animal using a dart gun. The animal responded to the drug but not satisfactorily; two other syringes bounced off the animal. We had to wait to see the response before giving a fresh dose as if the previous medicine did not completely wear off, an over dose may result in killing the animal. At 12.25 noon another dose of Rompan was given. When the animal was in near sedation, it was noosed by the neck with a safety knot to keep the head from dropping down into the water and another rope was thrown across the body. Three forest officials then entered the well and tied the animal to a cot which was lifted by a rope over a pulley and out of the well. The animal was immediately put into a cage. After judging the extent of the sedation and a thorough ex-

amination of the reflexes of the animal, Dr Cheeran gave another dose of drug before the ropes were removed. Pencillin was administered and two sutures were done on points of incisions, made by the barbed needles of the darts.

The panther was quickly taken to Anaikunthi shola of the Annamalai sanctuary, and at 4.30 p.m. the antidote was administered. We waited for the animal to fully recover and at 7.30 p.m. the panther stepped out of the open cage, walked out like a child in sleep, and moved slowly into the jungle. The animal was in perfect health. We breathed a sigh of satisfaction and relief.

It was a magnificent specimen of a male 80 kg in weight and about 2 m in length, aged 7 years.

J. MANGALARAJ JOHNSON

Waterfowl Indicator

HUSSAIN & D'SILVA
revised edition

Text by S.A. HUSSAIN
Illustrations by CARL D'SILVA

This booklet was first published in January 1987. Primarily it provided a ready reference in the field for the Asian midwinter waterfowl count initiated by the International Waterfowl Research Bureau and sponsored by the Bombay Natural History Society. Only those species which resemble one another or those that have plumage variations which often present difficulties in field identification were included. Common and distinctive species were not shown and they would not pose any problem even to a rank beginner.

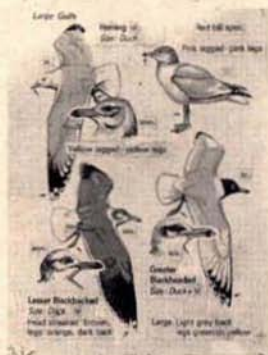
A revised edition is now brought out. It contains a total of 78 species, 28 more than in the previous edition.

Price: Rs.10/- postage extra
Size: 11 × 14.5 cms, 32 pages
Printed in full colour

late

Write to: Mr S.A. Hussain
National Coordinator
Asian Waterfowl Census
C/o. BNHS

**BIRDWATCHER VOLUNTEERS
FOR 1989 COUNTS REQUIRED.
PLEASE CONTACT NATIONAL COORDINATOR**





Mules, cloud and snow. Our mule train nears Paniatu in Chhota Bangahal, en-route to Bara Bangahal.

Bara Bangahal 1985 – Into the unknown

The Western Himalaya has been the target of many expeditions over the last two hundred years and it is certainly true that it was one of the great theatres of exploration during the nineteenth century. In the 'early days', when maps were new and inaccurate, it was, perhaps, William Moorcroft who set the style for much of the activity in the region. He 'discovered' the sources of the Beas, Ravi and Chenab rivers in 1812 and also visited Ladakh and Kulu. During the early 1830's James Wolff, Godfrey Vigne, Carl von Hugel and John Henderson all made varying contributions to the knowledge of the Pir Panjal. Indeed it was Vigne who became the first European to plot the courses of both the Chenab and Ravi rivers. It is at the head of the River Ravi,

below the Pir Panjal and it's spur, the Dhuala Dhar, the Bara Bangahal lies (see figs).

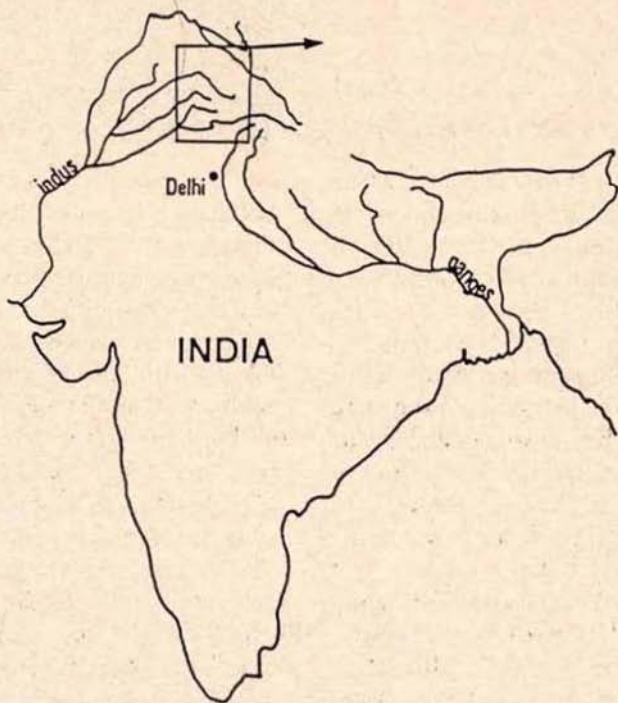
The village itself is an isolated settlement of around a hundred houses and lends it's name to that area of the Ravi headwaters that lies upriver of it, to the east. The last comments of biological interest on this area are recorded in *BIG GAME HUNTING IN THE HIMALAYA AND TIBET* by George Burrard (1925), where large Ibex herds are mentioned. Such game hunting trips marked a considerable change of emphasis for expeditions to the region. As some efforts had already been made to chart the remote areas, explorers now returned with tales of animals and people (and skins of whatever beasts they could bag!). To some extent biological expeditions carry on

this tradition today (without the bagging)!. Despite these enterprising trips, however, the whole area between the Vale of Kashmir, some two hundred kilometres north-west of Bara Bangahal and the upper Beas valley, immediately to the east is almost completely unexplored by field biologists in recent times. Both it's proximity to the Beas, which holds a significant stock of primary forest and indigenous wildlife, however, suggested that Bara Bangahal should be explored.

