

HORNBILL



BOMBAY NATURAL HISTORY SOCIETY

The cover picture shows the Golden Tree Snake (*Chrysopelea ornata*) photographed by I.D. Kehimkar.

A handsome tree-dwelling snake with pretty floral patterns on its back, this agile, graceful snake can scale vertical tree trunks with absolute ease with the aid of the sharp lateral keels of its belly.

Its ability to glide is well documented and is known to cover considerable distances while descending to ground level in an inclined glide with furious swimming motion in the air. It launches itself from the higher branches by suddenly straightening its strongly coiled body and flattens to hollow the belly concave to create a 'parachute' surface.

This fierce hunter of the daylight prefers geckos and other lizards. Occasionally a small bird or a bat may be taken. Essentially a forest dweller it is rarely seen in its Indian range where it occurs in the Andamans, Western Ghats from south of Goa, North Bihar, West Bengal and eastwards. It is comparatively common in Sri Lanka and the Indochinese subregion.

Much desired by Western snake fanciers for its exotic beauty and ability to 'fly', this snake remains on the shopping list of animal traffickers.

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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Members receive during a year three issues of the *Journal of the Bombay Natural History Society* now in its 82nd 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	25.00
<i>Subscription</i>		
Ordinary individual membership	Rs	60.00
Ordinary corporate membership	Rs	250.00
Life membership	Rs	800.00
Compound corporate membership	Rs	2500.00

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

Write to:

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EDITED BY

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J. S. SERRAO

I. D. KEHIMKAR

Lay-out

JETASHREE JAVERI



*The only ape in India and one of India's most endangered species Hoolock
Gibbon (Hylobates hoolock)*

Photo : E. Hanumantha Rao

EDITORIAL

Natural History is a subject in which the talented amateur has made remarkable contributions, particularly in India. The scientific input has been enormous. People of varied backgrounds, often self-taught, have made seminal contributions to the study of Indian animals and plants. To cite a few examples Stuart Baker and Hugh Whistler on birds, curiously enough both from the Indian Police Service. The Army Medical Service seems to have contributed substantially—Fraser on dragonflies; Wall and Gharpurey on snakes. Apparently, the Army Medical Service did not lack for leisure. The current emphasis on degrees often overlooks the fact that in field studies natural aptitude, ability to

observe accurately and record data precisely, combined with enthusiasm and personal integrity does not necessarily occur in association with a degree in biology. Many of the finest field biologists that India produced, such as S.H. Prater and Charles McCann did not have a university based training in biology, but their papers on Indian fauna and flora are shining monuments to their capacity.

It is this belief in the talented amateur that makes the Society pursue diligently its search for such talent among its membership. The papers published in the Society's *Journal* and the *Hornbill* by many of our young and enthusiastic members are proof that the seed still survives.

The Society's Patron

For many years the Society had the honour of having the late Prime Minister, Mrs Indira Gandhi, as its Patron, and it was in this capacity that she inaugurated the Centenary Celebrations of the Society on 15th September 1983. In her untimely death, the Society lost a tower of strength.

At the request of the President and the Executive Committee of the Society, Mr Rajiv Gandhi, the Prime Minister, has very kindly agreed to be the Society's Patron. We look forward to receiving the same active interest from him in the Society's welfare, as we had from his mother.

Can thieves be guides to naturalists?

During the campfire chat in the jungles of Kumbhal Gadh we came to know an interesting phenomenon from some tribals of the region. They said that the livestock thieves of the region know a magic and with its power produce a trance in sheep and goats. They recite some *mantras* over their *chappal* and place it on the ear of a goat or sheep after pulling it down to earth. It has a magic effect and the animal remains inactive as long as the *chappal* is in position. What they do is they stalk the animal farthest from the herdboys in a grazing flock of sheep or goats, pull down the animal, place their *chappal* over the ear of the animal and go off. When the flock moves away from the spot they remove their booty.

We discussed it thoroughly and concluded that some pressure around the ear region may be responsible for this behaviour of the animals. For our experiment we chose four mammals one each from deer and antelope family and two rodents. First we tried it on the Fourhorned Antelope (*Tetraceros quadricornis*). A stone in a plastic tray was placed over the ear of the antelope, lying flat on the ground, with its neck stretched out. As it was difficult to place a stone on the ear the flat plastic tray was used. The combined weight of the plastic tray and the stone was 273.5 g. The effect was beyond our expectation. The antelope became inactive and closed its eyes. It did not try to

throw the stone and seemed to be in deep sleep. The stone was in place for 15 minutes, and during this period the animal was not secured by any string. It remained inert as long as the stone was in position. But as soon as the stone was removed it jumped up and ran away. The same device was tried on a Guinea pig (*Cavia porcellus*) with the same result.

The old trick of the tribals was repeated on a chital fawn (*Axis axis*) but with a slight modification. A *chappal* weighing 193 g was placed on its ear in such a way that it covered the orifice, pinnae and the back of the head. This also put the animal to sleep.

A stone weighing 63 g was placed on the ear of a Threestriped Squirrel (*Funambulus palmarum*), the squirrel reacting the same way as the chital.

In all these animals we found that a slight pressure around the ear region renders them inactive but as soon as the pressure was removed they became active instantaneously. This shows that the pressure induces a trance in the animals.

Now if we look into the technique of killing by land predators, large as well as small, we find a similarity in the mode of overpowering their prey. Whether the prey is seized by the throat or the nape, the predator always goes for the upper reaches of the neck of its prey, that is near the junction of the head and the neck.



A Fourhorned Antelope 'Tranquilised' with a 273.5 g weight on its ear
Photo : Raza Tehsin

What we find in the many kills of the different predators is that one of their canines pierces near the back of the ear of its prey. During the attack when the predator closed its jaws on the throat or nape of its prey, the pressure produced by its canines around the ear region produces instant sleep in its prey. To pull down the prey running for its dear life in sleepy state is quite easy for the pursuer. Predators know this anatomical weakness of their prey since ages. Taking advantage of this weakness very small predators can overpower more heavier animals. In nature also most of the predators are smaller than their most sought prey.

From these experiments we infer-

red that some superficial nerve passing near or around the ear region may be responsible for this behaviour of the animals. A slight pressure on this nerve may stimulate the sleeping centre of the brain to induce sleep in the animals. Further study in this direction may immensely help naturalists, veterinarians and medical practitioners. If the cause of this sleep inducing phenomenon is found out, it may reveal many mysteries of the human brain and solve many problems of medical science, and may minimize human and animal sufferings.

J. S. NATHAWAT
RAZA TEHSIN

NEWS, NOTES AND COMMENTS

Wildlife Quiz Contest

The World Forestry Day was celebrated at the Society with a Wildlife Quiz Contest for students of 8th and 9th Standards under the Society's Nature Education Scheme. Sixteen Bombay schools participated, and the contest was won by St. Anthony's Girls High School of Chembur. The semi-finals and finals were broadcast by the All India Radio. Prizes were distributed on 21st March 1985.

Bird Photograph Portfolio

The Friends of Birds group of Nashik will be holding their annual convention in December 1985, and propose to produce a souvenir of bird photographs, both monochrome and colour. This could be an excellent

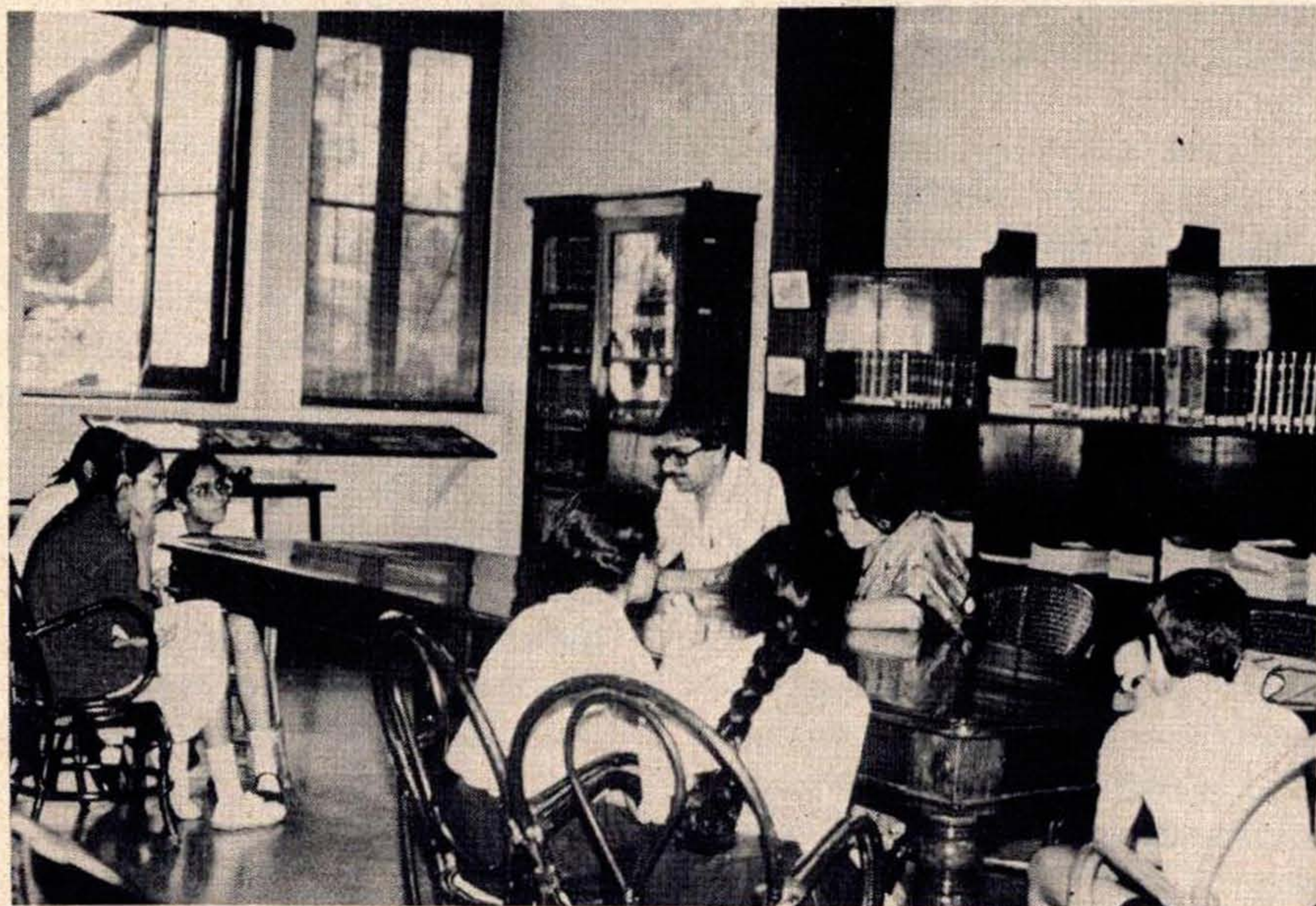
guide for field identification of birds. Friends of Birds plan to find a sponsor for each page of the publication.

