## Research

isplaving its long-term commitment to research, Nandankanan Biological Park supported a number of research projects to assess biodiversity conservation. wildlife management, animal health issues and management of captive

The project entitled 'Ecto-endo parasites of captive animals of Nandankanan Zoological Park' was successfully completed which was jointly operated by the College of Veterinary Science & Animal Husbandry, Bhubaneswar and Nandankanan Zoological Park, Govt. of Odisha. The results of the study revealed the prevalence of helminthic infection, either single or mixed, in large carnivores. In the other hand, the administration of different anti helminthic drugs have been tested successfully and found effective in treatment of the infected animals







## Conservation Breeding Programme of Indian Pangolin

The research on conservation breeding of Indian pangolin is actively going on in the established 'Indian pangolin conservation breeding centre'. Monitoring through the infrared sensitive CCTV cameras unfolds the secrets of the life of the pangolins. The centre has successfully bred Indian pangolins in captivity, leading to total birth of 7 pangolins in the centre. Besides, the centre is also focusing to standardize the hormonal assay of fecal steroid metabolites to better understand reproductive aspect of these endangered species.

#### Conservation Breeding of Long billed Vultures

The Vulture Conservation Breeding Centre has been constructed in an off-exhibit area of Nandankanan Zoological Park, Bhubaneswar during the year 2011-12 in an area of 0.3 acres surrounded by seven acres of undisturbed forest land with financial assistance from Central Zoo Authority, New Delhi. The Centre was established with objectives to develop protocol for captive management and breeding of long billed vultures for reintroduction and release in to wild. The founder populations are twelve numbers of long billed vultures procured from Gandhi Zoological Park, Gwalior on 26.11.2018. All the vultures are marked with leg bands for individual identity. The centre presently has one colony aviary (100'X40'X20'), two nursery aviaries (10'X12'X8'). A laboratory complex with observatory room for CCTV monitoring, laboratory for analysis of biological samples, incubation room and biologist chamber is available. The activity patterns of vultures are being monitored through two fixed angle and one PTZ camera with infrared facility.

## Zoo Education Programme

round 3.3 million people visit Nandankanan Zoological Park. Such a wide, diverse, varied and regular audience provides an excellent opportunity for education, and an enormous potential to heighten public perception and awareness about the animals and their conservation. Zoos are living institutions, living classrooms, living landscapes. Zoo education is a holistic discipline targeted at zoo visitors, staff and the wider community aiming to promote an understanding of, and concern and respect for biodiversity, animals and the natural world, and encourage action for a sustainable future. In order to have impact, we need to influence as many people as possible. To do this, we need to promise and deliver something relevant and attractive to the wider community. We want visitors to enjoy themselves, and to feel the wonder and affection toward animals. We want to make it easy for visitors to take action during their visit and after they leave our gates.





#### State Botanical Garden

he State Botanical Garden spreads over an area of 75 ha. is situated in the sylvan settings of the moist deciduous forest of the sprawling green Nandankanan Sanctuary hemmed between two wetlands. The Botanical Garden was established in the year 1963 and was under the management of Horticulture Department. The management of the State Botanical Garden was

## Uniqueness of Nandankanan

- It is the host zoo for white tigers, white tigers were born to normal coloured parents in 1980, a unique event in the
- Only zoo in the world where melanistic tigers were born (2014) and displayed to the visitors.
- First zoo in the country where endangered Gharials were born in captivity in 1980.
- A unique White Tiger Safari was established in the Zoological Park on 1st October, 1991 but now converted to a Tiger Safari.
- Wonderful site for wildlife conservation and education where one can experience integration of ex-situ and insitu conservation of wild fauna and flora.
- Presence of Kanija Lake- A wetland of National Importance (2006)
- Conservation Breeding Centre for Indian Pangolin and Long Billed Vultures.
- Nandankanan has largest enclosures for housing Gharials and Hippopotamus.

#### Director

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be definitely impressed by the nature's symphony and the exquisite touch of the wilderness here. This is one of the pioneering plant conservation and nature education centre of the State. The Botanical garden is sure to provide memorable experience to the green enthusiasts. The State Botanical Garden is situated inside Nandankanan wildlife sanctuary. Kiakani lake with an area of about 25 ha. is located inside the State Botanical Garden.

transferred to Nandankanan on 01.08.2006. One would



- Second largest heronry for Open Billed Storks in Odisha.
- Has a Captive Fodder Farm (over 33 Acs.) and a Slaughter house to cater the dietary needs of animals housed in the Zoological Park.
- First zoo in the country to become an Institutional member of World Association of Zoos & Aquarium
- First Zoo in the country where endangered Ratel was born in captivity.
- First zoo in the country after which an express train 12815/12816 Puri-New Delhi Express has been named as "Nandankanan Express".



## **Deputy Director**

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## Photographs

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# NANDANKANAN



## Vision

To strengthen the efforts in conservation of biodiversity of the region through the ex-situ conservation linked with in-situ practices.

## Mission

To achieve the distinction of an outstanding zoo through World Class Conservation, Education, Research and Exciting visitor experiences by connecting people to biodiversity conservation.







#### About Nandankanan

Nandankanan Zoological Park is one of the premier large zoos located amidst a beautiful natural setting recognized by Central Zoo Authority, Govt. of India. Unlike conventional zoos, it spreads over vast 3.62 sq.km. of undulating topography with natural moist deciduous forest, water bodies and enchanting landscape that provides the zoo inhabitants an appropriate ambience to live in harmony with the nature. It was dedicated to the public on 29th December 1960.