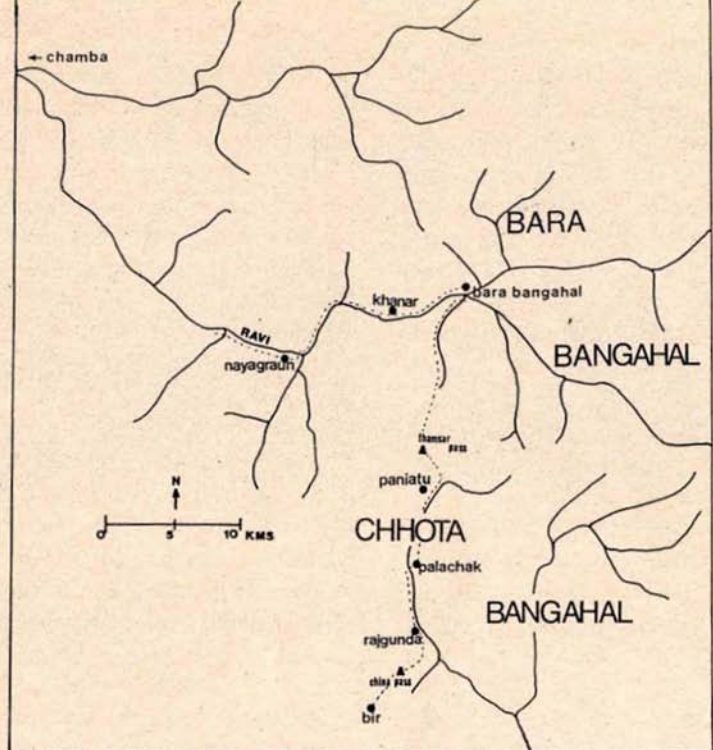
It is against this background that the Newcastle/Aberdeen Universities (UK) Bara Bangahal 1985 Himalayan Expedition was conceiv-

ed in October 1984. After ten months of planning, the four man team assembled in Palampur, Kangra District, Himachal Pradesh in July 1985. We were joined by two Indian counterparts from University of Kashmir and the Himachal Pradesh Forest Department (HPFD) and had excellent support from our field agent in Palampur, Mr Surinder K. Vats.

Our first problem was to get 220 kg of food and equipment into Bara Bangahal-four days' trek and over a 15,000 ft pass! With help from HPFD we arranged for a mule train to join us for the walk in. As soon as arrangements were completed, we



India, showing the Western Himalaya and the Indus River System



Routes used to and from Bara Bangahal as indicated in the text. Broken line gives route.

left the Rest House at Bir (5,200 ft), just north of Palampur, and started up the southern slopes of the Dhuala Dhar, leaving behind worst of the rains. We entered Chhota Bangahal at the 9,200 ft China Pass and, much against our better judgment, had to lose much of our hard won altitude, before reaching the Forest Inspection Bungalow at Palachak, on the Uhl river at 8,750 ft. The following day we had a short, but sharp climb up to Paniatu, a Tibetan owned teashop at 11,400 ft. Apart from making some of the best tea in Himachal, this is the staging post for the Thamsar—the forbidding 15,000 ft pass

that we had to cross to enter Bara Bangahal. By now, the effects of rushing up to such an altitude were becoming obvious and we were glad of a day's rest, necessitated by overnight rain and snow. An early start the following day, allowed us to reach the Thamsar before the heat of the day. As we stood atop the pass, we had a wonderful feeling of achievement and relief and the stunning views begged admiration. We were tremendously impressed by the atmosphere of tranquil beauty that such a rugged, isolated place should have. After an all too short break we descended to Udog, to spend our last night under canvas before



reaching Bara Bangahal. At noon the following day we arrived in the village—the initial object of our quest! We had arrived in the mystical place across the Dhaula Dhar—the biologically unknown.

We soon sorted out accommodation (in the Forest Guard's house) and guides and prepared for the first of our forays into the valleys around the village. For each trip we split into two man teams and disappeared upriver for three to seven days, depending on the size of the valley to be surveyed.

In the weeks that followed, we covered most of the region, investigating its natural resources in three stages 1) conducting surveys of birds and mammals, 2) examining the nature and extent of the forest and alpine pastures and 3) assessing human impact on these natural resources.

Towards the Thamsar Pass

Chhota Bangahal—looking south from Paniatu. Palachak, with its excellent forests is out of the picture.





The village of Bara Bangahal—a welcome site after four days trek.

Initially we envisaged emphasis on the first two objectives as we intended to compare the abundance of wildlife found in the upper Beas by the Himachal Wildlife Project (1979-83) with that of Bara Bangahal. As the survey progressed, however, it became readily apparent that the study of human disturbance was to be the priority of the expedition. By recording all human activities and relating them to the nature of the vegetation, we hoped to paint an accurate picture of the environmental situation at the head of the Ravi.