Members willing to donate bird photographs for a one-time use in the souvenir may please send them to

MR DIGAMBAR GADGIL
37, ANANDVAN
COLLEGE ROAD, NASHIK 5
MAHARASHTRA

Save Sahyadri

The Sahyadri mountain range (Western Ghats) runs almost parallel to India's west coast for about 1000 miles to form the great sea wall, leaving only a narrow strip along the coast. The rivers on the west coast



World Forestry Day — Quiz Contest at the BNHS
Photo : Isaac Kehimkar



A land sadly in need of rehabilitation

Photo : Ulhas Rane

being mere torrents hardly benefit agriculture to flourish all round the year. However, the abundant SW Monsoon clothes the western flanks of the Sahyadri with a most luxuriant vegetation. What the west coast loses in agriculture is gained through the natural wealth of its primaeval forests, the finest in India.

This singular natural resource on which much of the local economy depends is now fast depleting under pressure from a multiplying population. Only judicious use of natural resources will ensure a healthy economy of the region in the long run. What is needed is awareness among the locals to conserve nature and use it wisely. With the aim to educate and guide the local population, 'Save Sahyadri' movement was launched last year on the World Forestry Day. Since then a number of gainful activities have been conducted along the Sahyadri with the

help of individual volunteers, local non-governmental organisations, and the Forest Department. A detailed report of the activities and plans is available with the Convenor.

MR ULHAS RANE
LAXMI NARAYAN BUILDING
G. D. AMBEDKAR ROAD
PAREL, BOMBAY 400 012.

A tribute to the late Mrs Gandhi

"The untimely death of Indira Gandhi, India's Prime Minister, came as a shock to the world and particularly to conservationists. We at the International Crane Foundation (at Baraboo, Wisconsin, USA) feel a great loss. Over the past few years, Mrs Gandhi took a personal interest in helping the tiny flock of Siberian Cranes that winter at the Keoladeo National Park just south of New Delhi in Rajasthan....

"We were always amazed that Mrs Gandhi promptly answered our

letter and that twice she found time to meet with the ICF representatives. In her honour, the first Siberian Crane chick hatched at ICF in 1982 was named Gandhi. We have moved this magnificent male onto display at the Sam and Gene Johnson Exhibit Pod. He is a reminder to ICF visitors of a very special friend to wildlife."

Dr Harold Coolidge, 1904-1985

Dr Harold Coolidge, a key figure in International Conservation, died in February 1985 at the age of 81.

Dr Coolidge was one of the founders of the International Union for Conservation of Nature and Natural Resources (IUCN) and its first Vice President. At the time of his death he was the Honorary President of the IUCN and a World Wildlife Fund Member of Honour.

A Bird Club

Oriental Bird Club has recently come into being with the objective of encouraging interest in the birds of the geographical area from Pakistan to China and south to Indonesia to liaise with regional societies and to publish data on Oriental birds. For information write to

ORIENTAL BIRD CLUB
THE LODGE
SANDY, BEDS, SG19 2DL, U.K.

Getty Prize, 1984

Jane Goodall, the famous primatologist, was awarded the 1984 Getty Prize for Conservation.

Jane's study of the Gombe Stream Chimpanzees begun 20 years ago was the first long term study of the social life of this fascinating ape and combined with her ability to communicate her findings has enormously popularized the cause of chimpanzee conservation.

1985 INTERNATIONAL STORK CONSERVATION SYMPOSIUM

The World Working Group on Storks, Ibises and Spoonbills in conjunction with the International Council for Bird Preservation (ICBP) is organising the 1985 International Stork Conservation Symposium on 14-19 October at Walsrode, West Germany.

This Symposium will bring together Stork Researchers, Ornithologists, Conservationists and Government Personnel to develop a concise and workable conservation management plan for the White Stork and the Eastern White Stork; also, research observations on other stork species will be shared.

The Symposium is being developed as a workshop in order to effectively produce the management plans. Those unable to attend can send their papers to be included in the proceedings. For further details contact :

Stork Symposium
Vogelpark Walsrode
3030 Walsrode
West Germany

My experiences of photographing a Mottled Wood Owl

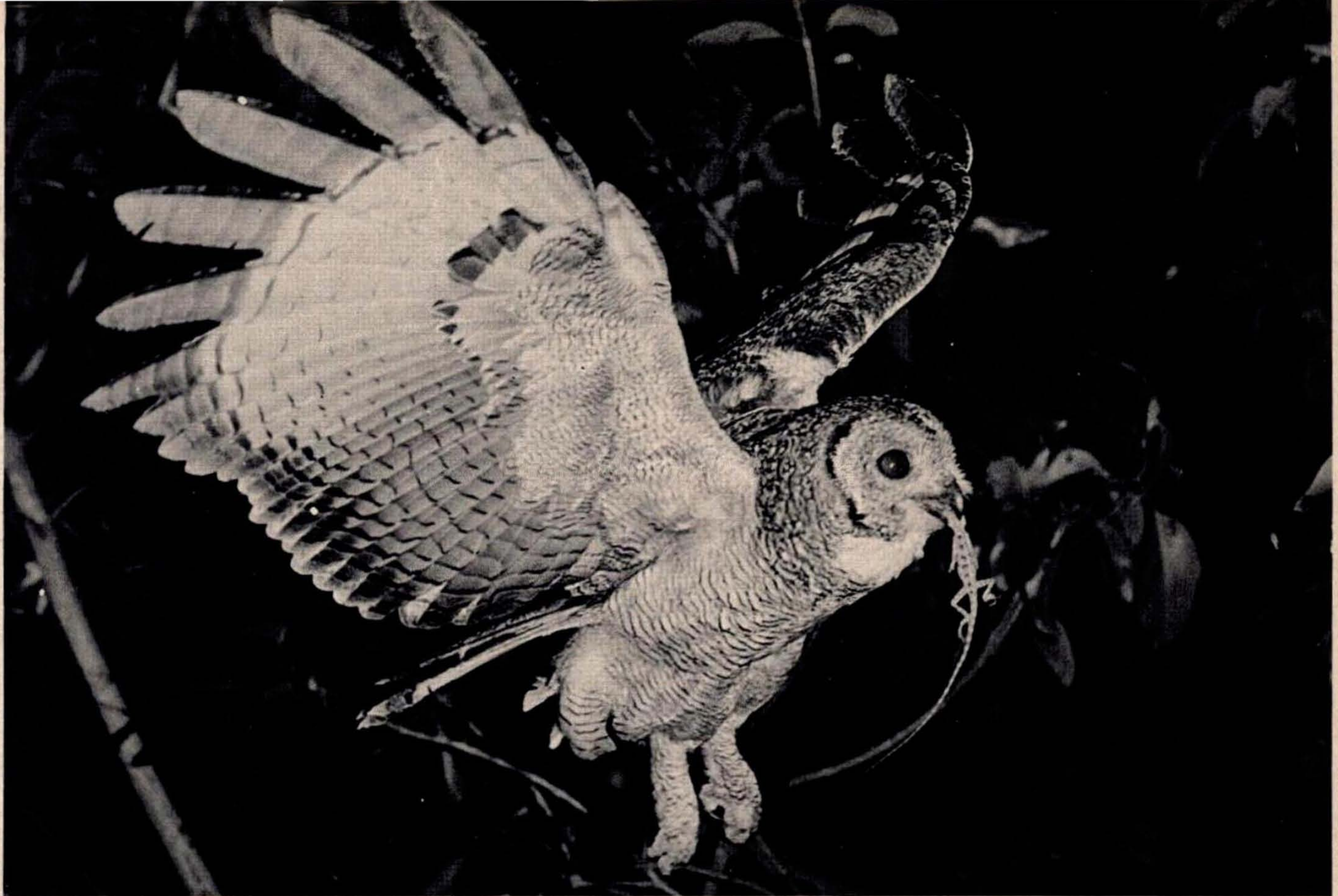
For the last few years a pair of mottled wood owls (*Strix ocellata*) has been breeding regularly in a roadside *jamun* tree at the junction of three roads leading from Sakalvara, Bannerghatta and Bangalore. The tree is one of the "avenue" trees of *jamun* decorating the state highway and, is hardly 25 metres from the forest boundary of Kalkere State Forest approximately 20 km from Bangalore, on the Bangalore-Bannerghatta State Highway.

The *jamun* tree is approximately 40 ft in height with good canopy of leaves and lofty branches, also it used to give good crop of fruits in the season, before it was hacked and lopped by the fuel hungry colony of stone-cutters and the villagers of the area. Now, this tree is a true symbol of present day large scale depredations on habitat that has overtaken this area which was once a beautiful bit of dense mixed-forest and formed a part of the migratory route of wild elephants in the area.

One season during the first week of March, returning from our usual bird-watching trip and as we were just passing through this area, the *oooh! ... oooh!* call of the mottled owl emanated from the cluster of *jalari* trees. We were quite excited at this melodious call and stopped to investigate. One of the owls flew out to the grove of eucalyptus trees and settled down to return our compliments by staring back at us in a

curious manner. We slowly moved towards the eucalyptus with our eyes fixed on the bird. As we neared the grove another bird was seen sitting on a different eucalyptus tree. But, this bird seeing us approach gave the agitated call *oooah! ooooah!* and took off to disappear into the forest — a timid bird indeed. The fact was there were two birds (a pair) in the area and the agitated call by one of the birds was an indication that they may have their home somewhere in the vicinity. As it was already getting dark we gave up our search and returned home discussing our plans to locate the owl's nest.

Next day, we reached the spot early in the evening to resume our search. It took a bit of systematic look-out and perseverance to find their address. My friend Irudhayam is an expert in locating nests of birds and is knowledgeable in their ways. It is indeed rare for any nesting bird to escape his instinctive sixth sense — a nest finder computer. Both of us walked through the forest of trees carefully looking for tell-tale splatter of white faeces marks and other signs of nesting owls and failed to come across any. Even the owls were not sighted which was rather puzzling. But, when we arrived at the junction of three roads; quite instinctively Irudhayam went below the tree and was looking up at all the likely forks and hollows. Then, he picked up a small stone and threw it



Mottled Wood Owl carrying a lizard

Photo : T.N.A. Perumal

up into one of the forks in the tree and out flew a mottled wood owl. We were elated at our success and immediately climbed the tree to examine the nest. It was a 6 inches deep and 10 inches wide hollow, almost circular in shape in a fork of the tree at a height of about 25 feet from ground.

Two dirty white oval eggs about the size of a village hen's and a dry leaf were at the bottom of the shallow nest. Unfortunately, the nest-hollow was in an awkward place for photography.

A successful photograph of a nesting bird depends largely on the photo favourable and photogenic situation of the nest. Though, this particular nest was in a difficult and disappointing location the opportunity of obtaining photographs of this not-so-common species was too good to be lost without trying my luck in capturing the bird on film.

While we were studying the nest, the owls made several silent sorties sailing over our heads and fortunately no aggressive attacks were made on us. The birds were visibly disturbed; helpless they expressed anguish with their agitated eerie calls. One of the birds landed on top of an adjoining tree to keep watch over us.

It was a beautiful bird to behold! A well proportioned, round and plumpy, in cryptic shade of dark reddish brown and about the size of a common kite. It had greyish finely barred front with a conspicuous white inverted pyramid like mark at

the throat, a broad tail barred with brown and grey with white tips. Two large delicately marked facial masks round its dark brown eyes with beautifully ornamented eyelids — a ring of pinkish coral bead-like membrane round each eye giving it the total effect of a neat well-manicured pretty bird wearing go-go glasses.

