



**PADMAJA NAIDU HIMALAYAN ZOOLOGICAL PARK  
DARJEELING, WEST BENGAL  
NEWS LETTER**

**October- December 2016**

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## From the Directors Desk...

Caring for wildlife in captivity today is very complex and involves many different fields, as well as being intricately tied to species survival in the wild. The biology and management of zoo animals requires a great deal of knowledge to maintain a sustainable population of animals in captivity and ensure their physical and mental well-being. Padmaja Naidu Himalayan Zoological Park unceasingly works towards the objective of having better scientific husbandry practices for all the species housed. The Park in this quarter initiated adding to its infrastructure a new hospital building that shall be well equipped with all the modern medical facilities. Soil conservation work was done in all the herbivore enclosures including beautification of the park with fresh paints in the entrance to the zoo and the visitors shed, the chain link enclosures of the leopards have been fixed followed with enrichments in different enclosures of the Park and the breeding centers.

Activities in this quarter included educational programmes for different school students and trainees. The Park also celebrated International Biodiversity Day in collaboration with ATREE.

The West Bengal Zoo Authority again approved two research proposals of the Park. The study shall look into the population ecology of Himalayan Goral and Himalayan Newt. To enhance the research activities in the Park the Zoo volunteers over a period have contributed immensely in research related to animal management and behaviour including assessing the biodiversity of the Park. Mr *Palden Tamang* and Mr. *Norbu Sherpa* students of St. Joseph College and Darjeeling Government College have assessed the biodiversity of pteridophytes in the Park. The report shall be uploaded in the zoo website [www.pnhzp.gov.in](http://www.pnhzp.gov.in). The Park has also joined Med ZIMS since October 2016. The medical records updated shall be a ready reference for any kind of emergencies that occurs and the line of treatment that is required to be provided.

The Bengal Natural History Museum has been opened for the public and the taxidermy work has begun. Animal stuffing and preservation work has been done in this quarter.

The Park bid farewell to one of its longest serving Zoo keeper Mr. Pradeep Pradhan but simultaneously new zoo keepers were appointed by the State Zoo Authority.

The animals' health remained sound with successful treatments of some endangered species. All the animals have been paired for breeding in appropriate enclosures with necessary enrichments. All precautionary measures have been taken for the approaching winter season to prevent ill health of the animal.

See you all again in the next quarter and wishing all the readers a very Happy New Year.

**Director  
PNHZ Park  
Darjeeling**

## BIRTH OF ANIMAL

S.No	Name of Animals	Date of Birth	No of Chicks /Cub
1	Barking deer ( <i>Muntiacus muntjac</i> )	25.11.2016	1 Female
2	Barking deer ( <i>Muntiacus muntjac</i> )	30.11.2016	1 Female

## NEW PUBLICATIONS

S.No	Article
1.	Arun Kumar <sup>1</sup> , Upashna Rai <sup>2</sup> , Bhupen Roka <sup>2</sup> , Alankar K Jha <sup>2</sup> P. Anuradha Reddy <sup>1*</sup> . <b>Genetic Assessment of captive Red pandas (<i>Ailurus fulgens</i>) population.</b> Springer Plus (2016)5:1750
2.	Arun Kumar <sup>1</sup> , Upashna Rai <sup>2</sup> , Bhupen Roka <sup>2</sup> , Alankar K Jha <sup>2</sup> P. Anuradha Reddy <sup>1*</sup> . <b>Molecular sex identification of Red panda (<i>Ailurus fulgens</i>) suitable for non invasive genetic studies.</b> European Journal of Wildlife Research. ISSN 1612-4642
3.	Neema Raja Beulah Budithi <sup>a</sup> , Vinod Kumar <sup>b</sup> , Suneel Kumar Yalla <sup>a</sup> , Upashna Rai <sup>b</sup> , Govindswamy Umapathy <sup>a,*</sup> . <b>Non invasive monitoring of reproductive and stress hormones in the endangered Red panda (<i>Ailurus fulgens</i>).</b> Animal Reproduction Science (2016) pp 173-181.

