



BENGALURU BANNERGHATTA BIOLOGICAL PARK



ANNUAL REPORT 2018-19



Central Zoo Authority



World Association of
Zoos and Aquariums
WAZA | United for
Conservation

**It is much is easier to show compassion to animals.
They are never wicked.
- Haile Selassie**



Sl. No	Section	Page No.
1.	Report of the Officer-in-charge.....	2
2.	History of the Zoo.....	3
3.	Vision.....	4
4.	Mission.....	4
5.	Objective.....	4
6.	About us.....	5
7.	Organizational Chart.....	6
8.	Human Resources.....	6
9.	Capacity Building of the Zoo Personnel.....	7
10.	Zoo Advisory Committee.....	8
11.	Health Advisory Committee.....	9
12.	Statement of Income and Expenditure of the Zoo.....	10
13.	Daily Feed Schedule of animals.....	11
14.	Vaccination Schedule of animals.....	12
15.	De-worming Schedule of animals.....	13
16.	Disinfection Schedule.....	14
17.	Health Check-up of employees for zoonotic diseases	14
18.	Development Works carried out in the Zoo during the year.....	15
19.	Education and Awareness programmes during the year.....	17
20.	Important Events and happenings in the zoo.....	22
21.	Seasonal special arrangements for upkeep of animals.....	24
22.	Research Work carried out and publications.....	24
23.	Conservation Breeding Programme of the Zoo.....	24
24.	Animal acquisition / transfer / exchange during the year.....	25
25.	Rescue and Rehabilitation of the wild animals carried out by the zoo.....	27
26.	Annual Inventory of animals	29
27.	Mortality of animals.....	32
28.	Status of the Compliance with conditions stipulated by the Central Zoo Authority.....	36
29.	List of free living wild animals within the zoo premises	37
30.	Safari.....	38
31.	Elephant Care Centre.....	40
32.	Rescue Centre.....	41
33.	Butterfly Park.....	42
34.	Animal Health Care.....	44
35.	Animal Adoption.....	47

1 Report of the Officer-in-charge



I have had immense pleasure in working as the Executive Director of Bengaluru Bannerghatta Biological Park from September 2018 till date. My goal was to provide high standards of welfare for the three main stakeholders of a Zoo- Animals, Staff & Visitors.

With over 2000 animal residents in BBBP, during the year, new naturalistic, immersive enclosures as per the approved Master plan by CZA are being constructed for jackal, hyena, wolf, wild dog and deer species. The work of establishing leopard safari was commenced and is in progress. Latest addition to our animal section includes Gowri, a giraffe from Sri Chamarajendra Zoological Garden, Mysore along with pairs for some of our single birds including Amazon Grey Parrot, Painted Stork and Sun Conures.

With a working strength of over 300 employees, as part of staff welfare, all the employees were immunized with anti-rabies vaccination. Zoo day was celebrated involving all the staff providing them an opportunity to express their sports and other talents. Recent employment includes lady drivers for our battery-operated vehicles, most of whom are family of mahouts and our staff.

We welcome 16 lakhs plus visitors annually. Towards visitor welfare, visitor facilities have been improved such as physically challenged friendly pathways in the snake park, cloak room facility, sitting benches, R O drinking water unit, battery operated vehicles, dedicated visitor pathway to butterfly park and improvised entry area to the butterfly park. For the easy commutation of visitors inside the zoo especially for aged and physically challenged visitors, ten battery operated vehicles were introduced. The significant initiative coupled with this initiative was engaging of women drivers for plying these vehicles.

Since Conservation Education is one of the main objectives of the zoo, various educational activities were conducted during the year. As a way to create awareness amongst students from Human- Conflict prone areas, 1910 students and 188 staff from government schools have benefitted by visiting the park free of cost for a day long guided tour of the zoo, safari and butterfly park as well as lunch as part of our Chinnara Mrugalaya Darshana programme. In addition to Zoo Club, regular awareness programmes which aim at inspiring young minds to conserve nature and wildlife consecutive were conducted throughout the year. New animal information boards have been designed and installed as well as pathways have been improved and regularized to enable free flow of visitors.

As an initiative to provide guided tour of the park by a naturalist for school children, ZEEPS (Zoo Educational Excursion Programme for Schools) was launched by Hon'ble Forest Minister Sri Sathish Jarakiholi on 16-01-2019 along with Laying of Foundation stone for construction of Hyena, Wild dog, Jackal enclosures. Other visitors' facilities dedicated to public include Battery operated vehicles, AC bus, visitor pathway to butterfly park and improvised entry area to the butterfly park.

Green initiatives in the zoo include regular plastic clean up along with installation of a Bottle Crushing Unit to recycle plastic. For other waste disposed in the zoo by visitors, separate wet and dry dustbins are provided for waste segregation.

I extend my heartfelt thanks to Member Secretary, Zoo Authority of Karnataka and Governing Council members of Zoo Authority of Karnataka for extending their cooperation and support for the smooth functioning of the park.

Dr. Sanjay S Bijjur, IFS
Chief Conservator of Forests
Bannerghatta Biological Park

2 History of the Zoo

Bannerghatta Biological Park (BBP) is located about 22 km from Bengaluru city. It is one among the few places in the world where wilderness is preserved so close to a big city. BBP has its own unique mission and visions for ex situ conservation of wildlife for the present and future generations. The park offers an excellent opportunity to inspire citizens and create awareness about the need of conservation of natural resources for maintaining ecological balance.

BBP was started as a small zoo (picnic corner) in 1974 within Bannerghatta National Park (BNP) mainly for recreation purposes, with changing times the priority has shifted to the welfare of wild animals. Whilst panning the pages of history, one comes across the contributions of Sri Y.M.L Sharma, IFS, the then Chief Conservator of Forests and Head of the Forest Department, who was responsible for identifying the need for a place where Bangaloreans can enjoy the solitude of wilderness. He was instrumental in visualizing and creating the Bannerghatta National Park. It was his conviction that ensured the notification of land and the creation of a National Park in 1974.

In 2002, Bannerghatta Biological Park, emerged out as an independent establishment from BNP and was brought under the administrative control of the Zoo Authority of Karnataka (ZAK). The Bannerghatta zoo, various safari units, butterfly park and rescue centre was created within the area of Bannerghatta Biological Park which measures around 731.88 Ha. The management jurisdictions of Bannerghatta Biological Park was brought under ZAK with effect from 01.04.2002.

For the convenience of the general public, the Governing Council of Zoo Authority of Karnataka has decided to rename Bannerghatta Biological Park as "Bengaluru Bannerghatta Biological Park (BBBP)".

List of officers headed Bengaluru Bannerghatta Biological Park after of bifurcation of Bannerghatta National Park and Bannerghatta Biological Park

- Sri. B.M.T. Rajeev, IFS (In-charge) : 01/04/2002 to 27/06/2003
- Sri N.L. Raghava : 27/06/2003 to 01/07/2003
- Sri. K.B.Markandaiah, IFS : 01/07/2003 to 25/06/2006
- Smt. Geethanjali, IFS : 25/06/2006 to 08/03/2007
- Sri. K.B. Markandaiah, IFS : 08/03/2007 to 05/05/2008
- Sri. Millo Tago, IFS : 05/05/2008 to 09/03/2011
- Sri Chandrashekar (In-charge) : 09/03/2011 to 29/04/2011
- Dr. R Raju, IFS : 29/04/2011 to 06/03/2013
- Sri N Devaraju, IFS : 06/03/2013 to 16/09/2013
- Sri Range Gowda IFS : 16/09/2013 to 14/09/2015
- Sri Santosh Kumar, IFS : 14/09/2015 to 01/11/2017
- Sri R Gokul, IFS : 01/11/2017 to 05/09/2018
- Dr. Sanjay S Bijjur, IFS : 05/09/2018 till date



3 Vision

The vision of BBBP is to create an opportunity to the citizens - especially to children in and around Bengaluru to have a Biological Educative and Informative Centre very close to the city in the midst of forests.

4 Mission

To achieve the distinction of a natural eco zoo through world class conservation, education, research and visitor experience by connecting all creatures of GOD - People, Wildlife and Trees.

5 Objectives

- To compliment and strengthen the national efforts in **ex-situ Conservation** and strength the Conservation of the rich Bio- Diversity of the country, particularly the fauna.
- Supporting the conservation of endangered species by giving species, which have no chance of survival in the wild, a last chance of survival through **coordinated breeding under ex- situ condition** and raise stocks for rehabilitating them in wild as and when it is appropriate and desirable.
- To inspire amongst zoo visitors empathy for wild animals, an understanding and **awareness** about the need for conservation of natural resources and for maintaining the ecological balance.
- Providing opportunities for **scientific studies, research and documentation on conservation and creation of database** for sharing between authorities involved in In-Situ and Ex-Situ conservation.
- Providing **dedicated facilities for the rescued and orphaned wild animals** by providing appropriate housing, clinical and management facilities in off- the display area.
- To serve as **gene pool and germplasm reserve for future biological research on wild animals** and to extend facilities for studies on behavior and breeding of different animals.
- To sustain the founder population and also to augment the Depleting populations of Endangered species in the wild.



6 About Us

Basic Information about the Zoo

1. Name of the Zoo : Bengaluru Bannerghatta Biological Park
2. Year of Establishment : 1974
Initially, it was started as a small zoo (picnic corner) in 1974 within Bannerghatta National Park (BNP) mainly for recreation purposes, with changing times the priority has shifted to the welfare of wild animals.

In 2002, Bannerghatta Biological Park (BBP), emerged out as an independent establishment from BNP and was brought under the administrative control of the Zoo Authority of Karnataka (ZAK). The Bannerghatta zoo, various safari units and rescue centre was created within the area of Bannerghatta Biological Park which measures around 731.88 Ha. The management jurisdictions of Bannerghatta Biological Park was brought under ZAK with effect from 01.04.2002.
3. Address of the Zoo : Bengaluru Bannerghatta Biological Park, Bannerghatta, Bengaluru 560083
4. State : Karnataka
5. Telephone Number : 080-29776466, 29776467
E-mail address : bannerghattazoo@gmail.com
Website : www.bannerghattabiologicalpark.org
6. Recognition Valid Upto : 05.05.2019
7. Category of zoo : Large
8. Area(in hectares) : 731.88 hectares
9. Number of visitors for the year 2018-19 : 1661974
10. Visitor's facilities available in Zoo : R O Drinking water, Toll free washrooms, Cloak room, Shelters, Electric Vehicle Service, wheelchair, Baby Care Unit, children's play area in butterfly park
11. Weekly Closure Day : Tuesday

Distance from nearest Airport: 59 km from Kempegowda International Airport
Railway Station: 24 km from Majestic Railway Station
Bus Stand: 24 km from Majestic bus station

Management Personnel of the zoo

Name with designation of the Officer in-charge : Dr. Sanjay Bijjur, IFS (Executive Director)
Name of Deputy Director : Sri H.T. Kushalappa
Name of Assistant Director (Veterinary Service) : Dr. Umashankar K.S
Assistant Executive Engineer : Sri H L Nagendra
Range Forest Officers : Smt. M C Bhagyalakshmi,
Sri Bheemaraya
Sri Chandregowda
Name of the Pathologist : Dr. Manjunath V (WADDL, Supported by IAH&VB)
Name of the Biologist : Kum. Aishwarya Sridhar
Name of Education Officer : Kum. Amala M Anil
Public Relation Officer : Sri Srinivas S
Name of the Lab Technician : Smt. Madhuri (WADDL, Supported by IAH&VB)