Soon, a party of black *goondas* (house crows and jungle crows) appeared on the scene to mob the bird and the poor owl had to flee from its tormentors. We quickly came down the tree without further ado, pretending that we were only cutting some leaves and branches with the hope that our distractive behaviour would fool the inquisitive crows who are adept in deducing from the ways of people. If we had stayed up there any longer to examine the owls' nest, our actions would be noticed by the crows and, on our departure the nest would be located and its contents destroyed by the '*yamaduthas*' — House crows and Jungle crows. This has been our experience in the field.

Once I witnessed a common myna playing the 'Pirate', it landed at the nest-hollow of the mottled wood owl which had nested in a different tree, at even greater height of 45 feet and it bent down to pull out the lone nestling from the nest and dropped it down to the ground. Strangely, the owl did not even defend its young!; it just sailed away.

The other menace and bane of bird-photography are the ubiquitous village urchins who play

havoc by their systematic, needless and wanton destruction of all smaller life forms — birds, their eggs and nestlings. Of course, we do have friends like the 'little devil' Ravi, a 12 year old boy from the nearby village who helped us in our photography of the mottled wood owl.

Our next visit to the place was after a month and we found one small hatchling and one unhatched egg at the nest. As the hatchling was too small we felt it was better and safer to allow one more week before starting our photography with remote-control. In the meantime a wooden Γ shaped clamp on to which a camera and flash unit were to be fixed was nailed to a branch at a distance of 3 feet from the nest-hollow and left there, with the idea and hope of gradually conditioning the owls and to get them accustomed to the strange set-up placed near their nest. After two days we made another trip to fix a black cardboard box and a tin disc (dummy) on to the wooden clamp.

On the following visit during the weekend in the evening we found the hen owl tightly brooding its young perfectly camouflaged; blending with the colour and pattern of the bark of the tree. Obviously, the owls had not accustomed to the strange apparatus near the nest. The bird flew out as we climbed the tree and replaced the "dummy" with real camera and flash unit to attempt photography.

A 2¼ inch sq. format T L R camera with 80 mm standard lens

was used focussing carefully on the front of nest hollow, but slightly behind the front edge of nest as depth-of-field is always less in front and more behind the point of focus and, the use of a small aperture ensures ideal range of sharpness from the front of nest and right up to the point where the bird alights (including the bird). Also, it was composed to include the complete nest and its habitat with generous space all round, including top and bottom of nest-hollow; so that the parent bird does not get cut-off in the event, if it lands at a slightly different spot other than its regular landing position at the nest. This was necessary as birds very often alter their mode of approach to their nest, at the sight of camera equipment and associated disturbances of camera shutter accompanied by the sudden flash of light which also makes them change their pattern of approach to the nest.

Generally most species of birds show signs of distress in the beginning, and gradually get used to it and later on completely ignore the inconvenience caused by the camera apparatus. But behaviour of individual birds of a species varies greatly and this factor also has to be taken into account while taking pictures, especially with the basic kind of remote-control photography; as human disturbance is greater, as the photographer is required to go up to the camera on the tree to wind the film, tension the shutter etc. every time a photograph is clicked, which fact imposes on the exponent of remote-control photography the

need to exercise greater care and patience in his endeavour.

After completing the operations of fixing the camera and flash at their respective angles, direction, tensioning of shutter, selection of shutter speed, aperture etc., the air-release was screwed on to the shutter release socket of the camera which had a 50 inch long tubing with a large rubber bulb at the other end. Then the whole set up was tested for smooth operation as any kink in the length of tubing will obstruct passage of air travelling along the tubing thereby causing malfunctioning of remote-control. My assistant was asked to press the rubber bulb and when he pressed the bulb the shutter worked alright.

Many a 'masterpiece' has been lost due to carelessness in not checking and straightening of a 'kink' in the tubing. Quite often when a glorious opportunity is presenting itself the excited photographer visualising the 'masterpiece' presses the bulb only to find that the shutter is not clicking and, then to his chagrin traces the fault to a kink in the tubing.

Next step was to camouflage the camera with a dull khaki cloth cover with an opening for the lens, taking care that the lens is not obscured by any part of the cover. Actually, before the cover was put on, the film had to be advanced and shutter tensioned as it had already been released by our testing operation.

It was nearing dusk and in anticipation the flash was kept on and

I came down the tree to take my position in the 'Hide' that was already erected adjacent to another *jamun* tree about 7 yards from the nest tree:

My friend moved 100 yards away to sit under a tree and watch the activities of the birds and signal to me, by word or a whistle, when a bird approached the nest tree.

As dusk fell both the birds appeared on the scene and sat on two different eucalyptus and kept looking in the direction of the nest. A little later they began a sing-song duet of *Ooh! ooh! .. and oooh! oooh!* and then followed a thrilling and amazing repertoire of calls including the bleating of a goat, the end piece was *oooah! ... oooaah!* a series of eerie calls of the agitated owl, once or twice a shadowy form of an owl was observed to sail over the nest tree. Now, the soft glee, glee chirping of the hungry nestling was coming forth too. But, the shadowy forms of parent owls were only seen to appear and disappear in the dark. Also their orchestrated calls became more expressive with anguish and fear. After a few minutes of such calls a bird would sail over the nest tree and fly back to its hiding among the eucalyptus. Somehow, the birds did not seem to gather sufficient courage to land at their nest.

These timid birds would not visit the nest even once after two hours of dusk falling, which disappointed us and forced us to quickly dismantle the whole set-up without causing further inconvenience to the birds



Mottled Wood Owl near its nesting tree

Photo : T.N.A. Perumal

and to avoid keeping the chick unfed for long.

Bird-photography is a game of patience and the ethics: 'welfare of the subject is more important than the photograph' was adhered to, and the whole project was abandoned when we found the birds behaving exactly in the same unco-operative manner on all our three subsequent attempts at photography.

It was an unpalatable experience to let go such an opportunity without a single picture. But, we had no other option at that time; as erecting a *machan* for 'photography from a hide', would have definitely attracted people and would have resulted in bringing disaster to the

nesting owls. We preferred to leave them alone and were content to witness the two owlets safely fly out into the forest in the care and company of their parents.

During my second attempt the fragrance of flowering *jalari* trees in full bloom was perfuming the whole forest and villagers were collecting these flowers to decorate their homes to celebrate their New Year which falls during the month of April. The owls too were celebrating their new found freedom of movement in the forest.

Last season's unsuccessful attempts in photographing the mottled owl was instrumental in my exploring other techniques of bird-photography.

The beautiful and spectacular shots of owls in flight appearing in various photography magazines and other journals further aroused my interest in the technique of photo-electric triggering, which had been used for obtaining those appealing photographs.

For technical information regarding this technique, I sought the help of a fellow bird photographer in U. K., whose beautiful photographs of a Barn owl in flight had appeared in the photo magazine "Amateur photographer". He quickly responded by sending me the data for assembling such a unit. With this information and my experience as a radio service engineer, I earnestly started experimenting in assembling unit with substitute components as most components used in the original data were not available locally.

After much trial and error the unit was made ready. But, to test it, a motorised camera was needed. Luckily for me another friend and

bird enthusiast came to my help in allowing me to test the unit with his motorized Sq SLR Camera.

I conducted several experiments to test the instantaneous functioning of the triggering unit and found the time-lag between the object breaking the light-beam and the tripping of shutter needed fine tuning which was achieved by increasing the sensitivity of the unit. Finally, the unit was found satisfactory and the time-lag was very negligible or almost instantaneous. It was a thrilling experience to see objects thrown at speed into the light-beam being captured on film.

The theory of photo-electric triggering is similar to burglar-alarm, automatic door opening device, etc., that is, any object when it interrupts or breaks a visible or invisible light beam (INFRA RED) the device automatically trips the shutter of a camera or activates the particular device of the system employed.

T.N.A. PERUMAL

(To be continued)

Members often write to us drawing attention to matters which require urgent attention from conservationists. In order to raise public support for such matters we have started a new section in the Hornbill named 'Alert' which you will see on the overleaf. We will need your support to protect wildlife and wild places—Editors

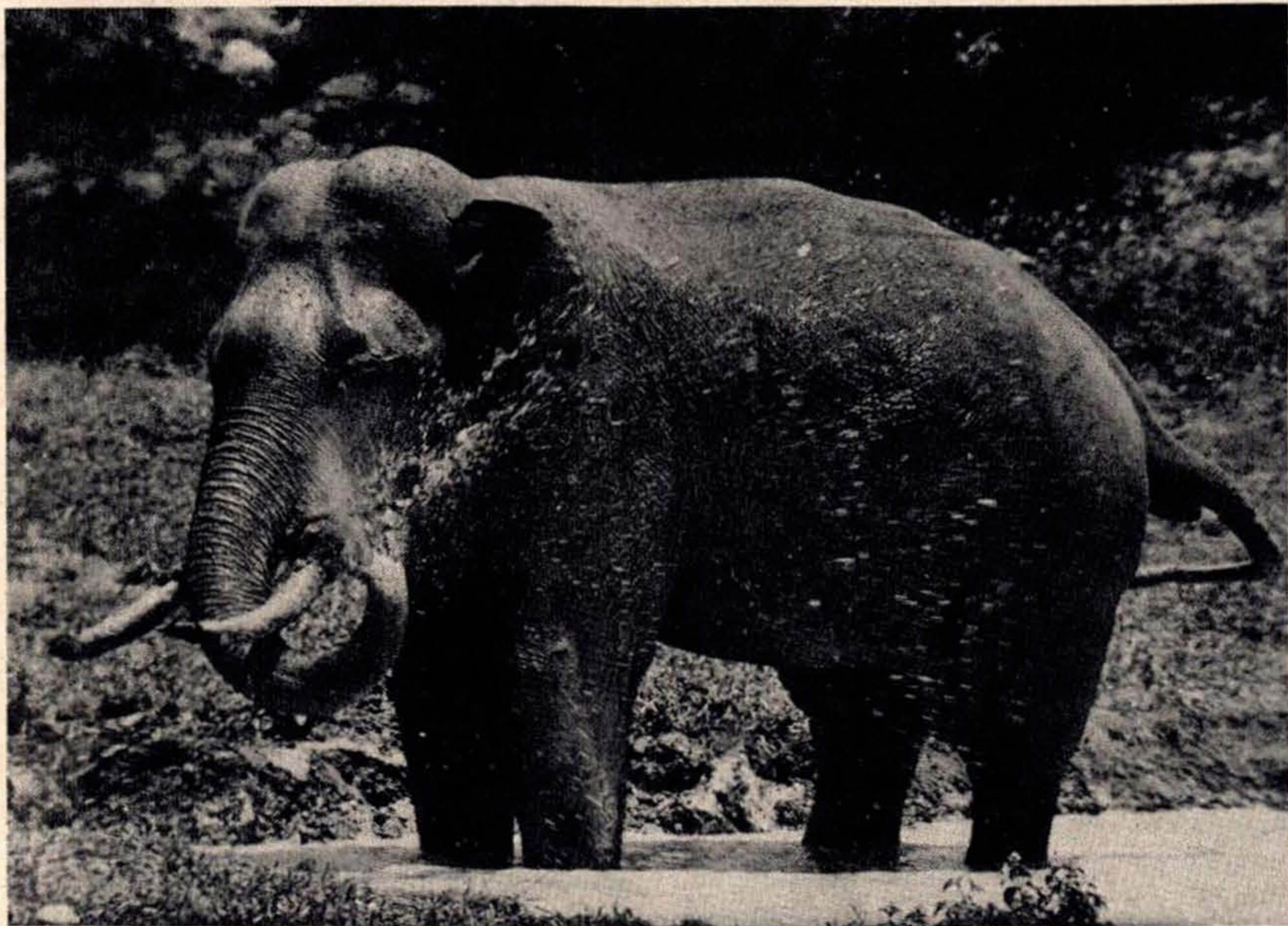
ALERT

Illegal capture of Wild Elephants

We wish to draw your attention to a very sad state of affairs in the Wynad wildlife sanctuary in Kerala state, and we hope that when you know the facts, you will be good enough to see that something is done.

