

ANNUAL REPORT 2023-24

Nandankanan Biological Park Bhubaneswar



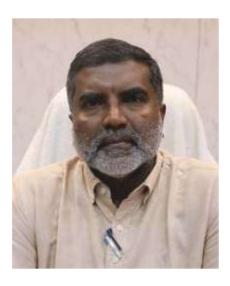
### Photographs —

Education Wing, Research Wing & Veterinary Wing Nandankanan

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# From The Director's Desk



**Dr. Manoj V. Nair, IFS**Director, Nandankanan Biological Park

As its name signifies, Nandankanan is indeed a veritable Garden of Gods. With the largest animal collection of any zoo in India, this Zoological Park is recognized as one of the best zoos in our country and is the only large zoo of the State of Odisha. Established on 29th December 1960, Nandankanan over the years has witnessed significant improvements in providing the highest standards in housing, husbandry and health care to its denizens and a fascinating experience to its visitors. It enjoys a special place in the wildlife

conservation annals of our country for its inimitable amalgamation of in-situ and ex-situ conservation initiatives. It is worth mentioning that the forested landscape encompassing the Zoological Park, Kanjia lake and State Botanical Garden has been declared as Nandankanan Wildlife Sanctuary, spread over an area of 4.37 sq.km on 3rd August, 1979. The sprawling zoo houses about 4300 plus individuals belonging to 165 species of mammals, reptiles, birds and amphibians. Further, the Nandankanan Sanctuary is home to a rich assemblage of wild flora and free-living wildlife. The State Botanical Garden which spreads over an area of 75 ha adjoining the Zoological Park is one of the most important plant conservation facilities in the State with more than 750 species of plants having been documented. There are two important wetlands namely Kanjia lake (66 ha) and Kiakani lake (25 ha) in Sanctuary. The former is the main water source for Nandankanan Zoological Park and State Botanical Garden. It supports a rich diversity of flora and fauna and is an ideal site for spreading awareness and education for conserving wetlands. Therefore, it has been listed as a Wetland of National importance by the Ministry of Environment, Forests and Climate Change, Government of India in the year 2006.

As the head of Team Nandankanan, it is my pleasure to inform you that we have completed another outstanding year of biodiversity conservation, zoo management, research and education. Nandankanan has been very popular, as always, among tourists and local inhabitants and has attracted 3.9 million visitors during the year 2023-24 and has earned revenue of more than 21 crores. Significant improvements were achieved in the infrastructure development, animal collection, care of rescued and infant animals, health care, fodder production and conservation research. The notable species which were born during the current year includes Sloth bear, Mouse deer, Blackbuck,

Hog deer, Stump-tailed macaque, Swamp deer, Jackal, Assamese macaque, Manipuri deer, Four-horned antelope, Asiatic lion, Indian grey wolf, Sambar, Hippopotamus, Ratel, Indian hare, Common palm civet, Leopard cat, Indian fox, Squirrel monkey, Emu, Mugger, Red jungle fowl, Black kite, Painted stork, Grey pelican, Indian peafowl, Alexandrine parakeet, Night heron, Mandarin duck, etc. Adding to its expertise in neo-natal care and hand-rearing of abandoned baby animals, the Zoo successfully reared very young babies of Hill mynah (4 nos), Four horned antelope (1 no), Ratel cubs (2 nos), Elephant calves (2 nos) and Lion cubs (2 nos) during the period. During the financial year 2023-24, we have welcomed 46 animals of 14 species to the zoo in animal exchange programme with an objective of infusion of new blood line to the existing stock and also addition of new species to the zoo collection.

During the year, many enclosures and visitor facilities were added which includes Wallaby enclosure, Hoolock gibbon enclosure, Quarantine unit for Indian pangolin, Back kraal for small mammal sections, WhatsApp based ticketing for visitors, up gradation of visitor roads, Ropeway facility, Drinking water fountains, Development and beautification of Lily pool at Multi Level Car Parking facility, New quarters for Foresters and Forest Guards. Restoration of Kiakani Lake, Up gradation of Conference Hall, Bambusetum and Hydrophyte Aquarium at State Botanical Garden have significantly enhanced the park's ecological and aesthetic value.

As a commitment to in-situ conservation, during 2023-24, It was heartening that the natural breeding of Gharial occurred for the third consecutive year at Satkosia Gorge, the project implementation site. On 24th May 2023, 35 Gharial hatchlings hatched at the same nest from the same mother as the previous year.

Research is in the DNA of Nandankanan. Following the long-term commitment to scientific contribution, three research papers in various national and international journals were published on numerous aspects of ex-situ conservation and managing captive wild animals. Significant enhancements of the Zoo Laboratory have taken place.

As regards healthcare, the Zoo Hospital has witnessed a tremendous upgradation of facilities during the last year. The highest standards of health care and animal husbandry practices have resulted in a reduced annual death rate in 2023-24. This was possible due to sincere efforts by our Zoo veterinarians, cooperation from the College of Veterinary Sciences and Animal Husbandry, OUAT, Bhubaneswar, and valuable advice and guidance from the Health Committee and Technical Committee on important health care issues.

Many zoo education and citizen science programmes including Celebration of World Environment Day, World Crocodile Day, International Tiger Day, Cheetah Awareness Week, Vanmahotsay, World Elephant Day, 69th Wildlife Week, World Wetland Day, World Pangolin Day and World Wildlife Day were organized during the year 2023-24. Nandankanan has started promoting Citizen Science (the voluntary involvement of the public in scientific study) in a big way. Various programs include Sunday Bird Walk, Great Backyard Bird Count, Odisha Birders Conclave, Tree Walk, Butterfly and Moth Watch, Nature Trail Walks and Herp Walks were conducted at regular intervals. Twelve interns completed their internship work and contributing to our research efforts

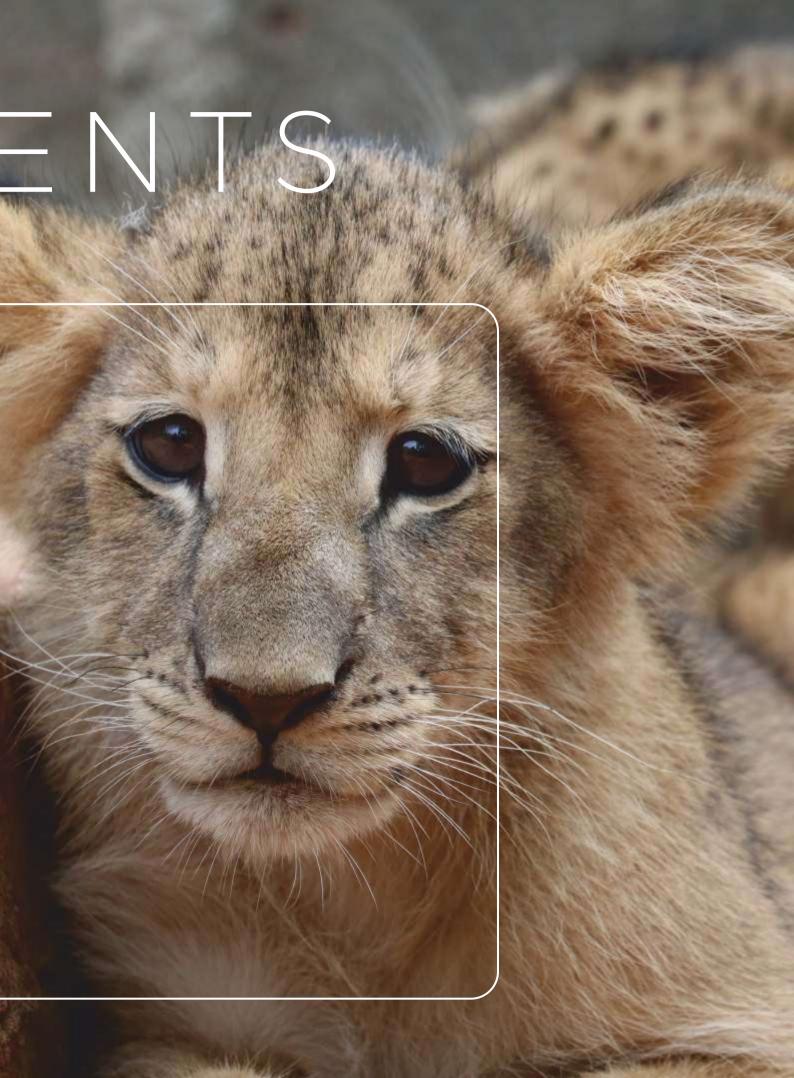
Needless to say, all this could not have been achieved but for the sincere efforts of all members of Team Nandankanan, and I would take this opportunity to thank them all - our dedicated staff, members of various technical and advisory committees and senior officers.

I am optimistic that with their hard work and sound advice, aided by the constant guidance of the Hon'ble Minister, Forest, Environment and Climate Change Department, Odisha, the Addl. Chief Secretary heading the Department, along with PCCF Wildlife & Chief Wildlife Warden, Odisha, we will continue to build upon our impactful legacy and forge ahead with our vision to place Nandankanan in the list of world-class zoos.

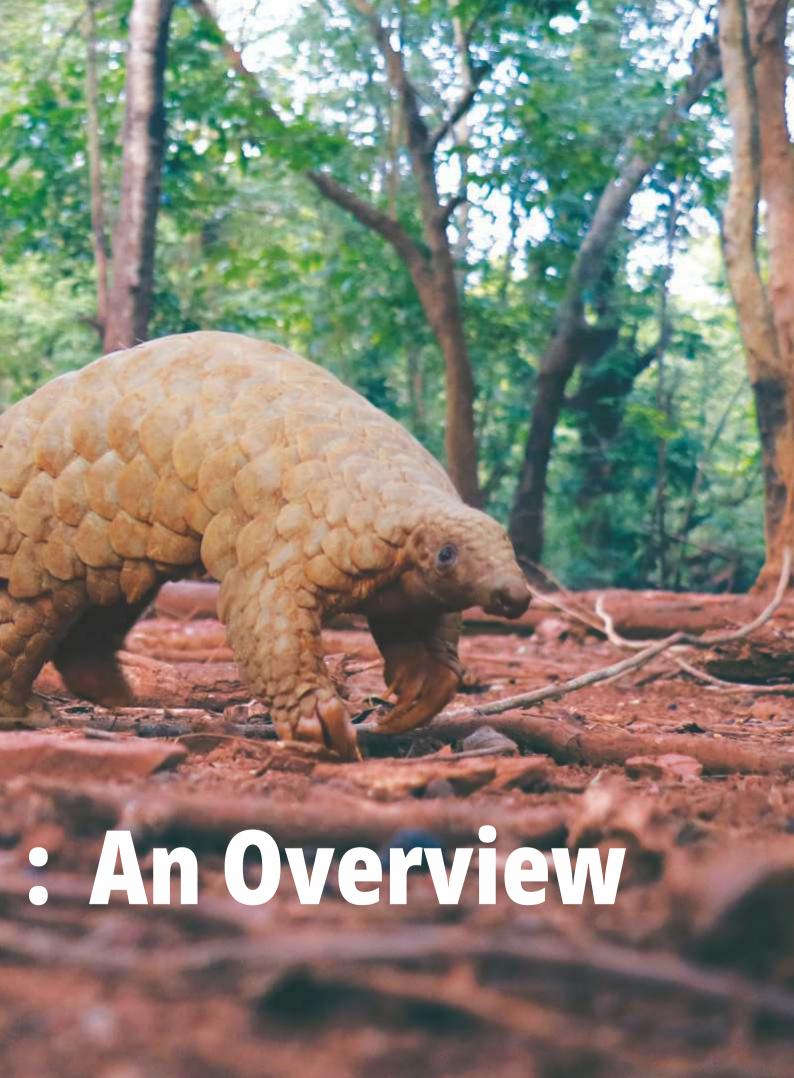
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# Nandankanan over the years

or a zoo that is the envy of others now, the birth and evolution of Nandankanan is a fascinating story that needs recounting. Many people will be surprised to know that it was never planned as a zoo in the first place and came into existence purely by a curious interplay of circumstances. So here goes the interesting story:

A motley collection of animals and birds sourced from various parts of the state were put together by the Odisha government for the World Agricultural Fair organized in New Delhi in January-February, 1960. The collection included two spotted deer, two barking deer, two blackbucks, a mouse deer, a leopard cat, a flying squirrel, an r-tailed drongo, a hornbill, two parrots, two hill mynahs, a peacock, a mongoose, a pangolin, two porcupines, a pair of wild boars and a python. Having played their part at the Fair, the animals and birds were brought back to the state in May and put up for public display at a temporary location near the Khandagiri-Udaygiri hills on the outskirts of Bhubaneswar. But soon, water scarcity emerged as a major problem for their continued stay in the area. It was the search for an alternative site for the animals and birds which ultimately led to the birth of what is now known as 'Nandankanan'.

Once the decision was taken to establish a zoo, the search for a suitable site with a perennial source of water began in right earnest. After several rounds of deliberations with senior officials of the Forest department, the then Chief Minister Dr Hare Krushna Mahatab and Development minister Dr Radhanath





Rath finally settled on a stretch of forest in the then famous Chandaka forest, which had a good natural water body called Kanjia lake. The site had the added advantage of being close to the Barang Railway Station. The present day Nandankanan zoo was established with parts of the Jujhagarh and Krushnanagar Demarcated Protected Forest (DPFs). Construction activities were taken up over a very small area to house the animals.

On 29<sup>th</sup> December, 1960, Sri S.K. Patil, the then Union Minister for Food and Agriculture, inaugurated the new Biological Park named "Nandankanan", which literally means 'Heavenly Garden'. A Botanical Garden came up close to the park on the other side of Kanjia lake in 1963. The park, along with the adjoining forests, has been notified as Nandankanan Wildlife Sanctuary vide Notification No. 8F(WL)-160/78-20672/FFAH dated 3<sup>rd</sup> August, 1979 of the erstwhile Forest, Fisheries & Animal Husbandry Department, Government of Orissa and published in the Official Gazette vide S R O No.935/79 dated 3<sup>rd</sup> August, 1979. The Nandankanan Biological Park was renamed as Nandankanan Zoological Park in the 1980s as per the recommendation of the Orissa Legislative Assembly Committee on Estimates, 1981-82.

The zoo evolved steadily with the addition of new animals and enclosures at regular intervals. The first tiger, along with a pair of African lions, a puma and a pair of muggers, were brought to the zoo from the Alipore Zoo in Calcutta during the All India Congress Committee session at Bhubaneswar in 1964. In 1967, the first open air tiger enclosure was constructed in the zoo. It surprised everybody when the last surviving tigress in the Chandaka forest was lured into this

enclosure, where a male tiger "Pradeep" was already housed, on the 04<sup>th</sup> January, 1967. She was named "Kanan" by the zoo officials. Proximity to wilderness had earlier led to another interesting incident in 1964 when a courting wild tusker kidnapped a cow elephant from the zoo. The cow elephant, however, returned to its enclosure later.

Nandankanan achieved a rare distinction with the first-ever breeding of the Gharial in captivity with a full-grown male gharial brought from the Frankfurt zoo on breeding loan in a naturalistic pool created for the purpose. It was a miracle of sorts when as many as 24 hatchlings hatched in the gharial pool on 7<sup>th</sup> May, 1980. Earlier the same year, two normal coloured tigers 'Deepak' and 'Ganga' had given birth to three white off springs named 'Debabrata', 'Alaka' & 'Nanda' on 8<sup>th</sup> January, creating history in the process. With this, Nandankanan created its own family of white tigers and a separate gene pool.

In the years that followed, the park forged ahead in its developmental activities with the advice and guidance of the Nandankanan Development Board to become a leading zoo in the country with a wide variety of animals housed in a near natural environment. On 20<sup>th</sup> January, 1984, a Lion safari over an area of (20 ha.) was inaugurated inside the zoo premises. In 1991 came the first White Tiger safari spread over (12 ha.) Two more safaris - namely Herbivore safari (30 ha.) and Bear safari (5 ha.) - were established in 2011 and 2012 respectively.

The zoo has bred innumerable species of animals, birds and reptiles, many of them designated endangered as per the Wildlife Protection Act, 1972. They include tigers (normal coloured, white and melanistic), leopards (black & normal), Asiatic lion, all the three types of Indian crocodiles, Indian tiger, elephant, lion-tailed macaque, Nilgiri langur, Indian peafowl, Indian pangolin, Thamin deer, Ratel, Black kite, Water monitor lizard, Gaur and many others.

The steady growth of the park was accompanied by a matching enhancement of facilities for the visitors. A toy train donated by the Ministry of Railways, Government of India was introduced in the park on 10<sup>th</sup> August, 1971. A ropeway linking the zoological park with the botanical garden has been in operation since the 1<sup>st</sup> of October, 1994. An aquarium was dedicated to the visitors by the Honourable Chief Minister, Odisha on 4<sup>th</sup> February, 2008. Several other amenities like electronic entry gate, battery operated vehicles, RO drinking water kiosk, interpretation centre, zoo museum, live feed rearing centre, Baby Care House, Multi Level Car Parking etc. were added for better management of animals and visitors.

In the six decades since its inception, the first zoo in the state has grown into one of the premier Zoos of the country.



# % | Zoo in a Snapshot

### Vision

To achieve global standards in all aspects of management become a truly World-class zoo by the next decade, and thereby to significantly contribute in conserving our country's biodiversity.

## Mission

and transform the zoo to a global leader in ex-situ conservation.

# Objectives

- To leverage the unique juxtaposition of natural wetlands, lakes and forests as well as favourable location inside a wildlife sanctuary and make Nandankanan an unparalleled example of seamless synergy between ex-situ and in-situ conservation.
- To retain and augment the USP of being a "Green Zoo" by increasing the forest cover so as an important green lung to the fast growing urban population of the twin cities of Bhubaneswar and Cuttack.
- To cater to the recreational needs of people and strengthen the people-wildlife connects by providing an immersive experience through large naturalistic and enriched enclosures and modern thematic exhibits.
- To build upon and consolidate the excellent reputation for animal health care, rescue and rehabilitation, cutting edge research and documentation, effective practices in conservation breeding, thereby contributing immensely to endangered species conservation in the State and the Country.
- To function as a hub for nature and environmental education in Odisha, especially her young citizens and foster in them a love for Nature, Wildlife and its Conservation.
- To keep innovating and add to first-of -its kind initiatives such as Captive Fodder Farm, Slaughterhouse, Live Feed Rearing Centre.



#### Area

Animal collection

Nandankanan Zoological Park - 362.1 ha Nandankanan Wildlife Sanctuary - 437.2 ha



#### Mammals

52 Species 2029 Individuals



#### Birds

77 Species 1900 Individuals



#### Reptiles

30 Species 357 Individuals



#### **Amphibians**

06 Species21 Individuals

#### Total Animal collection as

on 31.03.2024 165 Species 4307 Individuals

**Animal Houses** 

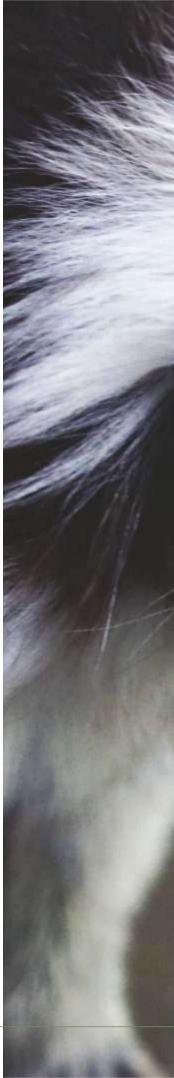
There are 212 number of enclosures which includes 118 number of caged enclosures and 94 number of moated enclosures.

Zoo holiday

Every Monday, except when it falls on Independence Day, Republic Day, Christmas Day, New Year Day, Raja and Dussehra. If any of these special occasions falls on a Monday, the zoo will remain closed on the following Tuesday.

Zoo timing for visitors

0730 hrs. to 1730 hrs (April-September) 0800 hrs. to 1700 hrs. (October-March)



# Entry Fees and Other Charges

Nandankanan Zoological Park



Indians (Above 12 years) : Rs. 50/-Children (Age group of 3-12) : Rs. 10/-Foreign visitor : Rs.100/-Handy cam camera : Rs.100/-

High-end Video Camera

: Rs.500/-(Amateur Photographer)

Movie Camera

(Professional

Photographers) : Rs.4,000/-

Nandankanan Safari

(Tiger, Lion, Bear &

Herbivore)

Bus Service Non-AC : Rs.65/-

: Rs 100/-Bus Service AC

Toy Train -

: Rs. 30/-Children (Age group 3-12)

Adult : Rs. 50/-

Boating (for 30 minutes)

Paddle Boat (2 seater) : Rs.50/-

> (4 seater) : Rs.100/-Family boat : Rs.150/-

Battery Operated Vehicle-: Rs. 80/-per person

: Rs. 1000/-(Reserve for 1 hr)

Multi-Level Car Parking

Bus-: Rs.70/-Two-wheeler-: Rs. 20/-Three-wheeler : Rs.30/-: Rs. 50/-Four-wheeler-Cycle-: Rs.5/-

Monocable Pulsated Ropeway: Rs 120/-(above 3 years)



# 🖔 | Kanjia and Kiakani lake

Nandankanan is home to two significant wetlands, Kanjia and Kiakani, each contributing uniquely to the region's biodiversity and ecological balance. Kanjia Lake, spanning 66.1 hectares, serves as the primary water source for the Park and holds the prestigious designation of a Wetland of National Importance since 2006, as recognized by the Ministry of Environment, Forest and Climate Change, Government of India. Its rich floral diversity includes 10 species of submerged macrophytes, 14 floating macrophytes, and 24 emergent macrophytes, creating a thriving aquatic ecosystem. The faunal diversity is equally remarkable, with over 100 species of birds, 14 reptile species, 10 amphibian species, 46 species of fish, and 3 prawn species. Management efforts for Kanjia Lake focus on water quality monitoring, wetland education, weed control, and inlet improvement, ensuring the lake's sustainability. Adjacent to the State Botanical Garden lies the Kiakani Lake, a serene 25hectare wetland renowned for its scenic beauty. This tranquil haven attracts both resident and migratory birds, offering breath taking views for birdwatchers and photographers alike. Both lakes are invaluable for their ecological, cultural, and recreational significance, supporting diverse life forms while enhancing the natural charm of Nandankanan.





# The Society for Management and Development of Nandankanan Biological Park

Government of Odisha registered the "Society for Management and Development of Nandankanan Zoological Park" on 27th August, 2005 under the Registration of Societies Act of 1860 with Registration No. 22073/54 of 2005-2006 dated 27.08.2005, with the following principal objectives.

- (a) Complementing, supplementing, strengthening or otherwise expanding the activities of Nandankanan Zoological Park in the cause of in-situ conservation of wildlife, captive management of wildlife and eco-tourism and facilitating linkage between ex-situ and in-situ management of wildlife.
- (b) To act as a platform for open debate, discussion and subscribe to or assist any charitable, benevolent, scientific, national, public or any other institution the object or purpose of which are consistent with or which promotes objects of the society.
- (c) To coordinate and liaise with national/international bodies, experts and funding agencies and to receive constitution and funds from Government of India, Central Zoo Authority, State Government or any individual, institute, national or international agencies, any other institution of Central Government or State Government for specific conservation programme, development of eco-tourism amenities of Nandankanan.
- (d) To receive and manage all contributions given to the Society in the larger interest of Nandankanan Zoological Park for maintenance and upkeep of zoo animals, improvement of the premises as well as maintenance and upkeep of zoo animals, improve the premises as well as maintenance and improvement of visitors amenities.
- (e) To engage/employ such staff as may be necessary for efficient handling and conduct of business of the society with approval of General Body.
- (f) To do all such acts and activities as area incidental or conducive to attainment of the objectives or directly beneficial to the society in promotion of its objects, subject to the overall control of the Chief Wildlife Warden and in conformity with the Society Registration Act, 1860.
- (g) To carry out any other activities in the furtherance of the above objectives.



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# **Uniqueness of Nandankanan**

- Only zoo in the world where melanistic tigers were born in 2014 and displayed to the visitors.
- It is the host zoo for white tigers. White tigers were born to normal coloured parents in 1980, a unique event in the world.
- 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.
- Wonderful site for wildlife conservation and education where one can experience integration of ex-situ and in-situ conservation of wild flora and fauna.
- Presence of Kanjia 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.
- Second largest heronry for open billed storks in Odisha.
- Has a Captive Fodder Farm (over 33 Acs.) and a Slaughter house to cater to 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 (WAZA) in the year 2009.
- First Zoo in the country where endangered Ratel was born in captivity in 2012.
- First zoo in the country after which an express train 12815/12816 Puri-New Delhi "Nandankanan Express" has been named.
- Only zoo having Multi-Level Car Parking and Ropeway facility for visitors.

# **Animal Healthcare and Management**



- Highest standards of animal housing: Our commitment involves creating environments that cater to the natural and behavioral needs of each species, ensuring their physical and mental wellbeing. Key aspects of our commitment include naturalistic habitats, regular upkeep and maintenance of appropriate enrichment in our enclosures.
- Superior hygiene measures: Nandankanan emphasizes its dedication to upholding excellent cleanliness by implementing various essential practices to ensure the well-being of both animals and visitors. Regular cleaning and disinfection, hygiene friendly enclosure design, proper handling of food and water, maintaining clean feeding areas, veterinary health check-ups, regular cleaning of visitor areas, effective waste management, staff training on hygiene measures & visitor education for a responsible behaviour are major among these practices.
- Guaranteed Optimal Feed standards:
   Nandankanan Zoological Park prioritizes the supply of nutritious, healthy, and hygienic food for its animals through premier measures which include:

- (i) A committed Store Range, headed by a Range Officer to oversee the procurement and supply of feed materials.
- (ii) A dedicated Food Distribution Centre equipped with a zoo kitchen tailored to meet the dietary needs of its captive animals.
- (iii) A Captive Slaughter House to ensure a consistent supply of fresh and hygienically processed meat for carnivores, the first of its kind in the country.
- (iv) Sustainable Feeding through our 33-acre captive fodder farm employs organic practices to ensure a continuous supply of nutritious grass and fodder for our herbivores."
- (v) Live Feed Rearing Centre for consistent production and supply of live feed for zoo animals.
- (vi) Transparent feed procurement process to guarantee the source of quality feed through feed contractors.
- (vii) Dedicated filtering units and chlorination plants to ensure reliable supply of potable drinking water.
- (viii) Stringent Quality check protocols to ensure reliable supply of high quality food.
- Veterinary Care and Animal
   Husbandry: Nandankanan Zoological
   Park prioritizes the highest standards of
   animal husbandry and veterinary care.
   Monitoring animal health begins from
   the moment an animal is born or
   arrives at the zoo. The primary focus of
   the health program is the prevention of
   diseases and ailments.

- Veterinary Hospital with advanced medical facilities: The Park houses a veterinary hospital with advanced facilities, staffed by three full-time veterinary surgeons who provide comprehensive care to the captive animals.
- Health Oversight: The Government of Odisha has established a five-member Technical Committee to regularly monitor and review health care and related issues at the zoo. Continuous communication with C.V. Sc & A.H. ensures that their services can be quickly requisitioned in cases of emergency.
- Preventive Care: Nandankanan follows a precise schedule for vaccination, deworming, and preventive medication, which is meticulously adhered to in order to safeguard the health of all animals.

#### Infrastructure at Zoo Hospital



The Zoo Hospital at Nandankanan is well-equipped with a range of facilities designed to provide comprehensive veterinary care:

- Operation Theatre: The hospital features a fully equipped operation theatre backed by a generator set to ensure uninterrupted power supply. UV lamps are fitted inside the OT to ensure absolute aseptic condition. The OT has advanced shadow-less ceiling lamps, oxygen supply unit, diathermy machine, gaseous anaesthesia machine, multipara patient monitor and ventilator unit. It has all necessary instruments to carry out various surgical interventions in wild animals.
- Radiology Unit: the Operation theatre is connected to a Radiology Unit which is equipped with mobile and portable x-ray machines, digital radiography unit, computed radiography unit, portable colour Doppler ultrasonography unit, endoscopy unit consisting of gastroscope and colonoscope, ECG machine and suction machine.

- Isolation Ward: A spacious isolation ward is designated for the treatment of sick and injured animals that requires aggressive therapy and round the clock monitoring. The Isolation Ward is fitted with air conditioners so that animals receive best care in a controlled environment.
- Quarantine Ward: A dedicated Quarantine Ward is there, distant from animal enclosures, having 24×7 attendance facility to house newly acquired animals and those suspected of having contagious diseases, preventing the spread of infections. The QW has close circuit cameras fitted in all its cells with one CCTV monitoring room where our staff carryout monitoring round the clock.
- Pathological Laboratory: The zoo hospital includes a pathological laboratory equipped with an automatic veterinary hematology analyzer, serum analyzer, ion analyzer, ESR analyser, centrifuge machines, a trinocular microscope fitted to computer for analyzing blood, serum, and stool samples. A full time Laboratory Technician is looking after the sample processing so that diseases can be diagnosed at the earliest.
- Molecular and Microbiological Laboratory: An advanced laboratory having facilities for molecular sexing, DNA isolation, and bacterial culture and antibiotic sensitivity testing of various biosamples is situated inside the 'Zoo Veterinary Hospital Complex' facilitating early diagnosis and effective treatment of ailing animals. One Research Associate and one Laboratory Technician with support staff is looking after timely processing of samples.

- Incubation Unit: The incubation unit assists in the artificial incubation of eggs collected from both indigenous and exotic bird species, promoting successful breeding. This unit has two 500 capacity automatic egg incubators. This unit has robust inverter facility backed by one Diesel Generator set to ensure uninterrupted power supply to the incubators.
- Centre for Rearing Animal Babies: This fully air-conditioned centre provides round-the-clock care and monitoring of the rejected/ abandoned/ orphaned/ rescued animal babies received from inside the zoo and from different parts of the state. It is equipped with advanced neonatal Intensive Care Unit, ICU unit for birds, one milk processing unit, separate facilities for herbivore and carnivore mammals, and paddock areas for animal babies to get sun access and have some exercise.
- Post-mortem Examination Hall: A state-of-theart post-mortem examination hall is located away from the animal enclosures. It is equipped with all essential tools including a mortuary refrigerator for carcass storage, a downdraft viscera dissection table for aseptic dissection of carcasses, and an eco-friendly high-rise incinerator ensuring scientific and humane post-mortem examinations. It has separate room for the pathologist having racks for keeping necessary dissection instruments, aprons, gloves, masks etc.
- Anti-depredation Unit: This unit is equipped
  with all necessary equipments like tranquilising
  guns and accessories and drugs for chemical
  immobilization. This unit caters the need of the
  entire state addressing emergency situations of
  animal depredation, man-animal conflict and
  sickness of wild animals in the forest areas.

# Collaboration with Odisha Veterinary College

A Memorandum of Understanding (MoU) has been signed with the College of Veterinary Science & Animal Husbandry (C.V. Sc & A.H), Bhubaneswar, for the use of the "Centre for Wildlife Health" services. The centre is equipped with onsite ultra-sound and x-ray facility backed by a state of the art clinical laboratory. The 'Centre for Wildlife Health' was initially set up in the Veterinary College, Odisha University of Agriculture and Technology, Bhubaneswar as a Regional Centre with financial assistance from the Central Zoo Authority, New Delhi. It was renamed as 'Centre for Wildlife Health' in April 2007 subsequent upon the bipartite agreement signed between the Forest Department, Government of Odisha and Odisha University of Agriculture and Technology, Bhubaneswar. The centre received an amount of Rs 110 lakhs during 2023-24 from Nandankanan for construction of BSL Lab- II as well as to meet its recurring expenses. The prime objective is to extend diagnostic facilities and advanced medical care to the captive animals of the Park. The Centre is well equipped to carry out molecular, meta genomic, hemato-biochemical, bacteriological, parasitological and histopathological examinations.