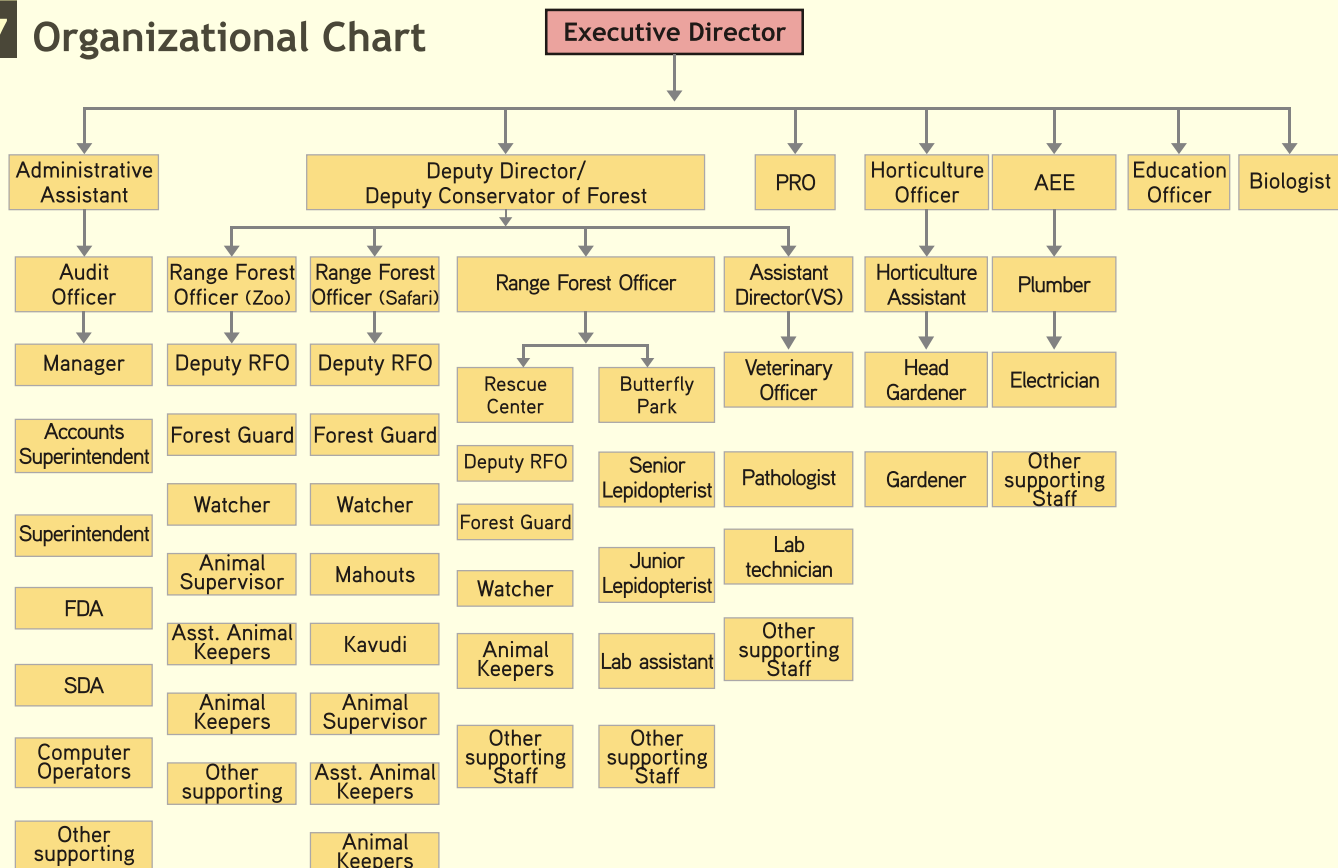
Owner/Operator of the zoo

Sri B.P Ravi, IFS

(Additional Principle Chief Conservator of Forests & Member Secretary)
Zoo Authority of Karnataka, Mysuru - 10

Contact details/Phone number of Operator : 0821-2432881, e-mail : ccfmszak@gmail.com

7 Organizational Chart



8 Human Resource

Manpower of the Zoo

Sl. No.	Designation	Number of Sanctioned Posts	Working Strength	Vacancy	Names of the incumbent
1	Executive Director and Chief Conservator of Forests	1	1	0	Dr. Sanjay Bijjur, IFS (Executive Director)
2	Deputy Director and Deputy Conservator Of Forests	1	1	0	Sri. H.T.Kushalappa
3	Gazetted Manager	1	1	0	Smt. M C Hemananda
4	Assistant Director(VS)	1	1	0	Dr.Umashankar K S
5	Veterinary Officer (VO)	1	1	0	Dr. Ramesh
6	Assistant Executive Engineer	1			Sri. H L Nagendrappa
7	Assistant Engineer(PWD)	1			
8	Range Forest Officer (RFO)	3	3	0	Smt. M C Bhagyalakshmi Sri. Bheemaraya Sri. Chandre gowda
9	First Division Assistant	1	1	0	Sri. B V Indresh Kumar
10	Deputy Range Forest Officer (DRFO)	4	2	2	Sri Narsimurthy Sri Hemanth
11	Forest Guard	3	0	3	
12	Forest Watcher	3	1	2	Sri. T Ramaiah
13	Mahouts	2	1	1	Sri Motanna
14	Kavadi	4	0	0	
15	Other sanctioned posts				

Sl No.	Staff	Nos.
1	Permanent Staff	13
2	Kshemanidhi Employees	40

Direct Contract

3	Category staff	181
4	Veterinary Officers	02
5	Office staff	06
6	Public Relation Officer	01
7	Entomologist	01
8	Biologist	01
9	Junior Engineer	01
10	Education Officer	01
11	Ex Army (Security Person)	30

Outsource staff

12	Outsourced staff from agency	46
13	Security staff from agency	25

9 Capacity Building of zoo personnel

The zoo personnel have been trained to ensure success within the Zoo whilst dealing with animals and the visitors. Some of the employees have attended various programmes outside the ambit of the zoo which is ensuring further success to the zoo and its functioning.

Sl. No.	Name and designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1	Sri Ramaiah, Animal Keeper	'Specialized Theme Based Training Programme' for zoo keepers	18.3.2019 to 22.3.2019	Nehru Zoological Gardens, Hyderabad
2	Sri. Motanna, Mahout Sri. Vinodha, Sri. Kalappa Sri. Naveen, Sri. Krishnakumar Sri. Surya	'Training Programme for Captive Building' of mahouts	04.02.2019 to 08.02.2019	Sri Chamarajendra Zoological Gardens, Mysuru
3	Dr. Umashankar (Assistant Director of Veterinary Services) & Dr. Manjunath (Pathologist)	Recent trends in Captive Wild Animals Management	07.01.2019 to 09.01.2019	Sri Chamarajendra Zoological Gardens, Mysuru
4	Dr. Sanjay S Bijjur , Executive Director	Competency Assessment Profiling and Development of Forestry Personnel for Excellence	19.11.2018 to 23.11.2018	Jaipur
5	Dr. Sanjay S Bijjur , Executive Director	Annual Conference of Indian Zoos	12. 11.2018 to 15 . 11.2018	Nawab Wazid Ali Shah Zoological Graden, Lucknow
6	Dr. Ramesh, Veterinary Officer	Training in Wildlife Forensics	29.10.18 to 06.11.18	CCMB, Hyderabad
7	Dr. Sanjay S Bijjur, Executive Director	'Role of Forestry in Sustainable Development of People'	17.07.2018 to 18.07. 2018	State Forest Research & Training Institute



10 Zoo Advisory Committee

- List of the Members of Governing Council of Zoo Authority of Karnataka, Mysuru

- BBP Zoo Advisory Committee

a) Date of constitution : 23rd March 2012

b) Members :

	Names and Designation	Designation
1	Smt. Mallige Veeresh Zoo Authority of Karnataka, Mysuru.	Chairperson
2	Sri C. Jayaram, IFS. Principal Chief Conservator of Forests (Wildlife), and Chief Wildlife Warden, Bengaluru.	Vice—Chairman
3	Sri B.P. Ravi, IFS. Addl. Principal Chief Conservator of Forests, Zoo Authority of Karnataka, Mysuru.	Member Secretary
4	Sri Vijaya Kumar Gogi , IFS. Secretary to Govt. (Forest), Forests, Environment and Ecology Department, M.S. Building, Bengaluru.	Member
5	Sri M.J Ravikumar, Hon'ble Mayor, Mysore City Corporation, Sayyaji Rao Road, Mysuru.	Member
6	Sri B.J. Hemanna, Special Officer (Banking) / Deputy Secretary, Finance Dept. M.S. Building, Bengaluru	Member
7	Dr. M.P. Manjunath, Director, Dept. of Animal Husbandry and Veterinary Services, Vishveshwaraiah Gopura, Bengaluru	Member
8	Dr. S.M. Bhyregowda, Director, Institute of Animal Health and Veterinary Biologicals, Hebbal, Bengaluru	Member
9	Sri B.N. Karigowda, Gandhinagar, Poonadahalli Post, Haranahalli Hobli, Periyapatna Taluk, Mysuru Dist.	Member
10	Sri S.N. Raju,M Saathanooru, Kasaba Hobli, Mandya Taluk. and Mandya Dist.	Member
11	Smt. Lata Jagadeesh, No.297, Old Taluk Office Road, T. Narsipur Town, T. Narsipur Taluk, Mysuru Dist.	Member
12	Sri Amjad Khan No. 479, Vivekanandanagar, T. Narsipur Taluk, Mysuru Dist.	Member
13	Sri K. Tukaram No. 46, Ashoka Road, Mysuru.-1	Member

c) Dates on which Meetings held during the year

Note: The local officers of BBP are the member invitees

BBP Zoo Advisory Committee

A.Date of constitution – 23rd March 2012

b.Members

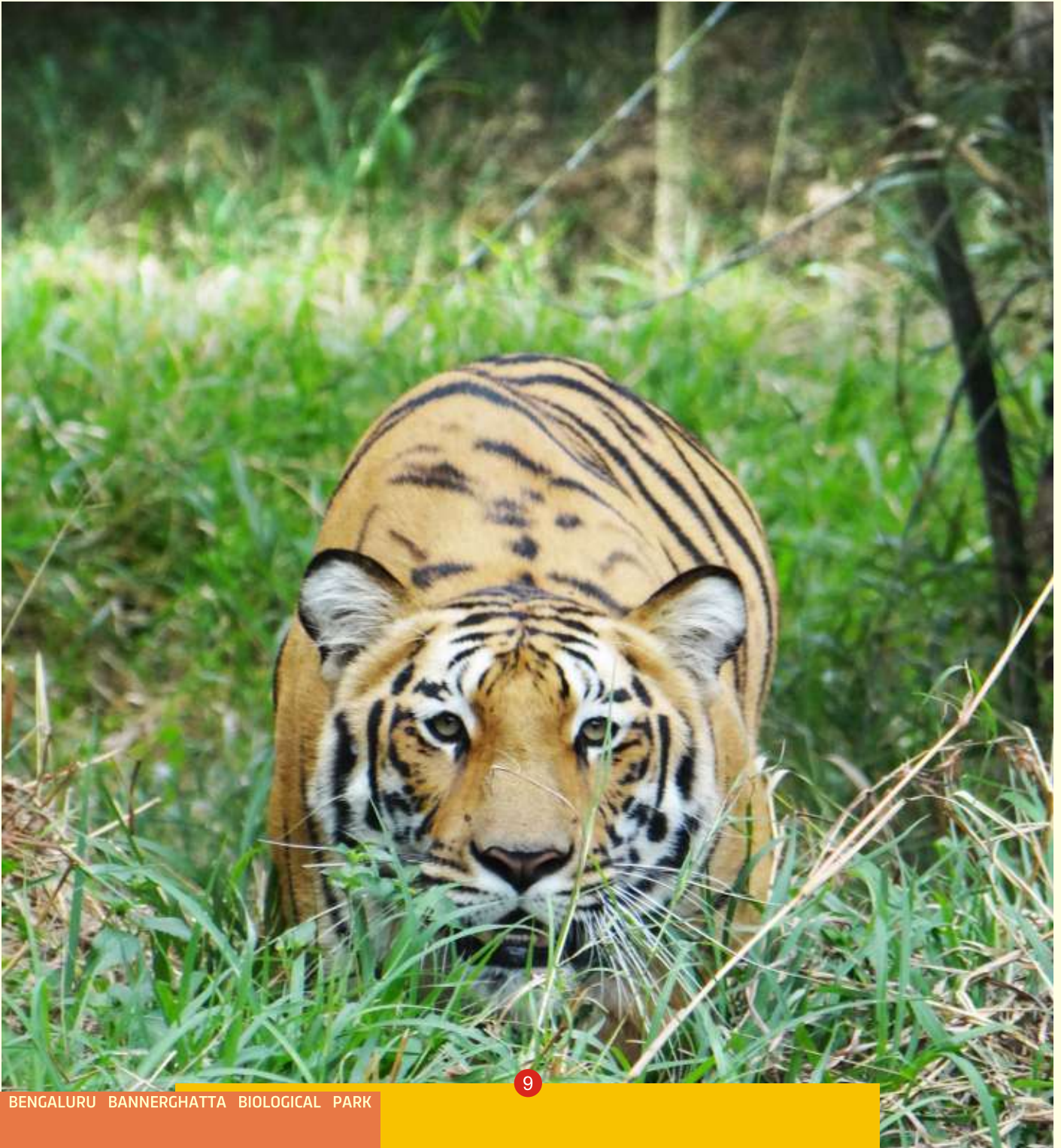
1.	Chief Conservator of Forests, Bangalore Circle, Bangalore	Chairman
2.	Executive Director, BBP, Bangalore Secretary	Member Secretary
3	Deputy Commissioner, Bangalore Urban District	Member
4.	Superintendent of Police, Bangalore Urban District	Member
5	Chief Executive Officer, Zilla Panchayat, Bangalore Urban District	Member
6	Deputy Director and District Officer of the Department of Animal Husbandry and Veterinary Sciences, Bangalore Urban District	Member
7.	Head of the Department, Zoology, Bangalore University	Member
8.	Superintending Engineer, PWD South Circle, Bangalore	Member
9.	Deputy Director, BBP	Member