In August 1979 the Indian Board of Wildlife recommended that wild elephants should not be captured in Kerala and certain other states (vide letter No. 1-8-/79-FRY(WL), dated 4th Aug. 1979 of the Asst. Inspector General of Forests (WL), Govt. of India). We understand that on the basis of this recommendation, the

capture of wild elephants was prohibited all over Kerala. However, from 1979 onwards wild elephants have been captured in Wynad from time to time under the aegis of the Forest Department itself. The last one was captured in January, 1985. Everytime an elephant falls into a pit, it is given out that it was an accident and that a wild elephant had fallen into an old and unused pit dug before August 1979. This is only an excuse given to deceive and placate those local people who might protest against the capture of wild elephants. In fact, it can be proved that elephant drives have been organised by the Forest of-



Wild Tusker

Photo : E. Hanumantha Rao

ficials and that at a time as many as five elephants have fallen into one pit.

Our attempts to move the authorities concerned having failed, we are constrained to appeal to you to do whatever you can to save the poor remnants of our elephant herds as well as of other wild animals.

C.C. MATHEW
PRESIDENT

WYNAD PRAKRITHI SAMRAKSHANA
SAMITHI
SULTAN'S BATTERY 673 592,
KERALA

The above is a letter addressed to the Prime Minister of India on 20th March 1985 with carbon copies endorsed to: Shri J.C. Daniel, ex Chairman of the Asian Elephant Group, IUCN, and Dr Thomas Mathew, Director, Environmental Services Group, WWF-India, New Delhi—EDS.

Matters of serious concern to Conservationists

Perhaps you have read from newspapers regarding the intention of Government of Kerala to give away around 10,000 hectares of forest land to various persons whose private forest lands were nationalised a few years back. The avowed purpose of this move is to enable the former owners of the forests to personally carry on the cultivation of the 15 acres of land now proposed to be given by the State to them for this purpose. But it is reliably learnt that in all these cases, the forest land which is likely to be

given to these original owners have been sold by these people to others, and in many cases these lands have changed two or even three hands. In the circumstances, the purpose of personal cultivation by the original owners will never materialise, and everyone has his eyes only on the timber in these forests. The total area involved is estimated to be around 10,000 hectares, and Government of Kerala is known to be forced to this decision due to the all-too-well known political uncertainty in the State. I would request you to kindly utilise your good-offices in the matter and bring the matter to the notice people in the Ministry of Environment and the Govt of India who would be interested.

Another important issue concerns the Parambikkulam sanctuary in Palghat District. Parambikkulam needs no introduction to you, and it is perhaps the best wildlife sanctuary in the South. Plans to develop the sanctuary in a big way into a tourist attraction are afoot, and this involves the construction of a road to Parambikkulam from Nelliampathy. As you know, at present Parambikkulam can be reached only via Pollachi in Tamil Nadu, and this limited access has all along been one of the positive aspects of the sanctuary in containing encroachment and poaching. Also the kind of tourist development that one sees all around may not be in the interests of the wild-animals themselves. There have been reports indicating that some of the dedicated forest officials were trying



Parambikulam Sanctuary

Photo : Oswald T.

to get the sanctuary designated as a Project Tiger area so as to ensure a better degree of protection. In this matter also I would request you to contact the concerned officials, and try to do the needful in the best interests of the sanctuary. I am sure you would also be interested to know that the Kerala Natural History Society, under Prof. K.K. Neelakantan's presidentship has

been recently revived and has been holding periodic meetings.

R. VENUGOPALAN
STATE BANK OF TRAVANCORE
MAIN BRANCH, CALICUT 673 001

The above is a letter dated 28th April 1985 received by Dr Salim Ali, President, Bombay Natural History Society, requesting intervention—EDS.

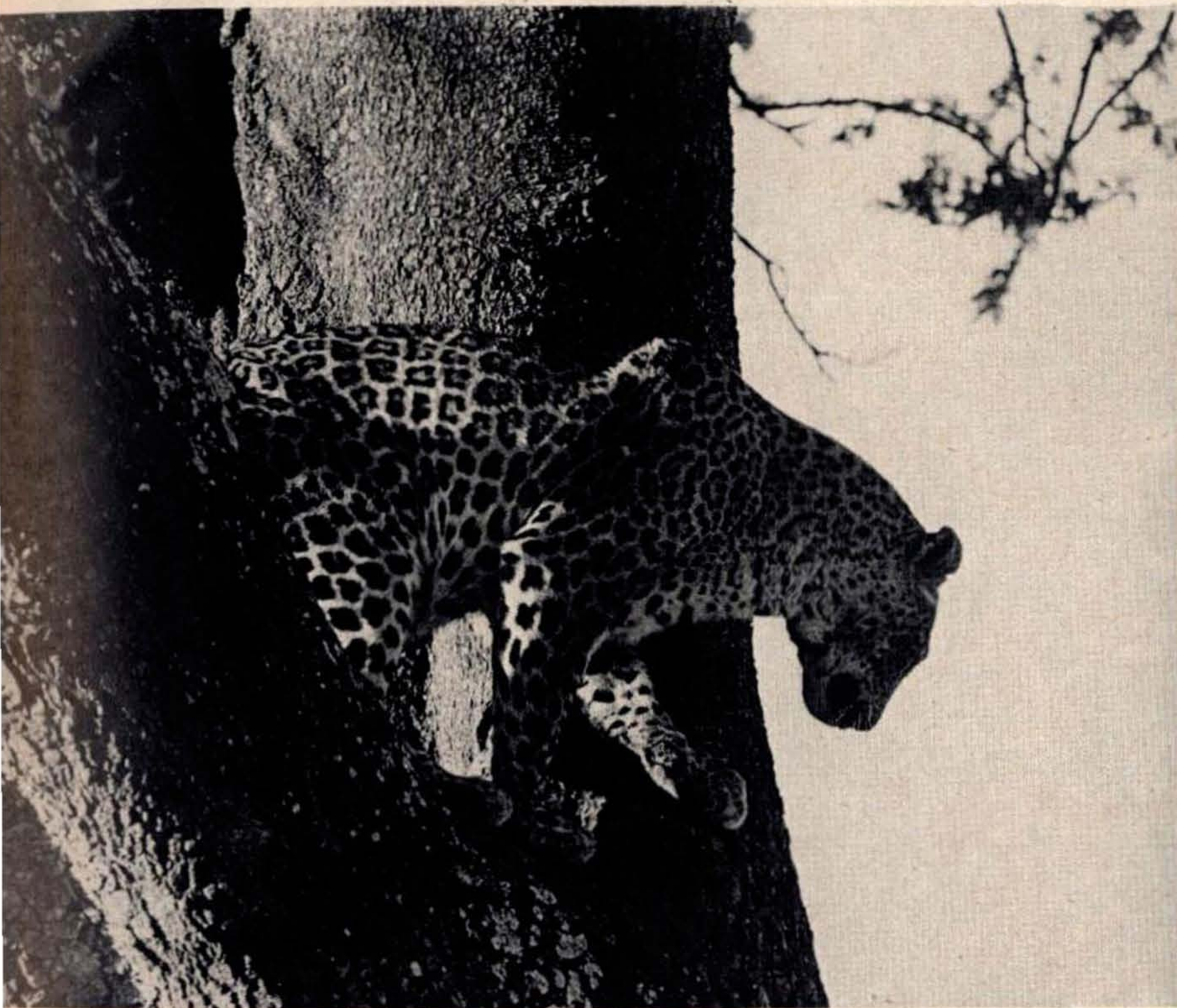
African Diary

This series is continued from p. 21 of Hornbill 1985(1).—EDS

Leopards are common throughout Africa and widely distributed. They have adapted to a wide range of habitats from tropical forest to grasslands and desert. They can also

seen often in the broad daylight in some of East Africa's National Parks.

The Seronera leopardess spent the whole day on a yellow fever tree



A female at Seronera in Serengeti

Photo : Rishad Naoroji

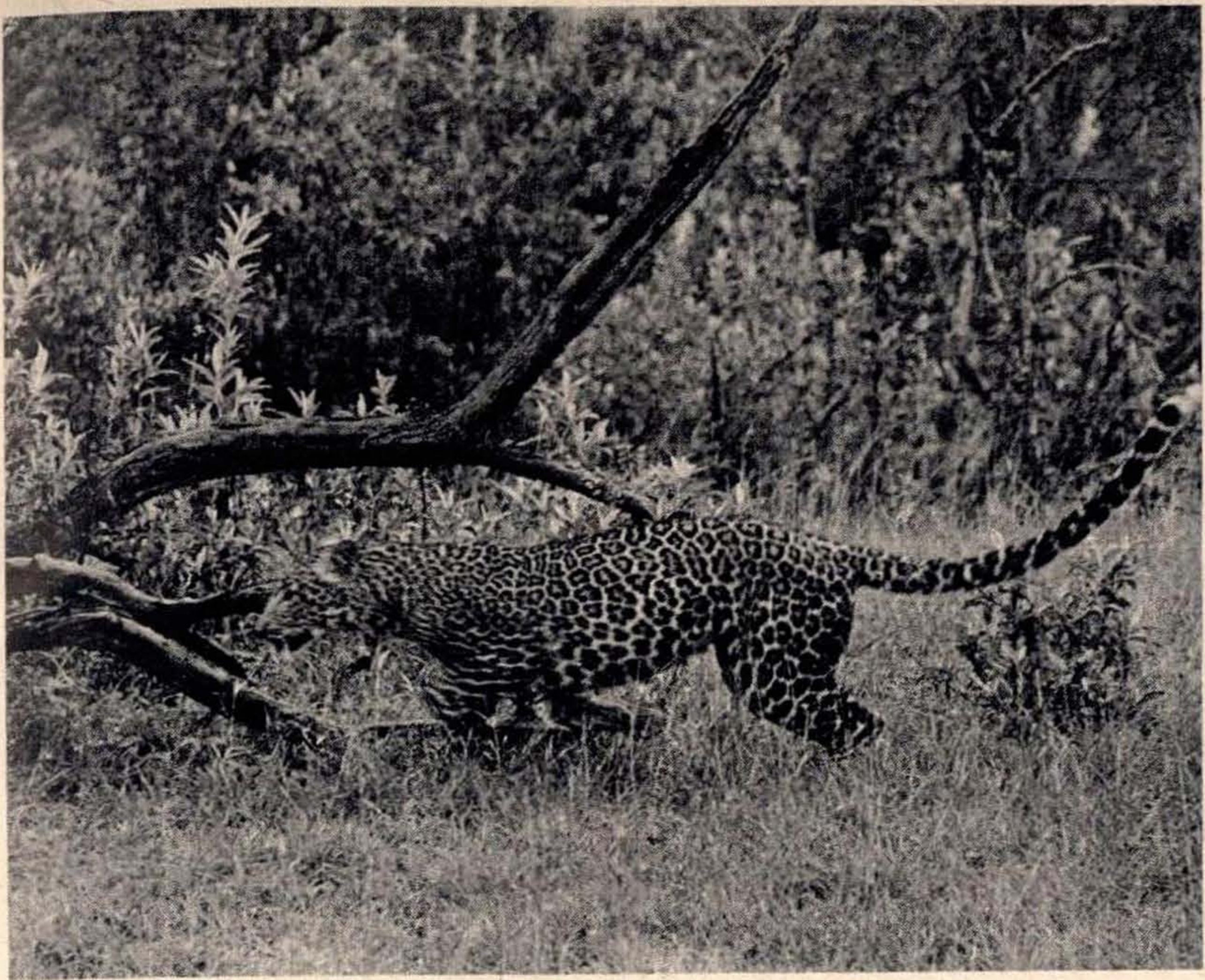
survive near human habitation fully utilizing the minimum of cover. Where they are protected they are

before coming down to drink in the evening. She is poised thus just before scrambling down the tree trunk.