# Committees constituted by Government of Odisha

#### 1. Expert Committee:

Government of Odisha, Forest & Environment Department, vide Office order No FE-WL-WLF-0027-2019/21236/F&E dated 05.11.2019, constituted an 'Expert Committee' under the chairmanship by Shri S. K. Patnaik, IFS (Rtd. PCCF, Wildlife, Odisha and Member CEC) for strengthening healthcare and upkeep of animals of Nandankanan Zoo.

#### 2. Expanded Technical Committee:

In view of the demise of the some members of the committee, and as per current requirements of animal health management, proposal for reconstitution of the committee is under consideration by Government.



#### 3. Health Committee:

Government of Odisha, Forest & Environment Department, vide Office order No FE-WL-WLF-0027-2019/21234/F&E dated 05.11.2019, constituted a Health Committee for strengthening healthcare and upkeep of animals of Nandankanan Zoo, with the following members:

- Professor and Head, Department of Preventive Medicine, CV Sc & AH -cum-Project Coordinator, Centre for Wildlife Health, OUAT, Bhubaneswar-Chairman
- Professor and Head, Department of Surgery, CV Sc & AH or his Nominee- Member
- Professor and Head, Department of Pathology,
   CV Sc & AH or his Nominee- Member
- Head, Department of Parasitology, CV Sc & AH or his Nominee- Member
- HOD, Department of Nutrition, CV Sc & AH or his Nominee-Member
- Senior Veterinary Officer/ VAS Nandankanan- Member Convener
- All Veterinary Officers of Nandankanan-Members
- Deputy Director, Nandankanan Zoological Park- Member
- Curator, Nandankanan Zoological Park-Member
- Range Officer, Sanctuary Management Range-Member

Date on which Health Committee visited/meeting held during the year- 03/04/2023, 11/04/2023, 18/04/2023, 28/05/2023, 21/06/2023, 12/07/2023, 24/07/2023, 30/07/2023, 17/08/2023, 26/08/2023, 25/09/2023, 09/10/2023, 10/10/2023, 03/11/2023, 09/11/2023, 14/12/2023, 03/01/2024, 03/02/2024, 07/03/2024, 11/03/2024, 24/03/2024



### Vaccination Schedule

Sl.No.	Species	Vaccine against	Schedule
1	Felids (tiger, lion, leopard, leopard cat, fishing cat, jungle cat)	Feline pan leucopenia Calici Disease Rhinotracheitis	Feligen-CRP/felocell-3 8, 12, 16 wk and Annually
2	Hyenas, jackals, wolf, wild dog	Distemper, Parvo, hepatitis, Leptospira Parainfluenza	Nobivac- DHPPi (Multivalent vaccine) Annually
		Rabies	Annually
3	Sloth bear and Himalayan Black bear	Distemper, Parvo,	Nobivac- DHPPi
		hepatitis, Leptospira	(Multivalent vaccine)
		Parainfluenza	Annually
4	Elephant	Haemorrhagic septicaemia	Half yearly
		Tetanus	Half Yearly
		Rabies	Annually
		Anthrax	Annually
5	Gaurs	HS, BQ, FMD	Raksha-Triovac Annually
6	Birds	New Castle disease	During winter (LaSota vaccine in every two months in in drinking water)

#### Chemoprophylaxis Schedule

Sl. No.	Species	Chemoprophylaxis against	Schedule
1	Carnivores (Felids-tiger, lion, leopard) (Canids- Wolf, Jackal, wild dog) (Hyenids)	Trypanosomiasis	Triquin- (every four months) December April August
2	Birds	Coccidiosis	Sulfquinoxaline / Coccidiostats (during monsoon)

#### Routine Fecal Sample Examination & Deworming Schedule

Sl. No.	Type of animal	Enclosure number	Period (month
1	CARNIVORES (at 4 months interval) Or whenever required	30,31,32,33 and tiger safari, lion safari (tiger section)	February
			June
			October
		18,19,20,21,22,23,24,25,26,27 28,29,90,91.(tigers, lions, Jackal, leopards) bear safari sloth and himalayan bears	February
			June
			October
		small cats, small mammal house, mouse deer, Indian hare, giant squirrel, nocturnal house,	February
			June
			October
2	HERBIVORES (at 4 months interval)	herbivore safari, spotted deer, elephants	March
			July
			November
	Or whenever	hippopotamus, giraffe, zebra manipuri deer, barking deer	March
	required		July
			November
		Sambar, swamp deer, spotted deer, nilgai, hog deer, black buck, white buck, four horned antelope, primates including chimps.	March
			July
			November
3	BIRDS (at 4 months interval) Or whenever required	Enclosures 1 to 13, enclosures inside the children park	February
			June
			October
		emu, cassowary, aquatic bird peacock, lesser adjutant stork, open bill stork, saras crane, black swan, mandarin duck, rose ringed parakeet, brahminy kite	February
			June
			October
4	REPTILES (at 4 months interval) Or whenever required	All snakes	March
		star tortoise, monitor lizard	July
			November
5	Indian Pangolins (at 4 months interval) Or whenever required	Pangolin conservation breeding centre	February
			June
			October

#### Disinfection Schedule

Ideal upkeep of captive animals in the zoo principally depends on general hygiene and sanitation of the enclosures, captive animals and their handlers. The following regimen of cleaning and disinfection is carried out routinely in Nandankanan Zoological Park.

#### a. Daily

- (1) Removal of fecal matter, leftover bone from carnivore enclosures, cleaning of the floors of feeding cubicles, kraal, corridor, passage and exhibit area.
- (2) Removal of left over fodder, fecal matter from herbivore enclosures and cleaning.
- (3) Cleaning of the feed trough and water trough etc. with scrubber.
- (4) Cleaning of drains with diluted phenyl.
- (5) Removal of plastic, polythene and unwanted materials from exhibit area and moats.

#### b. Weekly

- (1) Pest control measures are taken in and around feeding cubicle.
- (2) Deweeding is carried out in and around enclosures.
- (3) Keeping the exhibit area and moat free from debris.
- (4) The feeding place and water trough etc. are cleaned with bleaching powder.
- (5) Drains are treated with lime and bleaching powder.
- (6) Feeding cubicles are cleaned with potassium permanganate.

#### c. Monthly-

- (1) Leftover bones in bone pits are lifted and the bone pits are treated with acaricide.
- (2) Acaricide (cypermethrin etc.) is sprayed on the bodies of the big cats as well as the enclosures during vector abundance season.
- (3) All debris in exhibit/display area are burnt on a monthly basis. Liming is carried out in and around the enclosures.
- (4) All water storing areas are treated with water purifier i.e. Sokrena WS

#### d. Bi-monthly-

- (1) Kohrsolin is sprayed on the ground in and around the enclosures after deweeding.
- (2) Acaricide spray (Cypermethrin etc.), simultaneously on the enclosure ground and on the body of the big cats
- (3) All wet moat water is pumped out, desilted, lime washed and then replaced with fresh water.

#### e. Half yearly-

- (1) All feeding and drinking troughs are white washed.
- (2) All floors, walls, roofs of feeding cells, transporting cages, netting, rods are flame sterilized (March & November every year).

#### f. Annually-

- (1) Removal of top soil up to 6" in all kraals and intensively used pacing areas and refilling with fresh sand and soil.
- (2) All walls and roof tops, both inside and outside, are lime washed.
- (3) All chain-link mesh, angles of enclosures and animal cages, sliding doors, squeeze cages etc.



#### Summer Care Management

#### 1. Carnivore enclosures:

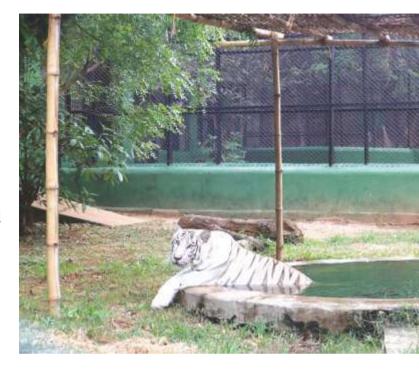
- All water pools in the exhibit area and back kraals are repaired for any possible cracks and water is filled up alternatively.
- Water in the pools is kept in running condition during peak hours of the day.
- The shutter of the feeding cell is kept open throughout the day to allow the animal to take rest inside the feeding cell, if it so desires.
- Water from all moats is pumped out, followed by cleaning, disinfection and refilling (wherever possible).
- Provision of shed above the water pools has been made to prevent water from getting heated.
- Feeding cells are made straw thatched to keep the cells cool.
- Sprinklers are made available and operational in all carnivore enclosures, including Jackal, hyena, wolf and wild dog.

#### 2. Herbivore enclosures:

- All Sprinklers are made operational.
- Wallowing tank of sambar enclosure is cleaned and provision of running water is made in wallowing tank.
- Water accumulation is not allowed inside the enclosure.
- Water in the pools is kept in running condition during peak hours of the day.
- Left over stems of fodders accumulated in the moat area is cleaned.
- Top soil is removed and enclosure is cleaned.
- Sprinklers are made available and operational in all enclosures including giraffe.

#### 3. Herbivore Safari:

- Sufficient number of sprinklers are made available and operational at different strategic locations inside the herbivore safari
- Arrangements have been put in place for proper drainage of both the large water pools to ensure that silt does not accumulate on the floor. The water pools are cleaned and disinfected every week.



- All the water troughs are repaired, lime washed and covered with overhead bamboo tatis to avoid heating.
- Artificial sheds made of bamboo tati are provided at different locations to allow the deer take rest underneath.

#### 4. Primate enclosures:

- Provision of air coolers is made to chimpanzee and exotic primates wherever necessary.
- Bena chera mats are hanged at the windows of the feeding cells in the chimpanzee enclosure.
- Roof thatching with provision of cantilever is made in the chimpanzee enclosure to provide shade on the feeding cell wall.
- Exhibit area of Assamese macaque, Capuchin, Tamarin and Squirrel monkey enclosures are covered with bamboo tati.
- Chimpanzees are not allowed into the exhibit area in case the temperature rises to more than 40°C.
- Provision of shed is ensured in the exhibit areas of all primate enclosures.





#### 5. Reptile park:

- In crocodile and water turtle enclosures, water in the pool is kept in running condition during peak hours of the day.
- Sheds are provided at all crocodile and turtle enclosures so that water does not get heated.
- Snake enclosures are covered with bamboo tati.
- Bamboo tatis have been provided on roof top of the Iguana and yellow anaconda enclosures.

#### 6. Bird enclosures:

- Provision of side wall curtains is made during day time (10 AM to 4 PM) to protect them from hot blowing wind.
- Water is sprinkled on side wall curtains, floors and roof tops by 8 AM every day.
- The grass lawn passage situated between bird enclosures (Enclosure 1 to 10) is flooded with water before 8 AM every day.
- Cinereous Vulture: Water tank is kept filled with water. Water is sprayed over the bird and inside the enclosure in case the temperature goes beyond 40°C.

- Silver pheasant/ Golden pheasant
  enclosure/ring neck pheasant/lorikeet
  enclosures: gunny bags/ bena chera are
  hanged up to half of the chain link mesh and
  water is sprinkled over it 2-3 times a day.
- Emu and ostrich are given bath by spraying water on them during the early part of the day (i.e. before 10AM).
- Large earthen water pots are provided in all bird enclosures to keep the drinking water cool.

#### 7. Bear Enclosures:

- All bear enclosures (enclosure 15 and 16) are provided with two sheds, each thatched with straw or bamboo. Bears are kept confined in the feeding cell during 10AM to 4PM on days when the temperature goes beyond 40°C.
- Moats are cleaned, disinfected and refilled with fresh water. Water moats are topped with fresh water daily.
- Back-kraals of bear safari are provided with bamboo tati on the chain-link mesh roof top.

#### 8. General considerations:

- All enclosures have wall hanging thermometers to record maximum/ minimum temperature of the day
- Staff of animal section remain vigilant during peak hours of the day and inform Zoo Veterinary Hospital in case any behavioural change is noticed. A special squad is constituted to remain vigilant during peak hot hours of the day.
- Anti-stress medicines, multivitamins and electrolytes are supplemented in feed/drinking water as and when required.





### Monsoon Care Management

- 1. Lime spreading, in all herbivore enclosures, is done every month.
- 2. Leaking roof tops of different animal enclosures especially birds and reptiles are properly sealed to avoid soiling of litter/substrate which can be a source of infection
- Old and rough drinking water pots are replaced with new and clean ones to facilitate clean water supply
- 4. Water pools of the carnivore enclosures are lime washed every month
- To protect the animals from water borne infections, stagnant water in all water moats is removed and the moat cleaned thoroughly and treated with lime.
- Pruning of bushes and weeds inside and surrounding the carnivore

- enclosures is done every fortnight to protect the animals from predators and ecto-parasite infection. To avoid tick infestation, acaricide is sprayed after every deweeding.
- 7. To check waterborne diseases, sensitive animals like Chimpanzee, exotic primates, Assamese macaque and other delicate small mammals and birds are provided with clean and potable drinking water every day.
- 8. Roofing over the feeding troughs is ensured to prevent the food items getting wet.
- 9. Cleanliness and hygiene measures are taken sincerely at the slaughter house and feed receiving centre. Floor washing with bleaching powder and antiseptic foot

- bath is ensured at feed distribution centres and slaughter houses.
- Vegetables, fruits and greens are washed with 0.1% potassium permanganate solution prior to processing at feed distribution centre.
- Containers, tins and carry bags used for transporting feed are properly cleaned and washed daily.
- 12. Potassium permanganate solution/lime foot bath at the entrance of all herbivore, carnivore and bird enclosures is strictly maintained.
- 13. Dumping pit of scat and excreta from carnivore enclosure are covered with earth. Bone pits are cleaned every month.



### Winter Care Management

### 1. Birds housed in Enclosure no 1 to 13, 81 and inside Children Park:

- Drapes of agro net or clean gunny bag are spread around the wire mesh from outside during night time.
- Lighting with 40W electric bulbs protected with a metallic frame is provided in each enclosure and is switched on during night time for warmth.
- As the breeding season for most birds coincides with the end of winter, provision of sufficient nest boxes and other nesting facilities are made in each enclosure according to the requirement of the species after meticulous observation.

#### 2. Chimpanzee and other exotic primates:

- The windows of the feeding cell are covered with drapes during night time but at a distance so that it can't be pulled out or damaged. The existing window shutters are used during the night time.
- Medicines to improve immunity are supplemented in the diet.
- Room heaters are kept in readiness for their use in extreme cold conditions.
- When needed, plywood sheets are spread on the floor of the night shelter of chimpanzee to keep the floor warm.

#### 3. Snakes:

- Clean fresh straw wrapped in gunny bags is provided inside each enclosure
- A 40W electric bulb is provided in the den to provide warmth
- Provisions of UV bulbs, IR bulbs and room heaters have been made to give preferred temperature range.
- Provision of direct sunlight into the enclosure has been made by pruning obstructing tree branches.

#### 4. Crocodiles:

 To allow day time basking, overhead branches of shady trees are pruned and fresh sand beds are spread in the basking zone. In extreme cold conditions, thatched sheds with straw underneath are provided in each enclosure to help crocs taking shelter at night.

#### 5. Tiger and other carnivore enclosures:

- Stagnant/accumulated rain water is pumped out from all water moats since it may act as a source of gastrointestinal infection. Silt accumulated inside moat is removed and the moat is treated with lime and is kept dry.
- The top soil of tiger and lion enclosures/back kraals (frequently used areas) are removed and replaced with fresh sand after sprinkling of lime.
- Lime washing of walls of feeding cells is done every winter.
- The water pools inside the enclosures/backkraals are inspected and repaired wherever required.

#### 6. Herbivore enclosures:

- All lake side herbivore enclosures are sprinkled with lime. Stagnant water and mud in enclosures are cleaned and replaced with fresh soil immediately.
- Top soil removal in all herbivore enclosures start during winter so that it can be completed before the arrival of the hot and humid climate

#### 7. General consideration-

- Annual lime washing of all wall structures of feeding cells, exhibit area, back-kraals and painting of chain-link mesh, squeeze/transportation cages, angles, iron structures is done during winter.



# **Special Attractions**

Nandankanan Zoological Park is a haven of serene beauty, enveloped in lush greenery and a picturesque woodland ambiance that creates a calming atmosphere for all who visit. Its tranquil charm, combined with a captivating array of visitor amenities, makes it a top choice for nature lovers, photographers, and adventure seekers alike. The park offers well-maintained trails, informative exhibits, and ample seating areas, allowing visitors to explore and unwind in a natural setting. Whether marvelling at the diverse wildlife, enjoying the scenic surroundings, or participating in exciting activities, Nandankanan provides an unforgettable experience that continues to draw large crowds throughout the year.



#### **Boating**

Boating in Kanjia Lake is a relaxing and peaceful way to admire the natural beauty of Nandankanan. Paddle boats ranging in size and capacity from 2-seater to 6-seater are offered to visitors.



#### Tiger safari

Tiger safari, which started on 1<sup>st</sup> October, 1991, offers visitors the opportunity to observe tigers moving about freely in their natural habitat. It's an exciting and adventurous way to see these majestic animals.



#### Lion safari

Developed in 1984 on 20 hectares of land, the drive takes approximately twenty minutes through forested areas, enabling guests a chance to witness gorgeous lions in their natural habitat.



#### Herbivore safari

Sitting in a specially designed vehicle, visitors can watch animals, including barking deer, spotted deer, sambar, four-horned antelope, wild boar, jungle fowl, peafowl, etc. moving freely in their natural habitat during the 30-hectare safari. The park has been offering this safari since 2011.



#### Bear safari

Established in 2012, the Bear Safari at Nandankanan is a relatively new attraction. Spanning an area of more than 5 hectares, it allows tourists to witness sloth bears in their own environment. The bear safari provides the visitors a rare chance to observe the behaviour and way of life of these incredible creatures.



#### Nocturnal Animal House

It is a unique concept designed to house a range of nocturnal animals, including porcupines, owls, pangolins, and civets. Since these animals and birds are nocturnal, keeping them in standard enclosures for public exhibition is not an option. To make the nocturnal animals more active during the day for the benefit of visitors, the animals' wake-sleep cycle is reversed by imitating night time settings, causing the animals to become active during the day.



#### Reptile Park

At the Reptile Park of Nandankanan, guests are greeted by a life-size Tyrannosaurus model. The park is home to 30 species of reptiles, including turtles, lizards, snakes and crocodiles with king cobras, pythons, and anacondas taking pride of place. It also has an interpretation centre that explains the biology and evolution of reptiles through interactive displays, live exhibitions of different reptile species and models of ancient animals.



#### Toy Train

The Toy Train, which provides an enjoyable and picturesque trip of Nandankanan, is an irresistible attraction for visitors of all ages. The battery-operated train has five bogeys that can accommodate 72 passengers each and two wheelchairs for the disabled. The 1.58 km long circular track of the Toy Train moves by the side of the lake and through the heavily forested hilltop region, where animals roam freely.



#### Aquarium

The Aquarium at Nandankanan is a fantastic resource to learn more about the fascinating world of water and its inhabitants. The thoroughly researched educational resources on offer at the Aquarium highlight the distinctive characteristics and conservation requirements of various freshwater and marine aquatic animals. The Honourable Chief Minister of Odisha dedicated the aquarium to the public on February 4, 2008.



#### Library

The Library at Nandankanan provides an extensive collection of books and publications on a range of topics like forestry, wildlife, veterinary etc. The conveniently located library offers over 5,000 books and journals to enhance the knowledge of visitors on the importance of conservation of natural resources.



#### Interpretation Centre

The interpretation centre, which is located near the entrance gate of the park, uses a variety of audio-visual aids to provide information on Odisha's wildlife in general and Nandankanan in particular. A movie about Nandankanan is also shown to visitors to keep them informed about the behind-the-scenes activities at the park.



#### Zoo museum

The museum displays taxidermy specimens, preserved specimens of early developmental stages of animals and eggs of flightless birds. It also has exhibits on animal behaviour, ecology, conservation and biodiversity. This facility is of great interest to visitors in general and students in particular.



#### Electronic Gate Entrance system

To ensure security and transparency at the entry point of the zoo, an Electronic Gate Entrance System was implemented in 2012. Guests can use any one of the six electronic gates to enter the zoo by scanning a ticket with a barcode. The system provides timely and accurate information on the number and type of visitors at any given time to the park management.



#### **Battery Operated Vehicle**

Battery Operated Vehicles (BOVs), a paid service provided by the Zoo, allow guests to move quickly and easily around the park, stopping at all major attractions. BOVs can be reserved for Rs. 1000 per group for one hour or on an as-needed basis for Rs. 80 per person. The zoo's Herbivore Lane, Reptile Park, Safari entrance gate, Tiger Avenue, Elephant Lane, Nocturnal Square, Kanan Square, Sloth Bear Enclosure and Aquarium are the locations where BOVs have scheduled stoppages.



#### Amphibian enclosure

The Nandankanan amphibian enclosure features six kinds of amphibians, including toads and frogs. The enclosure comprises a 56 m² plinth space and a viewers' gallery. Additionally, it incorporates amenities like a swimming pool, live plants, sawdust, and running water to provide the amphibians a realistic habitat. The goal of the frog enclosure, one of the first of its kind in India, is to inform guests about the significance and diversity of amphibians.



#### Walkthrough aviary

The Nandankanan walk-through aviary features a wide variety of exotic birds, including ducks, parakeets, pheasants, conures and turacos. With a tumbling waterfall, a meandering water channel, two pools, two arched bridges and living plants, the aviary boasts of the perfect naturalistic setting. There are separate entry and exit points for the aviary, which has a 216-meter walking path paved with laterite stone.



#### Open top leopard enclosure

A big, realistic enclosure that is open to the sky houses leopards on display at Nandankanan. One of the first in India, it is designed to provide guests a better view of the animals. The enclosure has a solar powered electric fence for the safety and security of the leopards and the visitors.



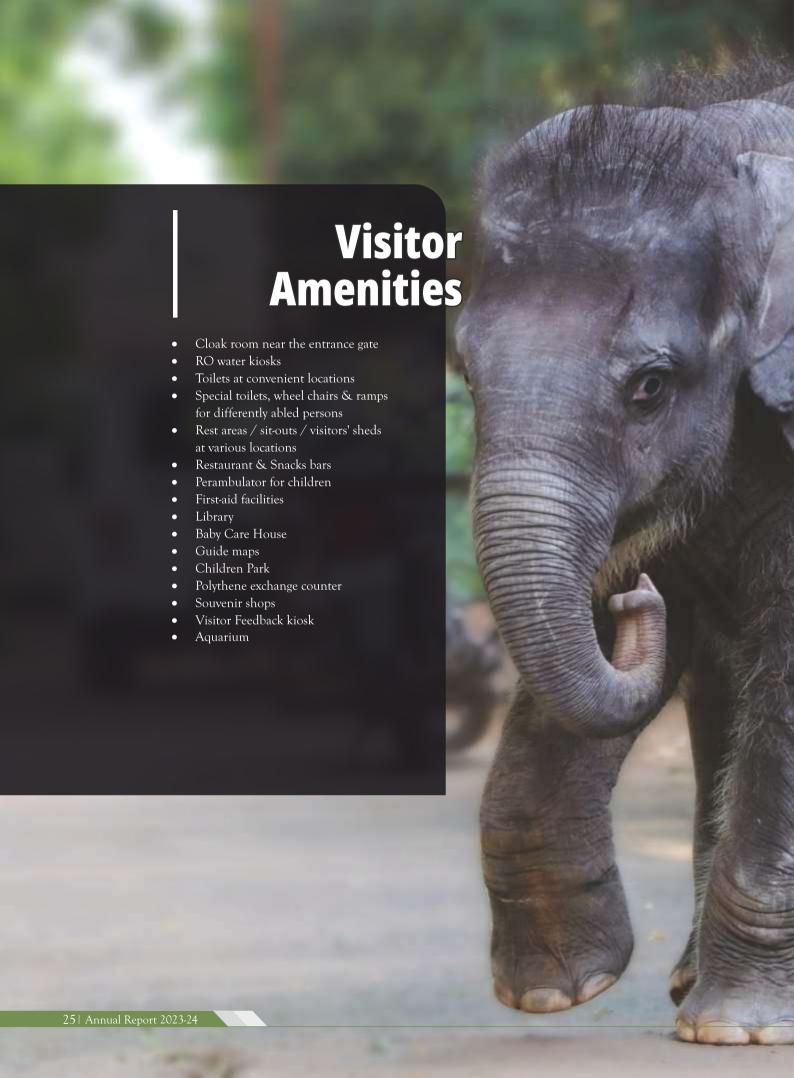
#### Monocable Pulsated Ropeway

The Monocable Pulsated Ropeway at Nandankanan Zoological Park is a facility that allows visitors to enjoy a unique aerial view of the Kanjia lake and the flora and fauna of the park. It is a 618-meter long ropeway that connects the Nandankanan Zoo to the State Botanical Garden. It consists of 12 cabins, each with a capacity of 6 persons.



#### Multi-Level Car Parking Facility

The Multi-Level Car Parking Facility at Nandankanan Zoological Park was inaugurated by the Chief Minister of Odisha in 2022. It is a three-storey parking facility with a capacity to accommodate 583 cars and more than 2000 two-wheelers. The facility also has features like fire safety measures, driver rest rooms, drinking water and snacks kiosks, CCTV monitoring, elevator, ramps and landing facilities for visitors besides separate wash rooms for gents and ladies. The facility not only facilitates safe parking of vehicles but also addresses the issue of traffic jam and rush at the main road near the zoo.









#### (A)Director's office in Mayur Bhawan, Bhubaneswar

Sl. No.	Designation	Number of Sanctioned Posts	Number of the incumbent
1	Director	1	1
2	D.C.F.	1	0
3	Senior Stenographer	1	0
4	Senior Assistant	4	4
5	Junior Assistant	4	1
6	Driver	1	0
7	Office Peon	1	1
8	Office Sweeper	1	0
9	Office Chowkidar	1	0
10.	Watchman	1	1
	TOTAL	16	8

#### (B) Deputy Director's Office, Nandankanan Zoological Park

Sl. No.	Name of each category of post.	Sanctioned strength.	No. of staff in position.
1	Deputy Director, N.K.Z.P.	1	1
2	Sr. Veterinary Officer	1	1
3	ACF	3	4
4	Vet. Assistant Surgeon.	1	1
5	Forest Ranger	8	2
6	Section Officer	1	1
7	Zoo Biologist	1	1
8	Education Officer	1	1
9.	Dy. Ranger	0	3
10	Fitter-cum-Mechanic	1	0
11	Senior Assistant	5	5
12	Junior Stenographer.	1	1
13	Forester	9	9
14	Driver(H.V)	3	0
15	Driver (L.V.)	4	1
16	Livestock-Inspector.	3	2
17	Projector Operator	1	0
18	Junior Librarian	1	0
19	Artist- cum- Modeler.	1	0
20	Guide	1	0
21	Junior Assistant	4	2
22	Booking Clerk	3	0
23	Welder-cum-Blacksmith	1	0

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	26	Mali	5	1
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	28 29 30	Mahunta Asst. Mahunta Animal Keeper	3 8 101	0 0 56
	28 29 30 31	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant	3 8 101 6	0 0 56 4
	28 29 30 31 32	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper	3 8 101	0 0 56
	28 29 30 31 32 33	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar	3 8 101 6 11	0 0 56 4 5
	28 29 30 31 32	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar Winch Operator	3 8 101 6 11 3	0 0 56 4 5
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	28 29 30 31 32 33 34 35 36	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar Winch Operator Ticket Collector Gangman Mate	3 8 101 6 11 3 1 10	0 0 56 4 5 2 0 7
	28 29 30 31 32 33 34 35 36 37	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar Winch Operator Ticket Collector Gangman	3 8 101 6 11 3 1 10 1	0 0 56 4 5 2 0 7 0
	28 29 30 31 32 33 34 35 36 37 38	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar Winch Operator Ticket Collector Gangman Mate Boat Man Zoo Watcher	3 8 101 6 11 3 1 10 1 2	0 0 56 4 5 2 0 7 0 1 0 9
	28 29 30 31 32 33 34 35 36 37 38 39	Mahunta Asst. Mahunta Animal Keeper Office Peon/Attendant Sweeper Bungalow Chowkidar Winch Operator Ticket Collector Gangman Mate Boat Man	3 8 101 6 11 3 1 10 1 2 2 22	0 0 56 4 5 2 0 7 0

#### (C) State Botanical Garden

Sl. No.	Name of each category of post	Sanctioned strength	No. of staff in position
1	Curator	1	0
2	Junior Typist	1	0
3	Grafter	2	0
4	Pump Driver	1	0
5	Power Tiller Operator	1	0
6	Herbarium Attendant	1	0
7	Gardener	6	0
8	Attendant	6	5
9	Peon	3	2
10	Watchman	1	1
	TOTAL	23	8



# It's all about team work

		Office		Section Officer	Junior Stenographer	Senior Assistant	Junior Assistant	Driver	Office Peon	
		Research and Education		Biologist	Education officer	Junior Librarian	Artist cum Modler			
		Zoo Hospital	Senior Veterinary Officer	Veterinary Assistant Surgeon	Livestock-Inspector					
		ACF, State Botanical Garden	State Botanical Garden-II	Forest Ranger	Forester	Forest Guard	Pump Driver	Attendant	Watchman	
	ctor	ACF, State Bo	State Botanical Garden-I	Forest Ranger	Forester	Forest Guard	Grafter	Power tiller Operator	Herbarium attendant	Gardener
	Deputy Director	ement	Special Project	Forest Ranger	Forester	Forest Guard	Winch Operator	Bunglow Chaukidar	Boatman	
		ACF, Visitor Management	Security and Maintenance	Forest Ranger	Forester	Forest guard	Zoo watcher	Watchman		
		▼	Revenue	Forest Ranger	Forester	Forest Guard	Booking Clerk	Ticket	Gang man	
Director		ACF, Sanctuary Management -cum-Curator	Stores	Forest Ranger	Forester	Forest Guard	Mali			
		ACF, Sanctua	Sanctuary Management	Forest Ranger	Forester	Forest guard	Mahaut	Mate	Animal Keeper	
			Establishment	Senior Stenographer	Senior Assistant	Junior Assistant	Office Peon	Chowkidar	Sweeper	

# Conservation Breeding & Research

Nandankanan Biological Park demonstrates a steadfast commitment to advancing research in biodiversity conservation, wildlife management, and animal health. Emphasizing collaborative efforts, the park actively engages in-house staff, zoo veterinarians, and experts from prestigious institutions such as Odisha Veterinary College, OUAT, and Centurion University, alongside graduate, Master's, and Ph.D. students. These partnerships ensure innovative and impactful outcomes in research. Sustained by funding from the Central Zoo Authority (CZA), New Delhi, and the Wildlife Wing, Forest, Environment, and Climate Change Department, Odisha, the park's research initiatives contribute significantly to enhancing expertise in captive animal management. Findings from these projects are shared through publications in esteemed international journals, highlighting Nandankanan's role in advancing global knowledge in wildlife conservation and management.