## OUTREACH PROGRAMME

The outreach programme of the Park involves students of all levels including school students and trainees. The programme is meant to be an interactive learning experience and aims to bring about an understanding of the relevant environmental issues regarding conservation of animals and the role of modern zoos in aiding to that conservation. The programme involves an educational tour of the park followed by a session where topics pertaining to the environment, zoo management such as role and functions of the modern zoo and conservation breeding programmes are discussed. Educational material on the housed animals of the park, conservation breeding programmes of the zoo, its biodiversity etc are distributed to the students along with notebooks and refreshments.

During this quarter the education wing of the Park attended to 968 students and 149 faculties from 27 institutes.

Date	Name of school/ Training institute/ Colleges/ Universities	Number of students	Number of teachers	Education incentives
07.10.2016	NERIST, Itanagar	20	02	Education Materials, Visit to Zoo and Interaction.
19.10.2016	Gyanoday Niketan, Darjeeling	75	06	Education material, Visit to Zoo and Interaction.
21.10.2016	Army Public School, Darjeeling	72	06	Education material, Packet lunch, Visit to Zoo and Interaction.
22.10.2016	Notre Dame School, Kainjalia	40	06	Education material, Visit to Zoo and Interaction.
23.10.2016	Himalayan Run and Trek	27	01	Education material, Visit to Zoo and Interaction.
31.10.2016	Anuj SUMI Nimbong	17	02	Education material, Visit to Zoo and Interaction.
04.11.2016	Missionaries of Charity, Darjeeling	43	12	Education material, Visit to Zoo and Interaction
05.11.2016	North Point Academy	20	02	Education material, Visit to Zoo and Interaction

06.11.2016	Snowdrops School, Mirik	37	05	Education material, Visit to Zoo and Interaction
12.11.2016	Bal Narayan Memorial School, Kaijalia	40	05	Education material, Visit to Zoo and Interaction
14.11.2016	Mangalpuri Primary School, Darjeeling	20	08	Education material, Visit to Zoo and Interaction
14.11.2016	Ferrando Preparatory School, Dhajea Busty	20	05	Education material, Visit to Zoo and Interaction
14.11.2016	Sardeswari Girls High School	142	10	Education material, Visit to Zoo and Interaction
14.11.2016	Holy Angels School, Darjeeling	70	05	Education material, Visit to Zoo and Interaction
16.11.2016	Crayons Preparatory School, Darjeeling	47	08	Education material, Visit to Zoo and Interaction
22.11.2016	Divya Jyoti School, Piabong Tea estate	14	07	Education material, Visit to Zoo and Interaction
25.11.2016	Shahid Krishna Primary School, Soom Tea estate	18	07	Education material, Visit to Zoo and Interaction
26.11.2016	Rabridranath Higher Secondary School, Mirik	26	07	Education material, Visit to Zoo and Interaction
29.11.2016	Nawayug Primary School, Lepcha Busty	21	8	Education material, Visit to Zoo and Interaction
02.12.2016	Mount Kanchan Valley Secondary English School, Mehi, Nepal	24	03	Education material, Visit to Zoo and Interaction
03.12.2016	DR/Fr Training, West Bengal Forest School, Dowhill	19	05	Education material, Visit to Zoo and Interaction
05.12.2016	Future Star Academy, Singtom Tea Estate	10	05	Education material, Visit to Zoo and Interaction
07.12.2016	58 <sup>th</sup> Batch Forest Guard Training, State Forest Training Institute, Hijli	43	01	Education material, Visit to Zoo and Interaction
08.12.2016	Sittong Tribal M.S.K, Sittong	33	06	Education material, Visit to Zoo and Interaction
11.12.2016	Tashiding Junior Basic School, Kalimpong	22	07	Education material, Visit to Zoo and Interaction
12.12.2016	Siksha Sang Primary School, Ging	28	08	Education material, Visit to Zoo and Interaction
12.12.2016	Madhyamik Siksha Kendra, Ringtong	20	02	Education material, Visit to Zoo and Interaction



