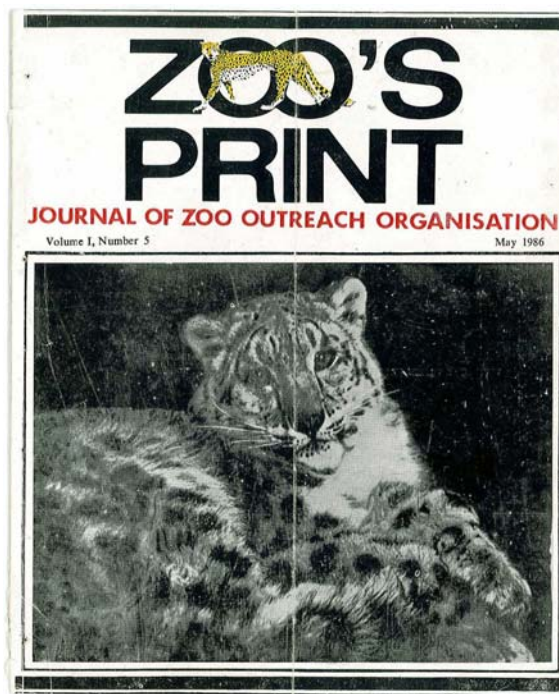


## "This month-That age" - ZOOS' PRINT 25 years ago - May 1986



*In the last years of my association with the Friends of Mysore Zoo, which I had founded, and the first years of Zoo Outreach Organisation, I used to travel around India a lot. This was thanks to Dr. T.N. Khoshoo who appointed me a Special Invitee to the National Zoo Advisory Board in Delhi. This enabled me to visit Delhi by air at government expense and move around by train to different places at my own expense. Zoo Outreach Organisation was an outcome of these visits, suggested by Dr. Khoshoo and even funded by the Department as a national level NGO.*

*It was quite a step up from a city zoo NGO, e.g. Friends of Mysore Zoo, and I tried to keep up with zoo things happening. I used to go to Shimla everytime a baby Musk Deer was born, for example, so you can imagine my excitement when Snow Leopards arranged by International Snow Leopard Trust came to Darjeeling Zoo. I happened to be visiting Calcutta at the time and ran into the famous Dr. R. K. Lahiri at the Zoo. He invited me to Darjeeling to see the arrival of the animals and shared much interesting information about the Snow Leopards and many other species. I went to Darjeeling and spent a few days there observing the entire galata of their arrival and settling in, taking photos, etc. I interviewed Monesh Gupta, Secretary, Dept. of Environment, Govt. of West Bengal who gave unstinting support to the Darjeeling Zoo's Snow Leopard project. The whole May 1986 issue of ZOOS' PRINT was devoted to Snow Leopards.*  
**Sally Walker, Founding Editor**

### **To Ensure Survival Captive Breeding the Snow Leopard in Darjeeling - By Dr. R. K. Lahiri Director, Calcutta Zoo, Calcutta**

*This article was taken from Dr. R. K. Lahiri's Project Report for establishment of a Breeding Centre for Snow Leopard and from his comments during interview and conversations. Dr. R.K. Lahiri consulted nearly fifty sources in preparation of his project report and implementation.*

Dr. R. K. Lahiri's Wild Life Conservation Pledge  
"Convinced of the fundamental importance of conserving the natural environment, upon which rests the foundation of human civilization, I solemnly pledge that I will spare no effort to preserve our vanishing wild life and our dwindling forest areas which our generation holds in trust for posterity".

The magnificent member of our majestic cat family, the Snow Leopard or Ounce *Panthera (Uncia) uncia*, Schreber 1775, is one of the most endangered fauna listed in Schedule I of the Indian Wild Life (Protection) Act, 1972. The Snow Leopard, inhabiting its range on the southern slopes of the Himalayas, has suffered tremendously at the hand of man for its sheer beauty and attractive, soft and thick fur. Because of its beautiful coat this exotic feline was subjected to enormous exploitation, so much so that it is hardly seen anywhere except in strictly protected areas and perhaps in remote, inaccessible, native haunts. Now its position is so threatened that the promptest measures for conservation including captive breeding are needed.