We recorded very little forest wildlife in any part of the survey

area and suspect the reasons to be twofold. Firstly, the major forest types occur at lower altitudes in Bara Bangahal than either lower down the Ravi or in Chhota Bangahal. This may have precluded many species, historically, from the area. It does seem likely, however, that the haphazard nature of forestry operations over the last decade or so has adversely affected wildlife. The reputation of the grazing grounds in Bara Bangahal has resulted in high numbers of domestic stock (both sheep and goats) traditionally entering the area for the summer months.

Whilst grazing and timber extrac-



Forestry operations are haphazard.

tion are both damaging to the forest on their own, the combination of the two ensures that forest is rapidly being converted to grassland at the head of the Ravi.

After surveying Bara Bangahal, we split into two parties to investigate habitat quality in Chhota Bangahal and lower down the Ravi. These areas were much less disturbed and the forests reportedly hold many species of pheasant and large mammal, such as Western Tragopan, Monal, Koklass, Black Bear, Serow and Tahr. The Ravi also contains much undisturbed grassland, which probably hold Cheer and Goral. We were unable to investigate these areas thoroughly, but habitat quality suggests that

they may well hold significant populations of several large forest wildlife species. We strongly recommend these sites for surveys and would be willing to provide further information if required. Although the spirit of enterprise and adventure that typified the explorers of old would be needed, the possibility of seeing some of Himachal's most vulnerable wildlife would be just reward.

The full report of the project has been lodged at Hornbill house.

PHILIP MCGOWAN
*c/o World Pheasant Association
P.O. Box 5, Church Farm, Lower
Basildon, Reading, Berkshire
RG8 9PF England, U.K.*

THE 4TH WORLD WILDERNESS CONGRESS

The 4th World Wilderness Congress met in Colorado, USA from September 11-18, 1987. The Congress had met on three previous occasions in South Africa (1977), Australia (1980) and Scotland (1983). The eight-day Congress was held in two segments: A three-day World Wilderness Forum convened on September 11 at the Currihan Convention Hall in downtown Denver, and a five-day World Wilderness Convention beginning September 14 at the YMCA of the Rockies, Estes Park Centre in the spectacular Rocky Mountain National Park.

Achieving "Worldwide Conservation" was the major concern of the Congress, and the relationship between "Nature Conservation" and "Sustainable Development" provided the specific theme for the daily plenary sessions and the 17 technical symposia and workshops. In addition, there were 150 exhibits and poster sessions in the Congress which was attended by over 1800 delegates from 60 nations.

It was diverse gathering: statesmen and politicians; bankers and businessmen; representatives of governments; environmentalists; scientists; agency representatives; representatives of national and international conservation organisations; traditional and native peoples; artists and writers; the general public. One common con-

cern—conservation for the welfare of humanity—brought them all together under one roof in this Congress.

The subjects covered in the various symposia, seminars and working included the following:

- * International NGO Cooperation
- * Acid Rain Impacts on Wilderness, Parks and Nature Reserves
- * Designation and management of Park and Wilderness Reserves
- * The Man and Biosphere programme
- * The Use of Wilderness for Personal Growth, Therapy and Education
- * Oceanic Wilderness
- * Conservation Leadership Training in Grassroots Organisations

An entire evening session was devoted to "Perceptions of Nature from India." Participants from India included the President of WWF-India, Lt. Col. Fatehsingh Rao P. Gaekwad; Chairman of IUCN's Commission on Education Mr M.A. Parthasarthy; Mr Kailash Sankhala, former Director of Project Tiger; Mrs Dilnavaz Variava of the Bombay Natural History Society; Dr N. Sukumar, Indian Institute of Science, Bangalore; and Mr Dhana-jayan, a classical Indian dancer.

The major resolutions of the Congress which were adopted on the final day included:

- * A World Conservation Inventory, and cooperation on use and exchange of Conservation

Information.

- * A Feasibility study for the establishment of an International Conservation Banking programme or Facility as a source of funding to augment the expansion of conservation activities.
- * The formation of a World Conservation Service with assistance from UNEP to provide for a coalition of people and organizations which would demonstrate the cooperative relationship between a healthy environment and sustainable economic long-term development, and promote new initiatives to restore, enhance and maintain the biosphere through massive community involvement.
- * Calling upon IUCN and UNESCO to create a Special Fund for Conservation Projects of Young Scientists and students

in Developing Countries.

- * The need for integrated Marine Management and Ocean Conservation, including the establishment of marine protected areas.
- * Endorsement of and a call for the Implementation of the recommendations of the World Commission on Environment and Development.

It was a very meaningful and highly successful Congress, and the delegates departed on the last day with a renewed commitment to the cause of conservation, and with a sense of hope for the future of mankind on planet earth. A rumor which was circulating around towards the end of the Congress was that the 5th Congress might meet in India! The basis for this rumor, however, could not be ascertained nor could its credibility be established.

KISHORE RAO

September 22, 1987

Mr J.C. Daniel, Curator of the Bombay Natural History Society is the recipient of the *Peter Scott Merit Award* of the Species Survival Commission of the International Union for the Conservation of Nature and Natural Resources. The award consists of a certificate, a citation and a medal, the last designed by Sir Peter Scott himself.

The award is generally given to six individuals or institutions the world over in each triennium for notewor-

thy contributions to or achievements in the conservation of the fauna and flora, especially the endangered and threatend taxa owing to continued exploitation by man.