**NERIST, Itanagar**



**Army Public School, Darjeeling**



**Notre Dame School, Kainjalia**



**Anuj SUMI Nimbong**



**Bal Narayan Memorial School**



**Mangalpuri Primary School**



**Ferrando Preparatory School**



**Crayons Preparatory School**



**Shahid Krishna Primary School**



**Rabindranath Higher Secondary School**



**Nawayug Primary School**



**Dr/FR Training, West Bengal Forest School**



**Sittong Tribal M.S.K**



**Tashiding Junior Basic School**



**Missionaries of Charity**

## VISIT OF DIGNITARIES TO DARJEELING ZOO AND THEIR VALUABLE COMMENTS

Date of Visit	Name of Visitor	Designation	Remarks
07.11.2016	Shri. D. Biswas	Additional Principal Chief Conservator of Forest	
09.11.2016	Lt. General Amrik Singh	Chief of Staff, Eastern Command	A very well maintained environment for our nature companions. The staff is doing a humane service. Our gratitude and best wishes for the future. Compliments for the museum too. A great learning place. A very courteous and knowledgeable teaching staff. Best wishes.
25.11.2016	Shri. Sankar Dhar	G.B. Member, WBZA and HWLW BTR, Alipurduar	<p>Visited PNHZP &amp; Breeding centre, excellent management. Thank to the Director and his team for good behavior. Keep it up</p> <p>Visited CBC Topkedara, The staffs are working very well. The breeding centre is running smoothly with the assistance of the Director, PNHZP and other staffs. Zoo keepers are doing good jobs and they should also be sent to other zoos to gather more information to keep the zoo better. Very well keep it up.</p>
11.12.2016	Shri. Amitabh Agnihotri, IFS	Director, National Zoological Park, New Delhi	Impressive overall management of the zoo. Maintenance of the rest house one of the finest. Great experience with Mr. Chand, Director and his team. Congratulations and keep it up.
16.12.2016	Shri. V.K Yadav, IFS,	ACCF and Member Secretary WBZA	Herbivore enclosures and pheasant enclosures have improved. Work of animal hospital is in progress.
29.12.2016	Dr. Sidhanand Kukrety, IFS	CCF, Hyderabad	<p>Ineffable experience. Very well maintained zoo, very aesthetically displayed information and highly educative. The commitment and the enthusiasm of the staff add value to the overall experience. The stay in the forest bungalow was delightful and memorable, compliment to the Director and his team.</p> <p>Visited the Topkedara CBC. I am told that this is the only one breeding centre for the snow leopard in the S.E. Asia. The Red Panda breeding is already well and I am sure the commitment of the CBC will keep it going. The CBC is in pristine condition and needs to and officers for establishing and running this facility be kept like this for the success for the programme. I compliment the staff and wish the best for its success.</p>