Our knowledge about this rare cat is indeed very incomplete, especially its distribution and numbers. No serious effort has ever been made in India for rearing this species in captive conditions, except a recent abortive attempt in Himachal Pradesh. Unless the species is properly studied in captive or semi captive condition no proper measures can possibly be chalked out for its conservation in natural haunts. It is urgently necessary that at least some specimens should be reared in captivity for conducting studies on various aspects of its biology in order to insure its survival.

Padmaja Naidu Himalayan Zoological Park Society, dedicated to conservation of Himalayan Wild Life, took serious note of the present position of this particular rare species and examined possibilities of embarking upon a captive breeding programme pertaining to Snow Leopard.

Sri Hari Dang Rector, St. John's School first proposed starting of Snow Leopard captive breeding programme in our Park. Sri Dang voluntarily offered to

contact the International Snow Leopard Trust for assistance in implementing the project.

Dr. Ingo Rieger of Switzerland was contacted and came to Darjeeling. He inspected the possible sites, studied the topography and finally agreed with the selection made earlier of a suitable site within the campus of the Padmaja Naidu Himalayan Zoological Park in the midst of a sylvan setting. Dr. Rieger also extended his valuable assistance in the matter of drawing up the plan and design of required Snow Leopard facilities.

The main objective of the project is to establish and maintain a breeding centre for the Snow Leopard at a suitable location in the Padmaja Naidu Himalayan Zoological Park, Darjeeling.

It is a conservation effort aimed at captive breeding and multiplication of the procured stock to ensure their survival and display for all time to come in Darjeeling. During the course of the project we shall acclimatise, rear, breed and multiply the endangered species and then make efforts to establish subsidiary breeding centres in suitable locations at higher altitudes in the Himalayas. The study of acclimatisation, behavioural traits, e.g., feeding, reproduction, other components of behaviour in captivity will be taken up to work out various aspects of the hitherto unknown biology of this rare species. This project will also provide opportunities to scientists and naturalists for study of the Snow Leopard under captivity/semi-captivity and promote rational utilisation of our facilities for scientific, educational, recreational and other purposes. Special and guided visits of interested tourists to the Centre will be arranged in order to arouse public consciousness about this endangered rare species and to cater popular and scientific information relating to this species amongst people from far and near.

An additional by product of the programme will be to provide an additional employment opportunity to the local people of the hill areas and to help boosting up of the economy of the area through this prestigious venture directly and indirectly.

#### **Basic Information about the Ounce**

The Snow Leopard or Ounce-Panthera Uncia (Schreber) belongs to the cat family and is highly endangered. No exact data are available as to the size of the natural population but it is a well-known fact that the population is greatly diminished in number and is still decreasing in spite of the protection measures in many countries.

Snow Leopards live in the mountains of Central Asia in inaccessible areas. It is, therefore, not possible so far to estimate the size of the wild living population with any real degree of accuracy. In India Snow Leopards range; along the whole Himalayan chain from Kashmir to Bhutan.

Northwards their territory extends into Tibet, Central Asia and Altai.

Generally the Snow Leopard is encountered above the timber line where it inhabits rocky wilderness, snow fields, glaciers and meadows as far as the belt of Juniper and spruce forests, Rhododendron and other bush vegetation. Seasonal migrations occur from higher to lower zones. In the winter months the Snow Leopard descends with the movement of its prey species to the lower altitudes. They stay within their territories and do not migrate extensively.

#### **Selecting the Site**

Pending arrival of the invited foreign experts a Site Selection Committee in its first deliberation examined five possible sites including one in the Lebong Park area. The Lebong site was rejected because of its lower altitude, much warmer condition and other uncongenial factors for establishment of the centre. At the preliminary selection the site No. 1 was chosen, taking into consideration the meteorological conditions, altitude, accessibility etc.

The experts Dr. Ingo Rieger and Dr. D. Walzthoeny inspected the site on in July 1983 and after examining in detail the terrain, made their final selection of the site No.1. The exact location of the finally selected site which was ultimately in the North-Western corner of the Park. (Jawahar Parbat-Birch Hill) latitude 27° longitude 88°E, altitude 6900 ft. approx. (2130.07 nit.)

#### **Nucleus Stock**

The Nucleus breeding stock of the Centre will be 2 breeding pairs of unrelated Snow Leopards procured from overseas Snow Leopard Breeding Centres. It will not therefore be necessary to capture any animal from the wild. At present there is no captive Snow leopard in our country. It is proposed that at the initial stage the animals will be procured from Helsinki Zoo, Finland and Zurich Zoo, Switzerland on permanent breeding loan basis. The breeding pairs will be carefully selected by the afore said authorities after consulting the "International Pedigree Book of Snow Leopard, **Panthera Uncia**", with a view to ensure that the specimens are genuinely unrelated breeding pairs.