#### SPECIAL ATTRACTION

#### **Boating**

Boating on paddle or row boats in the blue water of Kanjia lake is an exhilarating experience. The multistorey Boat Ghat is renovated to give new looks providing enough space for the visitors to relax and enjoy the picturesque fresh water spreading over an area of 66.1 ha. lake. The lake is also known for its rich floral and faunal diversity and is declared as a Wetland of National Importance by Govt. of India in the year 2006.

#### Safaris

There are four safaris i.e. tiger, lion, bear and herbivore in its natural surroundings. It exposes you to unique situation where the visitors are confined in a vehicle







and the animals roam in the open jungle. Meandering tracks add to it's beauty where accidental encounters with wildlife at the curves are quite thrilling.

#### Nocturnal Animal House

Many animals that only move freely at night but are almost immobile and hide in the thicket or in their burrows during the day are housed here. The twilight condition is created in these enclosures to provide an opportunity to the visitors to know what these animals secretively do in the darkness of the night. It is one of the best nocturnal house in the country.

#### Reptile Park

A reptile park, with a life size Tyrannosaurus at its entrance with tiny interpretation centre houses 29 species of reptiles including crocodiles, lizards, pythons, turtles and snakes. One would encounter crocodiles, king cobras and a huge Reticulated Python inside the reptile park. Yellow Anacondas add to it's rich exhibits.

## Toy Train

The toy train use to be a great attraction for the children. It starts from the station moves in a circular track of 1.58 k.m. along the lake and thickly vegetated hillock area with free ranging herbivores. The entire facility is now under renovation. It is expected to operate shortly with introduction of new coaches and non-pollutive locomotive.





#### Aguarium

Aquarium is an integral component of a modern zoo. Adequate steps were taken to include well researched education materials on the various aquatic ecosystems both marine and fresh water indicating their uniqueness and conservation needs.

#### Library

If one has got time and an aptitude for learning then the centrally located library, with a wonderful collection of more than 5000 books and journals on wildlife, veterinary care and other matters can serve one's satisfaction.

#### Amphibian Enclosure

An amphibian enclosure has been established with viewers gallery over a plinth area of 56 m². Necessary behavioural enrichments like flowing water, saw dust, live plants, water pool etc. have been provided within the enclosure. The enclosure is designed to house and display amphibian species. Nandankanan is the first premier large zoo to exhibit amphibians. At present there are 21 numbers of amphibians belonging to six species.

## Walk through Aviary

The walk through aviary for exotic birds is a unique exhibit of its kind in the country. The walk through aviary has a cascading waterfall and a meandering water channel of 58 m length connecting two pools having two arched cross over bridge along the 216 m laterite stone paved walking path with separate entry and exit points. In addition to the existing large and small trees, hundreds of selective plants have been planted to provide perches and hiding places for the birds housed. The inmates of the aviary are mixture of arboreal, terrestrial and aquatic birds. It is a visitor's delight to view the free flying birds over head.





## Open Top Leopard Enclosure

The new Open Top Leopard Enclosure in Nandankanan is one among the very few in the country which attempts to exhibit this species in a large naturalistic enclosure which is open to the sky. The enclosure which has an exhibit area with a deep dry moat, also has four feeding chambers and two back kraals. The entire enclosure has existing natural vegetation including two large *Ficus bengalensis* trees together with other trees and bushes. In addition, environmental enrichment by way of machan platforms, stone cave, wooden logs, water trough etc. has been provided to encourage them to indulge in natural activities.







#### Health Care of Captive Animals

Nandankanan has always given priority for highest standards of animal husbandry and veterinary care. Monitoring of animal health starts from the moment of its birth/arrival at the zoo. Prevention of disease/ailment is the main motto of the health program of Nandankanan. A dedicated veterinary hospital is located inside the park. Three full time veterinary surgeons are providing veterinary services to the captive animals and birds with specialist support from the College of Veterinary Science & Animal Husbandry (C.V.Sc & A.H) Bhubaneswar and input from an array of experts. A five member 'Technical Committee' constituted by Government of Odisha regularly monitor and review the health care and related matters. A close liaison is maintained with the C.V.Sc & A.H., Bhubaneswar and the services of the 'Health Committee' from C.V.Sc & A.H are requisitioned in case of emergency. A strict protocol for vaccination, deworming and prophylactic chemotherapy is meticulously followed to prevent diseases.



#### Feed

Supply of well balanced quality food is crucial for the sound health and reproduction of the captive animals in a zoo. Keeping this in mind, supply of nutritious, healthy and hygienic food to the animals and birds is an important mandate of the Nandankanan Zoological Park. The Park has a Food Distribution Center with a zoo kitchen to cater to the needs of the captive animals and birds.

## Captive Slaughter House

As a step forward the park has set up a captive slaughter house, first of its kind, inside the park to ensure regular supply of fresh and hygienically processed buffalo meat for the carnivores. Routine inspection includes ante and postmortem examinations of animals and meat respectively. Post mortem examination is supported by both gross and microscopic examination of meat and vital organs. As

a result, food borne health complications are being successfully kept at bay. With two incinerators, disposal of carcass and leftover feed of Carnivores has been sanitized.

### Captive Fodder Farm

Different types of grasses and fodder are given to the herbivores from the captive fodder farm of the zoo spread over an area of 33 Acres. Seasonal/Periodical organic farming of different grass/fodder is carried out in the farm to ensure supply of fresh and essential fodder to the herbivores in the zoo.