# Conservation Breeding Programmes



# Indian Pangolin Conservation Breeding Programme

Nandankanan Zoological Park houses the world's only Conservation Breeding Centre for Indian pangolins, established in 2008. Using infrared-sensitive CCTV cameras, the centre has uncovered vital insights into pangolin behavior, enabling the development of effective housing, husbandry, and conservation breeding protocols. With 16 pangolins successfully bred in captivity, the current population stands at 23 (11 males and 12 females). Recent additions include an isolation ward with three enclosures to mitigate infections and disease. Collaborative initiatives with

South East Asian pangolin facilities, supported by the Central Zoo Authority, focus on refining artificial diets, health care, breeding, and release protocols to enhance conservation efforts for this endangered species.

#### Conservation Breeding of Long-billed vultures

The Vulture Conservation Breeding Centre at Nandankanan Zoological Park, established in 2011-12 with support from the Central Zoo Authority, spans 0.3 acres within seven acres of undisturbed forest. It focuses on captive management and breeding of long-billed vultures for reintroduction into the wild. The initial population of 12 vultures, procured from Gandhi Zoological Park, Gwalior, in 2018, was identified through molecular sexing techniques. The center includes a colony aviary, two nursery aviaries, and a laboratory complex equipped for biological analysis, incubation, and CCTV monitoring. Activity patterns are observed using advanced cameras. In 2024, two pairs of vultures laid eggs, which were properly incubated but found infertile after radiographic analysis. The centre continues its efforts to refine breeding protocols for conservation success.

#### Conservation Breeding of Indian tiger

Nandankanan Zoological Park has been breeding tigers since 1966 and has been a participating zoo for conservation breeding of Indian tigers since 2009. There have been 380 tiger births since 1966, including 52 births under the conservation breeding programme i.e., after 2009. The zoo has sent tigers to the coordinating zoo Nehru Zoological Park, Hyderabad in 2016 and received a wild tigress from Nandanvan Zoo, Bhopal in 2009 and a zoobred tiger with 33% wild gene from Nehru Zoological Park, Hyderabad in 2016 to infuse new bloodline and increase heterozygosity. Presently, the zoo has 27 tigers which include 17 (9:8) normal coloured tigers, 07 (3:4) white tigers and 03(3:0) melanistic tigers, mainly as a result of the ongoing conservation breeding programme.



Nandankanan Zoological Park has been breeding mouse deer since 1971 and has been a participating zoo in conservation breeding of mouse deer since 2009. There have been 58 mouse deer births in captivity since 1971 including 41 births under the conservation breeding programme, i.e., after 2009. The zoo sent mouse deer to the coordinating zoo Nehru Zoological Park, Hyderabad in 2013 and 2016, to Sri Chamarajendra Zoological Garden, Mysore in 2018 and received mouse deer from Nehru Zoological Park, Hyderabad in 2016 to infuse new bloodline and increase heterozygosity. Presently, the zoo has 31 mouse deer (12:9:10) and is going ahead with conservation breeding programme. Nine offspring were born during 2023-24.



#### Species Recovery of Gharial in River Mahanadi

Odisha is the only Indian state having all three crocodilian species: Gharial, Mugger, and Saltwater Crocodile. Due to the dwindling population of Gharials in their natural habitat, the Government of Odisha initiated the "Species Recovery of Gharial in River Mahanadi" project in 2019 to restore Gharial populations in the Mahanadi River. The forest department released 19 captive-bred Gharials, equipped with radio and satellite transmitters, to monitor their movement, habitat use, and behavior. Conservation strategies included establishing a 10-km 'NO FISHING ZONE' in Satkosia Gorge, providing financial compassion to fishermen for damaged nets, and offering incentives for the safe return of accidentally captured Gharials. Despite challenges, including deaths from fishing nets, interspecies conflict, and infections, the project experienced the natural breeding of Gharials in 2021 at Satkosia Gorge after 40 years and continues until 2024. The second phase of the project, approved in 2023, focuses on habitat surveys, threat reassessment, community awareness, scholarship for school children, engagement of Kumbhira Bandhu, and preparations for future Gharial releases, ensuring continued efforts to safeguard this critically endangered species.





# Zoo Education Programmes

Nandankanan Zoological Park attracts around 3.9 million visitors annually, offering a unique platform to educate and raise awareness about wildlife and its conservation importance. Zoos act as living institutions, classrooms, and landscapes, promoting respect for biodiversity and inspiring action for a sustainable future. To engage the wider community, Nandankanan designs interactive and impactful educational programs, including Citizen Science Initiatives, naming ceremonies for newborns, and observances like World Elephant Day, World Pangolin Day, International Tiger Day, World Wetland Day etc. With a dedicated education wing, the zoo ensures visitors enjoy their experience, develop a connection with animals, and are empowered to act both during and after their visit.

#### Educational and Community Engagement Programs at Nandankanan Zoological Park

Nandankanan Zoological Park has developed a comprehensive suite of programs to engage students, volunteers, and the community, with a focus on wildlife education and conservation. These initiatives foster environmental awareness and provide hands-on learning opportunities, strengthening Nandankanan's role in conservation education.



# Sin cycl comp Q and Cycle

#### One Day at Nandankanan

The "One Day at Nandankanan" program offers school and college students a full-day educational experience, including guided tours of zoo exhibits, visits to themed gardens, and feedback sessions.

#### Zoo Outreach Programme

The "Zoo Outreach Programme" conducts wildlife awareness classes in schools across Khordha, Cuttack, and nearby districts, engaging students from grades 5 to 10 through interactive sessions. Education wing of Nandankanan with Zoo volunteers organize the programme in co-ordination with various schools.

#### Zoo Volunteers Programme

The Zoo Volunteers Programme offers individuals the chance to assist in zoo operations, supporting activities like visitor management, animal care, maintenance, and educational outreach. Volunteers who serve for at least 15 days receive a certificate, food, a uniform, and travel reimbursement.



#### Zoo Ambassador Programme

Through this initiative, student volunteers act as ambassadors for Nandankanan, educating visitors about conservation. The program includes online classes, culminating in an examination to select ambassadors at each school. Ambassadors engage with the public, sharing conservation messages and providing guided tours, and they receive complimentary zoo visits with their families.



#### Social Media Management

Nandankanan's social media presence educates the public about zoo events, wildlife, and conservation through "Did you know?" posts, videos, and updates. Managed by an IT expert, the content is thoroughly fact-checked and designed to engage a wide audience, spreading awareness about the zoo's activities and citizen science initiatives.



#### Zoo Internship Programme

The Zoo internship program provides practical experience in zoo management and conservation for graduate and postgraduate students, with four sessions per year (Winter, Spring, Fall & Summer).



#### Friends of Nandankanan

"Friends of Nandankanan" is an online community of well-wishers that connects individuals interested in supporting the zoo. A registration link on the Nandankanan website allows people to join this group. The community participates in virtual meetings, expert talks, and online classes to stay informed about important developments at Nandankanan. Additionally, online quizzes and competitions are held to celebrate eco days and engage members in conservation efforts.





#### Sunday Bird Walk

Nandankanan's "Sunday Bird Walk" is a Citizen Science initiative designed to involve the public in collecting data on bird diversity around the Nandankanan Wildlife Sanctuary. Held every Sunday for 20-25 participants, the program encourages voluntary participation through registration on the Nandankanan online portal. Participants gather at the Forest Rest House by 06:15 am, with the walk beginning at 06:30 am and lasting until 09:30 am, with group discussion. Guided by bird experts, participants observe both in-situ and ex-situ birds. After the walk, they join a WhatsApp group for further discussions and experience sharing. This program is ideal for beginners, researchers, and nature enthusiasts alike.





#### Tree Walk

The State Botanical Garden within Nandankanan serves as the venue for regular Tree Walks, where an expert leads 20-25 participants through trails to identify various trees, shrubs, and herbs, discussing their medicinal uses and ecological roles. This walk also educates participants on the habitats of birds and insects that thrive among these plants. Education Wing of Nandankanan leads the walk in a particular trail. There are QR coded Tree plates where one can scan and identify the plant. The use of Citizen science app, "SeasonWatch" helps in documenting and observing trees of an area. A Season Watch Odisha group has where nature enthusiasts can ask questions on the unidentified plants.



#### **Butterfly Walk**

Nandankanan's Butterfly Park, home to more than 90 butterfly species and over 50 host plants, hosts educational Butterfly Walks. Participants explore "butterfly hotspots" within the sanctuary, observe butterflies at different life stages, and learn about metamorphosis and butterfly ecology. Informational signs and a Butterfly Interpretation Centre enhance the learning experience. The "National Learn about Butterflies Day" on 14<sup>th</sup> March & "Big Butterfly Moth" in the month of September were observed as part of citizen Science programme related to Butterflies. The data is also uploaded in i Naturalist and Indian Biodiversity Portal for further identification.





#### Moth Watching

In these sessions, moth-watching setups attract moths using lights, allowing participants to observe and learn about moth species in the sanctuary. Experts guide participants, providing insights into the ecology and diversity of moths in the area. 'Moth week' is also celebrated in the last week of July every year by setting up light traps to document moths.





#### Herping Trail

Herping trails provide opportunities to explore Nandankanan's herpetofauna. Volunteers and experts lead participants through undisturbed areas, educating them on various reptiles, including their habitats and behaviours. Videographic & photographic documentation of the reptiles and amphibians give an overall idea of the biodiversity of the Nandankanan Sanctuary.

#### Wetland Trail

Nandankanan's Kanjia and Kiakani Lakes serve as prime locations for the Wetland Trail, where participants explore the diverse wetland-dependent species such as dragonflies, damselflies, fish, amphibians, and hydrophytic plants. Guided tours provide valuable insights into the biodiversity and ecological importance of wetland ecosystems.



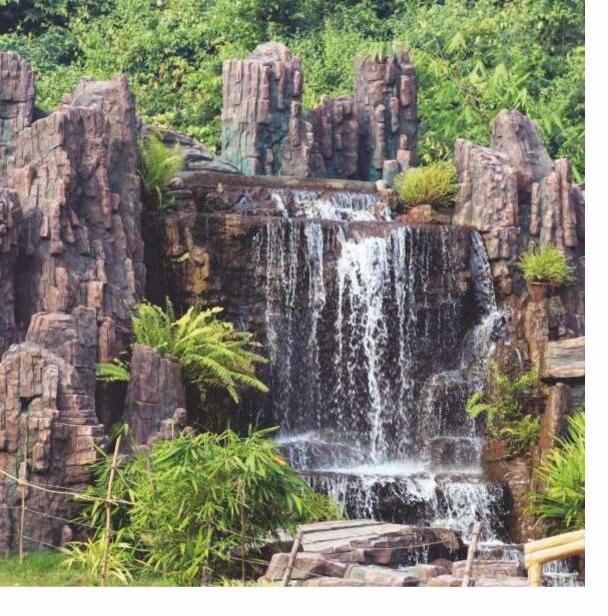
#### Nature Trail

The Nature Trail at Nandankanan offers an immersive experience for visitors to explore the natural beauty of the park. Guided by experts, participants walk through diverse habitats, learning about the flora and fauna that thrive in the area. The trail highlights the ecological significance of different ecosystems, offering insights into wildlife behavior, plant species, and conservation efforts. It's an educational journey that connects visitors with nature, fostering appreciation for biodiversity and the importance of preserving natural habitats. The Nature Trail is an ideal experience for nature enthusiasts, students, and families.

#### **Insect Trail**

Insect Trail at Nandankanan provides an exciting opportunity to explore the fascinating world of insects. Guided by experts, participants venture through different habitats to observe and learn about a variety of insects, including butterflies, beetles, ants, and other pollinators.

These citizen science initiatives are instrumental in cultivating a deeper appreciation for biodiversity while promoting hands-on learning and conservation awareness among participants. Through these programs, Nandankanan Wildlife Sanctuary serves as a model for zoo education, blending conservation with citizen engagement and scientific inquiry.





# State Botanical Garden

he State Botanical Garden (SBG) is situated on the beautiful landscape of Nandankanan Wildlife Sanctuary hemmed between two wetlands, namely Kanjia and Kiakani. It is located 20 K.M. away from the state capital Bhubaneswar at a latitude of 20°24'15" N and 85°49'30", 40 m above MSL. One of the pioneer plant conservation and nature education Centres in the state, it was established by the Horticulture department in the year 1963. The management of SBG was handed over to Nandankanan on 1<sup>st</sup> of August, 2006. The Garden is spread over an area of 75 Ha. of green and mesmerizing landscape, including the Kiakani lake covering 25 ha. The lush green forests and the pristine nature in all its resplendent glory are a treat for the sore eyes and a balm for the senses dulled by the cares of the world.



### Facilities

The Botanical Garden has 28 satellite gardens with natural plants and meadows distributed across an undulating terrain. The following sections highlight the key facilities available at the Botanical Garden.



#### Bougainvillea Garden

1 It is spread over 21, 400 square feet area. A total of 10 varieties of bougainvillea are available inside the bougainvillea garden, including four creeper varieties.

#### Rose Garden

**Q2** A total of 2, 500 plants belonging to 55 varieties are present in the Rose garden, which is the main attraction during winter.

#### **Butterfly Garden**

Spread over 36590 sq. ft, this garden is a unique butterfly garden of the state. There is one water fall, water channel, two fountains and a bridge inside the garden. More than 90 varieties of butterflies can be seen in the garden. The garden also has an Interpretation Centre depicting pictures of different varieties of butterflies in Nandankanan.

#### Waste management Garden

This garden, which was added to the collection of SBG recently, has been designed from waste materials like used tyres, bottles, ropes etc.

#### Palm Garden

O5 This garden has 30 varieties of palm trees and a total of 170 plants planted around the rocky landscape.

The garden is spread over an area of 15000 sq. ft.

#### Carnivorous Garden

**106** The garden houses four different varieties of carnivorous plants.



#### Glass House Complex

Spread over an area of 0.26 ha, it is situated in front of the Dry Garden. The complex is divided into five units; namely Glass House, Cactus House, Topiary Garden, Philodendron House and Begonia House. Glass House Area is a permanent structure covered with glass on roof & walls which create the perfect environment for growing plants. The idea behind the Glass House is to get the right amount of sunlight & warmth for the plants because these plants & flowers cannot survive

#### Cactus House

18 It is a poly house constructed with three raised beds filled with red soil & sand. Important ornamental cactii are raised and multiplied using the grafting method inside it. It is spread over an area of 1, 080 sq. ft.

#### Philodendron House

It is filled with potted plants of different
Philodendron and Monestra. This portion of the
garden is supplied with sprinkler and fogger system of
water supply.

#### Begonia House

10 It is a very small Green House having Begonia plants raised inside it.

#### 11 Topiary Garden

Here topiaries are maintained through regular pruning and cutting, giving them the shape of different animals, birds and geometric shapes.

#### 12 Dry Garden

A majority of the xerophytes are found in this garden. The region is nicely maintained to look like a dry environment with xerophytes. This area also has a sit out place with an umbrella cover for shade. The border on the other side of the garden is planted with Opuntia. The garden has an area of 0.62 hectares.



#### Landscape Garden

This area was the landing site for the old ropeway, which was later developed into a landscape garden with a stream and lawn of Jaysia lawn grass. Another portion of the garden is developed as a lawn with some permanent plants and a sit out.

#### Artificial Zoo

This is a garden for children with 32 animal statues constructed inside to give the feeling of wilderness. The landscape is maintained to give it a feel of the wild forest with a pathway of laterite stone, water bodies and keepers. It is spread over 0.35 ha.

#### 15 Mughal Garden

This is one of the most frequently visited places in SBG. It is designed in the shape of the Mughal Garden with a water canal and dome shaped rest sheds.

#### **16** Japanese Garden

It is spread over 020 ha. The landscape of the garden mimics old Japanese gardens. There is a water channel and a lily pond filled with water lilies.

#### \_\_ Orchid House

It is spread over 0.20 ha .This garden is like a greenhouse covered with argonet to create a suitable environment for orchids. The whole complex is covered with sprinkler and fogger system for watering. Species like Dendrobium hybrids, Cuttleya, Oncidium and Phalaenopsis have been planted in earthen pots with a mixture of charcoal, brick and coconut husks. Cymbidium is planted in full coconut husk and hanged while Vanda, Aphyllum are tied with Bamboo by using coir rope. Unique Orchid, Jewel orchid & Lady's slipper become a major attraction when they bloom.

#### Evolution Garden

The idea behind this garden is to give students and visitors a better understanding of the evolution of plants. A water channel flowing right through the length of the garden with a bridge has been constructed over an area of 0.77 ha



#### Heritage Garden

The garden display the heritage of Odisha containing models of Monk, Live size cow & Tribal hut. It spreads over an area of 1.2 acre.

#### Buddha Park

This park is located along the banks of the Kanjia lake near the Artificial Zoo. Spread over an area of 0.41. ha, ilt has a beautiful Buddha Statue at its Centre.

#### **21** Green House

It is a garden designed to house indoor plants, fenced with chain link mesh and completely covered with argonet. Sprinkler, fogger water supply system provides the required humidity. Total Green House is designed in the stepping manner to give visitors a proper view of all the plant. It is spread over an area of 0.18 ha.

#### Medicine Garden

Situated on the banks of the lake near the Japanese Garden, the Medicine Garden has 52 medicinal plant beds with a lotus pool to boot, which improves the look of the garden.

#### Bonsai Garden

The bonsai garden of SBG has now become a wonderful display for visitors after being renovated recently. The bonsai collection of SBG has a total of 60 species of plants now.

#### **24** Hatimundia Gate Complex

This garden, with one stream, and topiaries, is located near the entrance gate and is a major attraction for visitors while entering the SBG. Landscaping has been done with suitable grass species. There are tree species like Ashoka, Champa, Ixora, Almanda, Bamboo, Kamini hedge, Thunbergia, Duranta. Malpighia hedge, Arica Palm, Agave in the garden.



#### Arboretum

Spread over an area of 4 ha, t is one of be of the largest gardens of the State Botanical Garden.

Arboretum is a life collection of tree species of India.

336 species of different types of medicinal species,

Ornamental species & Forest species of trees are

#### 26 Hibiscus Garden

A small hibiscus garden is being maintained inside the State Botanical Garden.

#### **27** Hydrophyte Garden

Hydrophyte garden is a unique attraction of the SBG. There are beautiful collection of hydrophytes like Lotus Lily, and other plant varieties. A hydrophyte museum constructed recently showcases 225 varieties of hydrophytes, including submerged hydrophytes.

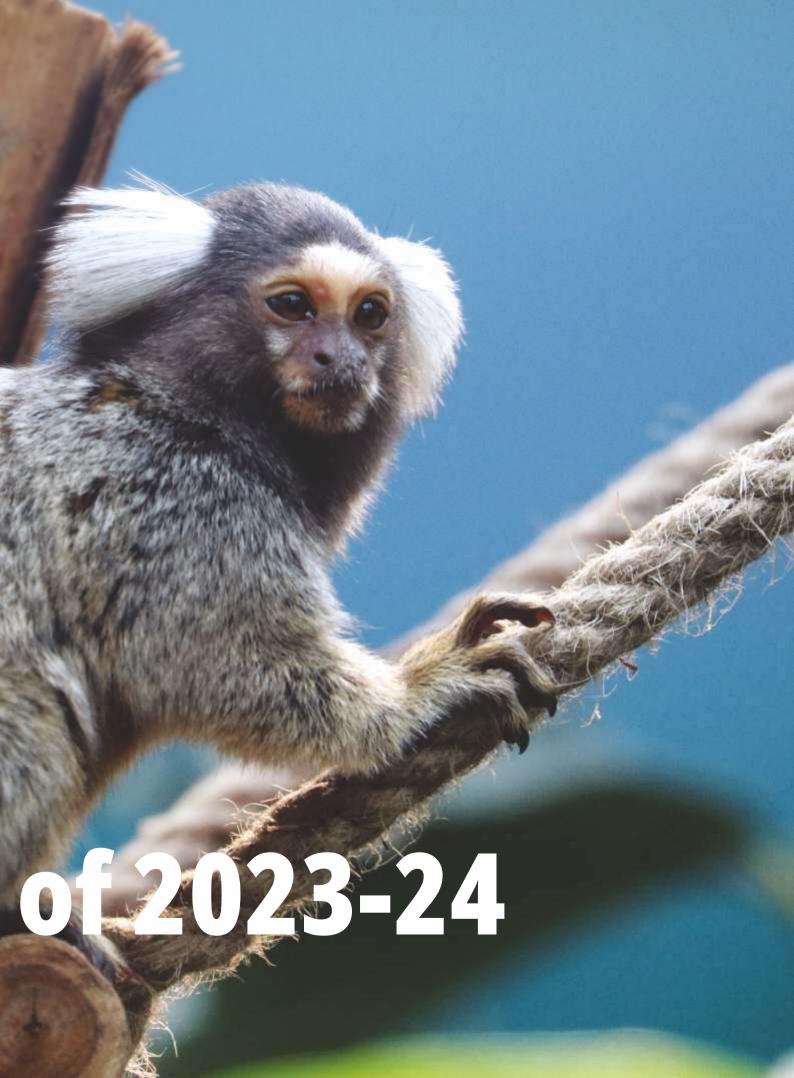
#### Bambusetum

This is a recent addition of to the State Botanical Garden and is a work in progress. Around 70 varieties of bamboos have been planted so far in the Bambusetum spread over 4.4 hectares of land.

#### 29 Children's Park

To provide entertainment to children, an area has been developed as a children's park. Various playing equipment, adventure activities and rides have been put in place at the Children's park to attract children







# **Enhanced animal collection**

Animal acquisition/exchange programs conducted during 2023-2024 added, six new species to Nandankanan's animal collection. Additionally, four species were brought for pairing, and five species were introduced for infusion of new bloodlines.

#### Implementation of animal exchange programmes during 2023-24

Sl. No	Species received	Sex (M: F: U)	Name of the zoo	Date of Disposal
1.	Hoolock gibbon	1:1:0	Biological Park, Itanagar	25.07.2023
2.	Leopard cat	1:1:0		
3.	Himalayan black bear	0:1:0	Aizawl Zoological Park, Mizoram	08.09.2023
4.	Pig tailed macaque	1:1:0	-	
5.	Hoolock gibbon	1:1:0	-	
6.	Four horned antelope	2:5:0	Sambalpur Zoo and conservation	05.12.2023
7.	Sambar	2:3:0	- centre, Sambalpur	21.02.2024
8.	Gangetic soft-shell turtle	2:2:0	Assam State Zoo Cum Botanical	18.03.2024
9.	Great white pelican	2:2:0	- Garden, Guwahati	
10.	Himalayan griffon vulture	2:2:0		
Sl. No	Species given to	Sex (M: F: U)	Name of the zoo	Date of Disposal
1.	Royal Bengal Tiger	1:1:0	Biological Park, Itanagar	14.07.2023
2.	Gharial	1:2:0	-	
3.	Royal Bengal Tiger	1:1:0	Aizawl Zoological Park, Mizoram	27.03.2023
4.	Blackbuck	4:4:0	Sambalpur Zoo and conservation	04.12.2023
5.	Hog deer	4:4:0	- centre, Sambalpur	20.02.2024

#### Acquisition of exotic animals during 2023-24

Sl. No.	Species Given	Sex (M: F: U)	Date of acquisition
1.	Golden handed tamarin	1:1:0	31.08.2023
2.	Squirrel monkey	1:1:0	31.08.2023
3.	Cassowary	1:1:0	25.10.2023
4.	Ostrich	1:1:0	21.09.2023
5.	Livingstone turaco	1:2:0	22.12.2023
6.	Parma wallaby	1:1:0	22.12.2023



# ANNUAL ANIMAL INVENTORY (FROM 1st APRIL-23 TO 31st MARCH-24)

	SCH-I, II, III & IV (Wildlife Protection Act)	tion Act)									Du	ring th	During the Month									
				Stock a	as on 01	.04.2023	13	Birth	S	Ψ	Acquisitions	su	Di	Disposals		Ď	Deaths	St	Stock as o	on Dt-31.03.	.03.2024	4
SI. No	o Species	Scientific name	SCH	M	H	D	T M	H	D	M	н	ū	M	Н	D	M	F	n D	M	F U	] T	
	SCH-I, SCH-II BIRDS																					
1	A. INDIAN PEAFOWL	Pavo cristatus	13	3	17	23	0 0	0 2	0	0	0	0	0	0	0	0	0	3	3	19	25	
	B. WHITE INDIAN PEAFOWL	Pavo cristatus	ī	2	_	1 4	0 4	0	0	0	0	0	0	0		0	0 0	7			4	
2	SARUS CRANE	Grus antigone	I	1	0	0	1 0	0	0	0	0	0	0			0	0 0		0	0	_	
3	EMERALD DOVE	Chalcophaps indica	II	2	_	0	3 0	0	0	0	0	0	0	0	0	1	0 0	_	_	0	7	
4	SPOTTED DOVE	Spilopelia chinesis	II		_	5 2	0 6	0	0	0	0	0	0			0	0 0		_	7	6	
5	CATTLE EGRET	Bubulcus ibis	II	0	-	5	0 9	0	0	0	0	0	0	0			0 0	0		5	9	
9	LARGE EGRET	Cosmerodius albus	П	0	0		1 0	0	0	0	0	0	0				0 0	0			-	
2	LITTLE EGRET	Egretta garzetta	II	0	0	∞	0 8	0	0	0	0	0	0	0		0	0 0	0	0	8		
∞	MEDIAN EGRET	Egretta intermedia	Ш	0	0		1 0	0	0	0	0	0	0				0 0			1	1	
6	GREY HERON	Ardea cinerea	Ш	3	9	0	0 6	0	0	0	0	0	0	0			0 0		2 6	0	∞	
10	NIGHT HERON	Nycticorax nycticorax	П	33	36	42 1	111 0	0	21	0	0	0	0	0	0	0	0	0 3		6 63	3 132	7
11	GREY HORNBILL	Ocyceros birostris	II	_	0	0	1 0	0	0	0	0	0	0	0		0	0 0		0		-	
12	ORIENTAL WHITE IBIS	Threskiornis melanocephalus	II	50	81	64 19	195 0	0	70	0	0	0	0	0			0	0 5	50 8		4 215	5
13	BLACK KITE	Milvus migrans	II	3	3		11 0	0		0	0	0	0			0	0 0	3	3	9	12	~)
14	BRAHMINY KITE	Haliastur indus		1	0	0	1 0	0	0	0	0	0	0				0 0				-	
15	KOEL	Eudynamys scolopacea	11	_			2 0	0	0	0	0	0	0	0	0		0 0	1		0	7	
16	BLACKHEADED MUNIA	Lonchura malacca	Ш	0			1 0	0	0	0	0	0	0	0			0 0	0	_	0	_	
17	RED MUNIA	Estrilda amandava	Ш	0	0		1 0	0	0	0	0	0	0	0		0	0 0	0	0		1	
18	SPOTTED MUNIA	Lonchura punctulata	II	-	0	0	1 0	0	0	0	0	0	0	0			0 0		0	0		
19	HILL MYNAH	Gracula religiosa	I	0	0	1	1 0	0	0	0	0	0	0	0			0 0	0	0	_	_	
20	BARN OWL	Tyto alba	Ι	2	1	4 7	0 2	0	0	0	0	0	0				0 3	2			4	
21	BROWN FISH OWL	Bubo zeylonesis	I		_	0	2 0	0	0	0	0	0	0	0		0	0 0			0	7	
22	ORIENTAL SCOPS OWL	Outs sunia	II	0	0		1 0	0	0	0	0	0	0	0		0	0 0	0	0	1	T	
23	ALEXANDRINE PARAKEET	Psittacula eupatria	Ш	2	7	3 1	17 0	0	1	0	0	0	0	0			0 0				18	
24	BLOSSOM HEADED PARAKEET	Psittacula cyanocephala	Ш	1	1	3 5	5 0	0	0	0	0	0	0	0		0	0 0	) 1		3	5	
25	ROSE RING PARAKEET	Psittacula krameri manillensis	П	7	15	0 2	22 0	0	0	0	0	0	0	0			0 0	9 (	5 15		21	
76	GREY/SPOT BILLED PELICAN	Pelecanus philippensis	П	4	4	17 2	25 0	0	9	0	0	0	0	0	0	0	0	0	4	1 23	3 31	_
27	ROSY/WHITE PELICAN	Pelecanus onocrotalus	=	0	0		3 0	0	0	7	7	0	0	0					2 2			
28	RED JUNGLE FOWL	Gallus gallus	=	7	7		7 1	0	0	0	0	0	0	0		0	2 0	3	0		9	
59	SHIKRA	Accipiter badius	I	0	0		2 0	0	0	0	0	0	0	0		0		0	0 0	) 2	7	
30	LESSER ADJUTANT STORK	Leptoptilos javanicus	Ι	0	0	2	2 0	0	0	0	0	0	0	0		0	0	0	0 0		7	
31	OPEN BILLED STORK	Anastomus oscitans	Ш	1	1	9 1	11 0	0	0	0	0	0	0	0			0 0	) 1		6		
32	PAINTED STORK	Mycteria leucocephala	Ш	9	9	28 4	40 0	0	17	0	0	0	0	0	0	0	0	0	9 9	5 45	5 57	2
33	CINEREOUS VULTURE	Aegypius monachus	I	0	0	2	2 0	0	0	0	0	0	0	0	0	0	0	0	0 0	) 2	7	
34	LONG BILLED VULTURE	Gyps indicus	Ι	1	7		11 0	0	0	0	0	0	0	0	0	0	1 1		_	2	6	
35	WHITE BACKED VULTURE	Gyps bengalensis	I	0	0	1	1 0	0	0	0	0	0	0	0		0	1 0	0		0	0	
36	HIMALAYAN GRIFFON VULTURE	Gyps himalayensis	I	0	0	0	0 0	0	0	7	7	0	0	0	0	0	0	0	2 2	0	4	
		SCH-I & II Birds - TOTAL		134	175 2	239 5	548 1	0	89	4	4	0	0	0	0	3	4	4	136 176	,6 302	2 614	4