11 Health Advisory Committee

A.Date of constitution : FEE 2003 FWL 2002, Bangalore dated: 12-03-2004

b.Members

- 1.The Joint Director of Animal, Husbandry and Veterinary Sciences, Bangalore
- 2.Head of Department of Clinical Medicine, Veterinary College, Hebbal, Bangalore or his representative
- 3.A representative from Institute of Animal Health and Veterinary Biological, Bangalore, to be nominated by Director of IAH &VB
- 4.Assistant Director (Veterinary Service), BBP
- 5.Executive Director, BBP - Convener



12 Statement of income and expenditure of the Zoo

Budget and Annual Income and Expenditure for the period 1-4-2018 to 31.03.2019

(Rs. In Lakhs)

	Particulars	Approved anticipated Revenue	Actual income 2018-19 Upto 31.03.2019 in Lakhs
1	Gate Collection	2,290.00	3,023.32
2	License Fees	200.00	186.42
3	Sale Proceeds	1.00	6.46
4	Bank Interest	125.00	230.26
5	Other Receipts	574.00	19.65
6	Zoo Parking Stand	-	-
7	Others	-	-
	Total	3,190.00	3,466.13
	Details of Budget Head	Total Budget & APO approved 2018-19	Actual Expenditure from 01-04-2018 - 31.03.2019 In Lakhs
1	Establishment Charges	703.00	888.59
2	Office Expenses	20.00	20.60
3	Advertisement and Publicity	18.00	16.11
4	Stores, Tools and Plants	2.00	0.00
5	General Charges	25.00	27.42
6	Zoo Education	15.00	1.25
7	Staff Welfare	40.00	38.04
8	Others (If any)	2.00	0.61
	Total	825.00	992.64
9	Feed Fodder	850.00	904.24
10	Hospitality/Animal Treatment charges	50.00	32.28
11	Animal Collection - Handling and transportation charges	200.00	12.87
	Total	250.00	45.25
12	Fixed Assets	70.00	124.12
13	Garden Development	25.00	
14	Civil Work Development(Zoo, Safari and Butterly Park)	1,200.00	206.03
	Total	1,295.00	330.15
15	Maintenance Charges	95.00	127.56
16	Garden Maintenance	5.00	
17	Research and Documentation	5.00	
18	Enrichment of Captive Habitat	10.00	4.82
19	Civil Work Maintenance(Zoo, Safari and Butterly Park)	485.00	378.57
20	Payment to KSTDC (50% of Safari Entry)	600.00	692.49
	Total	1,200.00	1,203.44
	Sub Total	4,420.00	3,475.72
	Spillover Works	1,200.00	159.47
	Grand Total	5,620.00	3,635.19

13 Daily feed Schedule of animals

The Animal Health Monitoring committee regulates the food requirement of the animals, whenever required. The food requirement varies from animal to animal and quantity also varies between age groups and sex. Herbivores are fed twice a day whereas omnivores are fed in the morning hours according to their feed requirements. Carnivores are fed in the evening time, except on Tuesdays, which is a starve day to mimic natural feeding behavior. Quality and Quantity are monitored by the Assistant Director of Veterinary Services and Range forest Officer respectively.

The daily food supplied by the contractor is first weighed in the weigh bridge in the presence of ADVS / RFO / security officer or their representatives inside the zoo, where CCTV is installed for monitoring the same. Then it is deposited in the store room where it is distributed to all the animals and birds as per the feeding schedule. The same is also monitored through CCTV which is installed in the kitchen room.

Species		Feed item	Frequency
1	Mammals	Herbivores	Vegetables, concentrates, grains, grass
		Carnivores	Beef and chicken
		Omnivores (macaques, toddy cat and bears)	Fruits, vegetables, grains, chicken and fish
2	Birds	Seasonal fruits, vegetables, grains, concentrates and fish.	Daily
3	Reptiles	Crocodiles	Fish
		Snakes	Live feed (Mice, rat snake and rabbit)
		Turtle	Fish
		Tortoise & iguana	Fruits, green leaves and vegetables.



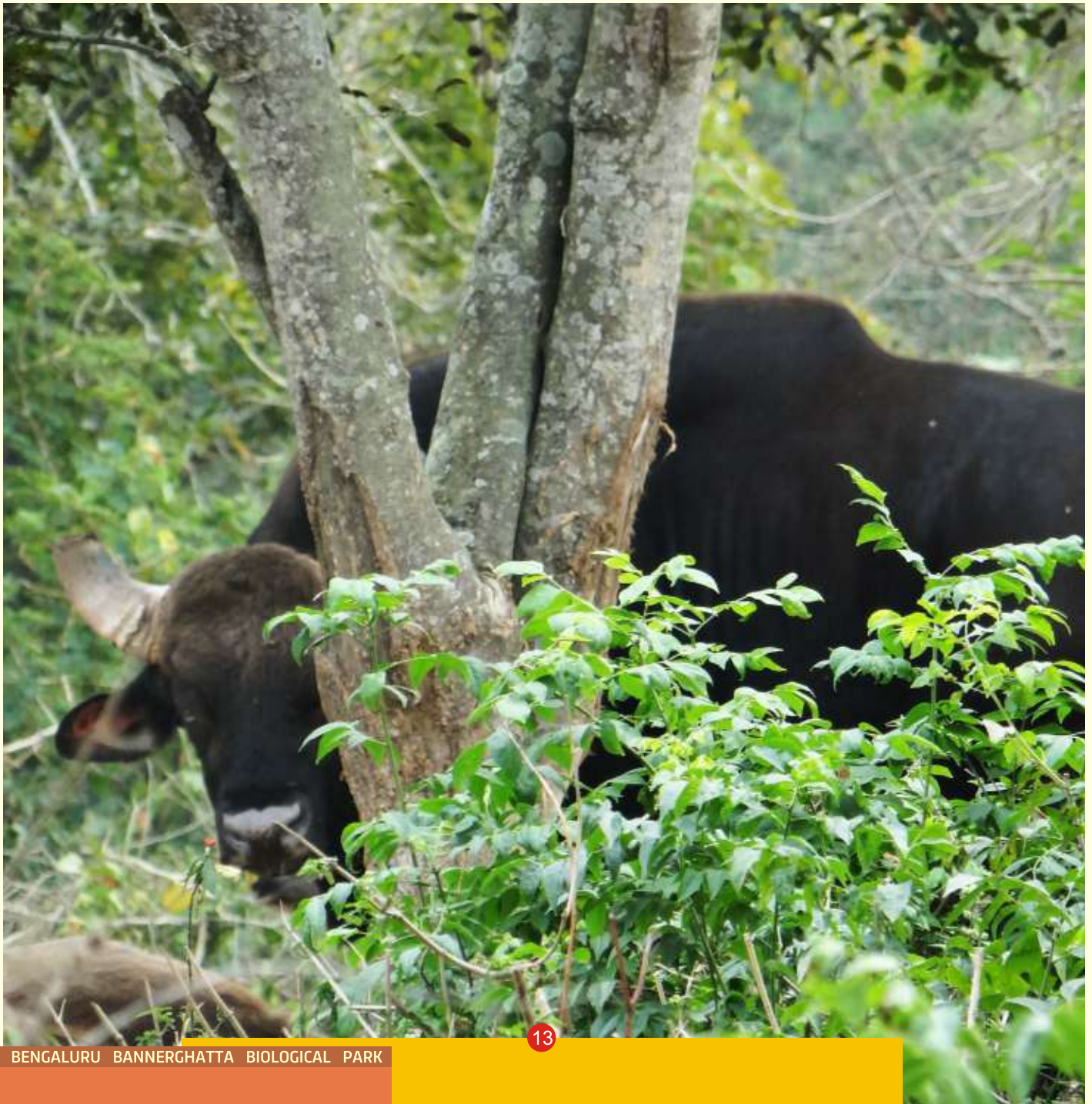
14 Vaccination Schedule of animals

Sl. no.	Species	Disease vaccinated for	Periodicity
1.	Tiger, Lion, Leopard, Jungle cat	Feline pan leukopenia, feline calci virus, feline infectious rhinotrachieitis	Annual
2.	Tiger, lion, leopard, jungle cat, wolf, dhole, jackal, hyena, Himalayan Black Bear	Rabies	Annual
3.	Wolf, Dhole, Jackal, Hyena, Himalayan Black Bear	Canine parvo virus, canine distemper, ICH, Canine Parainfluenza, Leptospirosis	Annual
4.	Deer and antelopes, Elephant, Giraffe, Gaur	Foot and mouth disease; Haemorrhagic septicaemia	Once in six months
5.	Tiger, Lion, Leopard	Trypanosomiasis	Once in three months



15 De-worming Schedule of animals

Sl.No.	Species	Drug used	Month
1	All Animals	Oxyclozanide	May
2	All Animals	Albendazole	August
3	All Animals	Fenbendazole	November
4	All Animals	Closantel	February



16 Disinfection Schedule

Sl. No.	Species	Type of enclosure	Disinfectant used and method	Frequency of disinfection
1	All Animals	All holding house, passages	Kohrsalin Th Mopping	Daily
2	All Animals	All holding house, passages	Biokleen Mopping	Daily
3	All Animals	All holding house, passages, visitor entrance	Potassium permanganate foot dip	Daily
4	All Animals	All holding house, passages, exhibit areas	Viracid spray and foot dip	Once a week as prophylactic method.

17 Health Check-up of employees for zoonotic diseases

All employees are vaccinated :

1. Anti-rabies



Development works and facilities created for the public during the year

1. Construction of underpass inside white tiger safari
2. Foolproof Double Entry Gate System at safari gates
3. Construction of Hyena enclosure
4. Construction of Leopard Safari animal holding house
5. Stone benches for visitors
6. Animal Information Boards
7. Ticketing System (Slot for safari)
8. Online Ticketing
9. Butterfly Park Entrance & Pathway
10. Battery Vehicle
11. Clock Room
12. Wheel Chair
13. Drinking water RO Unit
14. Bottle crushing unit
15. Rising of walls in RC and around the boundary of BBP to prevent wild elephant entry
16. Installation of Railway barricade to prevent wild elephant entry





19 Education and Awareness programmes during the year

Environmental Education activities are conducted on a regular basis at BBBP to develop empathy on wildlife in the minds of youth and people from all walks of life, who visit the park. Tailor made educational activities and awareness programmes conducted at the park are:

1) Zoo Club :

A unique 16 week experience for 50 students in 6th to 12th grade to get an opportunity to gain insight into the lives of the 2000+ animals which reside in Bannerghatta Zoo. The students get exposed to the management of the park, introduction to animal groups, meeting various specialists in the field as well as a visit to the National Park to get a glimpse of wildlife in its natural habitat and conservation efforts by the Forest Department.

To improve the students observation and communication skills, they were grouped in pairs or groups of 4 to 5 students to conduct animal behavior observations, visitor interaction and education, observation of visitors to understand their needs and reactions to the animals.

Throughout the weeks the students were exposed to different topics related to wildlife and nature conservation to implement a sense of empathy and need to save bio-diversity as a measure to secure their future from the harmful effects of anthropogenic factors affecting standards of living and the inter relatedness between a healthy ecosystem and human life.