A leopardess in the Mara on the banks of the Malek river

Photo : Rishad Naoroji



*This leopardess was released in the Masai Mara Game Reserve
Photo : Rishad Naoroji*

The Masai Mara leopardess was a goat lifter and had been trapped and caged at the Nairobi orphanage, from where she was transferred to the Masai Mara Reserve and released. She has just leapt out of the cage from the back of a landrover.

The leopardess whose photograph is on pg. 19 had four tommies stored in her larder high on a yellow fever Acacia. Two small cubs accompanied her and this probably accounted for her high rate of hunting. One morning she was sighted with a cub 45 ft up on a tree feeding on an old kill. The cub was small about the size of a jungle cat. Suddenly a herd of buffaloes appeared and the cub expertly descended the tree running among the surprised

buffaloes. The female called anxiously to the cub a high pitched whistle very unlike the usual sawing call heard at night. She then descended and disappeared with the cub into the nullah. The game scout gestured and I drove across to the other side where after a short search we found her but not too pleased with our sudden appearance. She snarled and whipped her tail sideways and suddenly turning around disappeared where her cubs were hidden somewhere in a thicket behind her.

RISHAD NAOROJI

(To be continued)

Some curious Lycaenid butterflies of the Bombay and Pune area

This is the second part of the series and is continued from p. 20 of
Hornbill 1985(1).—EDS.

THE GUAVA BLUES. There are two species of this group in the Bombay-Pune area. They are strong, fast-flying insects. (See figure 1 & 2) The male of the Common Guava Blue (*Virachola isocrates*) has dull violet-blue uppersides, but at certain angles one's eye is delighted by a brilliant 'shot' blue, deflected by the structure of the wing scales.

The Large Guava Blue (*Virachola perse*) is shining blue above in the male with dark borders and sometimes an orange patch on the forewing. It is a jungle and hill insect, with the same habits as *V. isocrates*.

The males of these butterflies are fond of sitting about, often high up, on the foliage of trees such as *neem* and fig — anywhere giving a good view, sunlight, and the coolness of green leaves. From such vantage

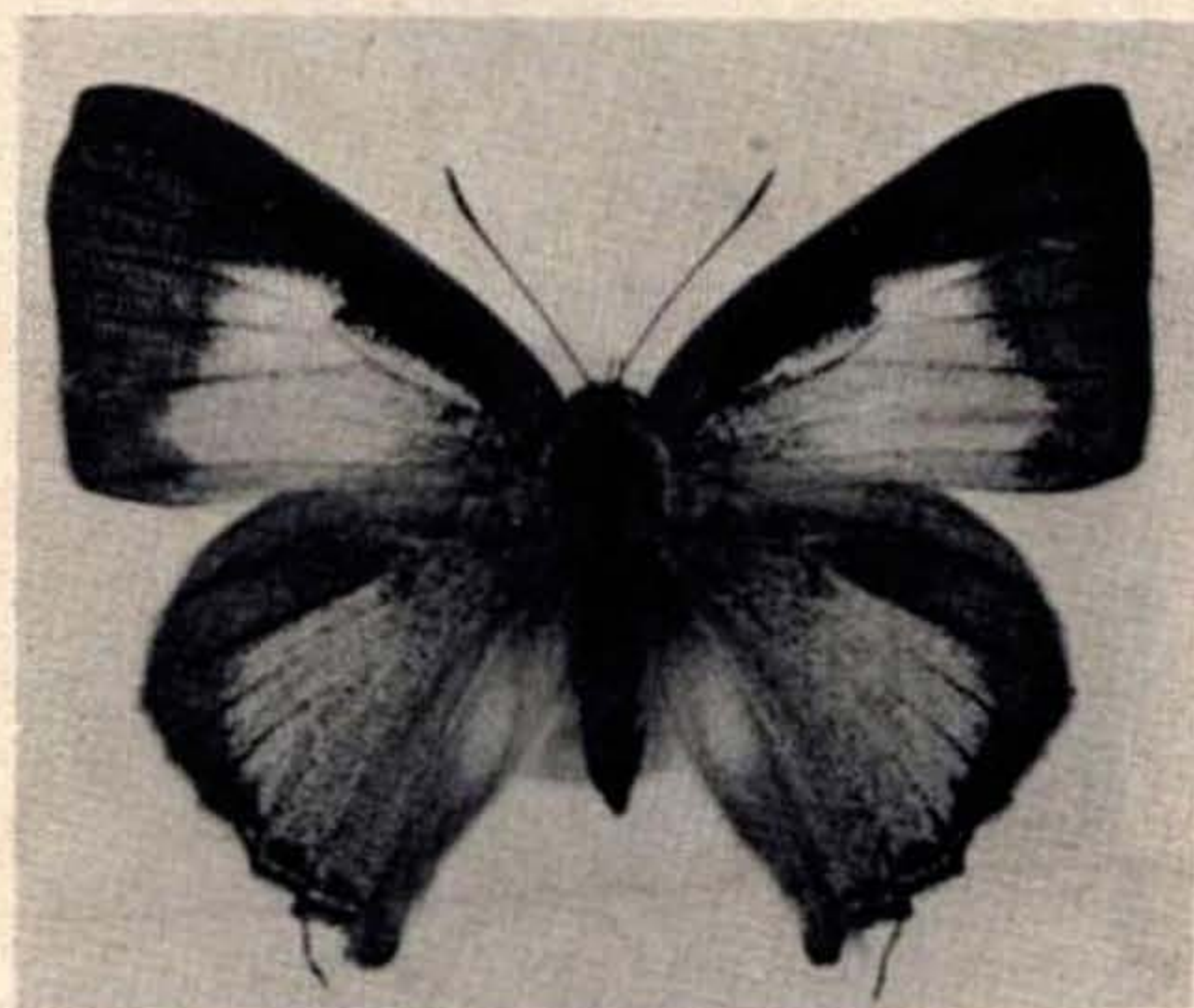


Figure 2. *Guava Blue* ♀

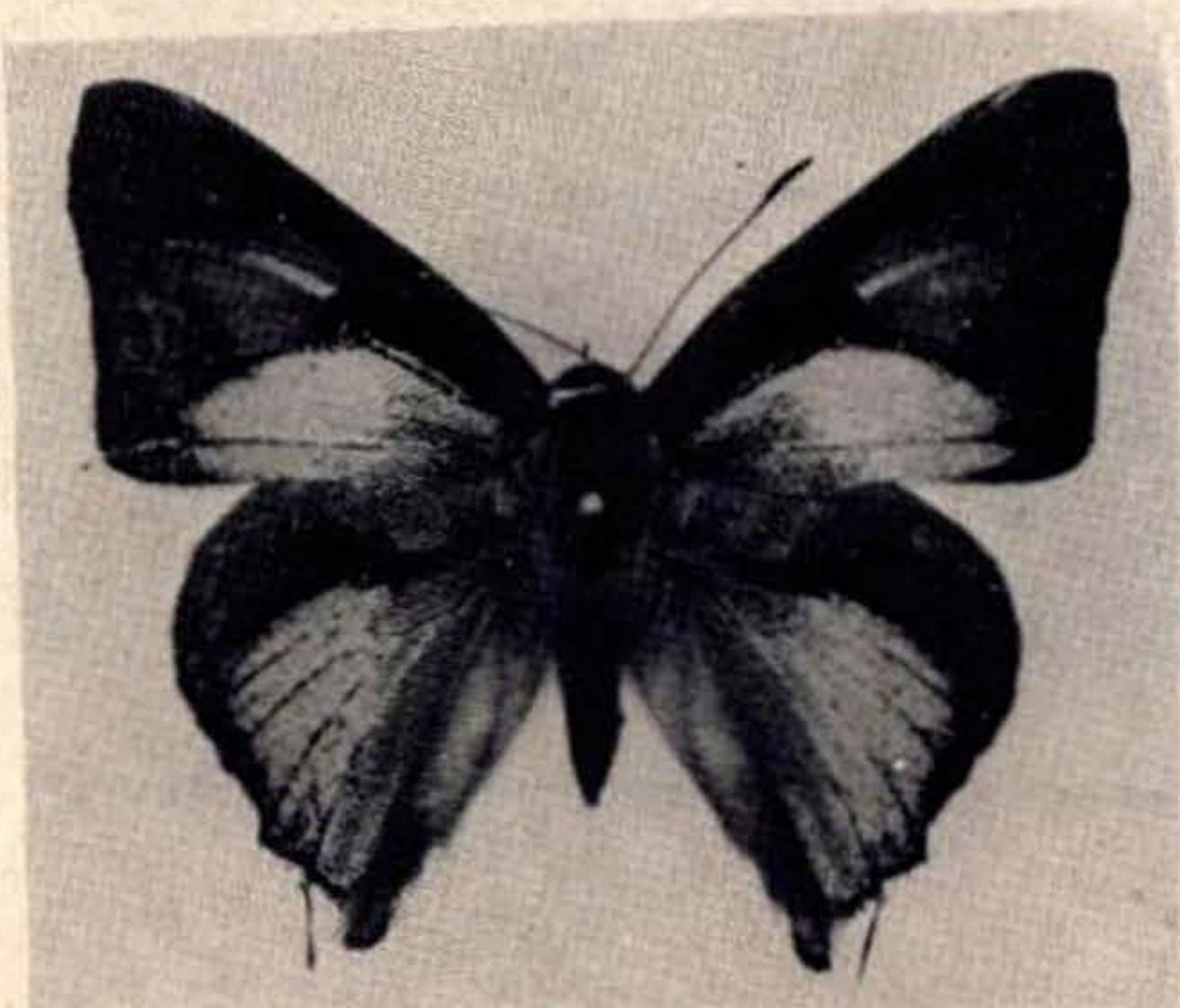


Figure 1. *Guava Blue* ♂

points they chase other males with tremendous vigour, two or three sometimes shooting skyward as they whirl around one another. This is not directly to do with courtship, but may be territorial behaviour, male rivalry, or simply high spirits.