SI. No	Species	Scientific name		M	Ľ,	n	<u> </u>							ഥ	$\supset$	M	Ľ.		M		D	⊢
_	FOUR HORNED ANTELOPE	Tetraceros quadricomis	_	_	_	1	3				5			0	0	0	7	0	3		3	10
7	GIANT FRUIT BAT	Pteropus giganteus	Ξ	0		0							Ē	0	0	0	0	0	0		0	_
3	HIMALAYAN BLACK BEAR	Selenarctos thibetanus	ı	7	3	0	5							0	0	0	0	0	7		0	9
4	SLOTH BEAR	Melursus ursinus	_	3	9	3								0	0	0	0	0	4		3	13
5	BLACKBUCK	Antilope cervicapra	_	16	23	43								4	0	0		0	32		15	85
9	JUNGLE CAT	Felis chaus	_	3	7	4								0	0	0	0	0	3		4	6
2	LEOPARD CAT	Prionailurus bengalensis	_	0	0	0								0	0	0	0	0	_		7	4
<sub>∞</sub>	CHINKARA	Gazella bennetti	_	_	0	0								0	0	0	0	0	_		0	-
6	COMMON PALM CIVET	Paradoxurus hermaphroditus	1	3	3	15								0	0	0	0	0	3		17	23
91	SMALL INDIAN CIVET	Vivernicula indica	_	-	0	0								0	0	0	0	0			0	
Ξ	MOUSE DEER	Tragulus memmina	_	12	6	6								0	0	-	3	0	12		Ξ	34
12	BARKING DEER	Muntiacus muntjak	П	22	40	∞	02						H	0	0	-	0	0	21		11	72
13	BROW ANTLERED DEER /SANGAI	Cervus eldi	_	∞	Ξ	0					0			0	0	7	-	0	9	10	9	22
14	HOG DEER	Axis borcinus	_	22	70	H		H	H	-			H	4	0	0	3	0	18	+	2	57
15	SAMBAR DEER	Cervus unicolor	_	3	∞				H					0	0	0	0	0	∞		8	21
16	A. SPOTTED DEER (ZOO)	Axis axis	=	360	395	H			H				H	0	0	0	0	0	360		78	833
	B. SPOTTED DEER (RBD)	Axis axis	Ξ	353	210	H								0	0	5	7	0	357		0	395
17	SWAMP DEER / BRASINGHA	Cervus duvauceli	ı	4	4									0	0	-	-	0	4		4	15
18	INDIAN ELEPHANT	Elephas maximus	_	0	7									0	0	0	0	0	0		0	2
19	INDIAN FOX	Vulpes bengalensis	_	-	3									0	0	2	0	0	3		3	6
20	GAUR	Bos Gaurus	_	3	3									0	0	0	0	0	3		0	9
21	HOOLOCK GIBBON	Hoolock hoolock	_	0	0									0	0	0	0	0	7		0	4
22	INDIAN HARE	Lepus nigricollis	Ξ		_								_	0	0		-	0	0		7	3
23	STRIPED HYAENA	Hyaena hyaena	I	2	4									0	0		0	0			0	5
24	JACKAL	Canis aureus	_	3	2									0	0	0	0	0	3		30	4
25	LEOPARD	Panthera pardus	_	_	3									0	0	0	0	0	-		0	4
76	ASIATIC LION	Pantera leo persica	_	6	9									0	0	_	0	0	11		0	17
27	ASSAMESE MACAQUE	Macaca assamensis	_	7	3									0	0	0	0	0	7			12
28	BONNET MACAQUE	Macaca radiata	_	_	9									0	0	0	2	0	_		0	5
56	RHESUS MACAQUE	Macaca mulatta	=	4	4									0	0	0	0	0	4		0	∞
30	STUMP TAILED MACAQUE	Macaca arctoides	_	3	3									0	0		0	0	7		4	6
31	PIG TAILED MACAQUE	Macaca nemestrina	_	0	0									0	0	0	0	0	-		0	7
32	COMMON MANGOOSE	Herpestes edwardsi	_	7	7									0	0	0	0	0	7		4	∞
33	NILGAI/BLUE BULL	Boselaphus tragocamelus	=	3	6									0	0	3	4	0	0		7	2
34	INDIAN PANGOLIN	Manis crassicaudata	_	4	5									0	0	_	-	0	3		7	6
35	WILD BOAR	Sus scrofa	II	7	_								_	0	0	0	0	0	7		_	4
36	INDIAN PORCUPINE	Hystrix indica	_		0	1								0	0	0	0	0			_	7
37	RATEL	Mellivora capensis	_	_	7									0	0	0		0	_		3	5
38	GIANT SQUIRREL	Ratufa indica	_		0	0								0	0	0	0	0	-	0	0	
39	A. BENGAL TIGER	Panthera tigris tigris	I	6	2	9								-	0	0	0	0	6	∞	0	17
	B. BENGAL TIGER (MELANISTIC)	Panthera tigris tigris	П	3	0	0	3	0	0	0 0		0	0	0	0	0	0	0	3	0	0	3
	C. BENGAL TIGER (WHITE)	Panthera tigris tigris	_	7	4	0					0			0	0	0	0	0	3	4	0	7
40	AISATIC WILD DOG	Cuon alpinus	_	1		0		0	0					0	0	0	0	0			0	7
41	INDIAN GREY WOLF	Canis lupus pallipes	_	3	3	7		0	0					0	0	0	0	0	3	3	6	15
	Č	TAMOR I STILL STILL																				

	SCH-1 & SCH-II REPTILES			Stock	as on	01 .04.2023	123	Bi	Births		Acquisitions	tions		Disposals	als		Deaths	Si	Stock	as on Dt-31.03.2024	t-31.03	2024
	Species	Scientific name		M	ш	D	F	M	ш,	U M	1 F		×	<u> </u>	D	×	[L,	D	M	ш	D	Н
-	COMMON SAND BOA	Eryx johnii	_	-	7	0	3	0	0	0 0	0	0	0	0	0	0	0	0	-	7	0	3
7	RED SAND BOA	Eryx conicus	=	-	-	0	7	0	0	0 0	0	0	0	0	0	0	0	0	1		0	2
3	INDIAN CHAMELEON	Chameleon zeylanicus	_	0	0	7	7	0	0	0 0	0	0	0	0	0	0	0	0	0	0	7	2
4	BINOCELLATE COBRA	Naja naja	_		-	4	9	0	0	0 0	0	0	0	0	0	0	0	0			4	9
7	KING COBRA	Ophiophagus hannah	_	-	0	0	-	0	0	0 0	0	0	0	0	0	0	0	0	-	0	0	_
9	MONOCELLATE COBRA	Naja naja kouthia	Н	-	-	10	12	0	0	0 0	0	0	0	0	0	0	0	0		-	10	12
~	MUGGER CROCODILE	Crocodilus palustris	-	4	9	22	32	0	0	20 0	0	0	0	0	0	0	0	0	4	9	42	52
∞	LONG SNOUTED CROCODILE / GHARIAL	Gavialis gangeticus	-	20	62	6	108	0	0	0 0	0	0	-	2	0	0	0	0	19	77	6	105
6	SALT WATER CROCODILE	Crocodylus porosus	-	0		0	-	0	0	0 0	0	0	0	0	0	0	0	0	0	_	0	_
9	BANDED KRAIT	Bungarus fasciatus	=	0	0	4	4	0	0	0 0	0	0	0	0	0	0	0	0	0	0	4	4
Ξ	COMMON INDIAN KRAIT	Bungarus caeruleus	Ξ	0	0	7	2	0						0	0	0	0	0	0	0	2	2
12	COMMON INDIAN MONITOR LIZARD	Varanus bengalensis	-	-	-	3	7.	0	0	0 0	0	0	0	0	0	0	0	0	-	T	3	2
13	WATER MONITOR LIZARD	Varanus salvator	-	-	-	5	2	0	0	0 0	0	0	0	0	0	0	0	_	1	1	4	9
14	BURMESE ROCK PYTHON	Python molurus bivistatus	-	-	-	0	7	0	0	0 0	0	0	0	0	0	0	0	0	-	_	0	2
15	INDIAN ROCK PYTHON	Python molurus molurus	-	2	7	-	5	0	0	0 0	0	0	0	0	0	0	0	0	2	2	_	5
16	RETICULATED PYTHON	Python reticulatus	-	-	-	0	7	0	0	0 0	0	0	0	0	0	0	0	0	-		0	2
17	RAT SNAKE	Ptyas mucosus	-	7	7	00	12	0	0	0 0	0	0	0	0	0	0	0	0	7	7	<sub>∞</sub>	12
18	ASIAN BROWN TORTOISE	Manouria emys	-	3	3	0	9	0	0	0 0	0	0	0	0	0	0	0	0	3	3	0	9
19	INDIAN STAR TORTOISE	Geochelone elegans	_	2	5	7	14	0	0	0 0	0	0	0	0	0	0	0	0	2	5	7	14
20	INDIAN TENT TURTLE	Pangshura tentonia		0	0	3	3	0	0	0 0		0	0	0	0	0	0	0	0	0	3	3
21	CHITRA TURTLE	Chitra indica	_	0	0	3	3	0	0	0 0	0	0	0	0	0	0	0	0	0	0	33	3
22	FRESH WATER TURTLE/ INDIAN FLAP SHELL TURTLE	Lissemys punctata punctata	-	28	36	0	64	0	0	0	0	0	0	0	0	0	0	0	28	36	0	64
23		Trionyx gangeticus	-	0	0	1	1	0	0	0 2	2	0	0	0	0	0	0	0	7	7		2
24	RUSSEL'S VIPER	Vipera ruselli	_	-	0	0	_	0	0	0 0		0	0	0	0	0	0	0	-	0	0	
		SCH-I & II Reptiles - TOTAL		92	143	62	867	0	0	20 2		0		7	0	0	0		77	143	86	318
	SCH-IV (APPENDIX) & EXOTIC BIRDS	BIRDS																				
-	BUDGERIGAR	Melopsittacus undulatus	ш	163	267	113	543	0	0	15 0	0	0	0	0	0	0	0	0	163	267	128	558
7	WHITE COCKATIEL	Nymphicus hollandicus	ш	16	23	52	91	0	0	3 0	0	0	0	0	0	0	0	0	16	23	55	94
3	LESSER SULPHUR CRESTED COCKATOO	Cacatua slphurea	A-I	0	-	0		0	0	0	0	0	0	0	0	0	0	0	0	_	0	
4	UMBRELLA SULPHUR CRESTED COCKATOO	Cacatua slphurea	A-I	-	0	0	_	0	0	0 0	0	0	0	0	0	0	0	0	-	0	0	_
5	BROWN THROATED CONURE	Eupsittula pertinax	A-II	0	1	1	2	0	0	0 0	0	0	0	0	0	0	0	0	0	1	1	2
9	JANDAYA CONURE	Aratinga jandaya	A-II	1	2	17	20	0	0	0 0		0	0	0	0	0	0	7	-	2	15	18
7	SUN CONURE	Aratinga solstitialis	A-II	4	4	20	28	0	0	0 0	0		0	0	0	0	0	2	4	4	13	21
$\infty$	PINE APPLE CONURE	Pyrrhura molinae molinae	A-II	3	9	0	6	0	0	0 0			0	0	0	0	7	0	3	4	0	2
6	YELLOW SIDED CONURE	Pymhura molinae sordida	A-II	<sub>∞</sub>	7	0	15	0	0	0 0		0	0	0	0	_	0	0	2	2	0	14
10	-	Streptopelia risoria	ш	1	0	0	-			0 0		0	0	0	0	0	0	0	-	0	0	1
Ξ	DIAMOND DOVE	Geopelia cuneata	ш	-	_	0	7						0	0	0	0	0	0	1		0	2
12		Spilopelia senegalnesis	ш	-	-	0	7		0		0		0	0	0	0	0	0	-	_	0	7
13		Streptopelia capicola	ш	-	-	0	7			_	-	-		0	0	-	0	0	0	-	0	_
41	MANDARIN DUCK	Aix galericulata	П	4	3	7	6	0	0	2 0	0	0	0	0	0	0	0	0	4	3	4	11

15	EMU	Dromaius novaehollandiae	ш		3		=								0	0	0	0	_	3	6	13
16	BENGALESE FINCH	Lonchura striata	ш	9	11	2	24	0	0	0	0 0	0	0	0	0	0	0	0	9	Ξ	~	24
17	LONG TAILED FINCH	Poephila cincta	A-II	1	1		7								0	0	0	0	_		0	7
18	STAR FINCH	Poephila ruficauda	ш	0											0	0	0	0	0	_	0	
19	ZEBRA FINCH	Poephila guttata	н	99	92		220								0	0	0	0	99	92	28	220
20	BLUE FACED LORIKEET	Trichoglossus haematodus enetermedius	A-II	Т	-	0	7	0	0	0 0	0	0	0	0	0	0	0	0	1	Ţ	0	7
21	SWAINSON'S LORIKEET	Trichoglossus haematodus moluccanus	A-II	0	0	2	2	0		0	0 0		0 0	0	0	0	0	0	0	0	2	2
22	YELLOW BACKED LORY	Lorius gamulus flavopalliatus	A-II	0	0	1									0	0	0	0	0	0	-	_
23	FISCHERS LOVE BIRD	Agapomis fischeri	A-II	11	10	13	34								0	0	0	3	Ξ	10	10	31
24	PEACH-FACED LOVE BIRD	Agapomis roseicollis	A-II	4	9	2	12				0 0				0	0	0	0	4	9	2	12
25	MASKED LOVE BIRD	Agapornis personatus	A-II	-	2	1	4								0	0	0	0	-	7		4
76	GREEN WINGED MACAW	Ara chloroptera	A-II	-	-	0	7				0				0	0	0	0	-		0	7
27	OSTRICH	Struthio camelus	A-II	2	0	0	2								0	0	0	0	3	3	0	9
28	AFRICAN GREY PARROT	Psittacus erithacus	A-II		-	0	7								0	0	0	0			0	7
56	GOLDEN PHEASANT	Chrysolophus pictus	П	3	14	4	21								0	0	0	0	3	14	4	21
30	LADY AMHERST'S PHEASANT	Chrysolophus amherstiae	ы		7	∞	11				0 0				0	0		0		-	$\infty$	10
31	REEVES'S PHEASANT	Syrmaticus reevesii	A-II	0	0	3	3								0	_	0	0	-		0	7
32	SILVER PHEASANT	Lophura nycthemera	ш	∞	12	9	76					0	0		0	0	3	0	∞	6	9	23
33	YELLOW GOLDEN PHEASANT	Chrysolophus pictus mut.	ш	0	0			0	0	0 0	0 0	0		0	0	0	0	0	0	0	_	
34	EASTERN ROSELLA	Platycercus eximius	A-II	-	-	-	3								0	0	0	0				3
35	JAVA SPARROW	Padda oryzivora	Э	11	23	68	123								0	0	0	0	11	23	94	128
36	BLACK SWAN	Cygnus atratus	ш	3	3	0	9		0	0	0	0	0 0	0	0	1	-	0	7	2	0	4
37	MEYER'S PARROT	Poicephalus meyeri	A-II	-	2	0	3								0	0	0	0		7	0	3
38	RED BELLIED PARROT	Pionus sordidus	A-II	2	3	0	5								0	0	0	0	7	3	0	5
39	PARAKEET, RINGED NECKED A. Lutino Mutation	Psittacula krameri krameri	ш	2	2	9	10					0			0	0	0	0	2	2	12	16
	B. Albino Mutation	Psittacula krameri krameri	ш	2	2	3	2								0	0	0	-	2	2	2	9
40	VIOLET TURACO	Musophaga violacca	A-II	0	0	4	4	0	0	0	0 0	0	0	0	0	0	0	0	0	0	4	4
41	LIVING STONE'S TURACO	Turaco living stonii	A-II	1	0	0	_				1	0	_		0	0	0	0	7		0	3
42	CASSOWARY	Casuarius casuarius	ш	0	0	0	0				1	)			0	0	0	0	_		0	2
	TOTAL SCHIV (APPENDIX) & EXOTIC BIRDS	EXOTIC BIRDS		334	464	441 1	569		0 3		3 5				0	4	2	13	335	493	458	1286
	SCH-IV (APPENDIX) & EXOTIC MAMMALS	MAMMALS																				
-	HAMADRYAS BABOON	Papio hamadryas	A-II	-	-	0	7				0				0	0	0	0	-	-	0	7
7	TUFTED CAPUCHIN	Sapajus apella	A-II	0	-	0		+	+				+	+	0	0	0	0	0	-	0	-
3	CHIMPANZEE	Pan troglodytes	A-I	7	5	0									0	0	0	0	7	7.	0	~
4	COMMON SQUIRREL MONKEY	Saimiri sciureus	A-II	_		0	2						_		0	0	0	_	7	7	0	4
5	GIRAFFE	Giraffa camelopardalis	A-II	0	1	0									0	0	0	0	0	_	0	
9	HIPPOPOTAMUS	Hippopotamus amphibius	A-II	4	5	7									0	_	0	0	4	9	_	Ξ
7	AFRICAN LION	Panthera leo	A-II	0	_	0	_			0 0	0	0			0	0	-	0	0	0	0	0
∞	HYBRID LION	Panthera leo	A-II	4	3	0									0	0	0	0	4	3	0	2
6	BLACKTUFTED MARMOSET	Callithrix penicillata	A-II	3	-	3									0	0	0	0	3		3	2
10	SLENDER TAILED MEERKAT	Suricata Suricatta	ш	-	7	0									0	0	0	0	-	7	0	3
11	RED-HANDED TAMARIN	Saguinus midas	A-II	0	_	0	_	0	0	0 1		0	0	0	0	0	0	0	-	7	0	3
12	PARMA WALLABY	Notamacropus parma	ш	0	0	0	0			0		0			0	0	0	0	_	-	0	7
	TOTAL SCH-IV (APPENI	TOTAL SCH-IV (APPENDIX) & EXOTIC MAMMALS		16	77	5	43	-	-	7	2			-	0		_	_	19	25	4	48

	MORELET'S CROCODILE	Crocodylus moreletii	A-I	0	7	0	7	0	0	0	0	0	0		0	0 0	0		0	2	0	2
7	SIAMESE CROCODILE	Crocodylus siamensis	A-I	3	12	3	18	0	0	0	0	0	0	0		0			3	11	3	17
3 (	CUVIERS DWARF CAIMAN	Paleosuchus Palpebrosus	A-II	7	3	0	5	0	0	0	0	0	0		0	0			2	3	0	5
4	A. GREEN IGUANA	Iguana iguana	A-II	0	7	0	2	0	0	0	0	0	0			0 0	0	0	0	2	0	2
	B. RED IGUANA	Iguana iguana	A-II	0	_	0	_	0	0	0	0	0		0 0		_	0		0	_	0	
5	NILE CROCODILE	Crocodylus niloticus	A-I	0	0	3	3	0	0	0	0	0			0				0	0	3	(*)
	YELLOW ANACONDA	Eunectes notaeus	A-II	0	0	12	12	0	0	0	0	0	0	0	0	0 0	0	3	2	7	5	6
	TOTAL SCH-IV (APPEN	TOTAL SCH-IV (APPENDIX) & EXOTIC REPTILES		7.	20	18	43	0	0	0	0	0	0	0	0	0 0	_	3	7	21	=	39
				Stock	as on	01.04.2	.2023	ш	Births		Acqu	Acquisitions		Disp	Disposals		Deaths	ths	Stock	sk as on	Dt-31.03	03.2024
7	AMPHIBIANS																					
1	INDIAN BULL FROG	Hoplobatrachus tigerinus	$\geq$	0	0	3	3	0	0	0	0	0	0			0 0			0	0	3	3
7	GREEN POND FROG	Euphlyctis hexadactyla	$\geq$	0	0	3	3	0	0	0	0	0	0	0	0	0 0	0	0	0	0	3	3
3	INDIAN SKIPPER FROG	Euphlyctis cyanophlyctis	$\geq$	0	0	5	5	0	0	0	0	0	0	0	0	0 0		0	0	0	5	5
4	COMMON INDIAN TREE FROG	Polypedates maculatus	$\geq$	0	0	3	3	0	0	0	0	0	0	0	0	0 0	0	0	0	0	3	3
5	ASIAN COMMON TOAD	Duttaphrynus melanostictus	$\geq$	0	0	5	5	0	0	0	0	0	0		0	0			0	0	5	5
	MARBLED TOAD	Bufo stamaticus	$\geq$	0	0	7	7	0	0	0	0	0	0	0		0 0		0	0	0	7	7
	TOTAL AMPHIBIANS			0	0	21	21	0	0	0	0	0	0		0	0	0		0	0	21	21
				Stock	as on	01.04.2	.2023												Stock	sk as on	Dt-31.03.202	03.20
				M	Ţ,	D	T	M	ΙΉ	n	M	H	D	M	F	M	F	D	M	H	D	T
	Birds			468	699	089	1817		0	101	2	6	0	0	0	0 7	=	17	471	699 1	092	1900
f	Mammal			892	835	194	1921	13	∞	130	01	15	0	6	) 6	0 21	1 28	2	918	8 875	5 236	5 2029
	Reptiles			81	163	26	341	0	0	70	2	2	0	1 2	0	0		4	84	164	109	357
7	Amphibians			0	0	21	21	0	0	0	0	0	0	0	0	0 0	0	0	0	0	21	2]
	TOTAL			1441	1667	992 4	4100	41	8	251 1	19 2	790	0 10	11	0	28	9	22	1473	3 1708	3 1126	4307
				ž	of Inc	No. of Individuals	s	No.c	of species	SS							No. of	of species		No. of	No. of Individuals	uals
,_*	BIRDS - SCH I & II			134	175	239	548		35								35		136	176	302	614
	SCH-IV (APPENDIX) & EXOTIC			334	464	441	1269		41								42		335	493	458	1286
	MAMMAL - SCH I & II			928	813	189	1878		38								14		866	850	232	1981
	SCH-IV (APPENDIX) & EXOTIC			16	22	75	43		11								11		19	25	4	48
	REPTILE - SCH I & II			92	143	62	867		24								24		77	143	86	318
	SCH-IV (APPENDIX) & EXOTIC			ĸ	70	18	43		9								9		7	21	11	39
7	AMPHIBIANS SCH I & II			0	0	0	0		0								0		0	0	0	0
	SCH IV			0	0	21	21		9								9		0	0	21	21
	TOTAI			1441	1000																	



# **Upgraded Animal Housing & New Enclosures**



#### Wallaby Enclosure

The Wallaby enclosure, inaugurated on 29.12.2023, features a 340 sqm nature-immersive exhibit with species-specific naturalistic enrichments for Parma wallabies, two feeding cells, and CCTV monitoring. The glass-fronted design offers visitors a unique viewing experience.

#### Hoolock Gibbon enclosures

Inaugurated on 17.10.2023, two large naturalistic enclosures totalling 2882 square meters have been built for Hoolock Gibbons as part of the new zoo Master Plan. These enclosures feature abundant greenery, species-specific enrichment, eight well-ventilated feeding cells, and two back kraals for animal management. Three glass-fronted viewing decks serve as a primate interpretation centre, educating visitors about Hoolock Gibbons and other primates. Solar fencing atop the moat wall ensures safety by preventing entry of free-living monkeys. Strategic planting and bamboo cladding enhance the natural habitat and minimize disturbances for the primates.

#### Quarantine unit for Indian Pangolin

A new quarantine facility was established within the Pangolin Breeding Centre to accommodate rescued and wild pangolins. The facility is equipped with CCTV cameras for constant monitoring, ensuring the safety and well-being of the animals.

#### Back kraals for Small mammals.

A small mammal back kraal has been completed to house Ratel, Giant Squirrel, and other small mammals, supporting successful breeding, particularly for Ratel. Additionally, another back kraal was developed to improve the breeding facility for Mouse Deer, as part of Nandankanan Zoo's active participation in its conservation breeding program.





# **Health & Veterinary Care**



# Strengthening of Veterinary Facilities at Zoo Hospital

The expansion and enhancement of veterinary facilities at the zoo hospital mark a significant advancement in providing top-quality medical care for the animals. The addition of advanced equipment, including an endoscope machine, urine analyzer, portable X-ray machine, V-top table, animal transportation trolleys, suction pumps, and an ECG machine, underscores the zoo's commitment to improving healthcare standards for its residents.

## Intervention by the veterinary wing of the zoo during 2023-24:

Sl. No.	Activities	Number of cases dealt
1.	Cases treated	13, 505
2.	Surgeries performed	21
3.	De-worming	10, 228
4.	Chemical immobilization	206
5.	Screening of blood samples	98
6.	Bacteriological examination	47
7.	Faecal Sample examination	4, 296
8.	Molecular screening of samples	36

#### Vaccination/Chemoprophylaxis:

Sl. No.	Vaccination/ Chemoprophylaxis	Number of cases dealt
1	Polyvalent vaccine for felids	80
2	Raksha-Triovac	06
3	H.S.V.	06
4	Triquin Administration	197
5	Anti-Rabies Vaccine	22
6	Tetanus Toxoid	06
7	Polyvalent Vaccine for canids	38
8	Anthrax	03

#### Significant achievements in health care



# 1. Surgical management of tumour growth in a silver pheasant (*Lophura nycthemera*)

An adult male silver pheasant (*Lophura nycthemera*) of the zoo was found with a tumour like growth in the left leg at shank area involving spur. The bird was immobilised using Isoflurane anaesthesia. The tumour mass measuring 2.1cm×1.8cm×1.2cm was completely excised on 03/05/2023 using standard procedure. The bleeding vessels were coagulated using electro-cautery. The surgical wound completely healed in about two weeks. Histopathology examination of the excised mass carried out at Centre for Wildlife Conservation, Management and Disease Surveillance, IVRI revealed a benign fibroma.

# 2. Dystocia and assisted parturition in a Black buck (Antilope cervicapra)

On 27/04/2023, a six-year old black buck doe was spotted with an abdominal strain. Observations made through binoculars revealed rupture of amniotic sac and a pair of hooves visible with discharges from vagina. The doe was immobilised using xylazine and ketamine combination. A live female foetus was removed through gentle traction and

manual correction. The fawn was initially struggling to take air, but it started breathing after cardio-pulmonary resuscitation. The fawn was shifted to Hand Rearing Centre for bottle feeding and the mother doe recovered successfully in a week.

# 3. Umbilical hernia in a white tiger (*Panthera tigris*) cub and its surgical correction

A four-month old male white tiger cub named 'Shiba' was noticed with swelling at the umbilical region after taking chicken meat. After physical examination, it was confirmed as umbilical hernia which warranted surgical intervention. Surgery was carried out under General Anaesthesia using drug mixture xylazine HCl and ketamine HCl administered intramuscularly. Standard procedure was followed to close the hernial ring, a non-absorbable synthetic polypropylene mesh was put as a supporting material to prevent a relapse. The tiger cub was kept under treatment at the zoo veterinary hospital for two weeks. Once it became clear that there was no recurrence of hernia, it was released back to its enclosure.

# 4. Successful treatment of dysentery in a sloth bear (*Melursus ursinus*)

On 13/06/2023, a 6-year old male sloth bear named 'Kabir' was noticed with foul smelling reddish stool with mucus. It looked depressed and off-fed. The stool was collected and subjected to screening against parovirus and endoparasites.

Haematological analysis revealed high TLC count. It was shifted to an isolated cell and a regime, consisting of intramuscular antibiotics and styptics, oral probiotics and electrolytes, was followed. Timely intervention proved effective and the bear recovered in five days.

# 5. Therapeutic management of umbilical infection in a rescued elephant calf (*Elephas maximus*)

On 25/06/2023, a one month old male elephant calf, rescued from Keonjhar Forest Division in abandoned state, was received at the Nandankanan Zoological Park. The calf was very weak, having multiple skin abrasions all over the body, and its umbilicus was swollen, painful, hot and oozing pus. Pus sample and blood sample were collected for culture sensitivity test, routine haematology and screening against EEHV. Based on the test reports, antibiotic injections were selected and administered, along with routine cleaning and dressing of the navel. Appropriate treatment, bottle feeding and round the clock intensive care led to improved health condition of the calf. Presently, the calf is active and showing progressive increase in body weight.

# 6. Successful management of dystocia in a stump tailed monkey (*Macaca arctoides*)

On 18-07-2023 morning, an adult female stump tailed monkey was seen with straining and discharges from the vulva. A close physical examination of the external genitalia revealed parts of hind limb with reduced foetal fluid. Pervaginal examination revealed absence of foetal responses; the forelimbs were folded and stuck in the pelvic cavity. The mother monkey was positioned in the left lateral recumbency followed by ample lubrication of the birth canal with glycerine. Correction of position and mild traction resulted in successful delivery of a dead foetus. Bleeding was prevented by administering ethamsylate injections and other supportive medications. The medications continued for five days and it recovered completely.

#### 7. Hand rearing of rescued spotted deer (Axis axis)

On 01/09/2023, a 15-day old male spotted deer fawn was received at the Nandankanan zoological Park for hand rearing. The fawn was rescued from City Forest Division. It was dehydrated and lethargic at the time of receipt. The fawn was initially stabilised by feeding electrolytes solution and was later was fed with cow milk. It recuperated gradually and got accustomed to bottle feeding. Presently, the fawn is doing well with normal growth and activity.

# 8. Successful management of traumatic injury in a Hoolock gibbon (Hoolock hoolock)

On 26/10/2023, the 13-year old female Hoolock gibbon 'Chalbengi' suffered an injury on the left arm on medial aspect near elbow, probably inflicted by its male partner. There was bleeding on the floor. It was immediately isolated, cold water sprayed locally, oral styptics, analgesics, antibiotics and probiotics were included in the regime that continued for one week. Progressive improvement was observed with the above medication and the wound was seen healing. It took about one month for complete healing of the wound.

# 9. Management of incised wound in a rescued baby elephant (*Elephas maximus*)

On 24/11/2023, a 3-month old elephant calf rescued from Belagachia, Keonjhar Forest Division, was brought to the Nandankanan Zoological Park for treatment. Due to entanglement with wire snare, its right forelimb suffered severe incised wound at carpal joint almost cutting through the limb with phalangeal dislocation. After cleaning maggots and dressing the wound, a specially designed metal splint was applied in order to immobilise the joint. The calf was restrained physically on every occasion for administration of antibiotics (both local and parenteral), tissue growth promoters, and antiinflammatory drugs. It took four months of hard work for the wound to heal and then the splint was removed. Presently, the calf is able to walk, but with a degree of discomfort.

# 10. Successful hand rearing of chausinga (Tetracerus quadricornis) fawn On 21/02/2024, Nandankanan

Zoological Park received a Chausinga fawn rescued from Jharsuguda Forest Division. The fawn was about 1 month old with body weight of 1.34 kg at the time of receipt. It was weak, anaemic and pot-bellied. The orphan fawn was shifted to the Hand Rearing Centre for bottle feeding. It was fed with 'cow milk'. Multivitamins and calcium preparations were added to the milk. Anti-flatulent drugs and lactobacillus preparations were also added to the diet at the time of need. Presently, the fawn is showing normal growth and activity.

# 11. Treatment of enteritis in a rescued white rumped vulture (*Gyps bengalensis*)

On 25/02/2024, one white backed vulture rescued from Thakurmunda, Karanjia, was received at Nandankanan with profound dullness, inability to fly, infested with lice, drooping of wings and head and greenish watery stool. After screening of blood sample, it was kept under aggressive daily treatment regime consisting of intravenous fluid, antibiotics, probiotics and electrolytes. Acaricide was sprayed topically to remove lice. It started taking meat after the 2<sup>nd</sup> day of treatment and got cured in five days.

# 12. Acute tetraplegia in a striped hyena (Hyaena hyaena) and its successful management

On 20/03/2024, an eight-year old striped hyena 'Anuradha' was found paralytic in all its four limbs. It was unable to walk though it accepted about half of its daily quota of buffalo meat offered. The hyena was immobilised the next morning for detailed physical examination. Radiographs of whole spine and limbs, ultrasonography of whole abdomen, analysis of whole blood and serum revealed that it was a case of neuropathy. Broad spectrum antibiotics, intravenous fluid and neurotonic drugs were part of the treatment regime followed. The hyena responded to therapy and gradually was able to stand and walk in a week. Then, it was released back to its enclosure.