1. Introduction session : Launch, wildlife movie and clay session
2. Animal information cards
3. Animal information cards and meet the vets
(duties of a wildlife veterinarian and crocodile handling demo)
4. Visit to the Butterfly park : life cycle, management, conservation
5. Session on mammals : adaptations and animal observations
6. Session on birds : adaptations and animal observations :
Guest speaker (EO, Shimoga Zoo)
7. Visit to Bannerghatta National Park, Nature trail : guided tour
8. Exploring flora of BBP in suvarnamuki garden and poster making
9. Meet the People Relation Officer (PRO) and visitor feedback session
10. Introduction to animal behavior
11. Monkey day : Veterinary Interns, Arnav's introduction and
Guest talk by People for Animal (PFA) Rescue Coordinator
12. Visitor observation session and introduction to enrichment
13. Bird watching and topic allocation for public talk
14. Importance of Education in a Zoo and talk by Zoo Club members
15. Visit to the safari, feeding room and meet the elephant mahout in the zoo
16. Convocation ceremony



2) Chinnara Mrugalaya Darshana: :

Government School Students residing in close proximity to the National Park are sponsored for a guided tour of the Zoo, Safari and Butterfly Park as well as lunch at Hill View Restaurant. This is an opportunity for create awareness among these young minds who are in the midst of human animal conflict prone areas and share their knowledge, that they gained during their visit to BBBP with their local community as a measure to reduce conflict with wildlife and nature..

Total number of schools	31
Total number of students	Boys + girls = 937+973 = 1910
Number of staff	188
Number of buses used for safari	49

Education and Awareness programmes during the year

3) Wildlife Week :

Week long activities from October 1st to 7th were conducted at BBP with the theme of 'Beat Plastic Pollution'. Activities included a pledge to save wildlife by the zoo visitors, Conservation storytelling, Competition for government school children : drawing and essay; Competition for public : essay and drawing, launch of zoo club.



4) Animal Birthday and naming ceremony :

Lion tailed macaque, Renuka's birthday was celebrated on 12th August. Hippopotamus Dashya and Karthik's calf was named Alok by Adoptees.



5) Training :

For Forestry students, DRFO, RFO trainees and I/s officers.



6) Other important days Celebrated :

1) World Earth Day : 22nd April 2018

Talk on Sustainable living :

An educational talk was conducted for the zoo visitors to create awareness on the impacts of plastic pollution and ways to reduce, reuse and recycle household waste to help save the ecosystem from further degradation. Visitors were also encouraged to make bird boxes, feeders and drinkers with plastic and other waste items which could be reused to conserve local bird species.

2) World Crocodile Day : 17th June 2018

To spread the message about the effects of water pollution and illegal wildlife trade for the Critically endangered, endemic Gharial and other crocodilians, an interactive educational talk was conducted for the general public on the occasion of World Crocodile day.

3) World Yoga Day : 21st June 2018

A yoga session for its staff from 7 am to 8 am as part of the 4th World Yoga Day. The event was headed by ex army personnel and security guard at BBP, Mr. Srinivas Kumar and this was an initiative to promote the theme "Yoga for peace" and the benefits from this Indian origin – age old practice. The event was followed by breakfast and refreshments.



4) World Environment Day 2018

As part of World Environment Day 2018 celebrations, BBP has collaborated with Toyota, Tata Consultancy Services (TCS) and the security team of BBP to create awareness on the theme of "Beat plastic pollution".

TCS event was conducted on June 24th with approximately 400 members participating in a Swachh Barath Abhyan initiative to litter pick from Bannerghatta Circle to the park. Additionally, a flash mob performed near the zoo ticket counter to spread the message of effects of plastic pollution to the general public. A wildlife photography exhibition was conducted near the museum and TCS fine arts team has adopted the Baby Care Unit to paint it.

Toyota event on July 1st consisted of a short skit on effects of plastic pollution by a theatre group namely "Tent cinema" for the general public and BBP staff. Educational activity of placard display around the zoo, ostrich adoption and nest box placement was done. A monkey dustbin has been gifted to BBP by the team and organic fertilizer has been distributed to neem and other plants which were planted by Toyota last year, on the same occasion.



5) World Tiger's Day 2018

Tiger day celebrations in collaborations with St. Miras high school, BNP and Arocha India. Activities included a talk on tiger conservation by experts in the field, awareness creation by students for the public, a touch table for the zoo visitors and facts displayed near the enclosure.



6) 10th August :World Lion Day :

Awareness creation and crafts in collaboration with School of India



7) World Monkey Day, 16th December :

BBBP hosted a day of interactive learning for the zoo visitors and zoo club members as part of monkey day celebrations. This included a talk on the different monkey species housed in the zoo and their management by BBP staff as well as introduction to why monkey day is celebrated by Zoo Club member Arnay. Hisitha Jagadish from People for Animals , an NGO which rescues urban wildlife in distress shared with the public why this conflict occurs between monkeys and humans in cities and how to prevent conflict, mainly by not encouraging feeding of wild animals



8) 3rd March : world Wildlife Day : Life under water :

Part of world wildlife day celebrations, various awareness posters were displayed in the zoo about the impact of plastic use and ways to conserve the ecosystem. An interactive session on threat to wildlife and pledge to save wildlife and nature was conducted for the public in partnership with 40 Rotaract club volunteers and students from RV Institute of management. This was followed by a discussion session with the volunteers on ways to mitigate forest fire and plastic pollution as well as awareness movies were played in the auditorium.



20 Important Events and happenings

Zoo Day :

Zoo day was celebrated involving all the staff providing them an opportunity to express their sports and other talents.



Inauguration function :

Honorable Forest Minister Sri. Satish S Jarikholi presided over the Inauguration function which was held at Bengaluru Bannerghatta Biological Park on 16th January 2019. As an initiative to improve facilities for visitors and animals, new facilities were inaugurated including battery vehicles, new AC Safari Bus and pathway to the butterfly park as well as a butterfly model.

As per the approved CZA guidelines, new naturalistic immersive enclosures for jackal was inaugurated. Foundation stone was laid for new Hyena, Wild Dog, Fox enclosures. A new guided tour educational programme for school children “ZEEEPS” - Zoo Educational Excursion Programme for Schools was also launched.



21 Seasonal special arrangements for upkeep of animals

- Water sprinkles as summer management
- Heaters for star tortoise



22 Research Work carried out and publications

Research articles published in various journals:

1. V. Manjunatha, M. Rout, R. Satish, H.K. Muniyellappa and S.M. Byregowda (2018), Diagnosis of various pathological conditions causing mortality in Asian koels (*Eudynamys Scoplaceus*); *Indian J. Anim. Res.*, 53(10) 2019: 1367-1371.
2. V. Manjunatha, M. Rout, C.S Sujay, N. Jaisingh, Nikitha Salin and S.M. Byregowda, (2018); Clinico-pathologic observations of spontaneous hepatic coccidiosis in broiler rabbits maintained in Bannerghatta biological park in Karnataka state of India; *Indian J. Anim. Res.*, Res., 53(4) 2019: 528-532.
3. V. Manjunatha, M. Rout, Umashankar K S, N. Salian, L.M. Kshama and S.M. Byregowda. (2019); Survey of Helminth Parasites in Reptiles under Captivity; *Journal of Immunology and Immunopathology*, Vol. 21, No. 1, January-June, 2019: pp 29-34.
4. V. Manjunatha, M. Rout, N. Salian, L.M. Kshama, V. Srivastava, K.S. Umashankar and S.M. Byregowda, (2019); "Copro-ovoscopic Assessment of Gastrointestinal Parasitism in Captive Canine and Feline Carnivorans". *Journal of Animal Research*, Vol 9, No 1, February 2019. pp 209-214.

23 Conservation Breeding Programme of the Zoo

No conservation breeding program within the zoo has been taken up during the year



24 Animal exchange program

Animal acquisition

Sl. No	Species	Sex			Total	Date
		M	F	U		
1	Giraffe Gowri (Mysore Zoo)	0	1	0	1	3/4/2018
2	Kite Black	0	0	3	3	5/4/2018
3	King Cobra	2	0	0	2	19/4/2018
4	Indian Porcupine	2	4	0	6	10/5/2018
5	Hamadryas Baboon	1	2	0	3	10/5/2018
6	Four Horned Antelope	0	1	0	1	10/5/2018
7	Peafowl (White)	0	1	0	1	10/5/2018
8	Grey Jungle Fowl	3	3	0	6	10/5/2018
9	White Ibis	1	2	0	3	10/5/2018
10	Painted Stork	2	2	0	4	10/5/2018
11	Love birds (Agaporins)	0	0	4	4	11/5/2018
12	Red Crowned Roof Turtle	0	0	4	4	16/5/2018
13	Flap Shelled turtle	0	0	4	4	26/5/2018
14	Tricaninate Hill Turtle	0	0	67	67	31/5/2018
15	Star tortoise	0	0	219	219	31/5/2018
16	Golden Jackal	4	4	0	8	8/6/2018
17	Barking Deer	1	2	0	3	8/6/2018
18	Red Jungle Fowl	2	2	0	4	8/6/2018
19	Lesser whistling teal	1	1	0	2	8/6/2018
20	Hamunan Langur	1	0	0	1	8/6/2018
21	Brahminy Kite	0	0	1	1	9/6/2018
22	Rock python	0	1	0	1	5/7/2018
23	Galah	0	0	1	1	5/7/2018
24	Silver pheasant	1	1	0	2	8/7/2018
25	Red eared slider turtle	0	0	4	4	8/7/2018
26	Asian Chameleon	0	0	2	2	19/8/18
27	King cobra	0	1	0	1	5/9/2018
28	Indian Grey Mongoose	0	0	3	3	20/9/18
29	Lesser whistling teal	0	1	2	3	2/10/2018
30	Red eared slider	0	0	4	4	12/10/2018

Animal Acquisition

Sl. No	Species	Sex			Total	Date
		M	F	U		
31	Indian roof turtle	0	0	1	1	12/10/2018
32	Red eared slider	0	0	2	2	15/10/2018
33	Indian Pangolin	0	0	1	1	3/11/2018
34	Grey slender loris	1	0	0	1	5/11/2018
35	Barn Owl	0	0	1	1	11/12/2018
36	Common Krait	0	0	1	1	12/12/2018
37	African Grey Parrot	1	1	0	2	18/12/18
38	Electus Parrot	1	1	0	2	19/12/18
39	Galah	0	1	0	1	20/12/18
40	Red Iguana	1	1	0	2	21/12/18
41	Green Iguana	1	1	0	2	21/12/18
42	Sun Conure	2	2	0	4	22/12/18
43	Rainbow lorikeet	1	1	0	2	23/12/18
44	Orange wigned Amazon Parrot	1	1	0	2	24/12/18
45	African Grey Parrot	1	1	0	2	25/12/18
46	Lady Amherest's Pheasant	1	1	0	2	26/12/18
47	Common Quil	0	0	10	10	7/1/2019
48	Rock Python	0	0	1	1	4/2/2019
49	Alexandrine Parakeet	0	1	0	1	14/2/2019
50	Rose-ring Parakeet	0	1	0	1	20/2/2019
Total		32	42	335	409	

Animal Disposal

Disposal for the year 2018-19 (01-04-2018 to 31-03-2019)

Sl. No	Species	Sex			Total	Date
		M	F	U		
1	Tiger Madhu	1	0	0	1	8/5/2018
2	Jungle Cats	1	1	0	2	8/5/2018
3	Hanuman Langur	0	1	0	1	6/6/2018
4	Night Heron	5	5	0	10	6/6/2018
5	Tigress Chamundi	0	1	0	1	19/3/2019
6	Tigress Sindhu	0	1	0	1	19/3/2019
Total		7	9	0	16	

25 Annual Inventory of animals

Form – II (See Rule 11(1)) Part – A Inventory Report for the Year 2018-19 Endangered Species*

*Animals under Schedule I and Schedule II of the Wild Life (Protection) Act, 1972

INVENTORY OF SCHEDULE I AND 11 SPECIES (WILDLIFE PROTECTION ACT)