The females behave differently, keeping to low levels to attract a mate and lay their eggs. So far as I know the courtship of these butterflies has not been observed. I don't remember having seen even a mated pair. The males have an apparatus, presumed to be scent producing and used in courtship. It consists of a brush on the underside of the forewing and a bare polished area on the upperside of the base of the hindwing.

The females of both species are larger than the males and the wings are more rounded. The ground colour is brown or pale blue, with an orange or yellow patch on the upperside of the forewing. The butterflies may be caught at flowers, both sexes of *isocrates* at Poinsettia for instance. In the jungle I have taken *perse* males on the flowers of *Leucas*.

I once found an *isocrates* egg shortly after it had been laid in a flower of pomegranate. The larva lives entirely inside the fruits of pomegranate or guava. The fruit may form around an egg or young

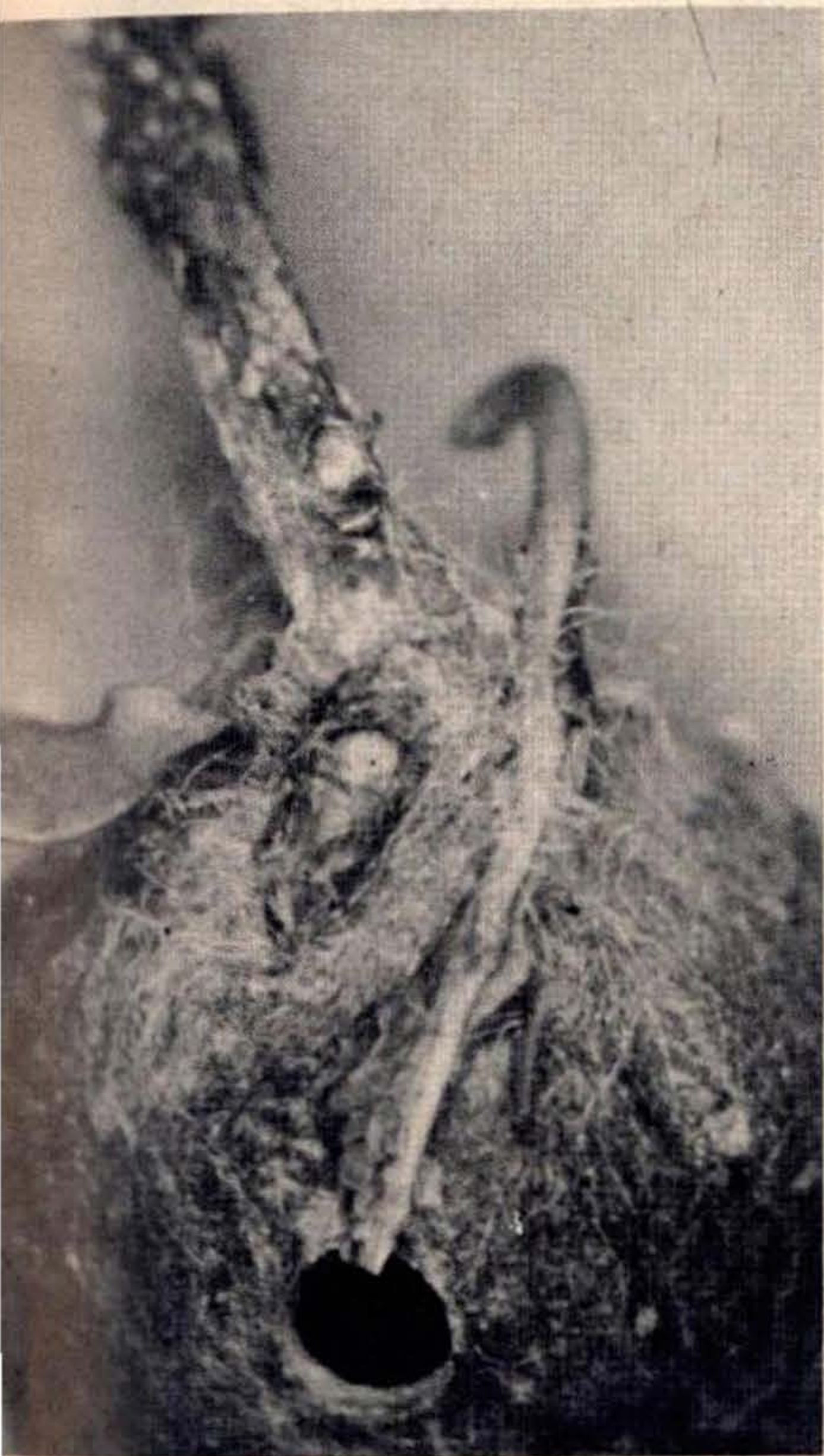


Figure 3. Fruit fixed to the stem by the larva

larva, or a larva may bore into a fruit from outside. More observation is needed! Once established, the larva makes a neat round hole in the hard rind, giving some ventilation. When not eating the juicy pulp it can fit its shovel-shaped tail end into the hole, thus keeping out enquirers. The shovel helps to push its droppings out through the hole. After eating a fruit completely out it will move to another fruit.

While the larva is eating the pulp and other vital parts of the fruit it follows that fragile parts like the stalk will weaken, and the fruit will be in danger of falling and so drying up. The larva has a behaviour pattern which guards against all this. Probably at night, it comes out of its home and fixes the fruit to the stem with an untidy but efficient array of silk threads produced from its mouthparts. Although quite unaware of what it is doing and why, the result is as advantageous to the species as if it were an intelligent animal. (See figure 3)

Before turning into a pupa inside the fruit the larva spins a white silk curtain of fine threads over the hole, leaving two little ventilation spaces. (See figure 4) The threads of the curtain prevent ants or other enemies from getting in and eating the pupa; the threads, however, can be easily pushed apart from the inside. So, when the butterfly is ready, it comes out of its pupa case and reaches the open air through the silk guarded hole, afterwards drying its wings in the usual way. It may be that the pupa pushes the silk strands apart before it splits at the head end

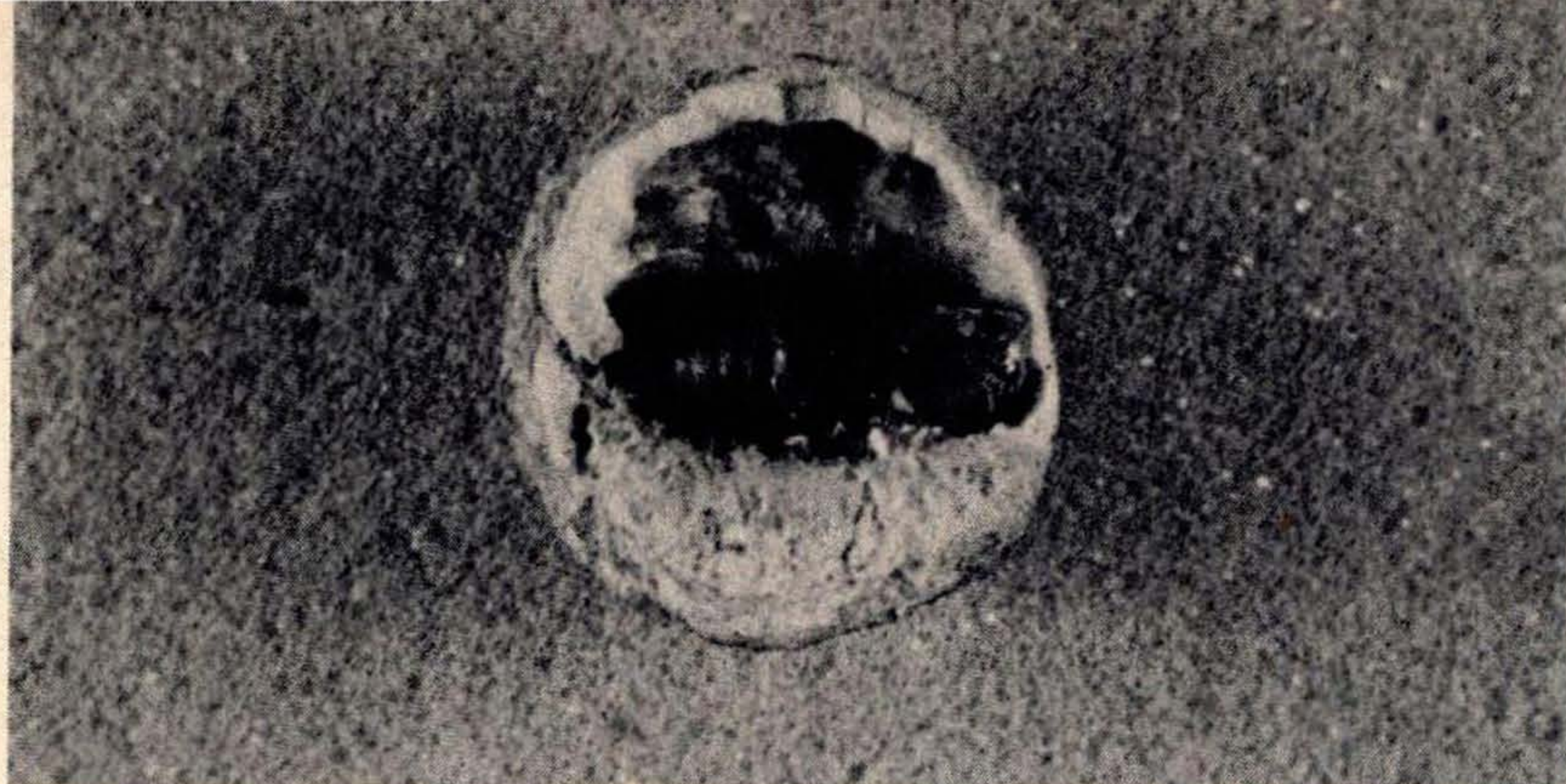


Figure 4. *Emergence of the butterfly*

for the butterfly to emerge. It would be a very good piece of observation, and difficult to make, if anyone could verify this theory.

In order to see and enjoy some of the butterfly's life history for yourself, look for guavas or pomegranates with a hole in them. Even though you live in a town you are very likely to find *isocrates*, certainly in Maharashtra. If there is no white silk curtain in the hole it means either that a feeding larva is inside or that the butterfly has already come out. It is worth sawing open a fruit without a curtain. Cut down the long axis. You may then see the pupa shell with its head end pointing towards the hole, and probably the cast skin of the larva. If the fruit contains a live larva it may come out when you start sawing, so have a guava ready for it to enter. A guava is better than a pomegranate because it is soft. If the curtain is intact there's probably a live pupa inside. In that case you can keep the fruit, with its hole to the side, under a gauze cage. Any net material will

do, especially the dark kinds which allow you to see through almost as if they were glass. Support the gauze with two wires bent over in the shape of a long U, tying them where they cross at the bottom of the U. Then stick the four feet into a flower pot of earth topped with gravel, and tie the gauze with a string under the rim of the flower pot. An elastic band is effective, but it will perish in the dry weather.

The large Guava Blue (*Virachola perse*), has the same habits as the commoner kind. You will find them in large numbers on jungle hillsides, at Khandala and Lonavla for instance. The Common Guava Blue flies with them there. Both species live as larvae inside the very hard fruits of a thorny jungle tree known as *ghela* (*Randia* sp.)¹

REV. A. BEAN, SSJE

¹Common Emetic Nut *Randia spinosa* (= *dumetorum*), a common tree of Bombay Ghats.—EDS.