# ANNUAL REPORT ON BIRTH OF CAPTIVE ANIMALS AT NANDANKANAN ZOOLOGICAL PARK FROM 01.04.2023 TO 31.03.2024

Sl. No	Date	Species	Number	4	-2	26/09/2023	Spotted Deer	5 U/
1	01/04/2023	Sloth Bear	2U/S	4	.3	27/09/2023	Spotted Deer	4 U/
2	01/04/2023	Mouse Deer	1U/S	4	4	06/10/2023	Ratel	1 U,
3	08/04/2023	Blackbuck	1U/S	4	.5	22/10/2023	Manipuri Deer	1 U,
4	10/04/2023	Hog Deer	1U/S	4	6	24/10/2023	Manipuri Deer	1 U,
5	18/04/2023	Blackbuck	1U/S	4	·7	01/11/2023	Manipuri Deer	1 U
6	18/04/2023	Ring Necked Parakeet	3U/S	4	·8	01/11/2023	Swamp Deer	1 U
7	19/04/2023	Painted Stork	5U/S	4	.9	09/11/2023	Blackbuck	1 U
8	20/04/2023	Painted Stork	2U/S	5	60	10/11/2023	Ratel	1 U
9	20/04/2023	White Ibis	5U/S	5	1	20/11/2023	Mouse Deer	2 U
10	20/04/2023	Night Heron	6U/S	5	2	23/11/2023	Mouse Deer	2 U
11	20/04/2023	Grey Pelican	1U/S	5	3	24/11/2023	Mouse Deer	2 U
12	03/05/2023	Painted Stork	5U/S	5	4	27/11/2023	Spotted Deer	2:3
13	03/05/2023	White Ibis	5U/S	5	55	03/12/2023	Mouse Deer	1U/
14	03/05/2023	Night Heron	5U/S	5	6	03/12/2023	Barking Deer	1 U
15	16/05/2023	Ring Necked Parakeet	3U/S	5	7	04/12/2023	Manipuri Deer	1 U
16	19/05/2023	Blackbuck	1U/S	5	8	04/12/2023	Swamp Deer	1 U
17	25/05/2023	Blackbuck	1U/S	5	19	07/12/2023	Manipuri Deer	1 U
18	01/06/2023	Ratel	1U/S	6	0	07/12/2023	Sambar	1 U
19	02/06/2023	Indian Hare	1U/S	6	1	08/12/2023	Manipuri Deer	1 U
20	03/06/2023	Barking Deer	2U/S	6	52	08/12/2023	Hog Deer	1 U
21	06/06/2023	Assamese Macaque	1U/S	6	3	01/01/2024	Sambar	1U/
22	08/06/2023	Indian Peafowl	2U/S	6	4	01/01/2024	Leopard Cat	1U/
23	08/06/2023	Mandarin Duck	2U/S	6	5	03/01/2024	Grey Pelican	2U/
24	10/06/2023	Common Palm Civet	2U/S	6	66	03/01/2024	Assamese Macaque	1U/
25	11/06/2023	Jackal	2U/S	6	7	24/01/2024	Stump Tailed Macaque	1U/
26	20/06/2023	Emu	2U/S	6	8	30/01/2024	Indian Grey Wolf	3U/
27	21/06/2023	Mugger Crocodile	10U/S	6	9	30/01/2024	Sambar	1U/
28	25/06/2023	Red Jungle Fowl	1M	7	0	30/01/2024	Hippopotamus	1U/
29	30/06/2023	Swamp Deer	1U/S	7	1	30/01/2024	Blackbuck	1U/
30	06/07/2023	Hog Deer	2 U/S	7	'2	31/01/2024	Four Horned Antelope	1U/
31	06/07/2023	Blackbuck	1 U/S	7	'3	24/02/2024	Indian Grey Wolf	2U/
32	06/07/2023	Spotted Deer	2 U/S	7	'4	24/02/2024	Four Horned Antelope	1U/
33	01/08/2023	Swamp Deer	1 U/S	7	5	24/02/2024	Painted Stork	1 U
34	19/08/2023	Hog Deer	1 U/S	7	6	25/02/2024	Night Heron	5 U
35	01/09/2023	Sambar	1 U/S	7	7	26/02/2024	Grey Pelican	1 U
36	05/09/2023	Sambar	1 U/S	7	'8	17/03/2024	Squirrel Monkey	1U/
37	20/09/2023	Hog Deer	1 U/S	7	'9	23/03/2024	Jackal	4U/
38	20/09/2023	Spotted Deer	2 U/S	8	80	23/03/2024	Indian Grey Wolf	2U/
39	20/09/2023	Spotted Deer	2 U/S	8	51	23/03/2024	Indian Fox	1U/
40	21/09/2023	Spotted Deer	3 U/S	8	32	23/03/2024	Budgerigar	5U/
41	21/09/2023	Mugger	10 U/S	8	3	24/03/2024	Alexandrine Parakeet	1 U,

84	24/03/2024	Spotted Deer	10 U/S
85	24/03/2024	Spotted Deer	5 U/S
86	24/03/2024	Blackbuck	2 U/S
87	24/03/2024	Lion Cubs	3:0
88	25/03/2024	Leopard Cat	1 U/S
89	25/03/2024	Spotted Deer	2 U/S
90	25/03/2024	Blackbuck	2 U/S
91	25/03/2024	Jackal	5 U/S
92	25/03/2024	Java Sparrow	5 U/S
93	25/03/2024	Budgerigar	5 U/S
94	26/03/2024	Painted Stork	4 U/S

95	26/03/2024	Grey Pelican	2 U/S
96	26/03/2024	Black Headed Ibis	5 U/S
97	26/03/2024	Night Heron	5 U/S
98	29/03/2024	Spotted Deer	10 U/S
99	29/03/2024	Jackal	3 U/S
100	29/03/2024	Cockatiel	3 U/S
101	29/03/2024	Spotted Deer	4 U/S
102	29/03/2024	Budgerigar	5 U/S
103	29/03/2024	Black Headed Ibis	5 U/S
104	30/03/2024	Spotted Deer	7:5
105	30/03/2024	Blackbuck	2 U/S



Abstract		Mammal	Bird	Reptile	Amphibian	Total
	Birth	152	101	20	,	273

# ANNUAL REPORT ON DEATH OF CAPTIVE ANIMALS AT NANDANKANAN ZOOLOGICAL PARK (FROM 01.04.2023 TO 31.03.2024)

Sl.No	Date	Animal	Age	Sex	Cause Of Death
MAM	MALS				
1	02.04.23	Spotted Deer	Adult	M	Infighting
2	05.04.23	Spotted Deer	Adult	F	Pneumonia
3	13.04.23	Four Horned Antelope	About 2 yrs	F	Shock
4	19.04.23	Striped Hyena	About 17 yrs	M	Tumour at the right maxilla associated with old age
5	25.04.23	Manipur Deer	About 3 year	M	Haemorrhagic myositis with fibrinous pneumonia
6	25.04.23	Manipur Deer	About 3 year	M	Haemorrhagic myositis
7	10.05.23	Spotted Deer	Adult	F	Infighting injury
8	12.05.23	Hog Deer	Adult	F	Internal injury and associated shock
9	14.05.23	Swamp Deer	Adult	F	Nasal Tumour
10	26.05.23	Black Buck	Adult	F	Dystocia and associated shock
11	06.06.23	Spotted Deer	Adult	F	Debility and old age
12	16.06.23	Stump Tailed Macaque	Adult	М	Infighting injury and shock
13	24.06.23	Indian Pangolin	About 6 years	M	Enteritis and pneumonia
14	25.06.23	Indian Pangolin	About 24 years	F	Ulcerative and proliferative gastritis with enteritis
15	30.06.23	Spotted Deer	Adult	M	Infighting
16	12.07.23	Spotted Deer	Adult	M	Infighting
17	03.08.23	Spotted Deer	Adult	F	Pneumonia
18	06.08.23	Nilgai	Adult	F	Tumour attached to liver & kidney
19	12.08.23	Barking Deer	Adult	M	Pneumonia
20	13.08.23	Hog Deer	Adult	F	Suppurative pneumonia
21	25.08.23	Asiatic Lion	9 months	М	Meningitis, muscular weakness & anaemia
22	01.09.23	Spotted Deer	Adult	М	Infighting Injuries
23	01.09.23	Spotted Deer	Adult	F	Debility & old age
24	15.09.23	Nilgai	Adult	F	Tuberculosis
25	27.09.23	Nilgai	Adult	М	Tuberculosis
26	05.10.23	Ratel	About 20 years	F	Hepatitis associated with old age
27	09.10.23	Indian Hare	Adult	F	Enteritis

28	09.11.23	African Lioness	About 17 years	F	Acute Pneumonia associated with old age
29	20.11.23	Mouse Deer	Adult	М	Pneumonia & Enteritis
30	20.11.23	Mouse Deer	Adult	F	Pneumonia & Enteritis
31	21.11.23	Mouse Deer	Adult	F	Pneumonia & Enteritis
32	25.11.23	Spotted Deer	Adult	М	Tuberculosis
33	25.11.23	Spotted Deer	Adult	F	Tuberculosis
34	30.11.23	Hippopotamus	About 2 years	M	Gastric Ulcer
35	02.12.23	Swamp Deer	Adult	M	Infighting
36	03.12.23	Hog Deer	Adult	F	Infighting
37	16.12.23	Spotted Deer	Adult	F	Pneumonia
38	13.01.24	Mouse Deer	About 1 year	F	Impaction of rumen and caecum
39	15.01.24	Indian Fox	Adult	M	Infighting Injury leading to septicaemia
40	17.01.24	Nilgai	Adult	F	Tuberculosis associated with old age
41	22.01.24	Indian Fox	Adult	M	Infighting Injury leading to septicaemia
42	29.01.24	Manipuri Deer	Adult	F	Tumour involving kidney
43	30.01.24	Nilgai	Adult	F	Tuberculosis
44	21.02.24	Bonnet Monkey	Adult	M	Tuberculosis
45	23.02.24	Indian Hare	Adult	М	Abscess at right maxilla leading to septicaemia
46	23.02.24	Nilgai	Adult	M	Senility
47	05.03.24	Four Horned Antelope	Adult	F	Inanition and debility
48	08.03.24	Nilgai	Adult	М	Infighting injury
49	23.03.24	Bonnet Monkey	Adult	F	Tuberculosis
50	26.03.24	Squirrel Monkey	9 days	M	Trampling and internal haemorrhage

#### **BIRDS**

1	05.04.23	White Backed Vulture	Adult	M	Hepatitis and nephritis
2	20.04.23	Sun Conure	Adult	F	Salpingitis
3	20.04.23	Sun Conure	About 3 month	M	Enteritis
4	20.04.23	Sun Conure	About 3 month	M	Enteritis
5	29.04.23	Sun Conure	About 3 month	F	Enteritis
6	12.05.23	Sun Conure	About 2 year	F	Injury to the limb and haemorrhage
7	28.05.23	Long Billed Vulture	Adult	F	Hepatitis, nephritis and enteritis
8	07.06.23	Love Bird	Adult	M	Hepatitis and enteritis
9	16.06.23	Red Jungle Fowl	Adult	F	Infighting injury
10	16.06.23	Red Jungle Fowl	Adult	F	Infighting injury

11	30.06.23	Yellow Sided Conure	About 2 year	M	Internal haemorrhage
12	17.07.23	Sun Conure	Adult	F	Haemorrhage into thoracic cavity
13	25.07.23	Jandaya Conure	About 3 month	F	Enteritis
14	25.07.23	Jandaya Conure	About 3 month	M	Enteritis
15	27.07.23	Long Billed Vulture	Adult	M	Enteritis, necrotic hepatitis and air.sacculitis
16	02.08.23	Love Bird	Adult	M	Senility
17	30.08.23	Sun Conure	Adult	F	Hepatitis & nephritis
18	14.09.23	Silver Pheasant	Adult	F	Predator bite
19	24.09.23	Black Swan	Adult	M	Fowl cholera
20	28.09.23	Reeve's Pheasant	Adult	M	Debility & Anaemia
21	22.10.23	Rose Ringed Parakeet	Adult	M	Infighting injury
22	22.11.23	Black Swan	Adult	M	Peritonitis with old age
23	30.11.23	Ring Necked Parakeet (Albino)	Adult	М	Enteritis
24	07.12.23	Pineapple Conure	Adult	F	Hepatitis
25	07.12.23	Fischer's Love Bird	Adult	F	Enteritis
26	03.01.24	Grey Heron	Adult	M	Hepatitis
27	15.01.24	Ring Necked Dove	Adult	М	Hepatitis & Enteritis
28	23.01.24	Pineapple Conure	Adult	F	Internal haemorrhage
29	27.01.24	Emerald Dove	Adult	M	Enteritis
30	29.02.24	Silver Pheasant	Adult	F	Pneumonia
31	08.03.24	Lady Amherst's Pheasant	Adult	F	Hepatitis and enteritis
32	12.03.24	Barn Owl	Adult	M	New Castle Disease
33	12.03.24	Barn Owl	Adult	M	New Castle Disease
34	12.03.24	Barn Owl	Adult	F	New Castle Disease
35	26.03.24	Silver Pheasant	Adult	F	Traumatic injury

#### REPTILES

1	07.04.23	Yellow Anaconda	About 8 mn	M	Haemorrhagic Enteritis
2	02.09.23	Water Monitor Lizard	Adult	F	Salpingitis
3	05.11.23	Siamese Crocodile	About 12 years	F	Peritonitis
4	04.12.23	Yellow Anaconda	1 year 4 months	F	Intestinal impaction & necrotic enteritis
5	05.12.23	Yellow Anaconda	1 year 4 months	М	Intestinal impaction & necrotic enteritis

ABSTRACT	Mammals	Birds	Reptiles	Total
	50	35	05	90

#### Birth and Death of Captive Animals for The Last Five Years Total Stock Position From 01.04.2019 To 31.03.2024

THE RESERVE ASSESSMENT ASSESSMENT

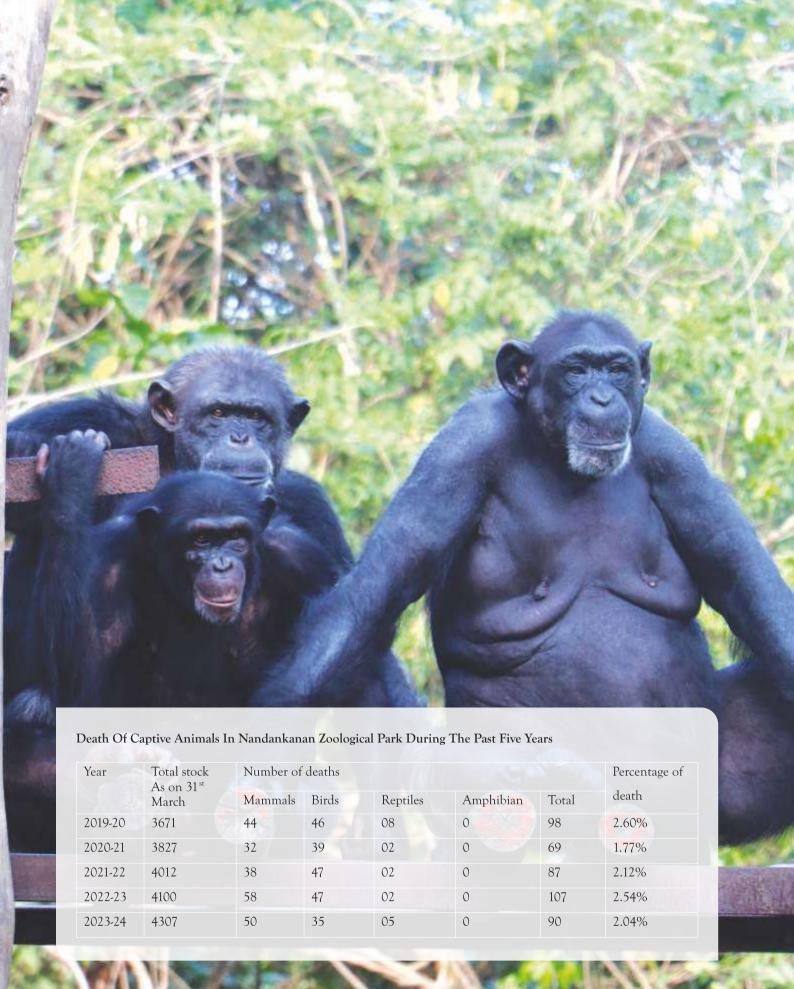
Types	Stock as on 01.04.2019	Birth	Acquisition/ procurement	Death	Disposal	Stock as on 31.03.2020
Mammals	1461	173	13	44	0	1603
Birds	1740	18	44	46	0	1756
Reptiles	295	0	11	8	7	291
Amphibians	21	0	0	0	0	21
Total	3517	191	68	98	7	3671

Types	Stock as on 01.04.2020	Birth	Acquisition/ procurement	Death	Disposal	Stock as on 31.03.2021
Mammals	1603	131	17	32	07	1711
Birds	1756	138		39	56	1799
Reptiles	291	4	9	2	06	296
Amphibians	21		~	-	~	21
Total	3671	273	26	73	69	3827

Types	Stock as on 01.04.2021	Birth	Acquisition/ procurement	Death	Disposal	Stock as on 31.03.2022
Mammals	1711	151	14	38	2	1836
Birds	1799	108	~	47	8	1852
Reptiles	296	14	2	2	7	303
Amphibians	21	~		~	~	21
Total	3827	273	16	87	17	4012

Types	Stock as on 01.04.2022	Birth	Acquisition/ procurement	Death	Disposal	Stock as on 31.03.2023
Mammals	1836	141	04	58	02	1921
Birds	1852	78	05	47	71	1817
Reptiles	303	40		2	~	341
Amphibians	21	~	~	~	~	21
Total	4012	259	09	107	73	4100

Types	Stock as on 01.04.2023	Birth	Acquisition/ procurement	Death	Disposal	Stock as on 31.03.2024
Mammals	1921	151	25	50	18	2029
Birds	1817	102	16	35		1900
Reptiles	341	20	4	05	03	357
Amphibians	21	~	~	~	~	21
Total	4100	273	45	90	21	4307





# **Rescue and Rehabilitation**

# Operationalization of Mobile Veterinary Unit

A Mobile Veterinary Unit was launched on 07.07.2023 to conduct awareness camps, provide treatment, and monitor disease in the forest fringe villages of Nandankanan Wildlife Sanctuary, Chandaka Wildlife Sanctuary, City Forest Division, and Khordha Forest Division. Led by a trained veterinary doctor, the team includes a livestock inspector and assistant. The unit also plays a key role in the rescue and rehabilitation of animals in these areas





Rescue and Rehabilitation of Wild Animals by Nandankanan Zoological Park From 01.0.2023 to 31.03.2024

				Purpose		
Sl. No.	Date	Species	Place	Rescue Treatment		
1	16/05/2023	Common Langur	Balipatna, Khordha	Rescue		
2	17/05/2023	Common Langur	Balipatna, Khordha	Rescue		
3	28/05/2023	Common Langur	Chhatrama, Khordha	Rescue		
4	04/06/2023	Elephant	Satkosia	Treatment		
5	7-8/06/2023	Elephant(Adult)	Hindol	Treatment		
6/7	10/06/2023	Common Langur	Delang	Rescue		
8/9	11/06/2023	Common Langur	Kanas	Rescue		
10	13/06/2023	Rhesus Macaque	Ramchandi	Rescue		
11	18/06/2023	Elephant Calf	Kapilash Zoo	Treatment		
12	19/06/2023	Common Langur	Mundali	Rescue		
13	24/06/2023	Elephant Calf	Kapilash Zoo	Treatment		
14	29/06/2023	Common Langur	Balipatna	Rescue		
15	16/07/2023	Elephant (Adult)	Anandpur	Treatment		
16	21/07/2023	Elephant	Kapilash Zoo	Treatment		
17	22-24/07/2023	Elephant	Daitari	Treatment		
18/19	26/07/2023	Rhesus macaque	Pipili	Rescue		
20/21	27/07/2023	Rhesus macaque	Pipili	Rescue		

22	28/07/2023	Elephant (Adult)	Athagarh	Treatment
23	06/08/2023	Elephant (Adult)	Hindol	Treatment
24/25	09/08/2023	Common Langur	Khordha	Rescue
26/27	23/08/2023	Common Langur	Jagatpur	Rescue
28/29	03/09/2023	Common Langur	Gania	Rescue
30	04/09/2023	Common Langur	Gania	Rescue
31	04/09/2023	Common Langur	Balipatna	Rescue
32	04/09/2023	Elephant	Kumarkhunti	Treatment
33/34	09/10/2023	Common Langur	Ekamra Park	Rescue
35	13/10/2023	Common Langur	Ekamra Park	Rescue
36	16/10/2023	Wild Boar	Ekamra Park	Rescue
37/38	03/11/2023	Common Langur	Khuntuni	Rescue
39	10/11/2023	Common Langur	Athagarh	Rescue
40	23/11/2023	Elephant	Keonjhar	Treatment/Rescue
41	25/11/2023	Elephant (Tuskar)	Jajpur	Treatment/Rescue
42/43	27/11/2023	Common Langur	Cuttack	Rescue
44	28/11/2023	Common Langur	Balipatna	Rescue
45/46	06/12/2023	Spotted Deer	CDA	Treatment
47/48	08/12/2023	Common Langur	Dhabaleswar	Rescue
49/50	13/12/2023	Common Langur	Thoriasahi	Rescue
51/52	21/12/2023	Common Langur	Khuntuni	Rescue
53/54	21/12/2023	Common Langur	Athagarh	Rescue
55	22/12/2023	Wild Buffalo	Bharatpur	Rescue
56	25/12/2023	Elephant	Tangi	Treatment
57/58	01/01/2024	Common Langur	Khordha	Rescue
59	02/01/2024	Rhesus macaque	Delanga	Rescue
60	04/01/2024	Elephant	Chandaka	Treatment
61/62	30/01/2024	Common Langur	Haladia	Rescue
63/64	01/02/2024	Common Langur	Kujanga	Rescue
65/66	02/02/2024	Common Langur	Kujanga	Rescue
67	02/02/2024	Rhesus macaque	Paradeep	Rescue
68	12/02/2024	Common Langur	Cuttack	Rescue
69	17/02/2024	Elephant (Tusker)	Chendipada	Treatment
70	18/02/2024	Rhesus macaque	Cuttack	Rescue
71	19/02/2024	Rhesus macaque	Nandankanan	Rescue
72	22/02/2024	Common Langur	Balipatna	Rescue
73	01/03/2024	Elephant	Godibari	Treatment
74	04/03/2024	Common Langur	Bhadrak	Rescue
75/76/77	14/03/2024	Rhesus macaque	Cuttack	Rescue



# **Visitor Footfall, Revenue & Expenditure**

Nandankanan Zoological Park received a record number of visitors and revenue collection during the financial year 2023-24, highlighting its growing popularity and success as a premier wildlife and conservation destination.



# Month wise number of visitors during 2023-24

Month	No. of visitors	Month	No. of visitors		
April	254954	October	331460		
May	238746	November	320452		
June	230290	December	522866		
July	223657	January	480415		
August	272551	February	372889		
September	273500	March	384934		
Free entry of school	Free entry of school children during Wildlife Week & Children's Day				
Free entry of differe	11214				
TOTAL			3918720		



# Visitor flow and revenue generated during the year 2023-24

Item	Visitors	Revenue (in rupees)
Entry fees		
Common visitors (Above 12 years)	3050130	152506500
Children (3 to12 years)	428851	4288510
School children	51905	519050
Foreign visitors	751	75100
Online booking- Adult	70044	
Online booking- Children	16304	
Online booking- Foreign Visitor	91	
Whats app- Adult visitor	76509	
Whats app- Children	32302	
Whats app- Foreign visitor	103	
Ropeway station- Adult	1610	80500
Ropeway station- Children	256	2560
Ropeway station- Foreign visitor	4	400
State Botanical Garden- visitors	175216	
State Botanical Garden- online visitors	2618	
Night-out visitor	20	
Free entry during Wildlife Week and Childrens' Day	792	
Free entry of differently abled persons	11214	
Total visitor	3918720	
Handy cam	172	17200
Online Handy cam	305	
Online Video camera	10	
Whats App Handy cam	463	
Whats App Video camera	15	
Video shooting		15000
Outsourced facility		
Boating facilities		1393377
Toy train revenue collected		3261820
Revenue realized from MLCP		3826560
Safari facility		14692443
Rent of MLCP		3185400
O.T.D.C. Restaurant		205260
O.T.D.C. Snacks bar		35724
O.T.D.C. Cafeteria		1

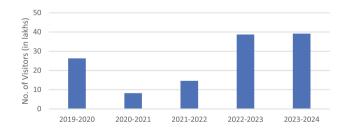
Rent collected from Ropeway	650032
Rent of BOV facility	25007964
Rent of Souvenir shop	256871
Rent of ATM counter (SBI)	142940
Rent of ATM counter (PNB)	88200
Sale of waste cattle bones	108800
State Botanical Garden (SBG)	
Revenue collected at SBG	3758402
Online ticketing	
Misc. revenue collected	38300
Souvenir shop revenue	369867
Cost of tender paper	197170
Sale of seedlings	33780
Forfeited EMD	1585823
Total revenue collected	216343554

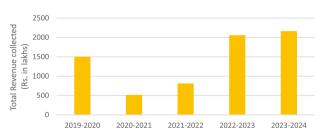
During 2023-24, a total of Rs. 2163.43 lakhs was earned in revenue from all sources.

A comparison of Revenue generated during the last five years is shown below.

Visitor flow during last five years

Year	No. of visitors (in lakh)	Total Revenue collected (Rs. In lakh)
2019-2020	26.295	1503.48
2020-2021	8.208	518.22
2021-2022	14.62	814.40
2022-2023	38.68	2058.52
2023-2024	39.18	2163.43

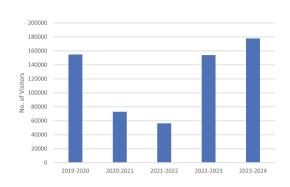




# State Botanical Garden

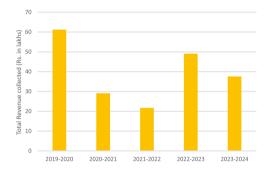
Month wise number of visitors during 2023-24

Month	No. of visitors	Month	No. of visitors
April	6167	October	8335
May	5326	November	9794
June	6798	December	39330
July	6195	January	49203
August	7054	February	23986
September	6235	March	9401
TOTAL			177834



Visitor flow & revenue generated during last five years

Year	No. of visitors	Total Revenue collected (Rs. In lakh)
2019-2020	154824	61.22
2020-2021	72820	29.11
2021-2022	56390	21.70
2022-2023	154059	49.10
2023-2024	177834	37.58



The following Table provides an overview of park funding allocations and expenditures during the last five years (Amount in Lakhs of Rupees)

Year	Expenditure & Allotment	Non- Plan/AE OM	State- Plan/PE	Centrally sponsored plan	CZA grant	CAMPA	Society Fund	Eco Tourism	Total
2019-20	Allotment Expenditure	11.59 11.37	346.15 346.15	11.0 11.0	12.80 09.82	236.93 236.92	1846.00 1369.55		2504.47 1984.81
2020-21	Allotment Expenditure	471.32 471.32	2295.30 2295.30	16.41 16.41		414.94 414.95	997.25 696.67	1200.00 1200.00	5395.22 5094.65
2021-22	Allotment Expenditure	565.46 565.46	1072.39 1072.39	18.04 18.04	18.0 5.37	287.38 287.38	1262.53 715.70	-	3223.8 2664.34
2022-23	Allotment Expenditure	654.12 654.12	729.21 729.21	28.75 28.75	95.44 91.40	230.45 230.45	1335.25 952.68		3073.22 2686.61
2023-24	Allotment Expenditure	674.00 674.00	2267.071 2267.071	31.66 31.64	60.91 19.76	314.27 314.27	1967.26 1909.16		5315.17 5215.92





# **Enhancement of Visitor Amenities**

# Whats App Based Ticketing

The WhatsApp BOT developed by Nandankanan Zoological Park is the first of its kind in any Indian zoo, offering seamless ticket booking without the need to wait in line.

# Upgradation of visitor roads

The internal and main arterial roads over 4.5 km of Nandankanan have been upgraded to ensure smooth movement for visitors and Battery Operated Vehicles. This improvement enhances visitor experience and overall mobility, making it easier to access various exhibits and facilities, ultimately providing a more enjoyable experience.

## Resuming of boating facility

The boating facility at Nandankanan Zoological Park resumed on 18th November 2023, offering visitors an enchanting paddle boating experience on Kanjia Lake

# Ropeway connecting Nandankanan Zoological Park & State Botanical Garden.

The long-awaited ropeway at Nandankanan was inaugurated on 17th November 2023 and opened to the public on 18th November 2023. With 12 cabins that can accommodate 72 passengers at a time, visitors can now enjoy a scenic ride across Kanjia Lake, spanning 618 meters. This exciting new addition is a Public-Private Partnership project with Damodar Ropeway & Infra Ltd, Kolkata.

# Drinking water fountains.

Three strategically located drinking water fountains have been installed by the Zoo authority to provide easy access to water for visitors, helping them stay hydrated at key points within the premises and enhancing their overall experience.

# Development and beautification of Lily pond at MLCP.

The once weed-infested lily pond within the Multi-Level Car Parking area has been completely transformed. It now boasts floating fountains, a landscaped perimeter with lush lawn grass, visitor seating areas, and designated selfie points, offering a refreshing and aesthetically pleasing space for visitors.









# Infrastructure Development

## Zoo Souvenir shop

The souvenir shop at Nandankanan Zoological Park offers a diverse range of items, from books and brochures to clothing accessories such as caps, hats, jackets, and age-specific T-shirts. The shop also participated in the Balijatra last winter, where it garnered positive responses and showcased its popularity and appeal among visitors.

# Renovation of administrative building at State Botanical Garden.

The old administrative building at the State Botanical Garden has been upgraded, which includes six office chambers providing a functional and organized workspace for the newly formed Project Management Wing of Nandankanan.

# Mini conference hall at the office of Deputy Director.

The Deputy Director's Office now features a 28-seater mini conference room, designed for emergency meetings, review sessions, and capacity-building programs, significantly enhancing the office's functionality.

# New staff quarters for Foresters and Forest Guards

The inauguration of the new staff quarters for Foresters and Forest Guards marks a significant milestone in improving the living conditions of the dedicated personnel responsible for the protection and conservation of the zoo. The event, attended by esteemed dignitaries including the Hon'ble Forest Minister, MLAs, and high-ranking officials, highlights the importance placed on staff welfare. Two blocks with 12 quarters are designated for Forest Guards, while one block with 6 quarters is allocated for Foresters.

# Construction of Conference room at State Botanical Garden

A new state-of-the-art conference room has been added to the State Botanical Garden, providing an excellent space for workshops, training sessions, meetings, and interactions with trainees/probationers. With a capacity to accommodate up to 35 individuals, this modern facility facilitates effective group discussions, training programs, and interactive sessions, enhancing the overall educational and professional experience.





# Capacity Building & Staff Welfare



# Exposure Visit of Zoo Officials

Dr Manoj V. Nair, IFS, Director and Dr Rajesh Kumar Mohapatra, Biologist were went for an exposure visit to Dubai Safari Park, Dubai from 24th to 26th February, 2024.

Sri Sanath Kumar N, Deputy Director and Sri Purna Chandra Behera, Forester were went for an exposure visit to Dubai Safari Park, Dubai from 16th to 19th March, 2024.