ZOO PORTION

Mammals

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Black Buck <i>Antelope Cervicapra</i>	9	18	6	33	1	0	8	0	0	0	0	0	0	1	1	0	9	17	14	40
2	Leopard <i>Panthera pardus</i>	15	18	0	33	0	0	2	0	0	0	0	0	0	1	1	1	18	14	0	32
3	Lion Tailed Macaque <i>Macaca silenus</i>	0	1	0	1													0	1	0	1
4	Himalayan Black Bear <i>Ursus tibetanus</i>	4	2	0	6													4	2	0	6
5	Jackal <i>Canis aureus indicus</i>	1	3	0	4	0	0	0	4	4	0	0	0	0	0	0	0	5	7	0	12
6	Macaque Rhesus <i>Macaca mulatta</i>	6	4	0	10	0	0	1	0	0	0	0	0	0	1	0	0	6	4	0	10
7	Langur <i>Semnopithecus entellus</i>	0	3	0	3	0	0	0	1	0	0	0	1	0	0	0	0	1	2	0	3
8	Shanghai /Thamin Deer <i>Rucervus eldii eldii</i>	10	6	1	17	0	0	4	0	0	0	0	0	1	1	0	0	9	5	5	19
9	Wild Dogs <i>Cuon alpinus</i>	1	1	0	2	0	0	3	0	0	0	0	0	0	0	0	0	2	3	0	5
10	Indian Grey Wolf <i>Canis lupus pallipes</i>	2	2	0	4													2	2	0	4
11	Four horned Antelope <i>Tetraceros quadricornis</i>	2	0	0	2	0	1	0	0	1	0	0	0	0	2	0	0	2	0	0	2
12	Jungle Cat <i>Felis chaus</i>	5	6	1	12	0	0	3	0	0	0	1	1	0	0	1	0	6	3	3	12
13	Spectacled Langur <i>Trachypithecus obscurus</i>	2	2	0	4	0	0	1	0	0	0	0	0	0	0	0	0	3	2	0	5
14	Pig Tailed Macaque <i>Macaca Leonina blyth</i>	4	2	0	6	0	0	2	0	0	0	0	0	0	0	0	0	4	2	2	8
15	Assamese Macaque (Hybrid) <i>Macaca assamensis</i>	1	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	1	2	0	3
16	Goral <i>Nemorhaedus goral</i>	0	1	0	1													0	1	0	1
17	Grey Slender Loris <i>Loris lydekkerianus</i>	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1
	Total	62	70	8	140	1	2	24	6	5	0	1	2	0	3	7	1	73	67	24	164

Zoo : Birds

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Great Indian Horn bill <i>Buceros bicornis</i>	0	1	0	1													0	1	0	1
2	Pea fowl Indian <i>Pavo cristatus</i>	4	3	0	7	0	0	2	0	0	0	0	0	0	1	0	0	3	3	2	8
2a	Pea fowl white <i>Pavo cristatus</i>	4	0	0	4	0	0	0	0	1	0	0	0	0	1	0	0	3	1	0	4
3	White stork <i>Ciconia ciconia</i>	1	0	0	1													1	0	0	1
4	Kalij Pheasant <i>Lophura leucomelanos</i>	0	1	0	1													0	1	0	1
5	Red Jungle Fowl <i>Gallus gallus</i>	6	1	0	7	1	1	0	2	2	0	0	0	0	3	0	0	6	4	0	10
6	Grey Jungle Fowl <i>Gallus sonneratii</i>	0	0	0	0	0	0	0	3	3	0	0	0	0	2	2	0	1	1	0	2
	Total	15	6	0	21	1	1	2	5	6	0	0	0	0	7	2	0	14	11	2	27

Zoo : Reptiles

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Crocodile long snouted Gharial <i>Gavialis gangeticus</i>	0	4	0	4													0	4	0	4
2	Indian Rock Python <i>Python molurus</i>	2	2	0	4	0	0	0	0	1	1	0	0	0	1	2	0	1	1	1	3
3	Indian Cobra <i>Naja naja</i>	9	8	0	17													9	8	0	17
4	King Cobra <i>Ophiophagus hannah</i>	1	1	0	2	0	0	0	2	1	0	0	0	0	0	0	0	3	2	0	5
5	Viper Russells <i>Vipera russelli</i>	4	2	1	7	0	0	0	0	0	0	0	0	0	2	0	0	2	2	1	5
6	Common Indian Monitor Lizard <i>Varanus bengalensis</i>	0	1	1	2													0	1	1	2
7	Rat Snake <i>Ptyas mucosa</i>	0	0	30	30													0	0	30	30
8	Black Spotted Terrapins <i>Geoclemys Hamiltonii</i>	0	29	20	49													0	29	20	49
9	Red Crowned Roof Turtle <i>Batagur kachuga</i>	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	4
10	Tricarinate Hill Turtle <i>Melanochelys tricarinata</i>	0	0	0	0	0	0	0	0	0	67	0	0	0	4	1	5	26	17	14	57
11	India roof turtle <i>Kachuga tecta</i>	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
	Total	16	47	52	115	0	0	0	2	2	73	0	0	0	7	3	5	41	64	72	177

26 Annual Inventory of animals

Zoo Portion

Mammals

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Hippopotamus <i>Hippopotamus amphibius</i>	3	3	1	7	0	0	2	0	0	0	0	0	0	0	0	2	4	3	0	7
2	Porcupine <i>Hystricomorph Hystricidae</i>	0	0	4	4	0	0	0	2	4	0	0	0	0	1	1	0	3	5	0	8
3	Cat Toddy <i>Paradoxurus hermaphroditus</i>	2	2	2	6	0	0	1	0	0	0	0	0	0	1	1	0	1	1	3	5
4	Chital or spotted Deer <i>Axis axis</i>	7	12	9	28	0	0	5	0	0	0	0	0	0	1	1	0	7	11	13	31
5	Hog Deer <i>Hyelaphus porcinus</i>	7	22	2	31	0	0	0	0	0	0	0	0	1	0	0	6	22	2	30	
6	Barking Deer <i>Muntiacus muntjak</i>	2	3	6	11	0	0	2	1	2	0	0	0	2	1	0	4	7	2	13	
7	Striped Hyena <i>Hyaena hyaena</i>	1	1	0	2													1	1	0	2
8	Nilgai or Blue Bull <i>Boselaphus tragocamelus</i>	1	4	4	9	0	0	5	0	0	0	0	0	0	0	0	2	4	8	14	
9	Zebra <i>Equus burchelli</i>	2	1	0	3	1	0	0	0	0	0	0	0	0	0	0	3	1	0	4	
10	Giraffe <i>Giraffe camelopardalis</i>	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	1
11	Hamadryas Babbon <i>Papio hamadryas</i>	0	0	0	0	0	0	0	1	2	0	0	0	0	1	1	0	1	0	1	
12	Indian grey Mongoose <i>Herpestes edwardsii</i>	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	1	2	0	3	
Total		25	48	28	101	1	0	15	4	9	3	0	0	0	6	5	3	32	59	28	119



Zoo Portion Reptiles

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Red Sand Boa <i>Eryx johnii</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
2	Tortoise Indian Star <i>Geochelone elegans</i>	3	4	0	7	0	0	0	0	0	219	0	0	0	21	23	4	30	141	7	178
3	Crocodile Caiman <i>Caiman latirostirs</i>	11	10	0	21	0	0	0	0	0	0	0	0	0	1	0	0	10	10	0	20
4	Red - eared slider turtle <i>Trachemys scripta elegans</i>	32	25	0	57	0	0	0	0	0	10	0	0	0	1	1	0	31	24	10	65
5	Batagar Terrapin or Rtver Terrapin <i>Batagar baska</i>	16	17	0	33													16	17	0	33
6	Indian Mud or Flapshell Turtle <i>Lissemys punctata</i>	1	0	0	1	0	0	0	0	0	4	0	0	0	0	0	0	1	0	4	5
7	Morelet's Crocodile <i>Crocodylus moreletii</i>	0	1	0	1													0	1	0	1
8a	Iguana green <i>Iguana iguana</i>	1	1	0	2	0	0	0	1	1	0	0	0	0	0	0	0	2	2	0	4
8b	Iguana red <i>Iguana iguana</i>	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	2
9	Asian Chameleon <i>Chamaeleo zeylanicus</i>	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	1	0	0	0	0
10	Common Krait Chameleon <i>Bungarus caeruleus</i>	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
Total		65	59	0	124	0	0	0	2	2	236	0	0	0	23	26	5	92	196	22	310

Mammals

Lion and Tiger Safari

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Tiger-Royal Bengal <i>Panthera tigris tigris</i>	14	11	0	25	0	4	6	0	0	0	1	2	0	2	4	0	12	10	4	26
2	White Tiger-Royal Bengal <i>Panthera tigris tigris</i>	2	2	0	4													2	2	0	4
Total		16	13	0	29	0	4	6	0	0	0	1	2	0	2	4	0	14	12	4	30
Other Schedule Exotic species																					
1	Lion Hybrid <i>Panthera leo</i>	11	7	0	18	3	3	1	0	0	0	0	0	0	1	0	1	13	10	0	23
Total		11	7	0	18	3	3	1	0	0	0	0	0	0	1	0	1	13	10	0	23

Elephant Care Center

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Elephant Indian <i>Elephas maximus indicus</i>	9	12	0	21	1	1	0	0	0	0	0	0	0	0	1	0	10	12	0	22
Total		9	12	0	21	1	1	0	0	0	0	0	0	0	0	1	0	10	12	0	22

Herbivore Safari Mammals

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019							
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T				
Schedule I and II																									
1	Black Buck <i>Antelope cervicapra</i>	5	2	0	7																	5	2	0	7
2	Gaur or Indian Bison <i>Bos gaurus</i>	5	1	0	6																	5	1	0	6
3	Indian Pangolin <i>Manis crassicaudata</i>	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total		10	3	0	13	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10	3	1	14

Other Schedule Exotic species

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	chital or spotted Deer <i>Axis axis</i>	107	115	431	653	0	0	0	0	0	0	0	0	0	4	0	0	103	115	431	649
2	Barking Deer <i>Muntiacus muntjak</i>	2	3	0	5													2	3	0	5
3	Sambar <i>Rusa unicolor</i>	84	89	128	301													84	89	128	301
4	Nilgai or Blue Bull <i>Boselaphus tragocamelus</i>	4	4	1	9													4	4	1	9
5	Hog Deer <i>Hyelaphus porcinus</i>	3	13	0	16													3	13	0	16
Total		200	224	560	984	0	0	0	0	0	0	0	0	0	4	0	0	196	224	560	980

Mammals Bear Safari

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Sloth Bear:- <i>Melursus ursinus</i>	31	46	0	77													31	46	0	77
Total		31	46	0	77													31	46	0	77

BFF Tiger

Sl. No	Name of the animal & Scientific name	Stock as on 01/04/2018				Births			Acquisitions			Disposals			Deaths			Stock as on 31/03/2019			
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
1	Sumatran Tiger: <i>Panthera tigris sumatrae</i>	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total		1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0

27 Mortality report

Mortality report of animals at Bannerghatta Biological Park for the the year 2018-19 (01-04-2018 to 31-03-2019)

Sl No	Species of animal	Nos	Sex	Date	Reason for death
1	Rhea	1	F	5/4/2018	Succumbed to infighting injury
2	Lady Amherst Pheasant	1	F	9/4/2018	Seniity and multi organ failure
3	Grey Pelican	1	F	11/4/2018	Infighting injury
4	Tiger Bharath (Safari)	1	M	12/4/2018	Respiratory assest
5	Black Headed Munia	2	1+1	12/4/2018	Predated by lizard
6	Red Eared Slider Turtle	1	F	13/4/2018	Enterites
7	Toddy Cat	1	M	13/4/2018	Malignancy
8	Caiman	1	M	16/4/2018	Septicemia
9	Black Headed Munia	2	1+1	21/4/2018	Shock
10	Lady Amherst Pheasant	1	F	23/4/2018	Senility and multi-organ failure
11	Leopard Lava (RC)	1	M	2/4/2018	Hepatitis
12	Python	1	M	26/4/2018	Impaction due to abscess
13	Barking deer	1	M	4/5/2018	Lighting shock
14	Star tortoise (Rescued)	1	M	7/5/2018	Pneumonia
15	Grey Jungle Fowl	2	M+F	10/5/2018	Transit stress
16	Grey Jungle Fowl	1	F	11/5/2018	Transit stress
17	Toddy Cat	1	F	12/5/2018	Malignant tumor of oral cavity
18	Star tortoise (Rescued)	1	F	13/5/2018	Cold shock
19	Star tortoise (Rescued)	1	F	17/5/2018	Cold shock
20	Porcupine	1	M	20/5/2018	shock
21	Grey Jungle Fowl	1	M	21/5/2018	Transit stress
22	Night Heron	1	U	21/5/2018	Choke due to fish
23	Painted stork	1	M	6/6/2018	Cervical dislocation and shock
24	Baboon	1	F	6/6/2018	Chronic hepatitis
25	White Peacock	1	M	7/6/2018	Suppurative joint infection
26	Thamin Deer	1	M	12/6/2018	Infighting injuries to lung tissue leading to shock and death
27	Tiger Madesha	1	M	13/6/2018	Multi-organ failure
28	Russel's Viper	1	M	15/6/2018	Septicemia
29	Eagle Owl	1	M	16/6/2018	Shock
30	Spotted Deer (HS)	1	M	25/6/2018	Infighting injuries and septicemia
31	Spotted Deer (HS)	1	M	25/6/2018	Septicemia
32	Jungle cat	1	F	2/7/2018	Infighting injiuritis
33	Black swan	1	F	4/7/2018	Rectal prolapse
34	Star tortoise	1	M	6/7/2018	Cold shock
35	Porcupine	1	F	7/7/2018	Senile/Multi-organ failure
36	Star tortoise	1	F	16/7/2018	Pneumonia
37	Spooted Deer	1	F	19/7/2018	Senility/Pneumonia
38	Star tortoise	1	M	28/7/2018	Cold shock
39	Russel viper	1	M	4/8/2018	Attacked by Mongoose
40	Star tortoise	1	F	6/8/2018	Pneumonia
41	Rhesus monkey	1	F	10/8/2018	Multi-organ failure & Senility
42	Sand boa	1	F	10/8/2018	Septicemia
43	Spotted deer	1	M	11/8/2018	Septicemia
44	Eurasian eagle owl	1	F	17/8/2018	Attacked by Mongoose
45	Tricarinate hill turtle	1	U	18/8/2018	Pneumonia