#### **Training of Staff**

At the initial stage a suitable senior keeper having experience in management of carnivore will be selected for this specialised work. As the centre will handle a very rare and endangered species initial training will be imparted to them about Snow Leopard, its care, management, breeding, rearing etc., by the officers of the Park at an appropriate time. Perhaps it will be necessary to send suitable officers abroad for visiting different Snow Leopard Breeding Centres in Europe/U.S.A. for gaining further knowledge about the management of this

species. It will be necessary to seek the assistance of the International Snow Leopard Trust for proper care and management of the Snow Leopard in captivity.

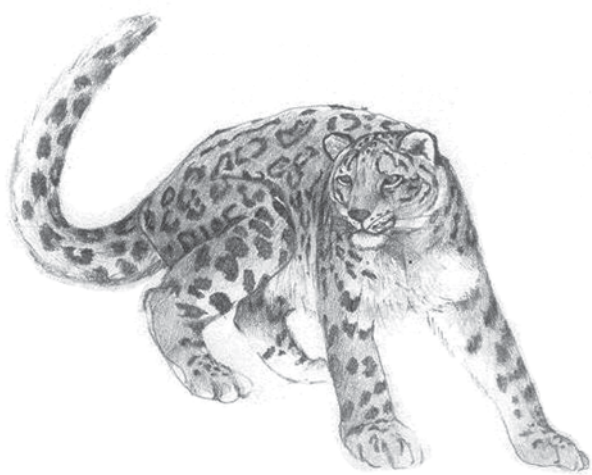
### Conclusion

The Padmaja Naidu Himalayan Zoological Society will be embarking upon an important and prestigious project involving this very rare and endangered species. Hitherto no serious effort has ever been made in India to establish a Snow Leopard Breeding Centre. This will be the first of its kind in our sub-continent and possibly in South-East Asia.

The project on being fully implemented besides fulfilling the main objectives will be a centre of attraction in the heart of the Himalayan Ranges not only in this country but also abroad. It is felt that considering the present status of the animal within our limits such a centre should have come up much earlier.

The proposed centre will function as a scientific unit for study of rare fauna facing danger of extermination and will eventually popularise the species and arouse an intelligent and enlightened interest among the people in the problem of preservation and conservation of a majestic species like Snow Leopard.

Such an endeavour will be of immense value to the nation not only for today but for all time to come since the proposed breeding centre, when successfully implemented and functioning with records of successful breeding of the species, will ensure survival of the rare cat in perpetuity. Thus both the direct and indirect benefit that will accrue to the nation cannot be over estimated.



## Back In Calcutta

– an Interview with Monish Gupta, Secretary, Department of Environment, Govt. of West Bengal.

**SW:** So you built the enclosures before you knew for certain that you were even getting the Snow Leopards ?

**MG:** In fact we were thinking of setting up facilities for breeding of endangered species. As you know, many species in India today are highly endangered, and notable among them is the Snow Leopard. This is a high-profile animal.

We thought that the best way to get international help was to show that we were able to provide good facilities. We spent 10 lakhs of rupees initially and then we spent another 5 lakhs on improvements. By that time we thought it would be a good idea to invite these people from Zurich Zoo to see if the facilities we provided were adequate. They came over, a Dr. D. Walzthoeny and Dr. Ingo Rieger and they were very happy with the arrangements. They recommended our case to the International Snow Leopard Trust with whom we were already in contact. They agreed to give a male animal from Zurich and a female from Milwaukee Zoo in USA. But I think that the female leopard there died of some liver trouble and we were reluctant to get one animal only-a male. Later they finally decided to give two animals from Zurich Zoo.

In fact I was keen to put in a humidification plant and we are still working on that. The place has a tendency to dampness. Although it's cool, it's damp and we thought that if we reduce humidity it would be more comfortable for the animals during the monsoons. We are in touch with one of the leading international companies. They are advising us about what kind of plant we should put in to control humidity.