**Shri. Sankar Dhar at the Reptile House**



**Lt. General Amrik Singh at the new BNHM**



**Shri. Amitabh Agnihotri, IFS, at the new BNHM**



**Dr. Sidhanand Kukretry, IFS at the park**

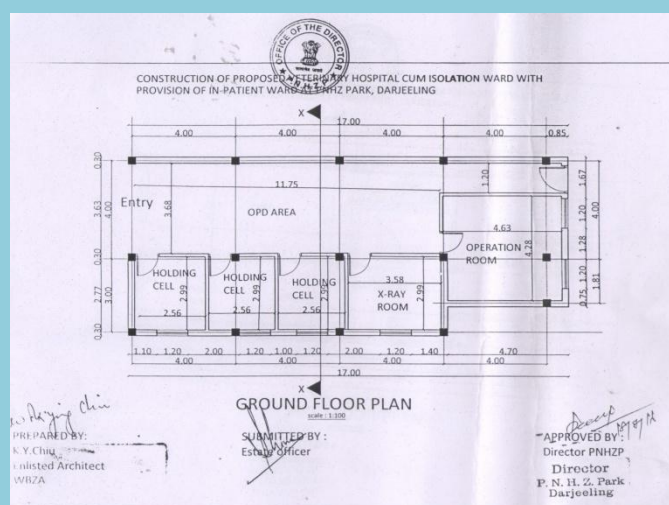
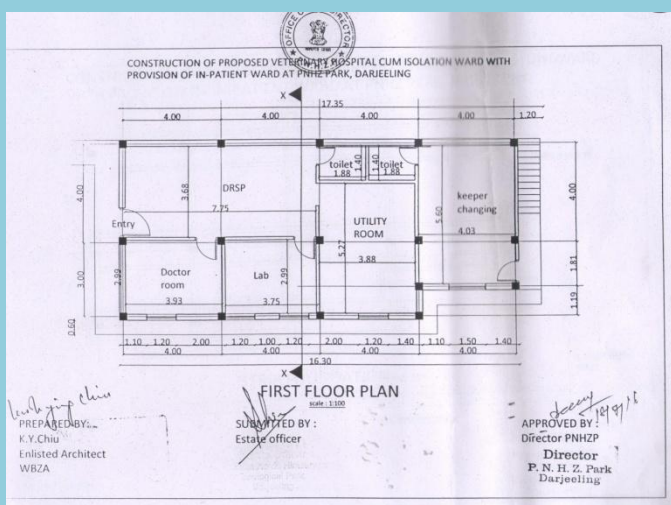
## **CONSTRUCTION OF THE NEW VETERINARY HOSPITAL**

Construction of the new Veterinary Hospital cum isolation ward at Padmaja Naidu Himalayan Zoological Park began on November 2016. A suitable location was identified in the display area of the park considering ease of treatment and transfer of the animals. The two storeyed building shall include a well designed in-patient ward, doctors chamber, well equipped laboratory, medicine storage room, X ray room etc. the hospital is set to be completed by April 2017.



**Construction of the new Veterinary Hospital**





**Floor plan for the first and the ground floor of the new Veterinary hospital**

**WILDLIFE WEEK IN ASSOCIATION WITH ATREE**

The Indian Board of wildlife (IBWL) celebrates the wildlife week in India between October 2<sup>nd</sup> – 8<sup>th</sup> as an initiative towards creating awareness on wildlife. The park celebrates wildlife week every year in association with the Forest Department inviting local schools and people to commemorate the week through various activities and campaigns focused on promoting wildlife conservation.

This year the Wildlife week was celebrated on 4<sup>th</sup> October 2016 at Padmaja Naidu Himalayan Zoological Park in association with ATREE. The program aimed at increasing awareness and disseminating information on the importance of wildlife conservation. The celebration included a day long program for school students at the park. A total of 9 schools including 47 students and 13 faculty members participated in the event. The one day programme included activities such as a short presentation on wildlife of India and the Darjeeling region, an educational tour for students of the park, screening of the movie “ Cherub of the mist” and poster presentation by the students. The students were also given educational material regarding the conservation programs and the animal collection of the park. Packet lunches were also distributed to the students.

The program was designed in order to facilitate active interaction between students and the respective resource persons working in the region.