Chinese Monal bred in captivity

Since the first pair of Chinese Monal was received by mistake by an American pheasant fancier in 1930, the species has not been available in the States until a pair was received by the San Diego Zoo in 1983. As colourful as the Himalayan Monal though about onethird larger in size, the species is restricted to Sichuan in SW China. The pair bred at the Zoo. Five chicks resulted from two clutches of five eggs each laid in April and hatched in May. No earlier records exist of captive breeding of the species (*World Pheasant Association News* No. 6, September 1984).

Mauritius Bird Fauna

Island species through the protection provided by the isolation of their environment are unable to meet the challenge of changes in their environment. Mauritius provides classic examples. The endemic Pink Pigeon has lost out through the destruction of the original forest. Only 15 to 20 birds survive in the wild. Captive bird specimens both at Mauritius, Jersey Wildfowl Protection Trust and elsewhere now number nearly a hundred, and are being released in the wild. The Mauritius Kestrel which has only an estimated population of six pairs in the wild is now being captive bred. The main problem for the kestrel is the rarity of its natural food, geckos which have disappeared along with the forests. The most endangered among Mauritius birds is the Echo Parakeet, about 8 individuals of which exist in the wild (*The International Council for Bird Preservation Newsletter* 6(1), March 1984).

'Progress' in the Antarctic

The Antarctic's unique and fragile ecosystems have so far escaped the ravages brought by human interference. The French have now plans to score a first in the destruction of this unique continent. An air strip

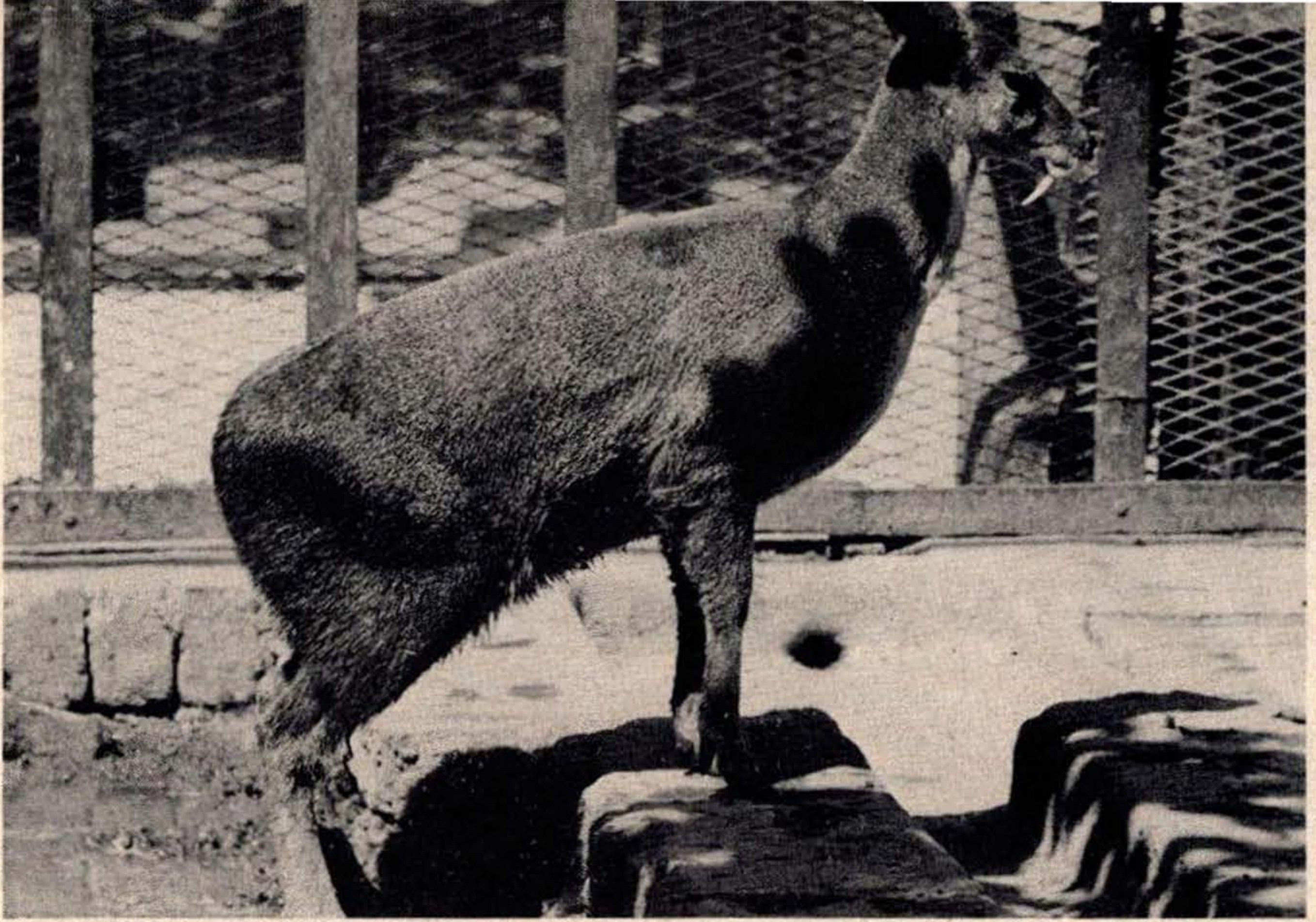
capable of taking large transport planes is being constructed in the Pointe Geologie Archipelago. Nine species of birds nest in the vicinity including Emperor Penguins and Giant Petrels. The Dumont d'Urville Centre of France which the air strip will serve does a great deal of ornithological studies. It is ironic that to service the Centre the birds, which are one of the reasons for its existence, are being destroyed (*The International Council for Bird Preservation Newsletter* 6(1), March 1984).

Rediscovery of Wild Mango

A delightfully sweet wild mango, locally known as *bingloo* is now rediscovered in a remote area of SW Java after about 85 years. Bingloo is less fibrous than *Mangifera kemanaga*, a variety sold in large quantities in Borneo markets. It is surmised that this ancestor of the mango would be found in the island of Borneo, where WWF/IUCN Wild Mango project is based, and that its find would help to solve the puzzle of genetic diversity of *Mangifera caesia* introduced to science in 1825 (*WWF News*, Newspaper of the World Wildlife Fund, No. 34, March/April 1985).

Solar energy for Ladakh

Situated in the rain shadow of the Himalayas, Ladakh enjoys 325 days of annual sunshine, and abundant solar energy. This has been put to use for heating rooms using the Trombe Wall designed by Dr Felix Trombe. Simple to build and maintain, the Trombe Wall consists of a south-facing wall painted black and covered with a double layer of glass in a wooden frame. Vents at the top and bottom draw in heat and draw out cold air by convection, making the room cosy and warm. The Trombe Wall and solar cookers have been enthusiastically accepted by the Ladakhis (*WWF News*, Newspaper of the World Wildlife Fund, No. 34, March/April 1985).



Musk deer buck, the species most likely to become extinct
Photo :E.P. Ghee



The Himalayan bear, a victim of commercial exploitation
Photo : E. Hanumantha Rao



The Indian Bullfrog, the main source for the frogleg trade
Photo : Isaac Kehimkar



Rhesus — always under threat

Photo : Oswald T.

Musk and Musk Deer

At about 800 US dollars an ounce, Musk is now probably the most expensive animal product. Michael Green who completed a five year study in the Western Himalayas is of the opinion that at current levels of exploitation the species is unlikely to survive, unless saved by being replaced in the commercial market by synthetic substitute. Presently about 372 kg of musk is used annually, the major portion of approximately 272 kg in annual average worth 4.4 million dollars being taken by Japan. This large amount of musk is mainly obtained from animals killed in the wild. The slaughter is indiscriminate, both males and females being killed, though only the male has the musk gland or pod (*WWF News*. Newspaper of the World Wildlife Fund, No. 34, March/April 1985).

Old Blue

The Chatham Island Black Robin *Petroica traversi* is probably the rarest bird in the world. There were only five living in 1980. The situation was changed largely through the egg-laying capacity of an 8 year old female, nicknamed 'Old Blue', who laid enough eggs to raise the population to 30 in 1984. She is presumed to have died this year (1985), and had the rare honour of being commemorated by an announcement in the New Zealand Parliament (*World Birdwatch*. The Newsletter of the International Council for Bird Preservation. Vol. 7, No. 7, Spring 1985).

Rhino Horn

In 1983, South Korea imported from Indonesia 300 kg of rhino horn valued at 161,209 US dollars and Taiwan imported from South Africa 117 kg, worth 81,049 US dollars (*Traffic Bulletin*. IUCN Wildlife Trade Monitoring Unit. Vol. 6(5), 21 January 1985).

Japanese Bear Trade

In South Korea, the gall bladder of the bear is believed to be cure for digestive troubles, in-

flammation and as a blood purifier. In Japan it is believed to be a curative for liver, stomach and intestinal diseases. The major casualty of this belief is the Himalayan Black Bear distributed from the Himalayas to Japan and Korea and critically endangered in both these countries. A bear killed by a poacher fetched nearly 48 million Won (about 57,000 US dollars) when auctioned. The dried gall bladder weighs on an average between 50 to 120 g, depending on the race, the Himalayan race has the heavier average. About 37,000 black bears are slaughtered annually to meet this demand. India exported between 1979 and 1984, 524 kg of bear gall bladder to Japan, the major centre for this nefarious trade (*Traffic Bulletin*, IUCN Wildlife Monitoring Unit. Vol. 7(1), 19 April 1985).

Froglegs

Over a hundred million Indian Bullfrog *Rana tigerina* are harvested annually in India and Bangladesh to meet the world demand for froglegs. Over 7 million pounds of froglegs: India (4,111,103 lb.) and Bangladesh (3,011,455 lb.) were exported in 1984 to USA and Europe. This is an enormous drain on the population of an economically valuable animal (*Traffic U.S.A.* Vol. 6(2), April 1985).

Rhesus Export

India's ban on export of Rhesus Macaques in 1977 resulted in a contract between MOL Enterprises, a leading American animal dealer and the Government of Bangladesh. This contract was cancelled when the International Primate Protection League was able to convince the Government of Bangladesh that the monkeys were being used for weapons development research and not in research 'of benefit to the whole of humanity.' A 15 million US dollar breach of contract suit filed by the importing company was rejected by an American Court, a verdict which was upheld by the US Court of Appeals (*Newsletter*. International Primate Protection League, Vol. 11(2), August 1984).

A 'sanctuary' within a town

One of the interesting natural phenomenon of the Saurashtra region of Gujarat is the presence of a large number of mini-bird sanctuaries inside bustling towns. People, generally being vegetarian do not molest the birds and consequently our feathered friends show a remarkable tameness which is mostly absent in other parts of the country where the birds are shot. Bhavnagar, Porbander, Dwarka and Jamnagar, all these towns have such sanctuaries inside or adjoining the towns (Fig. 1).

During our bustard survey in Gujarat in January 1984, we visited

one such 'sanctuary' in Jamnagar town. A small body of water not more than 10 to 15 acres, surrounded from all sides by buildings was the home of more than a thousand shovellers (Fig. 2), a few common teals and pintails along with other ducks and waders.