Mr J.C. Daniel was the Chairman of the Asian Elephant Group of the Species Survival Commission during 1984-86. He is also the author of THE BOOK OF INDIAN REPTILES (a BNHS publication) which advocates the right of our herpetofauna to live and propagate.

A NATURE CAMP FOR THE MUNICIPAL SCHOOL CHILDREN

A nature camp for the municipal school children was arranged this academic year from 4th to 8th November 1987 at Radhanagari Sanctuary in Kolhapur.

A total of 35 students from 11 municipal schools were selected for the camp from among 180 who attended a day's excursion to Borivli. They were assisted at the camp by 6

teachers and 3 officials of the Bombay Natural History Society. Besides excursions for the participants film shows on wildlife were held every evening, which were attended by the villagers and forest staff.

Dr Jay Samant, a member of the Bombay Natural History Society from Kolhapur and his wife were very helpful for the arrangements made there.



Mr S.P. Godrej viewing the stamp exhibition

Photo Isaac Kehimkar

BIRD STAMP EXHIBITION

A week-long exhibition of bird stamps was held at Hornbill House on 12th November 1987 which happens to be the birthday of the late Dr Salim Ali. Mr S.P. Godrej, Vice-Patron of the Society, inaugurated the exhibition. A portrait of Dr Salim Ali painted by Mr J.P. Irani was unveiled by Mr Godrej on the

occasion.

The exhibits were drawn from the collections of the Society's members, mainly from Bombay and two from Hyderabad. Some of them have won several national and international awards. The General Post Office in Bombay made arrangements for a special cancellation of out-going mail on that day.



A WINNER FROM INDIA

At the photographic competition held in March 1987 during the Third International Conference on Birds of Prey in Israel, Mr Rishad Naorji, a Life Member of the Society,

and a budding raptor specialist and a keen wildlife photographer, won the third prize for his black and white photograph of the Crested Serpent Eagle feeding its young in an unusual pose.

DR SALIM ALI MEMORIAL PAINTING COMPETITION

A painting competition for school children of Bombay was arranged by the organisers of 'Save the Western Ghat March' and the Bombay Natural History Society on 12th November 1987. The subject of the competition was Nature in the Sahyadris (Western Ghats).

Among 1500 or so who participated, six were selected as winners for receiving awards. The winners will get an aeroplane ride over

the Sahyadris, as part of the award. Twenty more students were selected for a year's free subscription of the *CUB* magazine. The most outstanding entry got a special award.

The highlight of the competition happens to be the four students from economically backward section from Bandra studying art under the sponsorship of the National Society for Clean Cities bagging four out of the six awards; one handicapped student too won an award.

Camlin Pvt. Ltd. provided the drawing paper and crayons.



A Blacknecked Stork in the Bombay Zoo Photo Asad R. Rahmani

Is the Blacknecked Stork threatened?

Unlike colonial birds, disappearance of solitary species is less dramatic and it generally remains unnoticed till it is too late. In our country the blacknecked stork *Ephippiorhynchus asiaticus* is perhaps the best example of a large, solitary bird which has disappeared from many parts of India without raising much anxiety among bird lovers. Possibly its natural distribution itself is the cause of this complacency. According to the **HANDBOOK**, the blacknecked stork is widespread in India but sporadic and nowhere abundant. Outside India, it is found in Sri Lanka, Nepal, Bangladesh (possibly extinct as breeding bird), Burma, east to

Vietnam, South to peninsular Thailand, Irian Jaya and Australia. Only in Australia, it is present in large numbers: nowhere else it is common. On the global scale, it may not be threatened as yet but in our country, destruction of wetlands and competition from the increasing fraternity of fishermen must have made the blacknecked stork a threatened species.

This large stork requires big marshes for foraging and old trees for nesting. Moreover, as the blacknecked stork is highly territorial, only a few individuals are found in each marsh. Even at Bharatpur, which has the best protected marshes in India, the BNHS

study team during the last six years, found only four widely distributed nests.

In the winter of 1986, as a part of the Asian wetland survey, I visited some jheels of Lucknow, Unnao, Berabanki, Sultanpur, Bahraich, Lakhimpur Kheri and Sitapur, and I was alarmed to notice the scarcity of this stork. Only at Banke Taal of Dudhwa National Park (2), Sitadwar jheel in Bahraich district (1) and Nawabganj jheel in Unnao district (2), we saw this stork (the number of storks seen is given in brackets). It is true that we could not go to many big jheels where this stork must be present, but the scarcity of this species in some of the well-known waterbodies was alarming.

The main cause for the increasing rarity of the blacknecked stork is the destruction of its wetland habitat, and possibly disturbance during the nesting period. Standing up to 135 cm high and weighing more than ten kilos, this big bird requires a large quantity of fish. Its food requirements bring it into direct conflict with fishermen. Except for some well-protected jheels like Bharatpur, Sultanpur (in Haryana) and Nawabganj, all other waterbodies are infested with itinerant fishermen. Fishing is now so intensive that even 5-10 centimetre fishes are caught by fishermen, thus effecting the food availability of piscivorous birds. In the huge Pyagpur jheel in Bahraich district, for example, we saw hundreds of fishermen and not a single

blacknecked stork though otherwise this jheel is eminently suitable for this species.