The list of schools that participated in the program was as follows:

S.No	School
1.	St Roberts School
2.	Camellia School
3.	St. Michaels School
4.	Ghoom Girls School
5.	Sai Ratna School
6.	Hindi High School
7.	Assembly of God School
8.	Notre Dame Academy



**SUCCESSFUL TREATMENT OF ANIMALS AT PNHZP**

A case of chronic diarrhea including gastritis was reported in a male snow leopard (*Uncia uncia*) Namkha, aged 2 years 3 months, since 9<sup>th</sup> October 2016. The animal was recently brought from Mulhouse zoo, France and is a very important part of the snow leopard breeding program. The animal was also observed to be anorexic. The animal was physically restrained and administered and treated with antibiotics for almost 3 weeks. Within a period of three weeks the animal regained its normal health and started accepting its feed. The animal was also

observed to be behaviorally sound. Even after its recovery preventive measures like continuous use of dehumidifiers, allowing the animal only in the crawl area for sunlight, use of curtains in the night shelters etc was done. The animal is still under close observation.

## ENTRY TO MEDICAL ZIMS

PNHZ Park started using the Medical ZIMS or MedARKS from October 2016. This software allows the institution to manage their veterinary records. This allows storage of information on veterinary treatments, parasitological testing, anaesthetics, blood tests and clinical notes to support veterinarians when treating zoo animals. The blood test results from all system users are pooled to provide normal values which allow for more accurate diagnosis and treatment of exotic animals. Reports can show trends in disease and mortality, enabling veterinarians and animal staff to improve conditions and increase the health of their animals.

## APPROVAL OF TWO NEW RESEARCH PROJECTS

In Reference to Memo number 558/WBZA/T-3/16-17 dated 21.11.2016, a research project titled, “ **Status Survey of Himalayan Goral (*Nemorhaedus goral*) at Singalila National Park, Neora Valley National Park, Mahananda Wildlife Sanctuary, Senchal Wildlife Sanctuary and Kurseong Division**”, has been approved by the West Bengal Zoo Authority (WBZA). The project aims towards studying the population and ecology of the species in the concerned protected areas of North Bengal.

In Reference to Memo number 362/WBZA/T-3/16-17 dated 31.08.2016, another research project titled, “ **Developing Ex-situ husbandry practices for Himalayan Newt**”, has been approved by the West Bengal Zoo Authority (WBZA). The project aims towards studying the status and distribution of the Himalayan Newt in West Bengal and to determine the cause for the decline in population,

Both the project is slated to commence by January 2017.

## INCREASE IN STAFF STRENGTH AT PNHZP

According to the order of West Bengal Zoo Authority, 7 zoo keepers were given permanent postings at PNHZP. The concerned zookeepers had been serving the park on a contractual basis for a period of more than 10 years and have been posted at the Padmaja Naidu Himalayan Zoological Park itself and the Conservation breeding centre for pheasants and herbivores at Dowhill, Kurseong. The list of the concerned zoo keepers are Mr Pranay Thapa (Dowhill), Mr Pawan Subba (Dowhill), Mr Bidhan Tamang (PNHZP), Mr. Ruden Lepcha (PNHZP), Mr Nipan Tamang (PNHZP), Mr Sunil Rai (PNHZP) and Mr Binod Kumar (Limboo) Subba (PNHZP). They have joined their duty from 08.12.2016.

## NEW ZOO INTERNS AND SUBMISSION OF REPORT

Mr. Rounak Lama, 1<sup>st</sup> Year, BSc, St Jopeshs College, Darjeeling and Miss Chetna Rai, 1<sup>st</sup> year Msc, Government College, Darjeeling joined as intern on 14<sup>th</sup> December 2016 and 21<sup>st</sup> December 2016 respectively. Mr Rounak Lama is assisting on the project titled “**Study of Soil Microflora and Microfauna at PNHZP, Darjeeling**” an inhouse project funded by the West Bengal Zoo Authority and Ms. Chetna Rai is working on “**Behavioral Observation of Red panda (*Ailurus fulgens*) at PNHZP**”. The park will provide them with all the necessary assistance required by them including a certificate for their service to the Park.