46	Sumatran Tiger - Rocky	1	M	19/8/2018	Multi-organ failure & Senility
47	Rock python	1	F	21/8/2018	Verminous enteritis
48	Tricarinate hill turtle	1	U	23/8/2018	Pneumonia
49	Eurasian eagle owl	1	F	24/8/2018	Septicemia
50	Star tortoise	1	F	27/8/2018	Pneumonia
51	Star tortoise	1	M	28/8/2018	Pneumonia
52	Star tortoise	1	F	28/8/2018	Pneumonia
53	Star tortoise	1	F	1/9/2018	Pneumonia/Cold shock
54	Four horned antelope	1	U	1/9/2018	Capture myopathy during emergency C-section
55	Star tortoise	1	U	2/9/2018	Enteritis
56	Tricarinate hill turtle	1	F	2/9/2018	Enteritis
57	Star tortoise	1	U	3/9/2018	Cold shock
58	Star tortoise	1	M	4/9/2018	Cold shock
59	Red Jungle Fowl	1	M	8/9/2018	Multi-organ failure & senility
60	Star tortoise	1	F	10/9/2018	Pneumonia
61	Star tortoise	1	F	10/9/2018	Cold shock
62	Blue crowned pigeon	1	F	10/9/2018	Carcinoma
63	Rock python	1	F	11/9/2018	Enteritis
64	Eagle Owl	1	M	14/9/2018	Pyosepticemia
65	Chameleon	1	F	16/9/2018	Anorexia
66	Thamin/Shangai deer	1	F	18/9/2018	Metritis
67	Tricarinate hill turtle	1	U	19/9/2018	Cold shock
68	Tricarinate hill turtle	1	U	20/9/2018	Cold shock
69	Star tortoise	1	U	1/10/2018	Cold shock
70	Baboon	1	M	8/10/2018	Multi-organ failure
71	Star tortoise	1	F	12/10/2018	Pneumonia
72	Star tortoise	1	F	12/10/2018	Pneumonia
73	Blackbuck	1	F	21/10/2018	Septicemia due to ruptured uterus
74	Chameleon	1	U	19/10/2018	Anorexia
75	Star tortoise	1	F	24/10/2018	Pneumonia
76	Star tortoise	1	M	27/10/2018	Cold shock
77	Hog Deer	1	M	30/10/2018	Septicemia due to infighting injuries
78	Gaur	1	M	1/11/2018	Senility and weakness
79	Star			3/11/2018	Pneumonia
80	Star tortoise	1	M	4/11/2018	Cold shock
81	Star tortoise	1	M	5/11/2018	Enteritis
82	Tricarinate hill turtle	1	M	11/11/2018	Cold shock
83	Star tortoise	1	F	13/11/2018	Pneumonia
84	Star tortoise	1	M	15/11/2018	Necrotic Enteritis
85	Tricarinate hill turtle	1	F	23/11/2018	Necrotic Enteritis
86	Star tortoise	1	F	3/12/2018	Pneumonia
87	Star tortoise	1	M	10/12/2018	Pneumonia
88	Tricarinate hill turtle	1	F	12/12/2018	Cold shock
89	Star tortoise	1	F	16/12/2018	Enteritis
90	Star tortoise	1	M	19/12/2018	Cold shock
91	Tricarinate hill turtle	1	M	25/12/2018	Verminous enteritis
92	Star tortoise	1	M	27/12/2018	Pneumonia
93	Star tortoise	1	M	31/12/2018	Cold shock & anorexia
94	Red eared slider	1	M	2/1/2019	Pneumonia
95	Star tortoise	1	M	7/1/2019	Enteritis

96	Silver Pheasant	1	M	22/01/2019	Infighting injury
97	Star tortoise	1	M	23/01/2019	Pneumonia
98	Star tortoise	1	F	23/01/2019	Pneumonia
99	Star tortoise	1	F	24/01/2019	Enteritis
100	Star tortoise	1	M	24/01/2019	Pneumonia
101	Spotted deer	1	M	28/01/2019	Infighting injury
102	Star tortoise	1	F	29/01/2019	Enteritis
103	Star tortoise	1	F	31/01/2019	Enteritis
104	Star tortoise	1	M	1/2/2019	Enteritis
105	Tri carinate hill turtle	1	M	1/2/2019	senility
106	Star tortoise	1	F	3/2/2019	Pneumonia
107	Barking deer	1	F	5/2/2019	Infighting injury
108	Elephant calf	1	F	5/2/2019	Viraemia and Pneumonia
109	Star tortoise	1	F	6/2/2019	Cold shock
110	Star tortoise	1	M	7/2/2019	Pneumonia
111	Tri carinate hill turtle	1	M	11/2/2019	Cold shock
112	Star tortoise	1	M	15/2/2019	Pneumonia
113	Star tortoise	1	F	15/02/2019	Pneumonia
114	Peacock	1	M	25/02/2019	Choke with fish bone and abscess
115	Barking deer	1	M	28/02/2019	Infighting injury
116	Red Jungle Fowl	1	M	3/3/2019	Senility and infighting injury
117	Star tortoise	1	F	7/3/2019	Enteritis
118	Red Jungle Fowl	1	M	8/3/2019	Infighting injury
119	Leopard Chinnu	1	F	10/3/2019	Hepatic cyst/senility
120	Star tortoise	1	F	10/3/2019	Wound in fore legs - Septicemia
121	Star tortoise	1	M	18/3/2019	Pneumonia
122	Star tortoise	1	F	26/3/2019	Enteritis
123	Star tortoise	1	M	31/3/2019	Anorexia/Weakness

**Infant Mortality report of animals at Bannerghatta Biological Park
for the the year 2018-19 (01-04-2018 to 31-03-2019)**

1	Lioness Sana cub	1	U	25/4/2018	Killed by dam
2	Lioness Sana cub	1	M	27/4/2018	Ruptured thorax due to dam
3	Lady Amherst Pheasant chick	1	U	30/4/2018	Pox infection
4	Spotted deer fawn	1	U	7/6/2018	Sudden infant death syndrome
5	Tigress Subhadra cubs	1	F	12/7/2018	Pneumonia
6	Leopard Sara cub	1	U	15/7/2018	Cannibalism
7	Hippopotamus Vidya calf	1	U	17/8/2018	Stampede
8	Four horned antelope fawn	1	F	17/8/2018	Gastric obstruction due to trichobezoar
9	Hippopotamus calf	1	U	19/10/2018	Septicemia
10	Blackbuck fawn	1	U	9/1/2019	Truma & shock

Nativity report

Nativity for the the year 2018-19 (01-04-2018 to 31-03-2019)

Sl.No	Species	Sex			Total	Remarks
		M	F	U		
1	Assamese Monkey baby	0	1	0	1	2/4/2018
2	Lady Amherst Pheasant chick	0	0	1	1	8/4/2018
3	Zebra calf	1	0	0	1	11/4/2018
4	Elephant veda calf	0	1	0	1	18/4/18
5	Spectacled langur	0	0	1	1	23/4/18
6	Lioness sana cubs	1	2	1	4	25/4/18
7	Red Jungle Fowl	1	1	0	2	15/5/18
8	Rhesus Monkey	1	1	0	2	26/5/18
9	Tigress Subhadra cub	0	4	0	4	11/7/2018
10	Leopard Sara cub	0	0	1	1	12/7/2018
11	Blackbuck fawn	0	0	1	1	2/7/2018
12	Hippopotamus calf	0	0	1	1	15/7/2018
13	Blackbuck fawn	0	0	1	1	23/7/2018
14	Spotted deer fawn	0	0	1	1	24/07/2018
15	Peacock chick	0	0	1	1	26/07/2018
16	Spotted deer fawn	0	0	1	1	30/07/2018
17	Tody Cat	0	0	1	1	9/8/2018
18	Black Buck fawn	0	0	1	1	18/8/2018
19	Pig Tailed Macaque	0	0	1	1	21/08/2018
20	Black Buck fawn	0	0	2	2	25/08/2018
21	Four horned antelope	0	0	1	1	1/9/2018
22	Nilgai	0	0	1	1	10/9/2018
23	Lioness Sana	1	1	0	2	11/9/2018
24	Nilgai	0	0	2	2	11/9/2018
25	Nilgai	0	0	1	1	30/09/2018
26	Nilgai	0	0	1	1	2/10/2018
27	Blackbuck fawn	0	0	1	1	2/10/2018
28	Dhole pups	0	0	3	3	5/10/2018
29	Gaur calf	1	0	0	1	8/10/2018
30	Hippopotamus calf	0	0	1	1	11/10/2018
31	Blackbuck fawn	0	0	1	1	21/10/2018
32	Tigress Subhadra cub	0	0	2	2	16/11/2018
33	Barking deer	0	0	1	1	22/11/2018
34	Blackbuck fawn	0	0	1	1	2/11/2018
35	Spotted deer fawn	0	0	1	1	1/12/2018
36	Thamin deer fawn	0	0	1	1	2/12/2018
37	Thamin deer fawn	0	0	1	1	4/12/2018
38	Thamin deer fawn	0	0	1	1	11/12/2018
39	Peacock chick	0	0	1	1	19/12/2018
40	Thamin deer fawn	0	0	1	1	29/12/2018
41	Tigress Vishmaya Cubs	0	0	4	4	7/1/2019
42	Lioness Sana Cub	1	0	0	1	4/2/2019
43	Jungle Cat	0	0	3	3	14/2/2019
44	Barking Deer	0	0	1	1	20/2/2019
45	Spotted deer fawn	0	0	1	1	22/2/2019
46	Pig tailed macaque	0	0	1	1	5/3/2019
47	Blackbuck fawn	0	0	1	1	7/3/2019
48	Spotted deer	0	0	1	1	14/3/2019
49	Elephant Nisharga calf	1	0	0	1	26/3/2019
	Total	8	11	49	68	