In spite of the fact that the blacknecked stork is becoming rare, there is practically no restriction on its capture for zoos. A dealer reportedly sells a pair of blacknecked stork for four thousand rupees. Almost all the Indian Zoos exhibit this species sometimes in unnecessarily large numbers. For example, in the Lucknow Zoo, there are thirteen of them, and in the Bombay Zoo, one can see six blacknecked storks in a small cage. I think, it is cruel to put together six individuals of this highly territorial species.

Unfortunately, at present we do not know much about the ecology and population status of the blacknecked stork. There is an urgent need to do a full status survey of this species throughout India. The BNHS as a major wildlife research organization should start collecting information on this species and a project to study the ecology, population dynamics, habitat requirements and status of the blacknecked storks should be launched.

I hope this warning about the increasing rarity of the blacknecked stork has not come too late and we will always see more storks in the wild than in the small cages of Indian Zoos.

ASAD R. RAHMANI



.... by the evening, the whole troop was in the bag Author

Capture and translocation of Bonnet macaques

In 1986(3) issue of *Hornbill*, there was an article by me on bonnet macaques *Macaca radiata*. In the same, some mention was made about the capture and translocation of bonnet macaques when their population gets too large and becomes troublesome in the villages of these parts (Kurnool district, Andhra Pradesh. A few may be re-released in the same village due to religious and sentimental reasons. The Rollapadu troop (on which the above article was based) was also captured and translocated recently.

Devadas, a traditional monkey tapper from nearby Nandyal town was employed for the job for a fee of Rs 250/-, and he set up his trap one day in early September. The trap was a simple twin cage device, one to trap the monkey and the other to hold it captive while the others were being caught. Rice as bait, was kept in the first cage and

the sliding door kept open, while Devadas sat about thirty metres away, waiting to pull and shut the door once a macaque entered the cage by the attached rope. Once hagged, he would push the macaque into the adjoining cage, close the connecting door and patiently wait for the next. I wondered how such a simple device could be successful (especially on primates), since they could easily witness the capture of their comrades. Devadas explained that, the troop would not desert their comrades, would loiter around and would finally be enticed by the bait. Accordingly, by evening, the whole troop was in the bag and were later taken by bullock cart and released about 30 km away. Peace at last to the grown-ups of Rollapadu, but to kids and few people like me, it was a sad day.

RANJIT MANAKADAN
Research Biologist, BNHS

Is it possible to study and record the avian wealth of Delhi in such a way to be able to document not only the present status of the birds and relative importance of the different regions as bird habitats, but also keep track of the changing numbers of the birds, so as to understand better the natural history of Delhi's birds, and ultimately use the information to fight for their conservation; and yet keep the exercise simple enough to involve as many amateurs as possible?

Such were the questions rankling the minds of the members of the environmental group Kalpavriksh in the early 1980's. The need for such an exercise was pressing, for, with the rapid urbanisation of even outlying wilderness areas of Delhi, huge tracts of prime bird habitats were being assimilated into a vast area of factories, buildings and man-made parks. Another decade, and the only source of information about Delhi's birds and wilderness areas, would be books and pictures of the past glories of what had been! At stake were many of the 400 odd species of birds recorded from the Delhi area, large tracts of unique Aravali wilderness, known popularly as the 'Ridge', and habitats provided by the River Jamuna.

January 1981 saw the nebulous thoughts and ideas of the individual members being amalgamated into concrete action: the first Delhi Bird-Count was held, to be followed

biannually, without a break, to the present. The past 7 years have witnessed over 300 hours of time spent in actual counting of the birds, spread over 14 separate counts, and in 10 different areas of the Capital. Nearly 100 individuals have participated in the counts over the years, many of them repeatedly.

The philosophy behind the counts was simple. Areas belonging to all the 3 major habitats of Delhi—the ridge, garden, and water—were to be included in the areas to be counted. This would ensure that the birds belonging to each of the 3 habitats would be represented in the counts. Route maps were to be provided for each area chosen after due exploration of the individual regions, so as to ensure that the route covered the more important 'birding spots' of the area. Once decided upon, the route was not to be changed over subsequent counts. In this way, the same region of the area being counted would be surveyed repeatedly. The time for starting the count, the length of time to be taken for the actual counting, the number of participants in the groups, and the method of recording the data, were also specified.

In this way, as many variables as possible were kept constant. It was reasoned that if the variables were constant, then, the errors of over or under counting, however great, would also be the same over succeeding counts; and thus be cancell-



A garden habitat with grassy meadows, trees, ponds ... Author

ed when results of successive counts were compared. Of course, this method provided not a census of the numbers of birds in the count-area, but a comparison of the species and numbers of birds in the same, and different areas, along with an assessment of changes in the bird populations over the years—and this is just what we wanted!

An analysis of the 14 bird-counts held during the past 7 years has indeed provided a unique set of information about the relative numbers of the various bird species in Delhi, their natural history in this region, and changes in their numbers over the years. Specifically, 177 species of birds have been identified in the areas counted—yet, two thirds of them were rare or uncommon, indicating that though the numbers of species are still numerous, many of them are seen so infrequently as to be a cause of great concern. The count data has also enabled us to draw up a table of the common, uncommon, and rare birds identified,

with a view to directing conservation methods for each species, based on an actual head count and not only the impression of the, albeit knowledgeable, birdwatcher.