Mr. Palden Tamang, 2<sup>nd</sup> year, Msc and Mr. Norbu Sherpa, 1<sup>st</sup> year Msc from St. Joseph college completed their internship at the park on 19.12.2016. Their report titled “**Case study of Pteridophytes in PNHZ Park, Darjeeling**” shall be published in the parks website [www.pnhzp.gov.in](http://www.pnhzp.gov.in).

## STAFF RETIREMENT

Mr. Pradeep Pradhan, one of the most senior zoo keepers of the park retired on 30<sup>th</sup> November 2016 . He served the park for more than 35 years. The park staff organised a farewell for him on 1<sup>st</sup> December 2016. He was one of the most experienced, dedicated and hardworking zookeepers of the park. His expertise and his presence will be missed. We pray for his good health.



## TAXIDERMY AT BNHM

Taxidermy is a highly technical job which needs theoretical as well as practical knowledge. Taxidermy means preparation of skin. Process of taxidermy is a mixture of both art and science to preserve the dead animals which may not spoil the national zoological wealth.

The taxidermy unit at Bengal Natural History museum under PNHZ Park has undertaken the work of preserving all the existing specimen at BNHM as well as new specimens that are brought to the museum. The Taxidermy work is done by Mr. Sairus Bhaktaraj under the supervision of Mr Arun Gupta, Former Scientist and Mr. Shivbachan Ram, Former taxidermist of the Indian museum. The work includes labeling specimens, preserving specimens by using chemicals, cleaning and maintenance of pre existing specimens on display, skinning and

mounting of new dead specimens collected from Padmaja Naidu Himalayan Zoological Park and surrounding areas. A total of 5 birds and 5 mammals have been mounted and a total of 21 mammalian fetuses have been preserved using formalin for further display.

**List of Birds mounted:**

S. No	Bird
1.	Temminck Tragopan ( <i>Tragopan temminckii</i> )
2.	Lady Amherst ( <i>Chrysolophus amherstiae</i> )
3.	Green Pigeon ( <i>Treron sp</i> )
4.	Himalayan Monal ( <i>Lophophorus impejanus</i> )
5.	Barbet

**List of Mammals mounted:**

S. No	Mammal
1.	Red panda ( <i>Ailurus fulgens</i> )
2.	Markhor ( <i>Capra falconeri</i> )
3.	Leopard cat ( <i>Prionailurus bengalensis</i> )
4.	Weasel ( <i>Mustela nivalis</i> )
5.	Flying squirrel ( <i>Glaucomys sp</i> )

**Preservation of Mammalian Foetus:**

S.No	Mammalian foetus
1.	Tiger ( <i>Panthera tigris tigris</i> )
2.	Common Leopard ( <i>Panthera pardus</i> )
3.	Black Leopard ( <i>Panthera pardus</i> )
4.	Snow leopard ( <i>Uncia uncia</i> )
5.	Barking deer ( <i>Muntiacus muntjak</i> )
6.	Rabbit ( <i>Oryctolagus sp</i> )
7.	Himalayan Palm Civet ( <i>Pamunga larvata</i> )
8.	Yellow throated marten ( <i>Marten flavigula</i> )



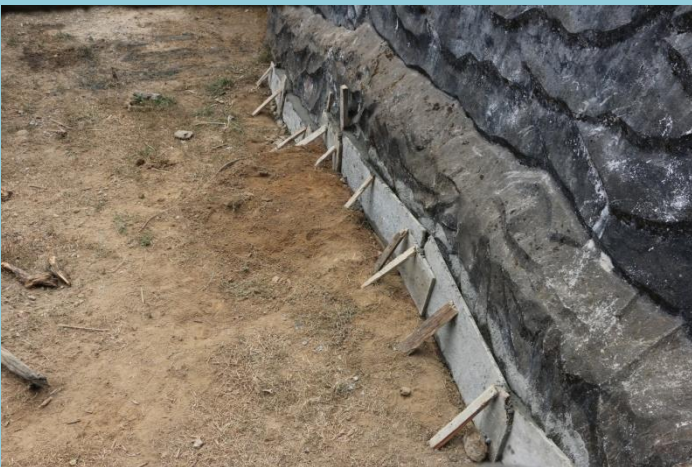
Skinning, Stuffing and Mounting of animals at the Taxidermy unit at PNHZP