This lake is called as Ranmal lake after Jam Ranmal during whose period this lake was developed to maintain the water regime of the city. After the end of the princely state, unfortunately, the lake was neglected and now with the increase in human population, the future of the lake is uncertain. Buildings are

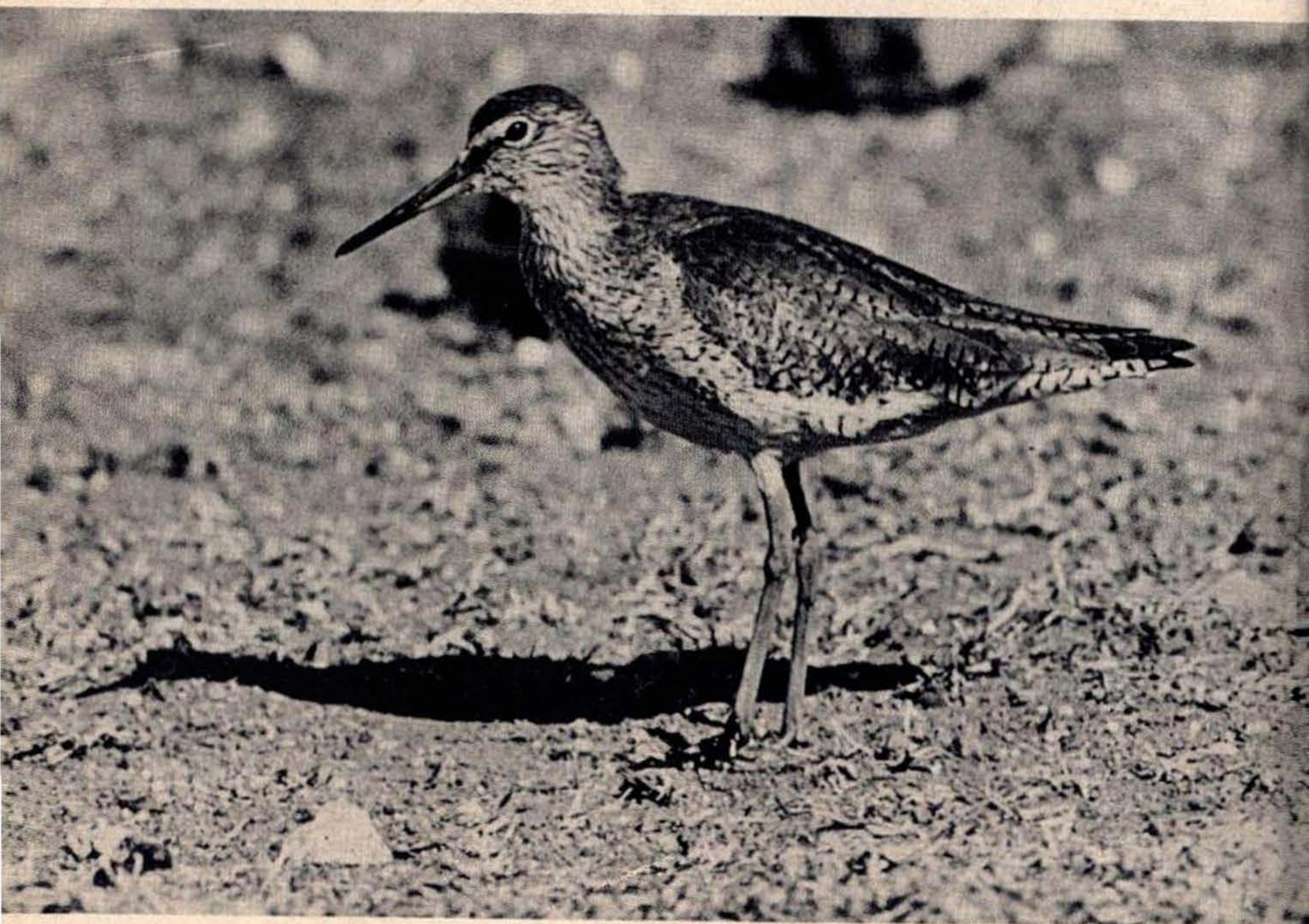


Little Cormorants and Shags nesting on a partly constructed building in the talab
Photo : Carl D'Silva



Blackwinged Stilt

Photo : E. Hanumantha Rao



Redshank

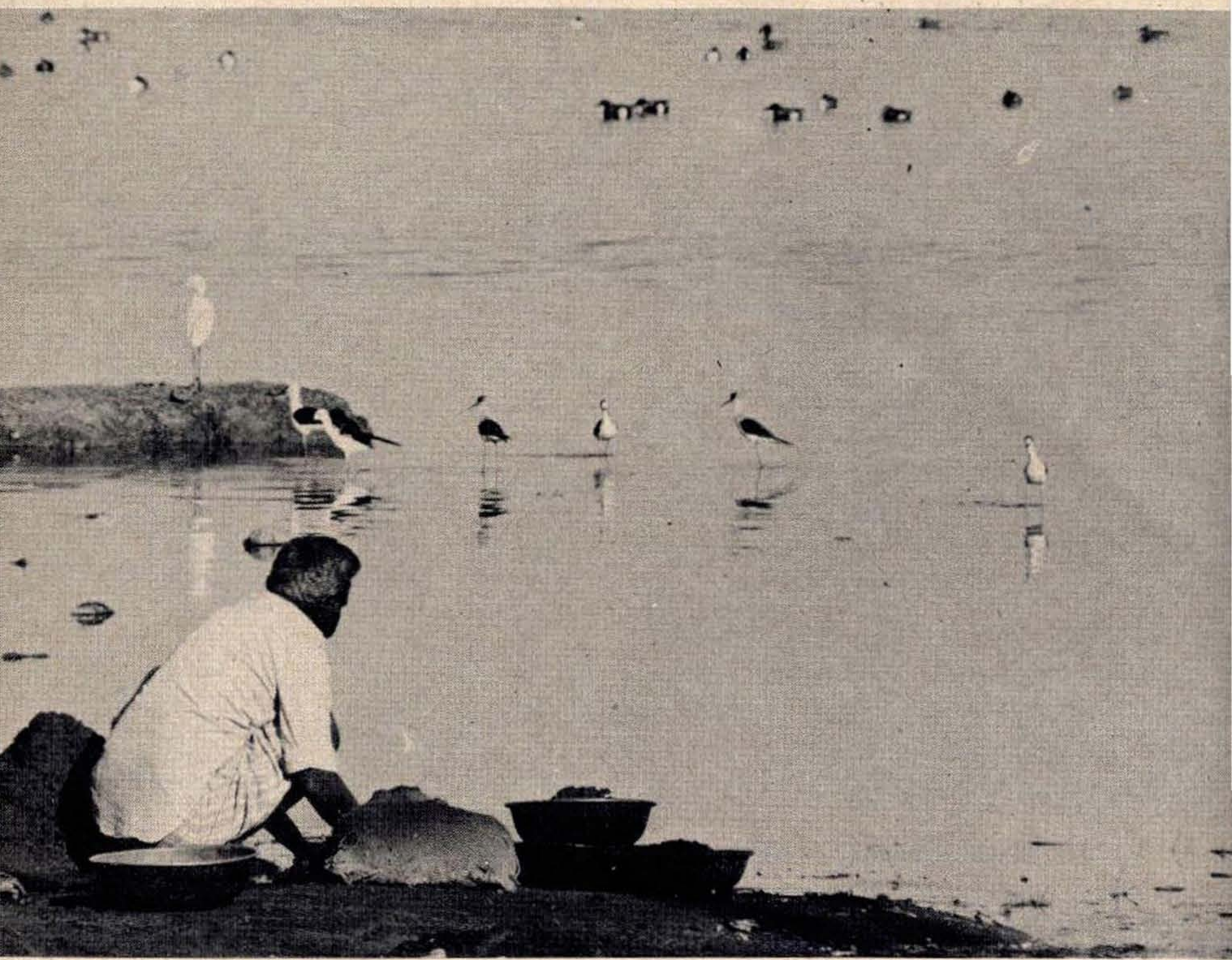
Photo : E. Hanumantha Rao

literally pushing this lake into oblivion. A few years ago, a road was constructed which has bisected the lake into two parts, now named as Agla and Pichla talab. A small portion of the lake was reclaimed to construct a bus stand, MIG colony and a few private houses. Protest by nature lovers stopped the construction of another huge building — the plinth can be seen which is now used by darters and cormorants to perch (Fig. 1). Nevertheless, every now and then new proposals come up to 'develop' the lake. A swimming pool and a multi-story commercial complex is planned. Needless to say, all these buildings could be constructed in other areas saving this beautiful mini-sanctuary.

A more invidious enemy is the increasing pollution of the lake. Sewage from the surrounding colonies finds an easy outlet in the lake. Government vehicles and private autorickshaws are washed here leaving the lake more polluted. Belatedly, Government has put up a notice board that washing of vehicles is prohibited in the lake but no one follows the restriction when they see the local State Transport buses violating the rules. After many protests by Nilesh Dave, District Co-ordinator of World Wildlife Fund-India and a very active conservationist, the municipal corporation removed 50 hawkers who used to sell fodder near the lake and used to dump the leftover in the lake. Strangely the same municipal corporation regularly dumps garbage (Fig. 3) in the water due to which every year the area of the

talab is decreasing. Perhaps land-sharks will not have to wait for long to grab this primary land once it is filled.

Due to the difference in the depth of the water, many types of birds are seen in the two sections of the Ranmal lake. Nilesh Dave has counted 60 species. Water is very shallow in the Pichla talab which is to the liking of shovellers which feed by skimming the surface. When we reached the place at 11.30 hours, most of the shovellers were sleeping. At 13.15 hours, almost all the shovellers started feeding. It was a memorable sight to see more than a thousand shovellers feeding simultaneously: chestnut belly, metallic green head and white breast of males contrasting with the drab colours of the females and subadult males. Garganey and common teal, openbilled stork, pheasant-tailed jacana, wood sandpiper, redshank, common sandpiper, common snipe and blackwinged stilts are some species found in this lake. The Agla talab, having water depth from three to seven metres, revealed dabchick, Indian moorhen, cotton teal, pochards, coot, purple moorhen, median egret, darter, shag and little cormorant. We also saw one of the two muggers basking in the sun. Local people believe that both the muggers have a gold ring in the nose. These rings were put by the benevolent Jam Sahib (the former Maharajah of Jamnagar) who was well known for his love of animals. With the gold prices shooting up to two thousand a tola (10 g), we hope these legendary gold rings will not



Will man edge out the birds from Jamnagar City talab?

Photo : Carl D'Silva

give added inducement to poachers to shoot these muggers.

Although there is nothing very extraordinary in Ranmal lake and most of the birds which are seen there are common in many lakes and jheels, if this lake is destroyed, people of Jamnagar will lose a spot where birds and humans can co-exist side by side. We request the Municipal Corporation of Jamnagar to stop dumping of garbage and to develop these talabs into a mini-bird sanctuary.

In addition to the beauty provided* by the birds right inside the city, these lakes offer a wonderful opportunity for local biology students to study the food and feeding habits of the shovellers and other common birds. Perhaps, nowhere one can see a thousand shovellers from his/her drawing room window. Even an arm-chair ornithologist can discover some of the unknown facts of our common birds. Is anyone listening?

ASAD RAFI RAHMANI
CARL D'SILVA

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A. N. D. Nanavati, M.D.
Honorary Secretary

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