The counts have demonstrated conclusively that Delhi is a haven for migrant water-birds, especially the Pintail and Shoveller ducks; and yet, the numbers of land birds migrating here in the winters are much fewer—the various species of wagtails, warblers, and swallows being the most numerous among them. The Rosy Pastor proves to be a passage migrant, while the Painted Stork and Grey Shrike are locally migrant in winter. The Night Heron, Pheasant-tailed Jacana, Streaked Weaver Bird, the Coppersmith and Green Barbets, all four species of Cuckoos seen, and the Golden Oriole, were all sighted frequently enough to establish them as monsoon migrants to Delhi. While many other species showed a marked predominance in one of the seasons, further counts will be need-



Grey Shrike Photo *Carl D'Silva*

ed to establish their true seasonal status without any doubts. Interestingly too, the commensals, e.g. the house sparrows and crows were present in similar numbers throughout the year.

Also evident from the count analysis is the fact that birds belonging to the water habitats are more than doubled during the winters, while land-birds are, in fact, more numerous in the monsoons, notwithstanding the land-birds that migrate to Delhi for the winters.

Strikingly, the average numbers of birds per species counted were 250 for the water habitats, 200 for the garden, and 150 birds of each species in the Ridge habitats. Commensals, (not included in the above averages), were by far, the most numerous with an average of 2000 birds per species. And it was seen how, although the man-made garden habitats have a greater average number of birds per species, yet the species seen here, are the adaptable ones, and are in general,

not in danger. The Ridge habitats, though supporting fewer birds, have many species that are unique to that type of habitat, and would be decimated, were the Ridge to be converted into a park, and worse still, into a colony. Also evident was the discovery that nearly 20 species of birds breed in thorny bushes of the types found in the Ridge areas; and these bushes are the ones that are the primary target of destruction when any wilderness area is converted into even a 'city forest', resulting in the loss of breeding sites for all those species that breed in them. Most importantly, the counts have provided the names of 19 species of birds that are decreasing in prevalence in Delhi. Included among these are Black Drongo, Indian Robin, Purple Sunbird, Redstart, some ducks and the Pheasant-tailed Jacana. Inferences about the habitats of these birds, their seasonal status in Delhi, breeding sites preferred and foods eaten, has also been derived from



The 'Ridge-type' habitat of Delhi Author

Painted Stork Photo *E.P. Gee*



the analysis.

In concrete terms, the information gained has been used to attempt conservation of at least one area so far--the Kushak Nala area in Chanakya Puri. The information derived from the counts has also been incorporated in a booklet, under preparation, on the Delhi Ridge. A complete report on the counts, and their analysis, has been written and is probably the first detailed analysis of a head count of nearly 50,000 birds in areas spread widely all over Delhi. It will provide a reference work for future ornithological work in this area, a data base for other conservation projects and, in the worst circumstances, an additional file which students on the demise of Delhi's wilderness can consult a decade from now and cry "My God! How rich we were!"

PRADIP SAHDEV



Egret in a heronry Photo E.P. Gee

A heronry at Kandivali, Bombay

My brother-in-law, Mr Hemant Varma, residing at Laxmi Narayan Sadan, Bajaj Road, Kandivali (West), Greater Bombay knowing that I am doing studies on birds gave me a ring to Poona telling me that a lot of different birds were breeding on a tree in a compound adjacent to his. He also mentioned that a lot of eggs were falling down from the nests as also some chicks, which were carried away by crows, stray dogs and cats. Apart from this some boys were climbing up the tree and removing eggs from the nests and also young chicks.

I felt great concern about it and was curious to know which birds were breeding there in the midst of a city like Bombay. I was to Kandivali on 30th June and to my surprise I saw that on a huge tamarind tree, growing in the backyard of Anand Ashram, which reached the terrace of the third floor, there were more than 100 nests. On close observation

it was seen that the birds breeding were mainly cattle egrets. The nests contained young ones from the smallest size to that of an adult. The peculiarity of the birds was that juveniles of the size of a myna were found to be very well adapted and were freely moving around on the branches, though they were not able to fly. The young birds would come to the exposed parts of the tree where they would eagerly wait for their parents to come and feed them. On the slightest noise these young birds would recede and sit quietly in their nests. From the different sizes of the young birds it could be surmised that they had hatched over a period of one month. There were about 7 nests in which the birds were still incubating.

The nests of cattle egrets were evenly distributed all over the tree. It was observed that at a higher level of the tree, more towards the canopy there were 13 nests of Little



Cattle Egret with young Photo *E.P. Gee*

Cormorants. They were still building, as they were seen stealing sticks from the egret's nests. These birds were found to be very shy, as the moment they saw me approaching, though their nests were quite away, they would leave the nest and fly away. There were also two nests of Intermediate Egrets situated higher than the nests of cattle egrets and little cormorants. They had two chicks each and one parent bird was found to be constantly at the nest while the other flew to get food for the young ones. It was observed that while feeding the plumes of the parent bird get fluffed up. There was a small peepal tree about 20 feet from the tamarind tree and this tree was exclusively the tree for night herons. In the centre of the tree was a huge nest which had a pair. In spite of my waiting for more than three hours, the sitting night heron did not move out at least once, and was probably incubating. There were about five other night herons on the adjacent branches which hardly moved and were totally resting.