Preservation of mammalian fetus

### NEW DEVELOPMENTAL WORK IN THIS QUARTER

The new developmental work taken up in this quarter was soil conservation and retaining wall work by way of plumb concrete inside the Herbivore enclosures ( Himalayan Tahr, Markhor, Sambhar deer, Yak and Blue sheep) at PNHZ Park. The chain linked enclosures of the leopards in the display area was also repaired. The beautification and maintenance work also included designing and printing new animal information and directional signage as well as painting of the park main gate and the visitors rest shed.



Soil conservation and Retaining wall work inside the herbivore enclosures



Providing proper support to the net in the Common And Snow leopard enclosures



Painting of the chain linked enclosures of Lesser Carnivores



Painting of the Visitors shed and the Zoo entrance

## ENRICHMENT OF ENCLOSURES IN THIS QUARTER

The enrichment activities in the park is taken up on a regular basis in the display and all the conservation breeding centres for all species. The enrichments for this quarter was done in the black leopard and himalayan black bear enclosures at the park. New logs and tress stumps were palced in the Himalayan black bear enclosure for scratching and resting and new fresh inter connected logs were placed in the Black leopard enclosure. The aerial walkways, logs, night shelters and nest boxes were also modified at the conservation breeding centre for Red pandas and Snow leopards at Topkey dara.



Logs and tree stumps in the Black bear enclosure and fresh inter connecting logs in the Black leopard and Snow leopard enclosures