28 Compliance with conditions stipulated by the Central Zoo Authority

			Remarks
Sr. No	Norm No. under RZR, 2019	Conditions stipulated	Status with regard to compliance of the conditions as submitted by the Officer-in-charge of the Zoo
General requirements			
1.	2(6i)	The residential colony including quarter of the Range Officer has entry from the zoo. The entry to the residential colony through the zoo premises may be stopped immediately.	All the Residential quarters including the officer's quarters is being shifted outside the zoo. Tender process is initiated to for construction of the quarters outside the zoo premises.
2.	2 (66i)	The animal attendants and the other personnel working in the Bear Rescue Center are staying in the same building at the upper storey of the building in which the Veterinary Hospital and the Animal Houses are at the ground level. The building and the campus of the Rescue center may not be used for any type of residential purpose.	Only night duty staffs including veterinarians are staying during the night hours on Bear Rescue Center premises for ensuring the security and medical care of the rescued bears.
3.	1(7)	The drainage system of the zoo is in very bad shape and has not been properly planned. It should be addressed in a proper manner with a proper drainage plan.	<ul style="list-style-type: none"> • Storm water drain has been constructed to drain out storm water. • The discharge from the holding room is connected to individual soak pits • Detailed survey has been done to construct UGD & STP to the zoo.
3.	Development and Planning		
4	3(1)	The enclosure as proposed for modification in the Master Plan should be taken up on priority.	The enclosures proposed for modifications being taken up for implementation on priority.
4.	Animal housing, display of animals and animal enclosure		
5	4(2&3)	The moat in safari needs modification to reduce wild elephant damages.	Wherever the moat is vulnerable to prevent elephants, retaining wall is being constructed based on the availability of funds and also tender has been called for providing rail barricade wherever essential.
5.	Upkeep and healthcare of animals		
6	5(4)	A street dog was seen in the zoo premises. The entry points of the dogs in the zoo premises should be identified and plugged effectively. It should be ensured that the dogs and other feral animals do not enter the zoo premises.	All the access point of street dogs has been closed and the dogs have been caught and rehabilitated.
9.	Acquisition and breeding of animals		
7	9(1 2&9)	The breeding of lion, tigers housed in safari needs progeny profile. There are excess tigers and lions in the Safari/Zoo, which should be reduced or exchanged and further breeding should be stopped.	Action has been initiated

29 List of free living wild animals within the park premises

A. Mammals :

Royal Bengal Tiger, Barking deer, Spotted Deer, Sambar deer, Gaur, Bonnet Macaque, Dhole, Leopard, Wild Boar, Pangolin, Toddy cat, Civet Cat, Mongoose, Asian Elephant, Jackal, Honey Badger & Sloth Bear

b. Birds :

Paradise Fly Catcher, Brahminy Kite, Night Heron, Black Kite, Grey Heron, Darter, Snake bird, Pied Kingfisher, White breasted kingfisher, Plum headed parakeet, Jungle Myna, Common Myna, Spotted dove, Open billed stork, Painted Stork

c. Reptiles:

Spectacled cobra, Rat snake, Red sand Boa, Marsh Crocodile, Star Tortoise, Flapshell turtle, Rock Python, Russel's Viper, Krait

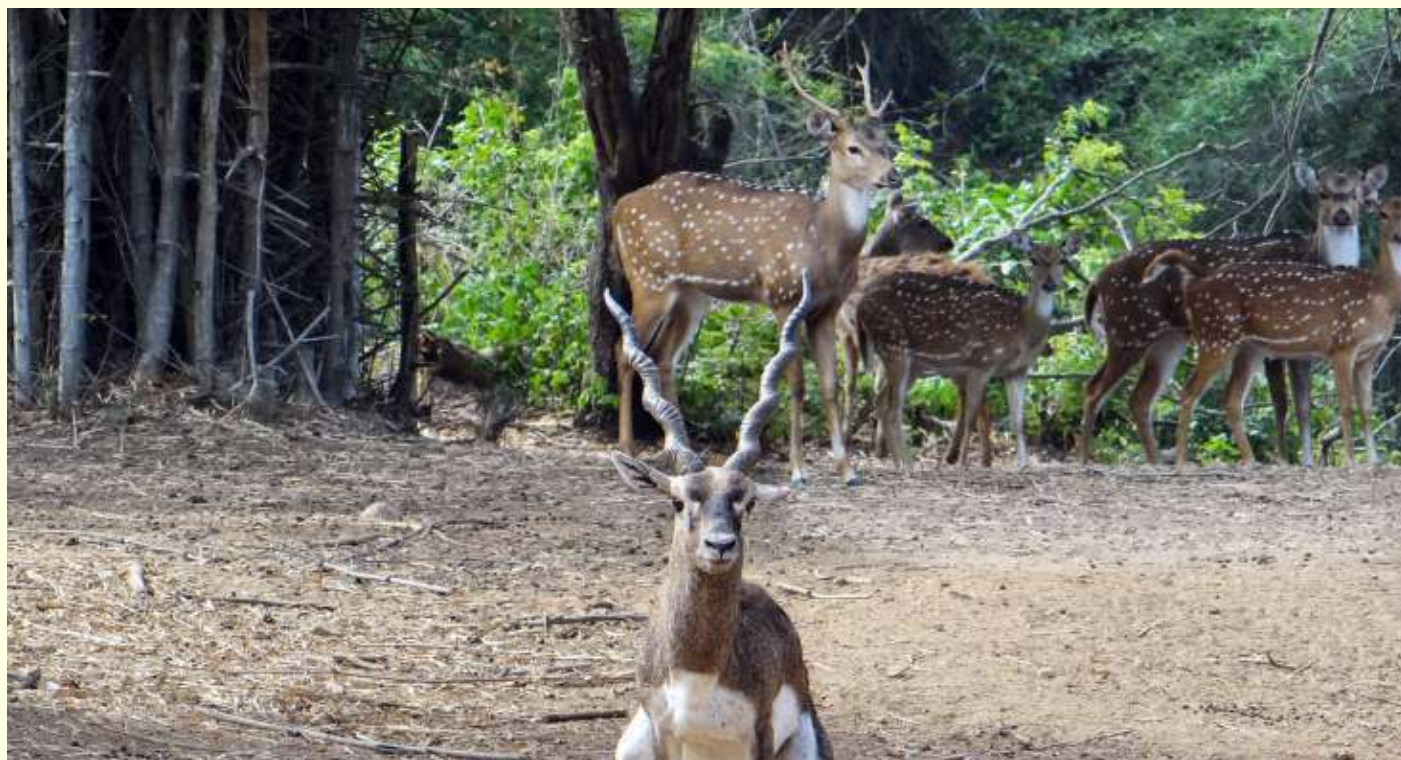


30 Safari

Safari unit is an expedition to observe the free range captive wildlife in immersive, naturalistic exhibits in the midst of the Natural forests of Bannerghatta and Ragihalli Reserve Forest. The Bengaluru Bannerghatta Biological Park is one of the pioneers in providing this facility to the visiting public. The safari is jointly managed and monitored by Karnataka State Tourism Development Corporation (KSTDC) and BBBP with a revenue sharing on a 50:50 basis between the two organizations. KSTDC focuses on sales, revenue collection and physical monitoring of the buses whereas BBBP fixes the fee for the visitors. The non-ac buses have a seating capacity of approximate 30 per bus and in addition to the non-ac buses ac buses, ac and non ac jeeps, Xylo and Innova are also available to visitors, for safari rides in smaller groups.

The visitors are allowed inside the safari in the secured safari vehicles and have the thrill of wilderness by seeing them in the midst of the forest through keen and close observation. The route to the safari passes through the picturous hillock Mettubunde giving an opportunity to the visitors to have the inspiring and breathe holding panoramic view of the landscape of the broken chain of hillocks and valleys with lush green forests.

Sl No.	Safari Enclosure	Area Extent (Hectares)
1.	Herbivore Safari	68.00
2.	Elephant Care Centre	60
3.	Bear Safari	20.00
4.	Lion Safari	6.00
5.	Tiger Safari	15.00
	Total	158.5 Hectares



Herbivore Safari: This section was developed during 1970's but opened to public viewing during 2002. The entire area has been barricaded with stone wall along with the additional support of solar power fence.. The vegetation in the safari is favorable to the herbivore animals round the year as large number of fodder species like bamboo and anogassius intermitted with vast extent of foreshore area of the water bodies. There are 5 water bodies found in the safari area namely, Deepankere, Chennamanakere, Gowdanakere and Seegadikunte, Godownkere. These water bodies are perennial and serve as the source of water for the safari animals during all the seasons. The animals found in the safari are Gaur, Sambar, Cheetal, Barking Deer, Black Buck, Hog Deer and Nilgai. The other animals naturally found in the safari are wild boar, porcupine, pangolin etc., are also sighted frequently along with the other major mammals.



Bear Safari:

The Safari area is provided with peripheral open moat. The outer wall of the moat is embedded with stone slabs all around in order to prevent the sloth bears from escaping or to avoid trespassing of any other free range wildlife into the safari. This safari is also provided with animal housing facilities in 5 blocks namely Panchavati, Chitrakuta, Kishkinda, Dr. G.K.V Block and Jambava. Around 100 animal holding rooms are available in total along with a kitchen for food preparation. . The facility created in the Bear Safari is jointly managed by Wildlife SOS to maintain bears rescued from Khalandars from all over India.



Lion Safari:

All around the 6.00 Ha of forest area, a chain link mesh with the height of around 15 feet has been erected. Further a moat all round the chain link mesh fence has been created to avoid the trespass of any wild animals living in the area. The animal house is provided with 11 holding rooms and all the holding rooms are provided with retrieval area for day time rest. The compatible groups of animals are allowed into safari on a rotational basis so as to allow all animals to the field.

Tiger Safari:

The peripheral boundary has been created for all the 3 units by digging open moat and erecting chain link mesh fence. Indira Gandhi Tiger Safari has the facility of 11 holding rooms. The Appaiah Tiger Safari has the facilities of 02 animal housing complexes. Both animal houses in Appaiah have a total of 10 animal holding rooms. The White tiger safari has the facilities of 02 animal housing complexes. There are totally 08 animal holding rooms. All the holding houses are provided with basic facilities of water and sanitation.



31 Elephant Care Centre:

An area of 60Ha., supported with thick bamboo breaks and a water body called Seegekatte, intermitted with grasslands was proposed and approved in the Master Plan to create an Elephant Care Centre. 0.65 Ha of land has an emergency Coral within the elephant care centre to contain and separating the elephants for medical procedures and for bouts of un-controllable aggression. There are 22 (10M+12F) elephants which are housed here in the elephant care center. Within the area of Herbivore safari, an elephant weaning center has been established.

The elephants housed in this centre enjoy a semi-captive management system where they are cared for by their respective mahouts and kavadis in the care centre during the day and are free roaming in the National Park area in the evening, where they can feed on natural fodder and socialize, mate with wild elephants which are free roaming in the national park.



32 Rescue Centre

The National Zoo Policy 1998, provides an opportunity to all the zoos to function as a rescue centre for orphaned, refused, rescued wild animals subject to the availability of appropriate housing and up keeping facilities. This Park is one of the Rescue Centers launched by the Government of India in the year 1999 under Central Zoo Authority for rehabilitation of rescued animals. The park has successfully established the Rescue Center over an area of 17.50 Ha within the Biological Park limits. The Rescue Centre started functioning from December 2000 as an off-display area. The annual expenditure for the year 2018-19 was Rs.74.63 lakhs which is entirely met by the grants from Central Zoo Authority, New Delhi.

The Rescue Center has two wings, one each for Lions and Tigers. The lion block is called L-block and has 12 houses. Each house consists of 6 cages connected to the kraal area and can house a total of 72 lions at one time. Right opposite to the lion block another semicircular housing complex namely T-block of half of the size of L-block has been constructed for tigers. There are 5 housing units in this block and each of the housing unit has 6 animal holding rooms connected to kraal area and can house a total of 30 tigers at a time. Presently, 14 (7 males and 7 females) lions rescued from various circuses are housed in this unit. Apart from these aged animals from zoo and safari is also housed in this unit.

Rest of the centers is planned to harbor different varieties of trees and plants to create natural surrounding like forest inside the center.

A Bear Rescue Centre has been established at the Bear Safari within Bannerghatta Biological Park, , with the collaboration of Wildlife SOS, New Delhi. This center has been established for the benefit of the rescued bears from Khandars, stray, injured, orphaned, trapped, sick etc., and enables to rescue and rehabilitate more such bears. As on 31-3-2019, 78 (32 male & 46 female) were housed in the rescue unit within the Bear Safari. The maintenance costs of all these Bears are being directly met by Wildlife Sos, an NGO. Tigers rescued from various circuses in Europe have been accommodated at Born Free Foundation (BFF), Bannerghatta Biological Park, Bengaluru. As on 31-3-2019, two wild rescued male tigers are accommodated in this unit. The maintenance cost of these animals for 2018-19, are met by the BFF, an NGO.

Rescue center - overview



Rescued the bear form Ramanagara district



Rescue of Male leopard around 4 years at ITC factory, Near Airport Toll Bangalore



33 Butterfly Park

The Park was conceptualized as one integrated center that would support education, conservation and research activities with exclusive focus on butterflies as flagship ambassadors of conservation. The Butterfly Park has the following major components:

- A Butterfly garden to sustain local butterfly population
- A butterfly conservatory enclosed under polycarbonate roof
- Research and captive breeding laboratory
- A museum
- Multimedia center

The entire park has been established over area 7.5 acres which has a butterfly trail of about 1 km length. The „butterfly trail “ established over a five acre garden leads the visitors to an innovatively designed three dome structure housing the conservatory, museum and the multi-media center.