**SW:** That's good. Because I think that's the only thing left that could possibly have been improved on at all.

**MG:** I think our local climate is such that we did not need anything at all, but I thought that we shouldn't take any chances. It does get a bit damp there wooden panellings and wooden floors tend to rot over a period of time. Of course the other way is to replace the whole panelling after a couple of years and keep repairing the stone walls so that there is no seepage of moisture. You must have noticed that the structure is basically concrete and it is not next to any hill, but out in the open, so there is less chances of it getting damp.

**SW:** Yes, they can get some sun. There are also no trees overhanging to fall and damage the enclosure.



**MG:** In fact, we did a lot of study on the environment of the cage itself—the approach road, the plants and the trees. We sent samples of leaves of the surrounding trees for testing to see if they contained any toxins, on which the animals might chew and get sick. We recently received the reports on that saying that some of the plants there are toxic to cattle and things like that but it wasn't anything serious. Cats may chew a little bit of grass now and then. They normally don't chew leaves.

The only thing that's been a little worrying is that temperatures in that area of Darjeeling have been a little on the higher side. Now that is a world-wide phenomena—there is a rise in the general temperature. The rainfall, is considerably less than it used to be. The temperatures might be on the higher side here in summer, but then it's quite cool in the shade.

**SW:** I was terribly impressed by the security there – policemen and a twenty-four hour guard there in addition to keepers, and in the first few days they closed the entire access road to visitors.

**MG:** Yes, and that's the only access road to that place. There's no other approach.

**SW:** You must have looked very carefully for that. It's excellent. If you wanted to close it for months you could. But what plans does the Department of Environment have to extend this type of project? Do you propose to start other centres?

**MG:** We're thinking. It's still on the drawing board but we have a Salamander conservation project. That's also in the hills in a place called *Kaddha*. By Salamander of course I mean the highly endangered Himalayan Newt.

**SW:** What is the status of that project ?

**MG:** We haven't got the ground as yet although a comprehensive project report has been written by Dr Lahiri. There is a problem about which department should look after it. The forest department, since it is in the forest and they have a lot of experience with wildlife feel that they should supervise it. And we feel that we would like to do it. The project has suffered because we cannot decide. Now we are willing to let the Forest Department take this on with a kind of committee with us on it, on which our Department will be represented. But I think that it may be another year before that takes off. Of course if this Snow leopard project is successful we would use this in a big way for other high altitude projects in areas like Sunderpur. Sunderpur is about 11,000 feet high whereas Darjeeling is about 6,500 feet high. So that's ideally suited for this kind of an animal, but the infrastructure is not there. Setting up the infrastructure in a remote place like that including building and maintaining a road of may be about 20-30 Kms having electricity, etc. would cost a lot. But

if this is successful we would like to put a project there because Sunderpur is one of the little known but very popular tourist spots, for trekkers and others. So if we had a breeding centre there it could promote a lot of interest internationally and the climate is absolutely ideal.

**SW:** Any plans for reintroduction?

**MG:** Their natural habitat is near Sikkim. That is quite a remote area near mountain passes to Tibet and China. Another area is in Ladakh in Kashmir. Yes, I think if this project is successful and we get a number of animals we will certainly think of releasing them. But that is a big scheme and the army will have to help because that area is generally left to the army. Now let's see how this will come along. Depending on that the ultimate aim is certainly to reintroduce them, and the International Snow Leopard Trust is conducting a big research programme on their habitat so we will be prepared.

**SW:** Is the Department of Environment particularly interested in any other species?

**MG:** Yes, there are many other endangered species which we have thought of, the mountain goat for instance, but we haven't worked on any project for that yet. This is for the near future as it is a prey species of the Snow Leopard.

**SW:** Yes, once this is successful then funding for other projects should be easier, Who has funded this project by the way ?

**MG:** This project has been funded entirely by the Government of West Bengal. But we have enjoyed the full cooperation of the centre in getting proper clearances for the animals, etc. We have been at it for some time yet it was dicey because when we had the problem with the female from Milwaukee Zoo, we had to postpone the transfer. Then we were in the warm season in summer which is bit risky. If it had been another 10 days or even a week we would have had to postpone the transfer from Zurich Zoo by another year. We just made it.

**SW:** Do you have plans to send anybody abroad to study at other snow leopard breeding centres ?

**MG:** We haven't moved on that yet but we are thinking. In the long term we will have to do something like that. People who are involved in the project should go over to such other centres which have been successful in breeding and see what kinds of arrangements have been made and how they compare with our setup.