Sri Sanath Kumar N, Deputy Director went for an exposure visit to Chamarajendra Zoological Park, Mysore & Bannerghatta Biological Park, Bengaluru from 27th to 29th January, 2024.



# Capacity Building Programme for Zoo Keepers of the Eastern Region

The three days capacity building programme for zoo keepers of the eastern region was organised by Central Zoo Authority, New Delhi & Nandankanan Biological Park from 5<sup>th</sup> to 7<sup>th</sup> March, 2024. 34 participants from 27 different zoos were participated in this programme.



## Organization of Health Camp for Animal Keeper

A three-day health camp was organized for all Nandankanan Zoo staff from 18th to 20th July 2023 by the CHC, Mendhasala, with support from CDMO, Khordha. The camp included regular health check-ups and screenings for zoonotic diseases. A total of 199 staff members benefited from this initiative.



# Nandankanan Sports Meet

One Sports Meet for staff of Nandankanan Zoo and State Botanical Garden was organised on 08.01.2024 where 280 participants were participated in 9 events.



# Constitution of Rapid Response Team

A newly formed Rapid Response Team has been established to address and reduce man-animal conflicts. This specialized team is trained to assist in the rescue and rehabilitation of animals in and around the sanctuary, as well as in nearby wildlife divisions, ensuring prompt and effective action to mitigate conflicts and safeguard both human and animal welfare



# Organization of eye check-up camp for zoo staff

A three-day eye check-up camp was organized at the conference hall of Nandankanan Zoo from 6th to 17th October 2023, with the support of Dr. Agarwal Eye Hospital, Cuttack. A total of 216 staff members benefited from the eye check-up camp.

# Engagement of Asst. Education Officer, Biological Data Manager and Laboratory Technician.

The engagement of an Assistant Education Officer, Biological Data Manager, and three research scholars during the year significantly contributed to advancements in the research and education activities at Nandankanan Zoo.

# Conservation Breeding & Research

# MoU with Centurion University on diversified issue

On April 24, 2023, Nandankanan Zoological Park signed a Memorandum of Understanding (MoU) with Centurion University of Technology and Management. The agreement focuses on technological interventions for captive wildlife management, enhancing comfort for nocturnal animals, and expanding the variety of animal feed. In return, Nandankanan will support the university's academic initiatives by offering internships for undergraduate, postgraduate students, and facilitating Ph.D. and research studies.



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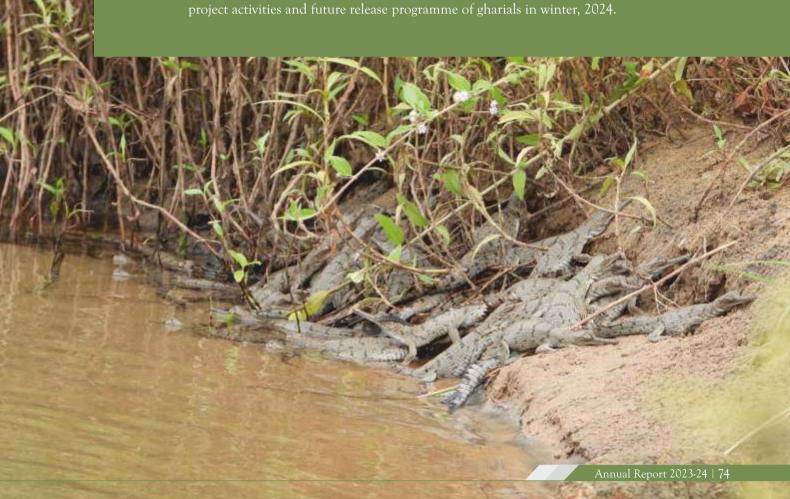
# Conservation Breeding Programmes:

In 2023-24, Nandankanan Zoological Park, as the coordinating zoo for Indian pangolins and a participating zoo for long-billed vultures, mouse deer, and tigers, demonstrated remarkable progress in its conservation breeding initiatives. Comprehensive breeding plans were developed for all four species. Notably, two pairs of surplus tigers transferred to Aizawl Zoological Park and Biological Park Itanagar under animal exchange programme, recorded two mating events and upgradation carried out in enclosures for improved welfare. Longbilled vultures were closely monitored using advanced infrared-enabled cameras, and although two pairs laid eggs, these were found infertile, underscoring the need isolation ward with 3 enclosures was established, alongside enrichment activities, health monitoring, and Additionally, RT-PCR-based diagnostics and microbiological assessments were standardized to enriched breeding enclosures leading to the birth of nine to advancing conservation science and ensuring the

# Species Recovery of Gharial (Gavialis gangeticus) in river Mahanadi

Since 2019, the Wildlife Wing of Odisha's Forest, Environment, and Climate Change Department has been implementing the "Species Recovery of Gharial in River Mahanadi" project to restore gharial populations. The project focuses on habitat assessment, threat evaluation, and post-release monitoring of tagged gharials. Nineteen gharials (13 with radio and 6 with satellite transmitters), aged 5–16 years and measuring 1.5–3.85m, were released in phases. Five individuals are currently tracked, while eight deaths were recorded—caused by blasting (2), nylon nets (4), predation by a Mugger (1), and bacterial infection (1). Six signals were lost. Conservation efforts included a 10-km "NO FISHING ZONE" in Satkosia gorge, engaging 14 forest divisions for protection, compensating damaged nets, and rewarding fishermen for safely retrieving gharials. Natural breeding resumed in 2021, continuing for four years, with seven hatchlings/yearlings safely handed over annually.

The first phase of the project was completed on 30th June, 2023. The second phase of the project got approved vide Letter No. PT1-CWLW-BUD-BUD-0004-2023/8735, dated 08/08/2023. The activities undertaken during the period includes recruitment of three research scholars, survey of Mahanadi and Churasimal for reassessment of gharial habitat, anthropogenic threats, monitoring of released and wild gharials for tracking their movement, habitat use and documentation of breeding biology, awareness discussion in villages on both sides of River Mahanadi in preferred gharial habitats, engagement of Kumbhira Bandhu, awareness competitions in five schools near important gharial habitats, including an award for top performers, improvement of field camp at Sunakhania, procurement of telemetry and field equipment to facilitate the project activities and future release programme of gharials in winter, 2024.







# ZOO-MIS

# Data management

Nandankanan Zoological Park has made significant strides in data management and digitization. Animal management data is now collected through the Nandankanan Integrated Monitoring System (NIMS) app, which enables real-time monitoring of animal health, enclosure conditions, and daily operations. The app also supports visitor management, environmental monitoring, and task assignments, generating reports and analytics for better decision-making and resource allocation, ultimately improving animal welfare and

park efficiency. This data is then updated in the Zoological Information Management System (ZIMS), a global real-time database developed by Species360, used by zoos and aquariums worldwide. As a member of Species360, Nandankanan Zoological Park uses ZIMS for enhanced care and conservation by managing and updating its animal collection data. In addition to ZIMS husbandry, the park has started utilizing ZIMS-Studbook and ZIMS Medical. Quarterly updates, annual inventories, and death reports are also submitted through Zoo-MIS to the Central Zoo Authority (CZA). Furthermore, physical records are being digitized into accessible formats for quick and meaningful outputs, and daily reports, as well as studbooks and herdbooks, are being maintained to ensure comprehensive data management.



# Internship programme

In July, 2022, Nandankanan launched internship program designed for graduate and postgraduate students. The primary goal of this initiative is to provide a platform for wildlife researchers to do basic research in the field of zoo management and learn new skills of ex-situ and in-situ conservation techniques at Nandankanan.

The internship program spans a duration of 30 days to 3 months, with new cohorts of interns enrolled during each quarter. In the financial year 2023-24, a total of twelve interns completed their assignments and submitted their theses. This program serves as a stepping stone for these aspiring researchers, providing them with hands-on experience and fostering a deeper understanding of the intricacies of zoo management and conservation practices.

Name	institution	Topic	Guided by
Swati Sucharita Rath	Dhenkanal Autonomous College, Dhenkanal	Non-invasive sampling of ecto and endo parasites and their surveillance	Dr Sarat Kumar Sahu, BVO
Lucky Sahu	Angul Autonomous College, Angul	Phenology and Viability of flowering twig of orchids at State Botanical Garden	Mrs. Sushree Swati Mohanty Range Officer, SBG-I
Sradhashree Pratap Singh	Angul Autonomous College, Angul	Phenology and propagation of medicinal plants at State Botanical Garden	Mrs. Sushree Swati Mohanty Range Officer, SBG-I
Bijayini Pattanaik	Angul Autonomous College, Angul	Growth, development and flowering of seasonal plants at Mughal Garden of State Botanical Garden	Sri Milan Kumar Panda Education Officer
Nikita Rout	Christ college, Bangalore	Behavioural study of wolves in captivity	Dr Rajesh Kumar Mohapatra, Biologist
Abhijit Hota	Centurion University, Bhubaneswar	Collection and analysis of different signs of Carnivores in Nandankanan	Dr Rashmi Ranjan Swain, ACF(SM)
Saswati Dash	Centurion University, Bhubaneswar	Collection and analysis of different signs of Herbivores in Nandankanan	Sri Milan Kumar Panda Education Officer
Deepika Mohanty	Salipur Autonomous College, Cuttack	Winter arrangements of birds in captivity	Dr Sudipta Panda, Range Officer, Sanctuary Management
Padmaja Niharbala Das	BJB Autonomous College, Bhubaneswar	Assessment of existing enrichments at animal enclosures of Nandankanan Zoological Park	Dr Rajesh Kumar Mohapatra, Biologist
Aishwarya Bharati Kar	BJB Autonomous College, Bhubaneswar	Behavioural evaluation of enrichment activities at Nandankanan Zoological Park	Dr Rajesh Kumar Mohapatra, Biologist

Yashaswini Sahoo	BJB Autonomous College, Bhubaneswar	Preparation of ethograms for the selected animals of Nandankanan Zoological Park through literature review and field observation	Dr Rajesh Kumar Mohapatra, Biologist
Sipra Ray	BJB Autonomous College, Bhubaneswar	Development of methods for animal welfare assessment of Nandankanan Zoological Park	Dr Rajesh Kumar Mohapatra, Biologist



# List of publications during 2023-24

- 1. Rath, L.P., Dash, S.K., Khan, A., Mohapatra, R.K., Kumar, S., Nair, M. V., Paul, S., and Maharana, S. (2024). Monitoring the movement, habitat use and mortality of captive-bred reintroduced gharials in the Mahanadi River, India. Aquatic Conservations: Marine and Freshwater Ecosystems. 34 (2). e4097.
- 2. Wangmo, L., Jabin, G., Ghosh, A., Priyambada, P., Dalui, S., Joshi, B. D., Singh, V., Dolker, S., Mohapatra, R.K., Nair, M. V., Sharma, L., and Thakur, M. (2024). Genetic assessment of captive breeding program of Indian Pangolin: implications for conservation and management. Molecular Biology Reports. 51. 10.1007/s11033-023-09090-0
- 3. Mohapatra, R.K. (2023) Solution to plastic pollution, In Murugasan, K., Panda G.K., Sahu, N. R. (Eds) Solution to Plastic Pollution. Centre for Environmental Studies, Forest, Environment & Climate Change Department, Government of Odisha, Bhubaneswar. pp 50-58.



# **Zoo Education & Outreach**



# Introduction of Zoo Ambassador Programme

The Nandankanan Zoo Ambassador Program is an educational initiative aimed at students from classes VII, VIII, and IX across various schools in Odisha, inviting them to become ambassadors for wildlife conservation. Students are selected through a test and provided with valuable insights into the animals at Nandankanan, conservation efforts, and the latest wildlife updates. Ambassadors also engage in community awareness activities, enhancing their involvement in conservation. This program not only rewards their efforts with certificates and benefits but





also nurtures a passion for nature among adolescents, potentially paving the way for future careers in wildlife conservation. A total of 53 ambassadors have been selected through the Nandankanan Zoo Ambassador Program across schools in Odisha.

# One day at Nandankanan programme

One Day at Nandankanan' is an educational program designed for students eager to learn about the zoo, its diverse animals, and its conservation initiatives. The program includes visits to various exhibits and gardens within and around the zoo, offering a hands-on experience in wildlife education. Students have the opportunity to interact with experts from Nandankanan Zoological Park, gaining insights into wildlife conservation. Additionally, the program fosters the development of essential skills such as communication, teamwork, leadership, and problem-solving. 18 'One Day at Nandankanan' programs have been successfully completed.

# Introduction of zoo volunteers programme.

Nandankanan Zoo launched the Zoo Volunteers' Program on 14th June 2023, aiming to enhance the quality of service provided to both the zoo and its visitors, while also enriching the learning experience for the volunteers. Volunteers assist in various tasks, including managing daily zoo operations, helping with visitor management during busy times, supporting zoo education programs, preparing documents, and assisting in zoo-keeping activities. As of 31st March 2023, a total of 53 volunteers are actively working with Nandankanan Zoological Park.



# **Story Telling**

On the eve of the 69th Wildlife Week at Nandankanan, a captivating "Storytelling Session" was conducted by Prachitara Mishra, engaging students from Damana Government High School. Through her skilful narration, Mishra effectively instilled a deep sense of responsibility in the students, highlighting the crucial importance of wildlife conservation and encouraging them to become advocates for nature's protection. The session was an inspiring and interactive experience, fostering awareness and empathy for wildlife among the young participants.

# Zoo Outreach Programme

The Nandankanan Zoo's Education Wing is deeply committed to its Zoo Outreach Programme, reaching out to schools and colleges to promote wildlife conservation. The program features engaging classes led by Education Officers, Assistant Education Officers, Biologists, trained Zoo Volunteers, and outsourced scholars. With two classes held every month, the initiative has successfully conducted 22 programs, spreading awareness about the crucial importance of wildlife conservation and inspiring the younger generation to take active roles in protecting nature

# One-day workshop on Zoo Management of Odisha

A workshop on "Ex-situ Conservation: Present Status & Way Forward" was held in collaboration with the Nature and Wildlife Conservation Society of Odisha (NWCSO) to celebrate day four of the 69th Wildlife

Week. The event saw the participation of NWCSO members, officials from Nandankanan Zoological Park, and representatives from all Zoos of Odisha, including DFOs, ACFs, Range Officers, Foresters, Forest Guards, Research Scholars, and Zoo Volunteers. The workshop provided a platform for zoo representatives to share insights into their conservation facilities and discuss the future strategies for ex-situ conservation.

# "AMA NANDANKANAN": Theme song of Nandankanan

On the 64<sup>th</sup> Foundation Day of Nandankanan Zoological Park, a theme song highlighting the park's sound management practices was released. The song serves as an artistic celebration of the zoo's commitment to excellence in wildlife conservation, animal welfare, and sustainable operations. Through its lyrics and melody, the theme song underscores the zoo's efforts in maintaining a balanced ecosystem, promoting ethical practices in animal care, and fostering environmental awareness among visitors. This initiative reflects Nandankanan's dedication to integrating music and education for the betterment of conservation efforts.





# Different Zoo Education and Outreach activities carried out during 2023-24.

Sl. No	No Date Programme/Event			
1.	14.04.2023	Visit programme of Intermediate students from KMBB Science Secondary School, Cuttack	110	
2.	15.04.2023	Visit programme of Intermediate students from KMBB Science Secondary School, Cuttack		
3.	18.04.2023	Visit programme of students from B.Sc (Forestry) 4 <sup>th</sup> year from OUAT, Bhubaneswar	54	
4.	19.04.2023	Induction training programme of SFS officer trainees from CASFOS, Burnihat	48	
5.	23.04.2023	Visit programme of students and faculty from Kiddy Kids School, Jajpur	25	
6.	29.04.2023	Celebration of World Veterinary Day 2023	150	
7.	29.04.2023	Field Tour of Forest Guard trainees from Forester Training School, G. Udaygiri-Batch-I	48	
8.	06.05.2023	Field Tour of Forest Guard trainees from Forester Training School, G. Udaygiri-Batch-II	48	
9.	13.05.2023	Celebration of Endemic Bird Day 2023	25	
10.	17.05.2023	Visit Programme of kid students from Kidzee School, Bhubaneswar	100	
11.	20.05.2023	Orientation programme on Mission Life	50	
12	31.05.2023	Celebration of World Otter Day & World Parrot Day 2023	75	
13.	01.06.2023	Visit of Internship programme students from CUTM, Bhubaneswar	25	
14.	05.06.2023	Cleanliness drive on the eve of World Environment Day 2023	40	
15.	05.06.2023	Poster Making Competition on the eve of World Environment Day 2023	25	
16.	07.06.2023	Orientation programme of Nrityanjali Institute of Eastern Art, Music, Drama & Dance, Bhubaneswar	50	
17.	07.06.2023	Field visit of Forest Guards trainees from NFTS, Champua- Batch-I	46	
18.	17.06.2023	Celebration of World Crocodile Day 2023	55	
19.	21.06.2023	Celebration of World Giraffe Day 2023	25	
20.	25.06.2023	Field visit of Forest Guards trainees from NFTS, Champua- Batch-II	43	
21.	04.07.2023	Van Mahotsav celebration	>100	
22.	07.07.2023	Zoo Outreach Programme at Nandankanan High School	140	
23.	13.07.2023	Zoo Outreach Programme at Mother's Public School, Bhubaneswar	145	
24.	21.07.2023	Zoo Outreach Programme at SAI International School, Bhubaneswar	100	
25.	29.07.2023	Celebration of International Tiger Day 2023	>150	
26.	29.07.2023	One Day at Nandankanan with students of Nandankanan High School	30	
27.	29.07.2023	One Day at Nandankanan with students of Darutheng High School	30	
28.	29.07.2023	One Day at Nandankanan with students of Vivekananda Sikshya Kendra	30	
29.	29.07.2023	One Day at Nandankanan with students of Jhunjhunwala Bidyapitha	30	
30.	04.08.2023	Moth Watching session at State Botanical Garden	15	

31.	10.08.2023	Celebration of World Lion Day 2023	>100
32.	12.08.2023	Celebration of World Elephant Day 2023	>150
33.	13.08.2023	Orientation programme of OAS officer trainees from Gopabandhu Academy, Bhubaneswar	127
34.	19.08.2023	Zoo Outreach Programme at Damana High School	120
35.	02.09.2023	Celebration of International Vulture Awareness Day 2023	75
36.	07.09.2023 to 17.09.2023	Programme on Big Cats	>300
37.	08.09.2023	Celebration of World Iguana Day	>50
38.	09.09.2023	Zoo Outreach Programme at Jhunjhunwala Bidyapitha	115
39.	12.09.2023	Moth Watching at Nandankanan Zoological Park	10
40.	12.09.2023	Zoo Outreach Programme at Mundali Nodal High School	125
41.	12.09.2023	Zoo Outreach Programme at Godisahi Govt. High School	110
42.	12.09.2023	Zoo Outreach Programme at Sidheswar Vidyamandir	130
43.	14.09.2023	Zoo Outreach Programme at Utkalmani Govt. High School	300
44.	14.09.2023	Zoo Outreach Programme at Utkalmani Balika Uchhabidyapitha, Kendupatna	120
45.	15.09.2023	Visit programme of B.Sc. Agriculture students from JKBK College of Forestry, Bangalore	25
46.	15.09.2023	Zoo Outreach Programme at Govt High School, Darutheng	155
47.	15.09.2023	Zoo Outreach Programme at Maharanabirabar Govt. High School, Chandaka	180
48.	16.09.2023	Visit programme of B.Sc. Agriculture students from JKBK College of Forestry, Bangalore	25
49.	17.09.2023	Visit programme of B.Sc. Agriculture students from JKBK College of Forestry, Bangalore	25
50.	21.09.2023	Visit Programme of SFS trainees from CASFOS, Dehradun	70
51.	01.10.2023	Cleanliness drive to celebrate "Swachhata Hi Seva"	140
52.	02.10.2023 to 08.10.2023	69 <sup>th</sup> Wildlife Week	>500
53.	02.10.2023	Anti-plastic drive with students of Nandankanan High School	55
54.	03.10.2023	Wildlife Story Telling for students of Damana High School	52
55.	04.10.2023	One Day at Nandankanan with students of Centurion University	44
56.	05.10.2023	Workshop on "Ex-situ Conservation: Present status & way forward"	75
57.	06.10.2023	Nature trail at Nandankanan	45
58.	07.10.2023	Wetland trail at Nandankanan	33
59.	07.10.2023	Visit programme of FG trainees from FTS, G. Udaygiri	41
60.	08.10.2023	Bird Watching session	55
61.	08.10.2023	Moth Watching session	23
62.	28.10.2023	Visit programme of FG trainees from FTS, G. Udaygiri	41

63,	12.11.2023	Celebration of National Bird Day	23
64.	18.11.2023	Visit programme of FG trainees from NFTS, Champua	41
65.	18.11.2023	One Day at Nandankanan programme from Saraswati Sishu Mandir students of Khordha district	1000
66.	22.11.2023	Visit programme of B.Sc Zoology students from Dhenkanal Autonomous College	32
67.	23.11.2023	Visit programme of FRO trainees from Chandrapur Training School, Maharashtra	45
68.	28.11.2023	Visit programme of FG trainees from NFTS, Champua	40
69.	29.11.2023	One Day at Nandankanan programme for Mother's Public School, Bhubaneswar	130
70.	03.12.2023	Visit of Forest officials from Tripura	35
71.	12.12.2023	Zoo Ambassador Test conducted in 33 schools of Odisha	480
72.	13.12.2023	Zoo Ambassador Test conducted in 19 schools of Odisha	275
73.	13.12.2023	One Day at Nandankanan programme for students of Mother's Public School, Bhubaneswar	75
74.	15.12.2023	One Day at Nandankanan programme for students of Mother's Public School, Bhubaneswar	120
75.	15.12.2023	Visit programme of B.Sc (Forestry) students from College of Forestry, OUAT	47
76.	19.12.2023	One Day at Nandankanan programme for students of Mother's Public School, Pahala Branch	110
77.	20.12.2023	One Day at Nandankanan programme for students of Mother's Public School, Bhramagiri	90
78.	23.12.2023	One Day at Nandankanan programme for students of Mother's Public School, Pahala Branch	110
79.	01.01.2024	Visit of members of standing committee of Parliament	40
80.	06.01.2024	Visit of B.Sc (Forestry) students from College of Forestry, OUAT for Tree Walk	44
81.	07.01.2024	Briefing session of Mid-winter waterfowl census 2024	42
82	07.01.2024	One Day at Nandankanan programme for students of Mother's Public School, Pahala Branch	450
83.	10.01.2024	Mid-winter waterfowl census 2024	55
84.	18.01.2024	Visit programme of IFS probationers from IGNFA, Dehradun	54
85.	24.01.2024	Workshop of field staff and Kumbhira Bandhu on rescue operation and monitoring of gharial and community awareness	45
86.	26.01.2024	Workshop on Odisha Birders' Conclave	35
87.	28.01.2024	Visit of students from B.Sc Zoology from Kharasrota Mahavidyalaya, Jajpur	20
88.	01.02.2024	Visit of Red Cross Volunteers from different districts of Odisha	450
89.	02.02.2024	Celebration of World Wetland Day	80

90.	03.02.2024	Visit of B.Sc Zoology students from Mahamayee Mahila Mahavidyalaya , Berhampur	38
91.	03.02.2024	Orientation programme of students from XIMB, Bhubaneswar	21
92.	06.02.2024	One Day at SBG from Mother's Public School, Unit-I	147
93.	07.02.2024	Visit of +3 B.A (Political Science) Hons students from Bonai College, Bonai	22
94.	08.02.2024	Visit of +3 B.A (Geography) Hons students from Barang College	15
95.	09.02.2024	Visit programme of Assistant Horticulture Officer trainees to SBG	30
96.	13.02.2024	One day at Nandankanan for students of Siddheswar Vidya Mandir, Naraj	55
97.	15.02.2024	Visit programme of SFS officer trainees from CASFOS, Coimbatore.	53
98.	16.02.2024 to 19.02.2024	Great Backyard Bird Count	72
99.	17.02.2024	Celebration of World Pangolin Day	>100
100.	17.02.2024	Visit of B.V.Sc students from SOA, Bhubaneswar	80
101.	18.02.2024	Season watch programme at SBG	15
102.	18.02.2024	Visit of B.Sc, Zoology students from Nimapada college	32
103.	20.02.2024	Visit of NSS volunteers from degree college of Odisha	84
104	24.02.2024	Capacity building Training programme of staff of Nandankanan	35
105	25.02.2024	Herping trail	10
106	03.03.2024	Celebration of World Wildlife Day	>150
107.	03.03.2024	Visit of B.Sc & M.Sc Zoology students from Phulbani Autonomous College	55
108.	05.03.2024 to 07.03.2024	Zoo Keepers' Capacity Building programme for Eastern region	35
109.	08.03.2024	Induction training of FROs trainees from OFRC, Angul	45
110.	10.03.2024	Night Out at Zoo	20
111.	13.03.2024	Refresher training programme of frontline staff of FTS, Ghatikia	21
112.	13.03.2024	National level exposure visit of forest officials from TNFA, Coimbatore	15
113.	14.03.2024	Visit of FROs trainees from HPFA, Sundarnagar	37
114.	14.03.2024	Celebration of Learn about Butterflies Day	40
115.	14.03.2024	Visit of students from Sri Sri University, Cuttack to SBG	30
116	15.03.2024	Visit of students from SAI International School, Patia	170
117	16.03.2024	Workshop on Herping	35

# Observation of Important Eco Days





### WORLD VETERINARY DAY

World Veterinary Day 2023 was celebrated at Nandankanan on 29th April with the theme "Promoting Diversity, Equity, and Inclusiveness in the Veterinary Profession." The morning session featured an awareness program where 200 veterinarians discussed their profession, 200 management, and wildlife rescue and rehabilitation. In the evening, 14 retired 200 veterinarians, who had significantly contributed to Nandankanan's development, were honoured for their notable work.

### WORLD ENVIRONMENT DAY

On World Environment Day 2023, Nandankanan Zoological Park hosted a poster presentation on Lifestyle For Environment (LiFE) and Beat Plastic Pollution to raise awareness about eco-friendly living and environmental conservation. A total of 25 participants from various colleges and universities displayed their posters, which were judged by a panel of experts. Sradhanjali Panda from NIIS group of institutions won first prize for her poster on "Waste management for sustainable environment," while Chinmayee Dhal of Utkal University and Meniswani Rout of NIIS group of institutions secured second and third prizes respectively. The event received positive feedback from both students and media.





# WORLD CROCODILE DAY

World Crocodile Day was celebrated at Nandankanan Zoological Park on 17th June 2023, with Prof. Sudarshan Maharana, an expert on crocodiles, as the key speaker. The event featured a presentation on the Gharial (Gavialis gangeticus) species recovery in the Mahanadi River by Laxmi Prasad Rath, followed by a talk on crocodiles by Prof. Sudarshan Maharana. A discussion session engaged the audience, and the event concluded with a poster presentation to foresters, forest guards, zoo interns, and volunteers.

# VAN MAHOTSAV

On 4th July 2023, Nandankanan Zoological Park, in collaboration with the Nature & Wildlife Conservation Society of Odisha (NWCSO), celebrated the Van Mahotsav-2023 programme. The event was attended by several distinguished members of NWCSO, including Sri Sushil Ku. Popli, IFS, PCCF (WL) & CWLW ,Sri Saroj Patnaik, IFS (Rtd.), Dr. Sudarsan Panda, IFS (Rtd.), Dr. Anup Nayak, IFS (Rtd.), and Sri Sushant Das, Joint Secretary, NWCSO,. Manoj V. Nair, IFS,. The event highlighted the importance of environmental conservation, with participation from various officials and staff of Nandankanan, underscoring their collective commitment to preserving nature.





### INTERNATIONAL TIGER DAY

International Tiger Day 2023 was celebrated at Nandankanan Zoological Park on 29<sup>th</sup> July 2023 with an online quiz on Tiger Conservation with e-certificates for participants, and a student orientation program titled "One day with tigers of Nandankanan" for 70 students from four schools. Miss Samarpita Dash, an Ollywood actress, also joined the programme to support the tiger conservation. A spot quiz for visitors was held, and 50 participants received prizes. The event also featured a signature campaign, tiger keeper felicitation, , and a Keepers Talk. The program was broadcast live on Facebook.

### WORLD ELEPHANT DAY

World Elephant Day 2023 was celebrated at Nandankanan Zoological Park on 12th August with series of activities. The zoo elephants were given a special treat of fruits and vegetables as feed enrichment. The Mahouts were felicitated for their dedicated care of the elephants. A Signature campaign on elephant conservation was held and online slogan and painting competitions were conducted, with winners receiving prizes and e-certificates. An onthe-spot quiz for visitors focused on elephant conservation, and a Keepers Talk highlighted the daily care of elephants at the zoo. Many of the events were coordinated by Zoo Volunteers.

# 69<sup>TH</sup> WILDLIFE WEEK

# Day 1: - 02/10/23 (Monday)

First day of 69th Wildlife Week at Nandankanan began with an Anti-Plastic Drive, involving students from Nandankanan Govt. High School. A key highlight was a Nukkad Natak performed by Zoo Volunteers on the impact of plastic on wildlife and its habitat. Additionally, an online quiz on "Zoos of India" saw participation from 48 individuals.



# Day 2: - 03/10/23 (Tuesday)

On the second day of the 69th Wildlife Week, Prachitara Mishra conducted a Story Telling Session for students from Damana Government High School, inspiring them to value wildlife conservation. A Keeper's Talk focused on Big Cats, where keepers shared their experiences. An online quiz on In-situ Conservation centre in India engaged 84 participants

# Day 3: - 04/10/23 (Wednesday)

On the third day of Wildlife Week, Nandankanan hosted the "One Day at Nandankanan" program for students from Centurion University of Technology and Management. The students, guided by Dr. Siba Prasad Parida, explored the zoo, learning about plants, animals, and insects, and visited the Zoo Laboratory, Zoo Hospital, and Zoo Museum. The day also featured an online quiz on "Reptiles" with 64 participants, along with a Keeper's Talk where keepers discussed reptile care, behavior, and the distinction between venomous and non-venomous snakes.

# Day 4: - 05/10/23 (Thursday)

On fourth day of the 69th Wildlife Week, Nandankanan hosted a workshop on "Ex-situ Conservation: Present Status & Way Forward" in collaboration with the Nature and Wildlife Conservation Society of Odisha (NWCSO). The workshop, attended by various zoo representatives, officials, and researchers, focused on ex-situ conservation practices and future strategies. An online quiz on "Insects" engaged 66 participants, and a Keeper's Talk on Elephants was held, where keepers shared insights on elephant care, feeding habits, and past elephant stories.

# Day 5: - 06/10/23 (Friday)

On the fifth day of the 69th Wildlife Week, Nandankanan organized a "Nature Trail" led by Dr. Siba Prasad Parida, Professor at CUTM, Bhubaneswar. 22 participants, along with zoo volunteers, explored the flora and fauna of the area. An online quiz on "Plants" saw 60 participants, and a Keeper's Talk on "Deer" provided insights into deer species and their care

# Day 6: - 07/10/23 (Saturday)

On the sixth day of the 69th Wildlife Week, Nandankanan hosted a "Wetland Trail" guided by Dr. Satyaranjan Behera, Zoologist at the Odisha Biodiversity Board, with 28 participants. The day also featured a Keeper's Talk on "Primates", an online quiz on "Wetlands", and a Nature Trail with Dr. Siba Prasad Parida. The events were attended by students from Centurion University, ACFs, Biologists, Education Officers, Zoo Volunteers, and others.