On inquiry, my brother-in-law told me that these birds were breeding in these trees for the last 20 years. The adjacent bungalow was purchased by Anand Ashram and they would be coming up with a new building. I observed that there was a considerable pungent foul smell coming from the excreta of these birds. There was a lot of noise throughout the day, but especially



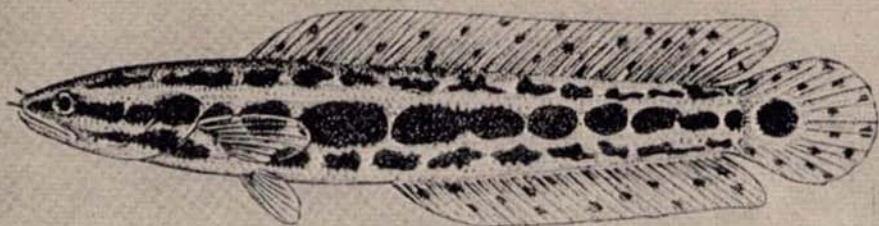
Little Egret about to settle on nest

during the night the noise was even louder.

Something has to be urgently done about the crows which are causing a lot of disturbance to these birds by trying to steal eggs and chicks. Erecting a barbed wire fence around the base of the tree would prevent urchins from stealing eggs and chicks.

This article is being especially written so that ornithologists and bird photographers may visit the place which is so near to Bombay and closely study bird behaviour and see these birds at eye level from the terrace of Laxmi Narayan Sadan without disturbing them.

SATYASHEEL N. NAIK, M.S.
Naik Hospital, Pune 411 002



Brood protection by Murrel Fish

There are several lakes around Udaipur in Rajasthan and many rivers with deep pools in which water is found throughout the year. These lakes and river pools harbour murrel (*Channa marulius*) in good number and are full of aquatic vegetation. The peak for breeding for murrel here is May, June and July.

When eggs hatch both the male and female guard their offspring. The brood moves in a group guided by the female and the male remains on the periphery of the bunch, attacking and chasing carnivorous fishes or other animals like turtles, watersnakes, and even birds. The female too sometimes attacks intruders and guides the brood cautiously from one hiding place to another in shallow water, always keeping herself beneath the brood.

The pair with a brood seldom takes any bait. If you put a live frog, fish or even drag the bait right through the midst of the brood they

don't bother even to look at it. They simply divert their course to avoid it. If a bait is suddenly put amidst the bunch, some time the female catches it but this is mainly a protective reaction. Until the offspring are able to look after themselves, the parents occasionally eat them. Several times freshly killed murrel with brood when dissected had remains of one of its offspring in the stomach. Scores of such fish were dissected by me, but apart from remains of offspring I never saw anything else in their stomach.

Locally murrels with their offspring are called *jaam*. On 13th May 1987 I went around Fatehsagar lake of Udaipur. In the shallow water near the shore I saw a *jaam* and stopped to watch. It was a beautiful sight. Periodically a small black cloud emerged from the depth of the murky water and in a moment the young murrel after gulping the air

(continued on p. 32)

WINDWARD HO!

Throughout the day, the area of Powai lake and its surroundings is subject to a moderate breeze from West to East, no doubt from the sea close by. One of the more interesting sights is to watch the terns as they fly over water, hover for a while, fly on, hover, and suddenly swoop down like an arrow into the water, emerging glistening in the sun, often with a small fish in their beak.

After a few days you notice that they seem to have a fishing route over which they fly again and again. All of them fly in similar patterns, cruising along one length looking for fish, and going rapidly back to their starting point to begin again. On their way back they are just not bothered about fish. Pretty soon, you also notice that all the fishing is done against the wind and the 'flying back' with the wind.

It is known that, for a flying object, lift is created by the relative motion between the object and air. This relative motion is created by engines in an aeroplane, by the flapping of wings in birds, and by breeze in gliding objects such as kites. The tern, in our case, is no doubt taking advantage of the breeze by flying against it so that it can hover in a more stable position. Possibly it gets an added advantage in going back with the wind.



This fact was confirmed one day when the wind direction reversed during one of the seasonal changes. True enough, the terns were fishing in the opposite direction.

HOW DOES THE CROW FLY?

Straight as an arrow, or so the saying goes. But over the past two years or so, we have observed instances of unusual behaviour amongst crows which is quite interesting.

The I.I.T. campus at Powai, Bombay, is situated along the Powai lake and is marked on the other side by two hills. During March and April, these hills attract a lot of birds of prey, specially the Pariah and Brahminy kites. It is not an unusual sight to see a few hundred kites soaring over the hill, or over the Vihar lake on the other side.

What is unusual is to suddenly

(continued on p. 32)



Amherstia nobilis Wall. in the Botanic Garden, Calcutta Authors

***Amherstia nobilis* Wall.**

The genus *Amherstia* of the family Leguminosae has only one species, *Amherstia nobilis* Wall. It was described in the year 1830 by Dr Nathaniel Wallich, a Danish surgeon and ex-superintendent of the Calcutta Botanical Garden. He noticed this magnificent tree at Rangoon near a monastery from where a Mr Crawford presented him with some dried flowers and leaves of the tree in August 1826. He saw the plant in its natural habitat at Martaban (Burma) and was overwhelmed by its vermillion coloured pendulous racemes of flowers and described them as 'Super objects' in the flora of the East Indies. Hooker,

the author of the volumes on the FLORA OF INDIA was amazed on seeing it and recorded that the flowers were 'the most showy of those of the Indian Leguminosae'. Wallich named this plant after the Hon'ble Countess Amherst and her daughter Lady Sarah Amherst, his friends, in recognition of their love for nature, especially botany.