Nest boxes and aerial walkways in Red panda enclosure and a wooden platform



Modification of aerial walkways in the snow leopard enclosure at Topkeydara

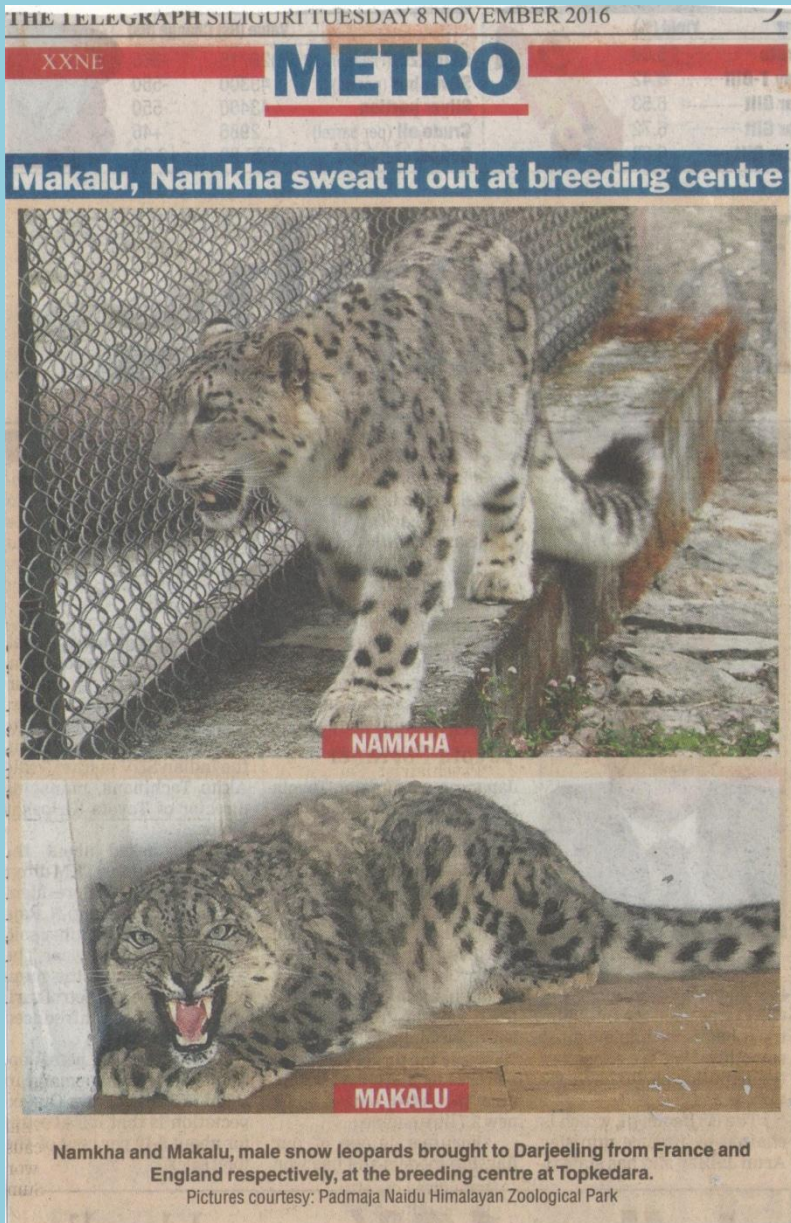


Modification of cubbing boxes in the red panda enclosure at Topkeydara



Resting platforms at the Snow leopard enclosure at Topkeydara





# Leopard game

**DEBRAJ MITRA**

Calcutta, Nov. 7: The boys have shown their spots but the girls are playing hard to get.

Makalu and Namkha, the two male snow leopards brought to Darjeeling from England and France respectively, have been forced to work extra hard to bond with their prospective female partners at a captive breeding centre on the outskirts of the hill station.

The two "couples" have been kept in enclosures separated by a wire mesh: Kim with Makalu and Zima with Namkha. But according to Piar Chand, director of the Padmaja Naidu Himalayan Zoological Park, the girls haven't reciprocated the male attention so far except fleeting glances.

For Makalu and Namkha, the wait for a mate could stretch longer since gender equations in the snow leopard kingdom are such that females have to take the lead in mating. The wire mesh that separates the leopard pairs in each enclosure will be removed "once we see some chemistry", Chand said.

"As of now, there is eye contact between the prospective couples. We hope that each pair will be ready for mating in a month's time," he told Metro.

Makalu came from Dudley Zoo in the UK to Darjeeling last June. Namkha made the long journey to the eastern Himalayas from Mulhouse Zoo in Alsace, France, in August. Both two-year-old males had a stopover in Calcutta before heading out by road.

After reaching Darjeeling, the duo had been quarantined for a month to prevent infection and ailments. This was in accordance with guidelines for keeping imported animals, Chand said.

In most cases, medical checks take place at the regional quarantine centres. Calcutta has one but snow leopards being unable to survive only in cold weather, they were taken to the hills soon after they landed at Calcutta airport.

Both Makalu and Namkha had to undergo a series of health checks for internal or external pathogenic diseases, Chand said. Once they had cleared the tests, the duo were shifted to the breeding centre at Topkedara, 7km from Darjeeling.

Makalu was put in the breeding enclosure in August-end. Namkha's induction happened early in October, said an official at the Darjeeling zoo.

Soon after their arrival, their prospective partners were put near one another, albeit with a mesh wire separating them. Kim, the chosen one for Makalu, was born in Germany. Zima is a local, though. At four years of age, both girls are older than their prospective mates. Snow leopards are capable of breeding from the time they are one-and-a-half-years old, zoo director Chand said.

The enclosures where the leopards are kept are around 1,000sq m each, large enough for feline courting rituals. When the weather is pleasant, as it is at this time of the year, the snow leopards basking in the sun is a glorious sight.

"The two males look quite active. They have adapted well and are doing just fine," Chand said.