# Day 7: - 08/10/23 (Sunday)

On the seventh and final day of the 69th Wildlife Week, Nandankanan hosted several events, including a "Bird Walk", "Keepers Talk", "Online Quiz", and "Moth Watching". The Bird Walk, led by Dr. Swetashree Purohit, involved 43 participants and focused on birding, ornithology, and wetland/terrestrial birds, observing 35 species. The Keeper's Talk on Birds provided insights into bird care at the zoo, while an interactive session with Zoo Volunteers was held at the FRH. The Moth Watching session, guided by Mr. Udit Pratap Das, educated participants about 30 types of moths. An online quiz on Birds attracted 53 participants.

# WORLD WETLAND DAY

World Wetland Day was celebrated on 2nd February 2024 at the State Botanical Garden amphitheatre with students from Godisahi Govt High School, Cuttack. The event, attended by officials from Nandankanan, featured activities such as slogan recitations, an enactment by Zoo Volunteers, and competitions in drawing, slogans, and quizzes, with teams named after Ramsar sites. Participants also enjoyed an Origami session to make wetland animals and used binoculars to observe wetland biodiversity. Winners and outstanding performers received prizes and badges.







## WORLD PANGOLIN DAY

World Pangolin Day was celebrated on 17th February 2024 at Nandankanan Zoological Park with a workshop attended by zoo staff, forest officials, volunteers, interns, and college students. Quiz, origami session, and Talk on "Pangolin Conservation" conducted by Research Scholar from Pangolin Centre Breeding Conservation (PCBC) on pangolin biology and conservation challenges. A mass Signature Campaign was held to raise awareness, while zoo keepers engaged with visitors to promote pangolin conservation.

## WORLD WILDLIFE DAY

World Wildlife Day was celebrated at Nandankanan Zoological Park on 3rd March 2024 with the theme, "Connecting People and Planet: Exploring Digital Innovation in Wildlife Conservation." Activities included a Bird Walk using citizen science apps like Merlin & eBird, attended by 20 nature enthusiasts. Zoo Volunteers and Interns learned about Camera Traps, disease detection, and molecular analysis at the zoo laboratory. The Zoo Veterinary Hospital team demonstrated digital medical equipment, while the Biological Data Manager showcased live transmitter signalling. The day included interactions with visitors, a signature campaign, and wildlife conservation displays. A poster debunking animal myths and a selfie point with the tagline "I care for wildlife" were set up.



# FOUNDATION DAY OF NANDANKANAN

The 64th Foundation Day of Nandankanan Zoological Park was celebrated on 29th December 2023 with distinguished guests. Sri Pradip Kumar Amat, Hon'ble Minister of Forests, Environment, and Climate Change, Government of Odisha attended as Chief guests and Sri Satyabrata Sahu

Additional Chief Secretary, Forests, Environment and Climate Change department, & Sri. Susanta Nanda, PCCF (WL) & CWLW, Odisha also graced the occasion through their valuable presence. During the celebration, Prof. Sudarsan Maharana was awarded the Lifetime Commitment Award for Gharial Conservation, and Shri Dhanraj H.D. IFS, DFO, Keonjhar was recognized as the "Friends of Nandankanan" for his work in pangolin conservation. 18 Nandankanan staff members were honored for exceptional services, and best performers in the citizen science, internship, and volunteer programs were also recognized. The event included the release of a theme song on Nandankanan's management practices, the launch of a dedicated website for the State Botanical Garden, and the introduction of the NIMS App for zoo management. Additionally, 16 Rapid Response Team vehicles for Similipal Tiger Reserve were flagged off, and the Annual Report 2022-23 and 2023 Highlights were unveiled. The inauguration of Wallaby enclosure, Bambusetum and Hydrophyte garden at the State Botanical Garden, and the release of cassowaries and ostriches into renovated enclosures were also significant highlights.

# Award Winners during the 64<sup>th</sup> Foundation Day

Sl. No.	Name of the award	Name & designation
1	Best worker in Animal keeping	<ol> <li>Sri Prafulla Bag, Animal Keeper</li> <li>Sabita Sethi, Animal Keeper</li> </ol>
2	Best enclosure maintenance	<ol> <li>Sri Rabindra Gouda, Outsourced Personnel</li> <li>Malati Dei, Animal Keeper</li> </ol>
3	Best worker in Revenue collection	Sri Udaya Singh Tamsoy, Forest Guard
4	Best worker in Lawn & Garden maintenance	Sri Kedar Ch. Bhanja, Watchman
5	Best worker in Veterinary Health care	Sri Prasant Kumar Mallick, Outsourced Personne
6	Best technical worker (Electricity & water supply)	Sri Gangadhar Hansda, Outsourced Personnel
7	Best worker in Raj Bhawan Deer Park	Sri Bhimsen Behera, Outsourced Personnel
8	Special prize for commendable performance in State Botanical Garden.	Sri Manas Bhoi, Peon
9	Best worker in ensuring Cleanliness Sanitation	Sri Tuna Naik, Outsourced Personnel
10.	Best worker in Security and Maintenance Range	Sri Bhabani Sankar Bhoi, Outsourced Personnel
10	Best worker feed, fodder and its distribution	Miss Rajashree Rout, Forest Guard
11	Best All rounder	Sri Laxmidhar Bhoi, Outsourced Personnel
12	Best Forest Guard	Smt Milanbala Pradhan, Forest Guard Sri Bimbadhar Rout, Forest Guard
13	Best Forester	Smt.Sudipa Behera, Forester Shri Arupa Ku. Rout, Forester
14	Best Intern Award	Miss Mousumee Das
15	Best Zoo Volunteer Award	Mr Abhijit Hota
16	Best Citizen Science Initiative Award	Miss Prajwalin Das
17	Friends of Nandankanan Award	Shri Dhamdhere Dhanraj Hanumant, Divisional Forest Officer, Keonjhar Forest Division
18	Lifetime commitment award for Gharial Conservation	Prof. Sudarshan Maharana
19	Nandankanan Scholarship-Best Performer in HSC Exam 2022-23 (Girl)	Archita Jena, Nandankanan High School
20	Nandankanan Scholarship-Best Performer in HSC- Exam 2022-23 (Boy)	Omm Subham Jena, Nandankanan High School



# **Wetland Management**





# Provision of outlet to Kanjia Lake

The natural lakes, Kanjia and Kiakani, serve as vital water sources for Nandankanan Zoological Park and are celebrated for their rich biodiversity. However, their sustainability is at risk due to the absence of a proper outlet. Drainage congestion in Kanjia Lake raises the likelihood of severe flooding in the zoo and the adjacent State Botanical Garden during heavy rains. Additionally, stagnant water encourages excessive weed growth, threatening aquatic life and the overall ecosystem. To address this, an outlet is being planned to direct water discharge to Budhinalla, a natural stream located approximately 3.1 km from the lake. Following a detailed study conducted by the Khurdha Drainage Division under the Department of Water Resources, the alignment for the outlet has been finalized, and implementation is currently underway.

# Deweeding of Kanjia Lake

To maintain the health of the lake ecosystem, deweeding activities were carried out across the entire stretch of Kanjia Lake. This process was crucial for removing aquatic weeds, which can hinder water flow and affect the overall health of the lake, ensuring a balanced and thriving aquatic environment.

# Rejuvenation of Kiakani Lake

During the 2023-24 period, efforts were made to rejuvenate Kiakani Lake. These initiatives aimed at improving the quality of water and restoring the natural habitat of the lake, promoting biodiversity, and enhancing the ecological balance of the surrounding area.



# **Development of State Botanical Garden**

# Hydrophyte Garden

The Hydrophyte Garden with a captivating Hydrophyte gallery was inaugurated on 29.12.2023. It showcases around 225 hydrophyte species, including 44 water lilies and lotus types. Many of these species mirror the rich biodiversity of the nearby Kanjia lake, home to over 40 hydrophyte varieties. The hydrophyte gallery is one of its first kind in India which showcases these varied kinds of collection.

# Bambusetum

Bambusetum was inaugurated on 29.12.2023 which spreads over 4.4 acres, of the State Botanical Garden, with exhibits of 70 species, is largest of its kind in Odisha. This garden featuring a waterfall and a stream immersed in the natural landscape mesmerizes visitors. To improve visitor experience, this garden has bamboo gazebos, three view-points showing the beauty of this place and a unique Laterite amphitheater.

### Website of State Botanical Garden

The website for the State Botanical Garden www.statebotanicalgardenodisha.org was launched on 29.12.2023 on the eve of 64<sup>th</sup> Foundation Day. The website provides comprehensive information regarding the State Botanical Garden, ticket bookings, online registration for educational activities and planning a visit, ensuring a seamless visitor experience.

# **Visitors Amenities**

Two number of water ATMs, three pre-fabricated toilets and one drinking water unit were installed to enhance the visitor amenities.

# Recognition of State Botanical Garden

32 awards won in different State Level Flower show competitions.









# **World Class Nandankanan**

On 23<sup>rd</sup> June, 2023, Honorable Chief Minister of Odisha declared that Nandankanan will be transformed to a "World Class Zoo". Accordingly, a new Master Plan of Nandankanan Zoological Park for the period of 2023 to 2043 was prepared and was approved by the Central Zoo Authority, New Delhi on 18/12/2023.

# Master Plan of Nandankanan from 2023-2042

The Master Plan 2023-2042 for Nandankanan Zoological Park outlines a comprehensive 20-year vision to transform the park into a world-class facility for wildlife conservation, education, and research. Aimed at expanding the animal collection to 267 species, the plan focuses on thematic exhibits that simulate natural habitats, enhancing the welfare of the animals and enriching the visitor experience. Aligned with the Central Zoo Authority's (CZA) Vision 2021-2031, it emphasizes modernizing infrastructure, including advanced drainage and sewerage systems, water treatment plants, and solar energy installations to ensure sustainability. Visitor facilities such as multilevel parking, a mono-cable ropeway, and interactive digital tools are designed to create a seamless and engaging experience, while state-of-the-art veterinary facilities, quarantine units, and expanded rehabilitation centre will ensure the highest standards of animal care.

Capacity building and community engagement are key priorities of the plan. By addressing staffing needs and offering targeted training programs, the zoo aims to enhance operational efficiency and strengthen its research capabilities. Conservation breeding programs for endangered species remain central to the zoo's mission, complemented by educational outreach initiatives such as internships, volunteer programs, and interactive conservation campaigns. The revitalization of Kanjia Lake as a wetland of national importance further reinforces the zoo's commitment to biodiversity and environmental education. Guided by this approved Master Plan (vide CZA letter No. 19-64-/1992-CZA(212)(NE)I/60207/2023 dated 18.12.2023), Nandankanan Zoological Park aspires to balance conservation, education, and visitor satisfaction, setting its position as a global leader in wildlife preservation and public engagement.

# Project Management Unit (PMU)

A dedicated Project Management Unit for implementing new initiatives started functioning from 18th September, 2023.

# Engagement of two consultants

Two Consultants for landscaping, hardscaping and design of selected enclosures at Nandankanan and State Botanical Garden have been on boarded and work is under progress.



# **Animal Adoption Scheme to Integrate Public in Wildlife Conservation**

The Animal Adoption Programme at Nandankanan Zoological Park encourages public involvement in the conservation of endangered species. Through this initiative, individuals, organizations, and corporations can adopt animals by contributing to their feed, housing, and healthcare costs. The program offers both offline and online adoption options through the Nandankanan website. In the 2023-2024 financial year, 106 adopters, including organizations like IPICOL, Bhubaneswar and Indiano Chrome Private Limited, Bhubaneswar, collectively pledged Rs. 39,300,100. Contributions towards animal adoption are exempt from tax under section 80G of the Income Tax Act, 1961.



# List of Donors 2023-24 (OFF-LINE)

SN	Name of the Person / Institutions	Animal / Birds / Reptile adopted	Period of Adoption		
		2 Four Horned Antelopes			
		6 Himalayan Black Bears			
		6 Sloth Bears			
		1 Leopard Cat			
		2 Leopards			
		4 Asiatic Lions	11 <sup>th</sup> Jan 2024 to		
		3 Tigers (NCT)	10 <sup>th</sup> Jan 2025		
		6 Tigers (White)			
		3 Tigers (Melanistic)			
		2 Wild Dogs			
	IPICOL, Bhubaneswar, Odisha	5 Striped Hyenas			
		1 Chimpanzee			
		1 Giraffe			
		11 Hippopotamus			
		2 Hybrid			
		2 Pig Tailed Macaques			
		8 Indian Grey Wolves			
		3 Slender Tailed Meerkats			
		1 Emu			
		2 Parma Wallabies			
		2 Cassowaries			
		1 Ostrich			

# List of Donors 2023-24 (ONLINE)

Sn	Name Of The Person / Institutions	Animal / Birds / Reptile Adopted	Period of Adoption
1	Abhishek Pradhan Bhubaneswar, Khurda, Odisha-751003	1 Asiatic Lion	1st Apr 2023 to 30th Apr 2023
2	Ajit Kashinath Nayak Balasore, Odisha-756001	1 Brahminy Kite	4th Apr 2023 to 3rd May 2023
3	Amod Inamdar Pune, Maharashtra-411038	1 White Backed Vulture	6th Apr 2023 to 5th May 2023
4	Anagha Inamdar Pune, Maharashtra-411038	2 Nilgai	6th Apr 2023 to 5th May 2023
5	Rina Bhubaneswar, Odisha-751018	1 Spotted Deer	10th Apr 2023 to 9th Apr 2024
5	Sumita Bhatnagar Gurgaon, Haryana-122001	1 Asian Brown Tortoise	11th Apr 2023 to 10th Apr 2024
7	Madhusmita Senapati Bhubaneswar, Odisha-751024	1 Indian Star Tortoise	12th Apr 2023 to 11th Apr 2024
8	Swarna Prabha Mohanty Mandir Marg, New Delhi-110001,	1 Jungle Cat	16th Apr 2023 to 15th May 2023
9	Rajib Kumar Mohapatra Niladri Vihar, Khurda, Odisha-751021	1 Jackal	1st May 2023 to 31st May 2023
10	Lalitha Kasi East Godavari, Andhra Pradesh-533262	1 Fischer's Love Bird	1st May 2023 to 31st May 2023
11	Anagha Amod Inamdar Pune, Maharashtra-411038	1 Indian Peafowl White	19th May 2023 to 18th Jun 2023
12	Amod Ashok Inamdar Pune, Maharashtra-411038	1 Ring Necked Pheasant	19th May 2023 to 18th Jun 2023
13	Dev Suriya Chennai, Tamil Nadu-600090	1 Bengal Tiger (NCT)	23rd May 2023 to 22nd Jun 2023
14	Satabdi Mohanty VSS Nagar, Khurda, Odisha-751007	1 Burmese Python	30th May 2023 to 29th Jun 2023
15	Satabdi Mohanty VSS Nagar, Khurda, Odisha-751007	1 Bonnet Macaque	30th May 2023 to 29th Jun 2023
16	Ishaan D. Joshi Pune, Maharashtra-411038	1 Giant Fruit Bat	3rd Jun 2023 to 2nd Jul 2023
17	Dharani Lakshmi Chennai, Tamilnadu-600040	1 Common Sand Boa	5th Jun 2023 to 4th Jun 2024
18	Atharv Chennai, Tamilnadu-600016	1 Barbary Dove	7th Jun 2023 to 6th Jul 2023
19	Anagha Inamdar Pune, Maharashtra-411038	1 Barking Deer	18th Jun 2023 to 17th Jul 2023
20	Rashmita Nayak Bengaluru, Karnataka-560037	1 Spotted Deer	19th Jun 2023 to 18th Jul 2023
21	Rina Cuttack, Odisha-753012	1 Barn Owl	23rd Jun 2023 to 22nd Dec 2023

22	Gyanendu Samanta Berhampur, Ganjam, Odisha-760001	1 Fischer's Love Bird	23rd Jun 2023 to 22nd Jul 2023
23	Subhashree Roy Saheed Nagar, Khurda, Odisha-751007	2 Fischer's Love Birds	24th Jun 2023 to 23rd Sep 2023
24	Sriyadita Das Kolkata, West Bengal-700052	1 Cockatiel	8th Jul 2023 to 7th Jul 2024
25	Maitreyee Naha Rasulgarh, Bhubaneswar, Khurdha, Odisha- 751010	1 Indian Tent Turtle	10th Jul 2023 to 9th Jul 2024
26	Sudhansu Bangalore, Karnataka-560037	1 Common Indian Krait	13th Jul 2023 to 12th Aug 2023
27	Ronav Agarwal Cuttack, Odisha-753014	1 Large Egret	13th Jul 2023 to 12th Aug 2023
28	Baby Dasgupta Kolkata, West Bengal-700052	1 Hill Mynah	16th Jul 2023 to 15th Oct 2023
29	Rashmita Nayak Bengaluru, Karnataka-560037	1 Common Mongoose	18th Jul 2023 to 17th Aug 2023
30	Himanshu Noida, Uttar Pradesh-201304	1 Little Egret	22nd Jul 2023 to 21st Aug 2023
31	Himanshu Yadav Noida, Uttar Pradesh-201304	1 Barn Owl	22nd Jul 2023 to 21st Aug 2023
32	Venkata Suseela & Vijaya Keerthi Bhimavaram, Andhra Pradesh-534202	1 Swamp Deer	22nd Jul 2023 to 21st Aug 2023
33	Sriram Sekhar Navi Mumbai, Maharashtra-400705	1 King Cobra	23rd Jul 2023 to 22nd Aug 2023
34	Lakshmi Ammal Chennai, Tamilnadu-600016	1 Alexandrine Parakeet	26th Jul 2023 to 25th Aug 2023
35	Amod Ashok Inamdar Pune, Maharashtra-4110 38	1 Indian Hare	29th Jul 2023 to 28th Aug 2023
36	Rashmita Nayak Bengaluru, Karnataka-560037	1 Jungle Cat	29th Jul 2023 to 28th Aug 2023
37	Eshajit North 24 PGS, West Bengal-700127	1 Tiger (NCT)	30th Jul 2023 to 29th Aug 2023
38	Shankarappa S Bengaluru, Karnataka-560032	1 King Cobra	4th Aug 2023 to 3rd Sep 2023
39	Shankarappa S Bengaluru, Karnataka-560032	1 Barn Owl	4th Aug 2023 to 3rd Sep 2023
10	Shankarappa S Bengaluru, Karnataka-560032	1 Brahminy Kite	4th Aug 2023 to 3rd Sep 2023
<b>1</b> 1	Nikitha N Bangalore, Karnataka-560097	1 Slender Tailed Meerkat	4th Aug 2023 to 3rd Sep 2023
12	Deepak Ramesh Joshi Thane, Maharashtra-400604	1 African Grey Parrot	13th Aug 2023 to 12th Sep 2023
<b>1</b> 3	Venkata Suseela & Vijaya Keerthi West Godavari, Andhra Pradesh-534202	1 Binocellate Cobra	21st Aug 2023 to 20th Sep 2023

44	Kaushik Pune, Maharashtra-411036	1 Russell's Viper	21st Aug 2023 to 20th Nov 2023
<b>4</b> 5	Saikrishna Hyderabad, Telangana-500089	1 Binocellate Cobra	24th Aug 2023 to 23rd Sep 2023
16	Rashmita Nayak Bengaluru, Karnataka-560037	1 Binocellate Cobra	24th Aug 2023 to 23rd Nov 2023
47	Utsav Mukherjee Kolkata, West Bengal-700107	1 Zebra Finch	24th Aug 2023 to 23rd Aug 2024
18	Prof. Ram Kuntal Hazra New Delhi, Delhi-110007	1 Hippopotamus	28th Aug 2023 to 27th Nov 2023
19	Jaspreet Kaur Bhandari Berhampur, Ganjam, 760004,	1 King Cobra	8th Sep 2023 to 7th Mar 2024
50	Umashanker Hyderabad, Telangana-500059	1 Indian Star Tortoise	9th Sep 2023 To 8th Sep 2024
51	Umashanker Hyderabad, Telangana-500059	1 Indian Tent Turtle	9th Sep 2023 to 8th Sep 2024
52	Umashanker Hyderabad, Telangana-500059	1 Asian Brown Tortoise	9th Sep 2023 to 8th Sep 2024
53	Uma Shanker Hyderabad, Telangana-500059	1 Blue Faced Lorikeet	9th Sep 2023 to 8th Sep 2024
54	Zoom Your Traffic Web Solutions Pune, Maharashtra-411016	1 Indian Porcupine	29th Sep 2023 to 28th Oct 2023
55	Animesh Mishra Bhubaneswar, Khurda, Odisha-751024	2 Binocellate Cobras	17th Oct 2023 to 16th Jan 2024
56	Mr. Anish Sarin & Ms. Radhika Sarin Civil Lines, Delhi- 110054,	1 Bengal Tiger (NCT)	20th Oct 2023 to 19th Jan 2024
57	Anagha Inamdar Pune, Maharashtra-411038	1 Grey Hornbill	28th Oct 2023 to 27th Nov 2023
58	Amod Inamdar Pune, Maharashtra-411016	1 Asian Brown Tortoise	28th Oct 2023 to 27th Nov 2023
59	Sriram Sekhar Navi Mumbai, Maharashtra-400705	1 Binocellate Cobra	29th Oct 2023 to 28th Apr 2024
50	Anshul Gupta Jabalpur, Madhya Pradesh-482003	1 Leopard	12th Nov 2023 to 11th Dec 2023
61	Pallavi Jha Mumbai, Maharashtra-400007	1 Alexandrine Parakeet	16th Nov 2023 to 15th Nov 2024
52	Anagha Inamdar Pune, Maharashtra-411038	1 Long Billed Vulture	27th Nov 2023 to 26th Dec 2023
53	Atharv Chennai, Tamilnadu-600016	1 Blossom Headed Parakeet	7th Dec 2023 to 6th Jan 2024
54	Anagha Amod Inamdar Pune, Maharashtra-411038	1 Indian Hare	12th Dec 2023 to 11th Jan 2024
55	Amod Ashok Inamdar Pune, India-411016	1 Indian Peafowl	12th Dec 2023 to 11th Jan 2024
56	Venkata Suseela & Vijaya Keerthi Bhimavaram, Andhra Pradesh-534202	1 Indian Flap Shell Turtle	12th Dec 2023 to 11th Jan 2024
67	Aadarsh Satapathy Nayapalli, Khordha, Odisha-751012	1 Slender Tailed Meerkat	14th Dec 2023 to 13th Dec 2024

68	Jack Bangalore, Karnataka-560076	1 Barn Owl	17th Dec 2023 to 16th Mar 2024
69	Vihaan Gupta Paschim Vihar, Delhi-110063	1 Common Indian Krait	21st Dec 2023 to 20th Dec 2024
70	Amod Inamdar Pune, Maharashtra-411016	1 Shikra	23rd Dec 2023 to 22nd Mar 2024
71	Sripriya Maharana Bhubaneswar, Khudra, Odisha-752101	2 Alexandrine Parakeets	25th Dec 2023 to 24th Dec 2024
72	Sripriya Maharana Bhubaneswar, Khudra, Odisha-752101	1 Indian Peafowl	25th Dec 2023 to 24th Dec 2024
73	Sripriya Maharana Bhubaneswar, Khudra, Odisha-752101	1 Rhesus Macaque	26th Dec 2023 to 25th Dec 2024
74	Sudhansu Kumar Naayak Bangalore, Karnataka-560037	1 Ganges Soft Shell Turtle	28th Dec 2023 to 27th Jan 2024
75	Advait, Swati, Vivek, Dhiwar Pune, Maharashtra-411033	1 Jackal	1st Jan 2024 to 31st Jan 2024
76	Soo Cuttack, Odisha-753012	1 Black Buck	3rd Jan 2024 To 2nd Apr 2024
77	Saikrishna Rangareddy, Telangana-500089	1 Ganges Soft Shell Turtle	6th Jan 2024 to 5th Feb 2024
78	Saikrishna Hyderabad, Telangana-500089	1 Binocellate Cobra	6th Jan 2024 to 5th Feb 2024
79	Ujjawal Thakur Pathankot, Punjab-145023	1 African Grey Parrot	6th Jan 2024 to 5th Feb 2024
80	Pamod Roul DLF Cybercity, Khorda, Odisha-751024	1 Indian Peafowl White	11th Jan 2024 to 10th Feb 2024
81	Pratyush Jena Bhubaneswar, Khurda, Odisha-751003	1 Red Handed Tamarin	13th Jan 2024 to 12th Feb 2024
82	Ashwin Govindaraj Chennai, Tamil Nadu-600130	1 Giant Squirrel	17th Jan 2024 to 16th Jan 2025
83	Sudhansu Kumar Naayak Bangalore, Karnataka-560087	1 Binocellate Cobra	19th Jan 2024 to 18th Feb 2024
84	Amod Inamdar Pune, Maharashtra-411038	1 Night Heron	25th Jan 2024 to 24th Feb 2024
85	Sourav Biswal Bengaluru, Karnataka-560102	1 Spotted Deer	26th Jan 2024 to 25th Feb 2024
86	Advait Swati & Vivek Dhiwar Pune, Maharashtra-411033	1 Nilgai	4th Feb 2024 to 3rd Mar 2024
87	Swati Verma Dehradun, Uttarakhand-248008	1 Black Headed Munia	5th Feb 2024 to 4th Mar 2024
88.	Atharv Chennai, Tamilnadu-600016	1 Bengalese Finch	11th Feb 2024 to 10th Mar 2024
89.	Mamata Dash Rasulgarh, Bhubaneswar, Odisha-751010	1 Leopard Cat	11th Feb 2024 to 10th Feb 2025
90	Supriya Sonaje Nanded, Maharashtra-431605	1 Banded Krait	13th Feb 2024 to 12th May 2024
91	Pratyush Jena Bhubaneswar, Khordha, Odisha-751003	1 Black Tufted Marmoset	17th Feb 2024 to 16th Mar 2024

92	Sriram Sekhar Navi Mumbai, Maharashtra-400705	1 Indian Rock Python	18th Feb 2024 to 17th Feb 2025
93	Vishwa Teja Pedaprolu Vijayawada, Andhra Pradesh-520011	1 Russell's Viper	19th Feb 2024 to 18th Mar 2024
94	Pragnya Paramita Das Bhubaneswar, Khurdha, Odisha-751030	1 Black Swan	27th Feb 2024 to 26th Mar 2024
95	Ruchi Jain Ahmedabad, Gujarat-380015	1 African Lion	29th Feb 2024 to 28th Mar 2024
96	Sanjeev Jain Ahmedabad, Gujarat-380015	1 Asiatic Lion	29th Feb 2024 to 28th Mar 2024
97	Sanjeev Jain Ahmedabad, Gujarat-380015	1 Tiger (RBT)	29th Feb 2024 to 28th Mar 2024
98	Linette John Dsouza Thane, Maharashtra-401 107	2 Alexandrine Parakeets	9th Mar 2024 to 8th Mar 2025
99.	Sasmita Nayak Balasore, Odisha-756001	1 Cinereous Vulture	12th Mar 2024 to 11th Mar 2025
100	Moirshad Iqbal Majothi Porbander, Gujarat-360575	1 Jungle Cat	16th Mar 2024 to 15th Apr 2024
101	Jaspreet Kaur Bhandari Ganjam, Odisha-760004	1 King Cobra	20th Mar 2024 to 19th Sep 2024
102	Durgesh Nandini Patra Rourkela-3,Sundargarh, Odisha-769003	1 Long Billed Vulture	21st Mar 2024 to 20th Apr 2024
103	Indiano Chrome Private Limited Saura Industrial Estate, Khordha, Odisha- 752057	1 Indian Elephant	29th Mar 2024 to 28th Mar 2025
104	Indiano Chrome Private Limited Saura Industrial Estate , Khordha, Odisha- 752057	1 Indian Elephant	30th Mar 2024 to 29th Mar 2025
105	Indiano Chrome Private Limited Saura Industrial Estate, Khordha, Odisha- 752057	1 Hoolock Gibbon	30th Mar 2024 to 29th Mar 2025
106	Amod Inamdar Pune, Maharashtra-411038	1 Indian Hare	31st Mar 2024 to 30th Apr 2024



# **Impression of Our Esteemed Guests**



Wonderful collection of animals which are well fed and well kept. Congratulations for this venture!

Dr. K. R. Kohli

Ex- Director Ayush, Govt of Maharashtra

30.04.23

We enjoyed a lot. Great collection of birds and animals as well. Good job forest department for maintaining such a clean and friendly environment.

Raj Kumar

Pr. Accountant general, Odisha

02.05.23

A well systematic park all facilities are up to the mark. I have visited many zoos and parks but it is totally different.

Congratulations to all of you. It's an amazing experience.

Rajesh Kumar Jha

Director- NIFT Bhubaneswar & Kolkata, Ministry of Textiles, Govt. of India

06.05.23

Excellent! Very well organized & all the animals look very happy & well looked after.

Gunjan Sanghi

W/o Chief Justice, Uttarakhand

06.05.23

It was a nice experience overall. Worth a visit.

R. Prakash

**DIG** Vigilance

21.05.23

It is an exciting & wonderful experience with our 3-year-old daughter with all the wild animals, birds, reptiles, fish and aviary. Educative & learning experience for the kid.

Dr Chittaranjan D. Majhi

IRS (C & IT), Additional Commisioner, New Delhi

Dr Anjoo Yadav

MBBS, MS, Professor, Lady Hardinge Medical College, Delhi

24.05.23

Amazing experience, excellent staff & all the best for perfectly managed zoo (all the animals & wildlife) Incredible India, Incredible Odisha!

Advocate Chetan Gupta

C/O- Dr Mona Sharma, IAS

25.05,23

My first visit to this wonderful place left me mesmerized. Wonderfully managed. Must be a jewel for the forest department of the country as a whole. Best wishes.

Sameer Rastogi, IFS-88, HP,

CVO, RCF, Mumbai

26.05.23

A perfect place to be visited by nature lovers. We are very much impressed by the picturesque beauty and nature's fauna. A well-maintained zoo. Thanks to the concerned authority for giving us this wonderful opportunity to visit.

Dr A K Mukherjee

High Court Calcutta

30.05.23

Excellent upkeep. Mr Milan Panda was very helpful & informative. This is a world class zoo.

Prof (Dr) Sandeep Patnaik

University of Maryland, USA

30.05.23

Amazed to see the wide variety of species of animals being well protected in a natural environment. The staffs are passionate about their work. Excellent hospitality. Thanks.

Niraj Agarwal

Director, Mineral & Steel

06.06.23

Thanks for all the arrangements. It was a great experience. The staff was very friendly & supportive. This made the journey inside the zoo enjoyable. My grandson Dhruv enjoyed a lot.

### Prof P. P. Mathur

# Vice Chancellor, Birla Global University, Bhubaneswar 23.06.23

The Zoological Park is well maintained with natural vegetation. The animals are quite healthy. The conservation breeding programme of Indian Pangolin & Long billed vulture is a good initiative & wish them success. The zoo education officer is well informed about wildlife and gave good insight about park.