Wallich on his return from his Burmese tour in the year 1826 brought some layered plants of *A. nobilis* for introduction in the Royal Botanic Garden, Calcutta. From this garden the plant was introduced to other gardens of the world. Bailey (1958) reported that it

flowered at Kew for the first time in 1849 in a hot house. T. Anderson (1865) an ex-superintendent of this garden reported that 'all the trees of *Amherstia nobilis* have been partially uprooted; they are supported merely by their branches, and all of them must be removed after young plants have been obtained from them by layering. The half prostrate trees of *A. nobilis* produced altogether only one abortive spike with sickly flowers, while two young plants that flowered freely last year, and are still standing almost uninjured, have shown no flowers'. C.B. Clarke in 1869 in his annual report of the garden mentioned that *A. nobilis* Wall. avenue was originally planted in the year 1866 between the principal garden and jetty and Kyd's monument, where at present the *Roystonea regia* (H.B. & K.) O.F. Cook avenue is in existence. This avenue of *A. nobilis* was completely destroyed by the cyclone of 1867, but these plants were again replanted under the protection of bamboo trellises.

It is not clear from the available literature as to when the plants of *A. nobilis* were planted in the Thomson avenue of this garden. However, David Prain, an ex-superintendent of this garden reported (1897-98) that 'Show of *Browneas* and *Amherstias* in the Thomson avenue was particularly fine'.

In Latin, the species name *nobilis* stands for 'noble', denoting its highly attractive flowers and handsome foliage. It is beautiful at the

time of flowering at the Indian Botanic Garden, i.e. during the months from late November to April, but in its natural habitat in Burma it flowers during the months of January to April. The bright vermilion colour, pendulous racemed inflorescences look like dancing girls and are reported as the 'most beautiful in the whole of the vegetative kingdom.'

By the early part of the 20th century there was a great demand for *A. nobilis* plants among plant lovers and horticultural institutions of the world. Seeds are rarely found and most of them are not viable. However, the tree is propagated mainly by layering but the survival rate is poor. Considering the above Calder (1935-36) carried out some experiments on the pollination of *Amherstia* in this garden with encouraging results and some of these seeds were despatched to Kew. From this experiment he concluded that "a suggestion might be made for pollination experiments to be carried out in Burma where it is native and locally not uncommon. Results might be better".

The young saplings perform better when they are protected from direct sunshine, especially during summer. Judicious watering is necessary for the saplings throughout the year except during the rains. Soil borne nematodes are its major pests, which damage the roots of young saplings. They can be controlled by drenching the soil with Dimecron solution.

...murrel

dived down into the water, while their parents remained vigilant. This *jaam* slowly moved into a small shallow channel of water near the shore. A Blue Rock Pigeon after drinking water flew very low over this channel. This was taken as a threat and countered by the male murrel with amazing swiftness. It catapulted out of the water to hit the intruder and with this act the unfortunate murrel landed on the dry land, about four feet away from the edge of the water, but managed to struggle back into the water.

Such dedicated parental care in such a low creature is a marvel indeed.

RAZA TEHSIN

41, Panchwati, Udaipur 313 001

...Amherstia

Besides the Indian Botanic Garden, Howrah (under greater Calcutta area), the Calcuttans are also proud of growing this majestic Leguminous flowering tree at the Agri-Horticultural Society of India, Vidhan Sabha Garden, Raj Bhavan Garden and at Eden Gardens, Calcutta.

A.K. BANERJEE

A.P. BHATTACHARJEE

H.S. PANDEY

R.K. CHAKRAVARTY

Indian Botanic Garden
Howrah 711 103

...bird antics

find a group of crows glide over you at high speed, not unlike fighter planes swooping down. The crows however do not seem to be as sure of themselves as the kites they are probably trying to emulate, and their glide becomes more like an uncontrolled dive, going zig-zag over the terrain.

Near the Powai lake, on the other hand, the crows seem to be turning to water for their food. It has become a fairly common sight to see a crow fly over water with its head bent down, much like a tern, as if looking for fish. And, on a couple of occasions, we have observed them swooping down upon water attempting to catch food with their claws. Whether they succeed or not, we cannot say, but adaptation to surroundings does seem to be taking place.

In late summer, at dusk, one often finds birds like drongos and mynas enjoying a feast when hundreds of insects, mainly dragonflies, fill the air. Here again, the crows do not want to be left behind. You can see them suddenly taking off, in a manner similar to the other eaters, into a swarm of insects and come back to their perch, with probably a dragonfly added to the day's menu.

DEEPAK KHEMANI

SHIRISH WAGHULDE

Wildlife Club, Students Gymkhana,
Indian Institute of Technology,
Powai, Bombay-400 076

SALIM ALI NATURE CONSERVATION FUND

Bombay Natural History Society under the aegis of its SALIM ALI NATURE CONSERVATION FUND (SANCF) invites applications from deserving amateur naturalists, scientists, Forest Officers, NGOs and other similar bodies for extending them partial or entire financial support to conduct research studies, status surveys and fact-finding missions with reference to conservation issues. Persons and organisations interested in availing of financial support from SANCF are requested to apply with a brief description of the proposed project. Correspondence may be addressed to

SALIM ALI NATURE CONSERVATION FUND
BOMBAY NATURAL HISTORY SOCIETY
HORNBILL HOUSE
SHAHID BHAGAT SINGH ROAD
BOMBAY - 400 023

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)