**SW:** From what I observed in Darjeeling and now the interest being taken here, I think it will not be an unfavourable comparison. Thank you for speaking with us.

## Farewell But not Goodbye to Dr. J.H. Desai

### Sally Walker

Dr. J. H. Desai bid the National Zoological Park a nostalgic farewell on 21st March and headed for Dehra Dun to take charge as Assistant Director at the Wildlife Institute of India.

Dr. Desai acquired his doctorate degree in Zoology from an American University with the Painted stork as his research and dissertation topic. Turning his back on excellent career prospects abroad, Desai returned to his native India to take the job of Asst. Director in the then "brand new" Delhi Zoo where he served twenty-one years, many of them as Director.

During his service Dr. Desai researched a great number of aspects of animal health and behaviour. Due to his efforts the Delhi Zoo is well represented in the International Zoo Year Book, having contributed an article almost every year.

As a Painted stork expert Desai directed research activity on the large numbers of migratory and other birds which make the Delhi zoo one of the largest urban wildlife centres in India. This culminated in the publication of a comprehensive census of all the species in the Indian Zoo Bulletin Vol. II. No. 1 by Education Director Dr. A. H. Malhotra.

The Indian Zoo Bulletin had not been published since 1974 but Under Desai's editorship it began coming out on a regular bi-annual basis in 1980 with a vastly improved format and a greater variety of contributions and useful new features, Comprehensive reports on the status of some important animals in Indian Zoos such as the Lion and the White Tiger were made regular features.

Desai's advanced degree in zoology insured his strict adherence to details such as determination of the exact origin of lions, whether Indian or African. He drew attention to the importance of keeping the two sub-species separate.

Desai is the first man to recommend vasectomy surgery as one of the best methods for controlling the captive population of big cats, having done a comprehensive study of the problem of overpopulation of lions in Indian Zoos on the request of the Expert Committee of the Indian Board for Wildlife.

Dr. Desai was keen that the Zoo in the capital city should set the space and tone for Zoo management in the country. Therefore it was under his directorship and largely on his insistence that the name was changed from Delhi Zoo to National Zoological Park to reflect the importance of its role. Not everyone can appreciate, perhaps, what it entails to be the Director of National Zoo — the responsibilities are staggering. First of all being Number - one man in a 250-acre zoo is a 24-hour-a

day job in itself, as any Director even of a small zoo can tell you.

Added to that the NZP Director is automatically a member of many high-powered Delhi Committees and Member-Secretary of some which entails more even duties and responsibility. Moreover the Director of National Zoo also acts as the Co-ordinator for all the zoos in India, which is, or should be, in itself a full-time occupation.

A further claim on the time and energy of the man lucky (or unlucky) enough to occupy the post is that he has so many "bosses". From the ministerial level down to zoo volunteers or visitors everyone will have an opinion and a suggestion.

In addition, due to his knowledge and experience, Desai was called upon to assist with a number of wildlife projects, involving the capture of animals most notably the prestigious and delicate Rhino Translocation Project.

During Desai's tenure as Director, a number of "firsts" in the Indian Zoo scene were brought about. Desai organized the first workshop for Indian Zoo Veterinarians, of which the subject was the very useful Immobilization of Animals using tranquillizer gun. Over half the Zoo Vets in India made the trip to Delhi for that highly successful workshop. Two years later another advanced workshop was arranged in Semen collection for artificial insemination. Desai had high hopes for introducing high technology reproductive techniques in India and was often frustrated by the hurdles and difficulties in importing necessary equipment for zoos. He attempted for years to arrange tranquillizer guns for all zoos, an activity which only now is coming about.

Another aspect of the modern zoo which Desai pursued was that of Breeding Loan. After many letters and much urging individual zoos the concept of zoos loaning single animals to others with one of the opposite sex finally became well-established. National Zoo had taken the lead by loaning white tigers for increasing the gene pool of this highly inbred animal. Now breeding loan has become almost common practice in India.

Perhaps Desai's greatest achievement as coordinator of Indian Zoos however was in arranging two major All-India Symposia of Zoo Directors, the first in May 1983 and the second in November 1985. At these meetings many important policy decisions were taken, such as the need for establishing a Forum of Association for Indian Zoo Directors, emphasis on breeding endangered species, the need for a Stud Book or inventory of all animals in Indian Zoos and imparting training to middle level zoo employees.