### Shrikanth V. Hosur

# IFS (Ret.), APCCF (Ret.), Karnataka

### 25.06.23

Visited the park today & went around seeing various types of wildlife. A very well-kept park with good amenities & good staff. The staff was very friendly & helpful. Best Wishes.

# D. K. Jain, Member, Lokpal of India & Mahendra Singh

### 15.08.23

Had a great experience. I see lots of changes with positive note. Enrichment in various enclosures is appreciable & quite a good number. A new enclosure with a proper environment. Animals in exhibit also seem healthy & satisfactory. Thanks to Director and his team for all the help & hospitality.

### B S Bonal, IFS

# Ex-Member Secretary, Central Zoo Authority

### 16.08.23

The Nandankanan Zoo & Safari is a lovely experience. The zoo has been very well maintained. The number of animals in the safari could be increased. The staffs are very much cordial, highly informative and guest friendly. Wishing more success and laurels in the days to come.

### Shefeen Ahamed K, IPS

### IGP Odisha

### 20.08.23

Nice place to visit. Had great experience after visiting natural habitat full of birds and animals. Excellent hospitality by staffs. Enjoyed fully. Thanks to everyone.

# Narendra Singh

# Commandant ITBP

# 22.08.23

Very well-kept zoo. It has very happy animals which shows the hard work put in together. Please keep up the good work. Thanks!

Dr Rajiv Bhartari, Former HoFF Uttarakhand & Mrs. Sharmila Bhartari,

Odissi Dancer

24.08.23

Excellent zoo with so many diversified species in almost all animal kingdom phyla. I just recollected my memories post back to 1998 when I visited this zoo for the first time.

Credit must be attributed to the Zoo management for the owning and caring towards the animals and they are successful in maintaining the zoo environment. So natural that even we feel like being in a real forest. I will carry my experiences to my state to implement there for sure.

### Srinivas Pani

# Regional Director, AP Tourism

# Visakhapatnam Hub, Andhra Pradesh

# 29.09.23

Amazing facility. Especially the tiger population and the role of Nandankanan zoo in popularising and sustaining white tiger population in the country. Our organization is proud to be associated with Nandankanan through CSR activities and would love to do more. Will be back soon!

# Vikrant Gupta & Reyaansh Gupta & Riya Gupta Manager, Business Development CMPDIL 30.09.2023

It was a wonderful experience visiting the zoo. The staff  $\mathscr{E}$  hospitality is awesome. The zoo is very well maintained  $\mathscr{E}$  overall an excellent experience. Wishing all the best for future endeavours.

# Dr. A. K. Prusty

### Senior Scientist, ICAR-IIFSR, New Delhi

### 28.10.23

Good zoo & excellent staff. I have visited zoo with my family.

# Dr. Raghuraj Singh,

# State Minister of Labour & Employment, UP Government

# 29.10.23

Excellent zoo & excellent staff. Officers & staffs are very cordial. Very well-maintained zoo!

# P.B. Verma

### Regional Commissioner, EPFO

# 29.10.23

Excellent experience to visit the Nandankanan zoo. The staff conduct & behaviour has been par excellence. Would like to visit again & recommend all to visit. Very well-maintained zoo. Thanks!

# Col. Ravinder Kumar

# Gurgaon (Haryana)

### 05.11.23

Nandankanan is an extraordinary tourism product. It is heartening to see how well maintained this zoo is. It offers multifarious engagement for researchers & tourists alike. Bird walks & tree walks are interesting offerings that Odisha tourism would love to collaborate with promotion of tourism. My best wishes to team Nandankanan.

Sachin Jadhav, IAS,

Director Tourism, Odisha.

10.12.23

This is a wonderfully managed zoo with unique conservation initiatives & also innovative for visitor's experience. Kudos to the dedicated Director & his team. All the Best!

Leena Nandan

Secretary, Ministry of Environment & Forest & Climate Change

15.10.23

Excellent zoo with so many diverse species. We enjoyed a lot and a place to be remembered forever.

M. Birathiviraj, IAS

Tamil Nadu,

24.11.23

Our visit to Nandankanan is very pleasant & excellent. We feel forest is being well developed & modernised. We wish all the staff & officers of forest a very happy future.

Justice Rajendra Kumar,

M. P. High Court

23.12.23

It is a wonderful experience. I came along with my family. The facilities are great and well maintained. The animals in the zoo are a sight to see. The protocol  $\mathscr E$  hospitality was good. I strongly recommend to my brother  $\mathscr E$  sister judges to visit with their families.

Justice N. V. Shravan Kumar

High Court for the state of Telangana

25.12.23

It has been a wonderful experience to visit Nandankanan. Got the opportunity to watch beautiful flora & fauna. Efforts being made by all the concerned in developing and making this place an attraction centre for the tourists is really commendable.

Justice Meenakshi I. Mehta

High Court of Punjab & Haryana at Chandigarh 30.12.23

Visit after a very long time. It is heartening to see the improvements made over the years. It is not only the pride of Odisha rather a gem in firmament in the zoos & sanctuaries across the country. A lot has been achieved, yet a lot more remains to be achieved.

Keep up the good work. All the best!

Justice Aditya K. Mohapatra,

Justice, High Court Odisha

07.01.24

Visited for the first time and had a splendid experience. The upkeep of the zoo is absolutely praiseworthy. The Forest Rest House and the flower garden is impeccably maintained and we had a nice time sitting on the balcony and overlooking the water body.

We will visit again.

A. K. Sinha, IRS,

Commissioner of Income Tax, Bhubaneswar.

10.01.24

It is my first visit to Odisha with family. Enjoyed the zoo. I had opportunity to visit many zoos in India. But this was amazing and has abilities to qualify world class zoo. If zoo takes a collaborative project with IVRI for conservation of wildlife, it would be a wonderful initiative.

Dr Amit Kumar

Senior Scientist, IVRI, Animal Genetics

11.01.24

We admire the management of Nandankanan. We enjoyed the beauty of the park. Thanking.

Mr. M. K. Sharma, (Retd) IFS

17.01.24

Nandankanan has been able to meet more than expectation. It is nicely managed. The officials are working meticulously. Cleanliness is another attribute that can't be ignored. Loved the place & hospitality of forest department.

Satyen Vaidya

Judge, High Court of H.P

20.01.24

We really like the hospitality and help given by the staff. The extended visit of the State Botanical Garden along with the zoo is very enjoyable, allowing us to explore both flora & fauna of Odisha.

Mrs. Pushpamita Mishra,

W/o of Hon. Justice Sanjay Kumar Mishra, Odisha High Court.

24.01.24

Well-maintained and most attractive for the open space for birds which is a unique concept and happy environment is for birds remarkably.

Sourabh.

**MOEF SSC** 

18.02.24

First visit and really impressed with management and high standard especially, research & breeding of Pangolin.

Remarkable. Kudos to Shri Narayan, Dr Mohapatra and.

Education Officer

Dr Jagdish Krishnaswamy,

Indian Institute for Human Settlements (IIHS).

28.02.24

Very enriching experience in the zoo. The layout & enclosure designs were of a high architectural standard according to CZA rules. The health care facility is one of the best in India & feeding, nutrition of animals has been given highest priority. The range of activities from the exhibit & animals to the three safaris & the state botanical garden gives the valuable experience to visitors. The new endeavour of the zoo the hydrophyte garden is an innovative experience not seen in any other zoo. The zoo is innovative and adopts the best practices will be one of the best zoos in India.

Praveen Chandra Tvagi

Member Secretary, Central Zoo Authority

05.03.24

A well-maintained house for animals & birds. The dedication of the team is likely to take it to greater heights. Best of luck to the team.

Y. K. Jethur, IPS,

Director Vigilance, Odisha.

09.03.24

A visit that came a little late in the career, but worth a wait. No wonder it is called Nandankanan! it's a trailblazer and this leads in so many ways. EO Milan Panda conducted us.

Rajiv Kumar, IFS,

PCCF (HOFF), Shimla, HP.

09.03.24

The majestic Nandankanan still maintains its glory. Neatly arranged enclosures and beautiful preparation.

Rajiv Ranjan, IFS,

APCCF, Singhbhum, Jamshedpur.

13.03.24

A very soothing environment at the zoo. The animals which are in the zoo are nicely kept and the cleanliness of the zoo and its staff service is highly appreciated.

Justice Ramesh Sinha

Chief Justice, Chhattisgarh High Court, Bilaspur

15.03.24

After staying so many years in Bhubaneswar, first time I visited this place. The general audience is very good. The animals were taken care of very well. We especially loved the Giraffe and the bear. Staff is extremely dedicated & polite.

Subhashree Routray & Sanjay Biswal, IFS

16.03.24

Visited Nandankanan zoo for first time. A very pleasant environment at zoo. The animal kept in the zoo is maintained properly & hospitality provided highly appreciated.

M.P. Aggarwal,

PPS to DWII, WII Dehradun

17.03.24

The zoo is very well maintained. There are so many species. The animals looked well fed & maintained. The zoo environment is very sound & clean. The person in-charge of our visit is well educated about animals & has a good personality and staff services are highly appreciated.

Ajeet Singh

Deputy Director of IWAI

27.03.24

I have visited the zoo today & it was a memorable experience. The lion safari, tiger and bear & bear safari are the highlights of the Nandankanan Zoo. All the animals looked great and the staff have explained the details nicely.

P. Balakiran, IAS, DCO, AP

27.03.24

I along with my family visited the zoo. I found it wonderful. The staff (working people are doing it very well). It remained an educative experience for us. A very clean and maintained zoo. We grade it outstanding. Thanks.

Ved Pal, Dy. Commandant, BSF, Raipur.

29.03.24

# **SUPERANNUATED STAFF DURING 2023-24**

With deepest gratitude from Nandankanan family for your valuable service



Sri Shyam Singh Mahout 31.05.2023



Mrs Sabita Tripathy Junior Librarian 30.06.2023



Sri Pratap Rout Animal Keeper 30.06.2023



Sri Laxmidhar Rout Watchman 30.09.2023



Sri Krushna Chandra Das Watchman 31.10.2023



Khulana Pahadsingh Animal Keeper 31.12.2023



Golam Fakhrullah Khan Deputy Range Officer 29.02.2024



# NANDANKANAN BIOLOGICAL PARK ADOPTION SCHEME



Animal Adoption Programme of Nandankanan Biological Park was launched in the year 2008 to support the world class zoo care and people's movement towards conservation and preservation of flora and fauna which brings in higher dividends. The primary intention to evolved this scheme to involving general public in conservation of endangered animals, birds and reptiles. Individuals, philanthropists, organizations and corporate can adopted animals by way of contributing services for all inhabitants by providing quality food to meet their nutritional requirements, medical care, equipment, upgradation of the enclosure and enrichments. This scheme also brings patrons closer to the zoo and heighten their love and passion for the captive animals. Therefore, the zoo would like to invited philanthropists, institutions and industrial houses and individuals to lend a helping hand by donating liberally to the zoo. One can adopt any animal/bird/reptile for a period of one month, three months, six months and for one year. The animal adopted remains at the Nandankanan zoo receiving proper care and housing. This programme is being done both through online and offline mode. After adopting, a patron received a "Thank You" in the form of an Adoption Certificate. All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.

Animal Adoption rates for different species which had arrived based on the data collected for feed charges, veterinary care charges, animal keeping charges and administrative charges per year/six months/three months and one month and the privileges for patrons are as follows.

### CURRENT ADOPTION CHARGES FOR DIFFERENT ANIMALS

Serial No	Name of the Species	Scientific name	No of animal available for adoption	Adoption charges in Rupees			
	SCHEME			Per Year (365 Days)	Per six months (180 Days)	Per three months (90 Days)	Per month (30 Days)
BIRDS 1	HILL MYNAH	Gracula religiosa	1	10000/-	5000/-	2500/-	1000/-
	INDIAN PEAFOWL	Pavo cristatus	25	15000/-	7500/-	3800/-	1300/-
3	INDIAN PEAFOWL WHITE	Pavo cristatus	4	15000/-	7500/-	3800/-	1300/-
4	CINEREOUS VULTURE	Aegypius monachus	2	10000/-	5000/-	2500/-	1000/-
5	LONG BILLED VULTURE	Gyps indicus	9	10000/-	5000/-	2500/-	1000/-
6	BRAMHINY KITE	Haliastur indus	1	10000/-	5000/-	2500/-	1000/-
7	BLACK KITE	Milvus migrans	12	10000/-	5000/-	2500/-	1000/-
9	SHIKRA GREY HORNBILL	Accipiter badius Ocyceros birostris	2	10000/-	5000/-	2500/- 2500/-	1000/-
10	SARUS CRANE	Grus antigone	i	15000/-	7500/-	3800/-	1300/-
11	EMERALD DOVE	Chalcophaps Indica	3	10000/-	5000/-	2500/-	1000/-
12	SPOTTED DOVE	Spilopelia chinesis	9	5000/-	2500/-	1500/-	500/-
13	RING NECKED DOVE	Streptopelia capicola	2	5000/-	2500/-	1500/-	500/-
14	CATTLE EGRET	Bubulcus ibis	6	5000/-	2500/-	1500/-	500/-
15	LARGE EGRET	Cosmerodius albus	1	5000/-	2500/-	1500/-	500/
16	LITTLE EGRET	Egretta garzetta	8	5000/-	2500/-	1500/-	500/ 500/
17 18	MEDIAN EGRET NIGHT HERON	Egretta intermedia Nycticorax nycticorax	1 122	10000/-	2500/- 5000/-	1500/- 2500/-	1000/-
19	BLACK HEADED IBIS	Threskiornis aethiopica	205	10000/-	5000/-	2500/-	1000/-
20	KOEL	Eudynamys scolopacea	2	10000/-	5000/-	2500/-	1000/-
21	RED MUNIA	Estrilda amandava	1	10000/-	5000/-	2500/-	1000/-
22	BLACK HEADED MUNIA	Lonchura malacca	1	10000/-	5000/-	2500/-	1000/-
23	SPOTTED MUNIA	Lonchura punctulata	1	10000/-	5000/-	2500/-	1000/-
24	BARN OWL	Tyto alba	07	10000/-	5000/-	2500/-	1000/-
25	BROWN FISH OWL	Bubo zeylonesis	2	10000/-	5000/-	2500/-	1000/-
26 27	ORIENTAL SCOPS OWL ALEXANDRINE PARAKEET	Outs sunia Psittacula eupatria	1 17	10000/-	5000/ <del>-</del> 2500/ <del>-</del>	2500/- 1500/-	1000/- 500/
28	BLOSSOM HEADED PARAKEET	·	5	5000/-	2500/-	1500/-	500/
		Psittacula cyanocephala					
29	ROSE RING PARAKEET	Psittacula krameri	22	5000/-	2500/-	1500/-	500/
30	GREY PELICAN ROSY PELICAN	Pelecanus phillippensis Pelecanus onocrotalus	26 3	10000/-	5000/-	2500/-	1000/-
32	PAINTED STORK	Mycteria leucocephala	52	15000/-	7500/-	3800/-	1300/-
33	OPEN BILL STORK	Anastomus oscitans	11	10000/-	5000/-	2500/-	1000/-
34	RED JUNGLE FOWL	Gallus gallus	6	10000/-	5000/-	2500/-	1000/-
35	BUDGERIGAR	Melopsittacus undulatus	543	5000/-	2500/-	1500/-	500/
36	COCKATIEL	Nymphicus hollandicus	91	5000/-	2500/-	1500/-	500/
37	LESSER SULPHUR CRESTED COCKATOO	Cacatua slphurea	1	10000/-	5000/-	2500/-	1000/-
38	UMBRELLA CRESTED COCKATOO	Cacatua slphurea	1	10000/-	5000/-	2500/-	1000/-
39	BROWN THROATED CONURE	Eupsittula pertinax	2	5000/-	2500/-	1500/-	500/
40	JANDAYA CONURE	Aratinga jandaya	18	5000/-	2500/-	1500/-	500/
41	SUN CONURE PINEAPPLE CONURE	Aratinga solstitialis Pyrrhura molinae molinae	21	5000/-	2500/- 2500/-	1500/-	500/ 500/
43	YELLOW SIDED CONURE	Pyrrhura molinae molinae Pyrrhura molinae sordida	14	5000/-	2500/-	1500/-	500/
44	BARBARY DOVE	Streptopelia risoria	1	5000/-	2500/-	1500/-	500/
45	DIAMOND DOVE	Geopelia cuneata	2	5000/-	2500/-	1500/-	500/
46	LAUGHING DOVE	Spilopelia senegalnesis	1	5000/-	2500/-	1500/-	500/
47	MANDARIN DUCK	Aix galericulata	11	5000/-	2500/-	1500/-	500/
48	LESSER ADJUTANT STORK	Leptoptilos javanicus	2	15000/-	7500/-	3800/-	500/
49	EMU EST FINION	Dromaius novaehollandiae	13	10000/-	5000/-	2500/-	500/
50 51	BENGALESE FINCH LONG TAILED FINCH	Lonchura striata Poephila cincta	24	5000/-	2500/-	1500/-	500/
52	STAR FINCH	Poephila ruficauda	1	5000/-	2500/-	1500/-	500/
53	ZEBRA FINCH	Poephila guttata	220	5000/-	2500/-	1500/-	500/
54	GREY HERON	Ardea cinerea	9	5000/-	2500/-	1500/-	500/
55	BLUE FACED LORIKEET	Trichoglossus haematodus intermedius	2	5000/-	2500/-	1500/-	500/
56	SWAINSON'S LORIKEET	Trichoglossus haematodus moluccanus	2	5000/-	2500/-	1500/-	500/
57	YELLOW BACKED LORY	Lorius garrulous flavopalliatus	1	5000/-	2500/-	1500/-	500/
	FISCHERS LOVE BIRD,	Agapornis fisheri	32	5000/-	2500/-	1500/-	500/

59	PEACH FACED LOVE BIRD	Agapornis roseicollis	12	5000/-	2500/-	1500/-	500/
60	MASKED LOVE BIRD	Agapornis personatus	4	5000/-	2500/-	1500/-	500/
61	GREEN WINGED MACAW	Ara Chloroptera	2	15000/-	7500/-	3800/-	1300/-
		Struthio camelus		15000/-		3800/-	
62 63	OSTRICH AFRICAN GREY PARROT	Psittacus erithacus	6 2	15000/-	7500/- 7500/-	3800/-	1300/-
						1	
64	GOLDEN PHEASANT	Chrysolophus Pictus	21	15000/-	7500/-	3800/-	1300/-
65	LADY AMHERST'S PHEASANT	Chrysolophus amherstiae	11	15000/-	7500/-	3800/-	1300/-
66	RING NECKED PHEASANT	Phasianus colchicus	16	15000/-	7500/-	3800/-	1300/-
67	SILVER PHEASANT	Lophura nycthemera	25	15000/-	7500/-	3800/-	1300/-
68 69	REEVE'S PHEASANT YELLOW GOLDEN PHEASANT	Syrmaticus reevesii Chrysolophus Pictus mut.	1	15000/-	7500/- 7500/-	3800/-	1300/-
70	EASTERN ROSELLA	Platycercus eximius	3	15000/-	7500/-	3800/-	1300/-
71	JAVA SPARROW	Padda oryzivora	123	5000/-	2500/-	1500/-	500/-
72	BLACK SWAN	Cygnus atratus	5	15000/-	7500/-	3800/-	1300/-
73	MEYERS PARROT	Poicephalus mayeri	3	10000/-	5000/-	2500/-	1000/-
74	RED BELLIED PARROT	Pionus sodidus	5	10000/-	5000/-	2500/-	1000/-
75	VIOLET TURACO	Musophaga violacca	4	15000/-	7500/-	3800/-	1300/-
76 77	LIVING STONES TURACO RING NECKED PARAKEET	Turaco living stonii	7	15000/-	7500/- 5000/-	3800/- 2500/-	1300/-
//	KING NECKED FARAKEET			10000/-	3000/-	2300/-	1000/-
78	FOUR HORNED ANTELOPE	MAMMA Tetraceros	2	10000/-	5000/-	2500/-	1000/-
70	/CHOWSINGA	quadriucornis		10000/-	3000/-	2300/-	1000/-
79	HIMALAYAN BLACK BEAR	Selenarctos thibetanus	6	20000/-	10000/-	5000/-	1700/-
80	SLOTH BEAR	Melursus ursinus	13	20000/-	10000/-	5000/-	1700/-
81	BLACK BUCK	Antilope cervicapra	85	10000/-	5000/-	2500/-	1000/-
82	JUNGLE CAT	Felis chaus	9	5000/-	2500/-	1500/-	500/
83 84	LEOPARD CAT COMMON PALM CIVET	Prionailurus bengalensis	23	10000/-	2500/-	2500/- 1500/-	1000/-
		Paradoxurus hermaphroditus				1	
85 86	SMALL INDIAN CIVET BROW ANTLERED DEER / SANGAI	Vivericulla indica Cervus eldi	17	10000/-	10000/-	2500/- 5000/-	1000/-
	MOUSE DEER		31	20000/-	10000/-	5000/-	1700/-
87 88	MOUSE DEER SWAMP DEER/	Tragulus memmina Cervus duvauceli	14	20000/-	10000/-	5000/-	1700/-
00	BARASINGHA	Cervus auvauceli	14	20000/-	10000/-	3000/-	1/00/-
89	INDIAN ELEPHANT	Elephas maximus	2	250000/-	125000/-	63000/-	21000/-
90	GAUR	Bos gaurus	6	50000/-	25000/-	12500/-	4200/-
91	LEOPARD/PANTHER	Panthera pardus	4	50000/-	25000/-	12500/-	4200/-
92	ASIATIC LION	Panthera leo persica	14	100000/-	50000/-	25000/-	8500/-
93 94	BONNET MACAQUE	Macaca radiata	7	10000/-	5000/-	2500/-	1000/-
95	RHESUS MACAQUE INDIAN PANGOLIN	Macaca mulatta Manis crassicaudata	8 9	10000/-	25000/-	2500/- 12500/-	1000/-
96	RATEL	Mellivora capensis	4	50000/-	25000/-	12500/-	4200/-
97	GIANT SQUIRREL	Ratufa indica	1	10000/-	5000/-	2500/-	1000/-
98	COMMON MANGOOSE	Herpestes edwardsi	8	5000/-	2500/-	1500/-	500/-
99	BENGAL TIGER (NCT)	Panthera tigris tigris	18	100000/-	50000/-	25000/-	8500/-
100	BENGAL TIGER (WHITE)	Panthera tigris tigris	6	100000/-	50000/-	25000/-	8500/-
101	BENGAL TIGER (MELANISTIC)	Panthera tigris tigris	3	150000/-	75000/-	37500/-	12500/-
102	ASIATIC WILD DOG	Cuon alpinus	2	20000/-	10000/-	5000/-	1700/-
103	ASSAMESE MACAQUE	Macaca assamensis	11	10000/-	5000/-	2500/-	1000/-
104	BLACK BUCK	Antilope cervicapra	85	20000/-	10000/-	5000/-	1700/-
105	BARKING DEER	Muntiacus muntjak	71	10000/-	5000/-	2500/-	1000/-
106 107	HOG DEER SAMBAR DEER	Axis porcinus Cervus unicolor	65 15	10000/-	5000/-	2500/-	1000/-
108	SPOTTED DEER	Axis axis	802	5000/-	2500/-	1500/-	500/-
109	INDIAN HARE	Lepus nigricollis	5	10000/-	5000/-	2500/-	1000/-
110	STRIPED HYAENA	Hyaena hyaena	5	10000/-	5000/-	2500/-	1000/-
111	GIANT FRUIT BAT	Pteropus giganteus	11	5000/-	2500/-	1500/-	500/
112	JACKAL NIII CALIFORNIA	Canis aureus	28	5000/-	2500/-	1500/-	500/
113	NILGAI/BLUE BULL WILD PIG/ WILD BOAR	Boselaphus tragocamelus Sus scrofa	11	5000/-	2500/-	1500/-	500/
115	INDIAN PORCUPINE	Hystrix indica	2	10000/-	5000/-	2500/-	1000/-
116	HAMADRYAS BABOON	Papio hamadryas	2	10000/-	5000/-	2500/-	1000/-
117	CHIMPANZEE	Pan troglodytes	7	50000/-	25000/-	12500/-	4200/-
118	GIRAFFE	Giraffa Camelopardalis	1	100000/-	50000/-	25000/-	8500/-
119	HIPPOPOTAMUS	Hippopotamus amphibious	11	20000/-	10000/-	5000/-	1700/-
120	HYBRID LION	Panthera leo	7	50000/-	25000/-	12500/-	4200/-
121	AFRICAN LION	Panthera leo	1	100000/-	50000/-	25000/-	8500/-
122	BLACK TUFTED MARMOSET	Calhithrix penicillata	7	15000/-	7500/-	3800/-	1300/-
123	CHINKARA	Gazella bennetti	10	20000/-	10000/-	5000/-	1700/-
124 125	INDIAN FOX HOOLOCK GIBBON	Vulpes bengalensis Hoolock hoolock	10	50000/-	10000/- 25000/-	5000/- 12500/-	1700/- 4200/-
126	STUMP TAILED MACAQUE	Macaca arctoides	8	10000/-	5000/-	2500/-	1000/-
127	PIG TAILED MACAQUE	Macaca nemestrina	2	10000/-	5000/-	2500/-	1000/-
128	INDIAN GREY WOLF	Canis lupus	8	20000/-	10000/-	5000/-	1700/-
129	TUFTED CAPUCHIN	Sapajus apella	1	15000/-	7500/-	3800/-	1300/-
130	COMMON SQUIRREL MONKEY	Saimiri sciureus	4	15000/-	7500/-	3800/-	1300/-
131	SLENDER TAILED MEERKAT	Suricata suricatta	3	5000/-	2500/-	1500/-	500/-
132	RED HANDED TAMARIN	Saguinus midas		15000/-	7500/-	3800/-	1300/-
		REPTILE	S	•		•	•
133	KING COBRA	Ophiophagus hannah	1	30000/-	15000/-	7500/-	2500/-
134	MONOCELLATE CORRA	Naja naja kouthia	12	5000/-	2500/-	1500/-	500/
135	BINOCELLATE COBRA LONG SNOUTED	Naja naja Gavialis gangeticus	105	20000/-	2500/-	1500/-	1700/-
124		Gavialis gangeticus	105	20000/-	10000/-	3000/-	1700/-
136							
136	CROCODILE / GHARIAL	Crocodylus palustris	52	20000/-	10000/-	5000/-	1700/-
137	CROCODILE / GHARIAL MUGGER CROCODILE	, ,					
137	CROCODILE / GHARIAL MUGGER CROCODILE SALT WATER CROCODILE	Crocodylus porosus	1	20000/-	10000/-	5000/-	1700/-
137	CROCODILE / GHARIAL MUGGER CROCODILE	, ,					
137	CROCODILE / GHARIAL MUGGER CROCODILE SALT WATER CROCODILE	Crocodylus porosus	1	20000/-	10000/-	5000/-	1700/-

141	BURMESE PYTHON	Python molurus bivistatus	2	10000/-	5000/-	2500/-	1000/-
142	INDIAN ROCK PYTHON	Python molurus molurus	5	10000/-	5000/-	2500/-	1000/-
143	RETICULATED PYTHON	Python reticulatus	2	20000/-	10000/-	5000/-	1700/-
144	COMMON RAT SNAKE	Ptyas mucosus	12	5000/-	2500/-	1500/-	500/
145	FRESH WATER TURTLE /	Lissemys punctata punctata	64	5000/-	2500/-	1500/-	500/
	FLAP SHELL TURTLE						
146	GANGES SOFT SHELL	Trionyx gangeticus	1	5000/-	2500/-	1500/-	500/
	TURTLE	, , ,					
147	RUSSEL'S VIPER	Vipera ruselli	1	5000/-	2500/-	1500/-	500/
148	INDIAN CHAMELEON	Chameleon zeylanicus	2	5000/-	2500/-	1500/-	500/
149	COMMON SAND BOA	Eryx johnii	3	5000/-	2500/-	1500/-	500/
150	RED SAND BOA	Eryx conicus	2	5000/-	2500/-	1500/-	500/
151	CHITRA TURTLE	Chitra indica	3	10000/-	5000/-	2500/-	1000/-
152	BANDED KRAIT	Bungarus fasciatus	4	5000/-	2500/-	1500/-	500/
153	COMMON INDIAN KRAIT	Bungarus caeruleus	2	5000/-	2500/-	1500/-	500/
154	STAR INDIAN TORTOISE	Geochelone elegans	14	5000/-	2500/-	1500/-	500/
155	ASIAN BROWN TORTOISE	Manouria emys	6	10000/-	5000/-	2500/-	1000/-
156	INDIAN TENT TURTLE	Pangshura tentoria	3	5000/-	2500/-	1500/-	500/
157	MORELET'S CROCODILE	Crocodylus Moreletii	2	15000/-	7500/-	3800/-	1300/-
158	SIAMESE CROCODILE	Crocodylus siamensis	18	15000/-	7500/-	3800/-	1300/-
159	DWARF CUVIER'S CAIMAN	Paleopuchus palpebrosua	5	15000/-	7500/-	3800/-	1300/-
160	NILE CROCODILE	Crocodylus niloticus	3	15000/-	7500/-	3800/-	1300/-
161	YELLOW ANACONDA	Eunectes notaeus	11	15000/-	7500/-	3800/-	1300/-
162	GREEN IGUANA	Iguana iguana	2	10000/-	5000/-	2500/-	1000/-
163	RED IGUANA	Iguana iguana	1	10000/-	5000/-	2500/-	1000/-

Privileges proposed for the patron who will adopt the animals in Nandankanan Biological Park, Bhubaneswar.

- A. Level-I (Rs. 500/- to Rs. 10000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart.
- Two free zoo entry ticket.
- A plague at the animal's enclosure.
- B. Level-II (Rs. 10001/- to Rs. 25000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart.
- Four free zoo entry ticket
- A plaque at the animal's enclosure.
- C. Level-III (Rs. 25001/- to Rs. 50000/-
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's

- chart.
- Six free zoo entry ticket
- A plaque at the animal's enclosure.
- D. Level-IV (Rs. 50001/- to Rs. 75000/-)All donations and adoption
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart
- Eight free zoo entry ticket
- A plaque at the animal's enclosure.
- E. Level-V (Rs. 75001/- to Rs. 100000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart.
- Ten free zoo entry ticket
- A plaque at the animal's enclosure.
- F. Level-VI (Rs. 100001/- to Rs. 150000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted
  animal
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.

- Mention on Annual Report Donor's chart.
- Ten free zoo entry ticket
- Five free Battery Vehicles ticket.
- A plaque at the animal's enclosure.
- G. Level-VII (Rs. 150001/- to Rs. 200000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- · Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart.
- Ten free zoo entry ticket
- Five free Battery Vehicles ticket
- Five free Safari entry ticket
- A plaque at the animal's enclosure.
- H. Level-VIII (Rs. 200001/- to Rs. 250000/-)
- All donations and adoption contribution are exempted U/S 80G Income Tax Act 1961.
- Official certificate of adoption.
- Information Sheet about Adopted animal.
- Adoption folder with pen
- Mention on Adopter's chart on web wall of Nandankanan website.
- Mention on Annual Report Donor's chart.
- Ten free zoo entry ticket
- Ten free Battery Vehicles ticket
- Ten free Safari entry ticket
- A plaque at the animal's enclosure.