A good start on the inventory has been made with more than half the zoos collections having been prepared as a booklet and distributed. Desai was particularly interested in the Association of Indian Zoo Directors and worked hard to see that by-laws and a format for it was drawn up for discussion at the Symposium. It was approved, by the Directors at the meeting.

At the National Zoo itself one of Desai's greatest achievements was the breeding and distribution of the highly endangered Thamin Deer. There is a herd of 15 at the zoo now and twenty have been distributed to seven other zoos making the total of 35, more than what exist in the wild. National zoo has also been the most successful in sustained breeding of the rare Lion-tailed Monkey.

Under Desai's guidance a large nocturnal house was completed last year and will soon open for the public. The 'front lawn' of the zoo got a face lift and a new lease on life by the installation of attractive brick mini-walls to organize the vegetation. Although it looks like a decorative measure its real purpose is to keep the public off the grass.

But it is in area of education of visitors that the National Zoo under Desai's leadership set an example for other Zoos. National Zoo was the first zoo in the country to experiment with using volunteers to assist in crowd control and visiting schools with audio-visuals. NZP introduced Education / Interpretation in Indian Zoos by conducting the first Teachers Workshops, hosting more than 200 teachers. The National Zoo is still the only zoo in India to have an Education Officer. Desai planned and supervised the recently constructed education room at the zoo in which a systematic programme of educational activities will take place.

Desai had been working closely with the innovative centre for Environmental Education to create a comprehensive Education Programme at the Delhi Zoo complete with co-ordinated signage, new literature, zoo guides and outreach activities. Unfortunately he will have to see this programme, like the nocturnal house, come to fruition from his new perspective at Wildlife Institute as there have been unavoidable delays.

But at least Dr. Desai was able to see through the gala Silver Jubilee festivities of National Zoo the arrangements for which were made by him. To complicate matters the whole thing was postponed twice, but finally came off in a very well co-ordinated fashion and without a hitch.

Desai encouraged botanical research in the zoo also and during his time a book on Plants of the National Zoo was written and released at the Jubilee function, making another "first" by National Zoo. There is an old American saying : "You can take a man out of the country (meaning village) but you can't take the country out of the man."

We think this may apply also to the zoo : "once a Zooman, always a Zooman."

If this is indeed a fact, then Dr. Desai is in an excellent position to be of even greater service to Indian Zoos in his new post. So far at the newly formed Wildlife Institute of India, courses in captive breeding have been sketchy and in Zoo Management, nil. It is a boon then for Zoo Culture in India that a man with such a rich educational background and so much practical experience in the zoo should be appointed at the Wildlife Institute. We can hope now that even though the man has left the zoo the zoo won't leave the man. We can think of Desai's promotion as a 'breeding loan' with Wildlife Institute of India and hope that this mating will result in many Zoo Management courses and activities as healthy offspring.

#### **Editorial note:**

*My prediction that Dr. Desai would go on to be of greater service came true. During his time at Wildlife Institute of India, he did an all-India survey of its many zoos, collecting information, evaluating, advising. His Report was of great value in assessing the "state of zoos" in India and gave support to the initiative to create a zoo authority and zoo legislation. Also while at Wildlife Institute Dr. Desai started the first zoo management training courses, in alternate years for middle level staffers and for directors of zoos. These were excellent courses. The first one for middle level staff held at Wildlife Institute was six weeks long and included an ambitious zoo tour around north India to Kanpur Zoo and others on the rickety WII bus.*

*Dr. Desai was kind to invite me and I was in some kind of zoo heaven. I knew all the participants as I had visited many zoos by that time and it was a great opportunity to tell them more about CBSG, ISIS and other organisations which could be of help to our zoo knowledge. We had resource persons from all over India come and lecture to the participants but the bulk of teaching was on Dr. Desai's shoulders, and also B. C. Choudhury's. There was a great feeling of camaraderie and appreciation on the part of participants throughout the course and at the end of the training, they honoured Dr. Desai by presenting a shawl and recounting what all they had learned in the time they were there.*

*Dr. Desai wrote a very comprehensive history of Indian zoos of India later in life and continued to advise and inspect zoos from time to time. Dr. Desai was the most knowledgeable person in the field of zoo science that I met in India, even today. He had studied in USA and was up on all the modern ways of thinking. He was way ahead of his time and was often misunderstood. If India had gone his way, our zoos would have improved much sooner.*

**Sally Walker, Founding Editor**