Butterfly rearing:

List of butterfly species reared in the Laboratory & their host plants

Sl. No	Common Name	Scientific name	Host Plant
1	Southern bird wing	Troides minos	Aristolochia indica
2	Common Mormon a) Cyrus form b) Romulus form c) Stichius form	Papilio polytes	Murraya koenigii
3	Lime Butterfly	Papilio demoleus	Citrus species
4	Common Rose	Pachliopta Aristolochia	Aristolochia indica
5	Crimson Rose	Pachliopta hector	Aristolochia indica
6	Common pioneer	Anaphaeis aurota	Capparis sepiaria
7	Common gull	Cepora nerissa	Capparis sepiaria
8	White orange tip	Ixias Marianne	Capparis sepiaria
9	Yellow orange tip	Ixias pyrene	Capparis sepiaria
10	Small Grass yellow	Eurema brigitta	Cassia siamia
11	One spot Grass yellow	Eurema under soni	Cassia siamia
12	Common Grass yellow	Eurema heccabe	Cassia siamia
13	Three spot Grass yellow	Eurema bland	Cassia siamia
14	Red Pierrot	Talicauda nyseus	Kalanchoe
15	Common Pierrot	Castalius rosimo	Kalanchoe
16	Blue tiger	Tirumala Imniace	Wattakaka volubilis
17	Plain tiger	Danaus chrysippus	Caltropis gigantea
18	Striped Tiger	Danaus enutie	Cynancum species
19	Common crow	Euploea crow	Ficus racemosa
20	Double branded crow	Euploea sylvester	Nerum olender
21	Small leopard	Phalanta	Salix tetrasperma
22	Common castor	Aridane merione	Ricinus communis
23	Red Hellen	Papilio helenus	Todelia asiatica



34 Animal Health Care:

The zoo has a modern hospital headed by an Assistant Director (Veterinary Service) and supported by contractual veterinarians, biologist and support staff. The hospital has an operation theatre (OT), X-ray facility, in-patient facility and store for medicines and equipment as well as a fully equipped ambulance for animal rescues. The Veterinarians have been active in training veterinary interns to get hands on experience and impart knowledge on the skills required to work effectively as a wildlife veterinarian.



The following equipments are available in the zoo hospital

- ✓ Gaseous Anesthetic machine
 - ✓ Autoclave
 - ✓ Operation table
 - ✓ X-ray unit, digital radiography & Other surgical equipments,
- The following equipments are available for restraining of animals:
- ✓ Dist inject projector and pistol
 - ✓ Pneumatic projectors
 - ✓ Blow pipe
 - ✓ Hand syringe



BBP has a well equipped pathology laboratory namely Wild Animal Disease Diagnostic Laboratory (WADDL), a branch of IAH & VB headed by a scientist and lab technician. There is a post mortem room where all the carcasses of dead captive animals are subjected for postmortem and pathological investigation to determine the cause of death. After the postmortem, the carcasses are disposed of by burning. A bio-medical waste disposal pits was constructed beside postmortem room to degrade and dispose medical (veterinary) wastes.



Gaseous Anesthesia apparatus



Portable Radiography Unit

Routine activities of Wild Animal Disease Diagnostic Laboratory (WADDL)

- Haematology
 - Clinical Examination of Blood, Serum, Urine and Exudates from the Wild Animals
 - Blood Examination : Hematology – parameters includes
 - WBC, RBC, Hb, PCV, DLC, Platelets, MCV, MCH and MCHC
- Serum Examination : Serology
 - Liver function tests: Total Protein, Albumin, Globulin, SGOT, SGPT and Alkaline Phosphate
 - Kidney function tests: Creatinine and BUN
 - Lipid Profile: Total Cholesterol and Triglycerides
 - General : Glucose and LDH
 - Serum Electrolytes: Ca, P, Na, K
- Post mortem Examination of Wild Animals, Wild Birds and Reptiles and diagnosis of disease
- Wild Animal Disease investigation and advices to taking control measures to control the diseases in the BBBP, BRC
- Bacterial Isolation and identification by cultural, staining and biochemical methods in Wild animal and Birds
- Fungal Isolation and identification by cultural, staining methods in Wild animal and Birds
- Acid Fast staining / Ziehl Neelsen staining for the Acid fast bacteria such as mycobacteria spp
- Confirmation of the bacterial, viral and parasitic diseases in the wild animals by PCR method.
- The material sent to IAH & VB Hebbal, for further confirmation.

Ongoing Projects :

1. Epidemiological prevalence of haemoprotozoan Parasites in the Captive Wild Animals.

Name of assignment/project :

Epidemiological prevalence of haemoprotozoan Parasites in the Captive Wild Animals

Year : 2017-Present

Location : Bannerghatta Biological park

Client : BBBP

Main project features :

- a) Microscopic examination of blood smears of tigers, lions and leopards by Giemsa's stain.
- b) Molecular diagnosis of haemoprotozoan parasites with parasite species specific primers. Trypanosoma spp, Cytauxzoon spp, Babesia spp, Haemobartonella spp,.

Activities performed :

- Procurement of EDTA collection vials, Microscopic slides and staining materials completed
 - Procurement of DNA extraction kits, PCR reagents and Primers completed
 - Blood collection from the tigers , Lions, leopards and Pythons completed
 - DNA extraction from all the Blood samples completed and stored the DNA at -20o c.
 - Primers Dilution completed
- PCR standardised for Babesia spp and Cytauxzoon spp

Progress Report of WADDL, IAH & Vb, Bannerghatta Biological Park from April 2018 to March 2019

Sl.No	Type of specimen	April	May	June	July	August	Sep	Oct	Nov	Dec	Jan	Feb	March	Total
1	Hematology	7	7	7	15	22	6	5	5	10	30	8	7	129
2	Blood smears	7	7	7	15	22	21	5	5	10	30	8	7	144
3	Fecalsamples	15	19	26	26	30	25	40	349	17	13	56	17	633
4	Impression Smears	24	12	25	37	14	40	15	26	16	9	27	38	283
5	Immunoserology							1						1
6	Histopathology	8	3	6	6	4	6	5	4	11	6	6	7	72
7	Serum chemistry	91	98	105	194	273	84	64	65	140	385	104	105	1708
8	Skin scrapings	2		6	2	2	3	4		3			1	23
9	Urine analysis	3	2	3	2	2	2	3			2		4	23
10	TB & JD testing	10	2	6	12	18	16	3	9	6	5	13	16	116
11	Fecal sample-AFB			9	3	17				6	1			36
12	Anti bioassay			1			3	3	1				2	10
13	Autopsies	9	4	8	17	6	19	4	9	5	6	13	10	110
14	Brain for Rabies													
15	FMD-Tong. Epith.							2						2
16	Brain for BSE													
17	AI - tracheal / cloacal/Envt swabs							2						2
18	Poisoning/ Toxicity	1									2	2	1	6
19	Milk sample													
20	Nasal discharge	1		3						1				5
21	Miscellaneous/DNA /PCR/Veterolegal	33	26	25	49	66	24	4	8	14	75	5	14	343
TOTAL		211	180	240	378	448	249	161	481	239	564	242	229	3622



35 List of Animals Adopted in Bannerghatta Biological Park

	Name & address of the Person/Firm	Name of the animal adopted/Nos.	Amount Paid
1	Sri Mahantha Kesari Das, S/o Sri Parthasarathy, #121, Dasari Street, Anekal Talluk, Bangalore - 562125	White Peacock - 1	3500
2	Sri Siddharth Ethan Vijay, B005, Adarsh Crystal, , #16, Cambridge Road, Halasuru, Bangalore - 560008	White Tiger - 1 No.	100000
3	Smt. Anahitha Sofia B005, Adarsh Crystal, , #16, Cambridge Road, Halasuru, Bangalore - 560008	Lion - 1 No.	100000
4	Amala Alok Farms, Naganayakana Halli, Kanakapura Road, Bangalore	Hippopotamus-1 , Lion Tailed Macaque - 1	85000
5	Sri Manohar, Deadstock India, #29/2, Agraharadhasaruhalli, Magadi Road,Bangalore - 40	Lion Tailed Macaque - 1	10000
6	Sri Harsh Brahmabhatt, #B/408, Modern Partments, Garden Lane, Ghatkopar West, Mumbai - 400086	Black Buck	7500
7	Ms Rekha N.S, #278, 26th Cross, 9th Main, Banashankari 2nd Stage, Bangalore - 70	Red Sand Boa	3500
8	SJB Institute of Technology, BGS Health & Education City, Kengeri, Bengaluru - 60	King Cobra - 3 Nos	10500
9	Toyota Kirloskar Pvt Ltd., Plot No.1, Bidadi Industrial Area, Bidadi, Ramanagara Dist.	Ostrich	10100
10	Satyaprakash, Reshu Advertising Pvt Ltd.,, Musahar Nagar, Uttar Pradesh	King Cobra - 3 Nos	10500
11	Priyanka Sarkar, Grace Cottage, Room No. 2, 5th Cross, Whitefield, Bangalore - 560066	Cockteail & Budgerigar	2000
12	Sri Mohan. S.A, #13(old No.18), 21st Main, 3rd B Cross, BTM 2nd Stage, Bangalore	King Cobra	3500
13	Smt. Shalini S.R, #13(old No.18), 21st Main, 3rd B Cross, BTM 2nd Stage, Bangalore	Indian Cobra	2000
14	Kumari Krishi Kaashvi, #13(old No.18), 21st Main, 3rd B Cross, BTM 2nd Stage, Bangalore	Indian Cobra	2000
15	Sri N. Seshadri, No. 1253, 11th Cross, Chandra LayoutBangalore – 560 072	Spotted Deer -1 No, Peacock- 1 No	11000
16	Sri Vikas M, 'Upasana', No. 456, Coffee Board Layout, Bangalore - 24	Indian Cobra- 1 No	2000
17	M/s Kirloskar Toyota Textile Machinery Pvt Ltd, Jigani Industrial Area, Benagloru	Elephant, White Tiger, Ostrich, Porcupine, Indian softshell turtle, LTM, Lovebirds, Rainbow Lorikeet, Yellow Golden Pheasant	350000
18	Sri Lithesh Chowdappa, #2, 'Buddha Nilaya', H.T. Lane,Sir M.V Nagar, R.M Nagar, Bangalore - 560016	Peacock-1 no.	3500
19	Smt. Sharadamani Swamy Rad. J. B, #25, RMV Extension, 2nd Stage, 1st Block, 2nd Cross, Bangalore - 560094	Tortoise	2000
20	Sri .R Kishor Kumar, Honnenahalli Village, Chikkaballapura Taluk & District.	Indian Cobra	2000
21	'Environment Club', Bishop Cotton Women's Christian Law College #19, 3rd Cross, C.S.I. Compound, Bangalore-560 027	White Peacock (Male)	3500

	Name & address of the Person/Firm	Name of the animal adopted/Nos.	Amount Paid
22	Sri Sharath Kumar Shetty, Yelahanka, Bangalore	Tortoise	2000
23	Forgepro India Private Limited, #2,3,4(Part), Harohalli Industrial Area, Kanakapura Taluk, Ramanagara Dist	Tiger - 1 No	100000
24	Dr. Lakshmi Ananth, G-403, Vaishnavi Ratnam, S.M. Road, Jalahalli Cross, T-Dasarahalli, Bangalore - 560057	Peacock-2 Nos King Cobra - 2 Nos	14000
25	Jayanthi. H.S, #762, 7th Main, Srinagar, Bangalore - 560050	Indian Cobra	2000
26	Sri Deepak.N, #391, 5th Main, 2nd Cross, BSK 1st Stage, Hanumanthnagar, Bangalore	Indian Cobra - 2 Nos	4000
27	Sri Renuka Prasada. C, #502, 5th Cross, 4th Main, BCMC Layout, Raghuvanahalli, Kanakapura Road, Bangalore	Sparrow Rat Snake	2000
28	Supriya G.D, #2090/30, 9th Cross, RPC Layout, Vijayanagar, Bangalore - 560104	Leopard - 6 Nos, King cobra-1, Jungle cat-1	26000
29	M/s Kumar Organic Products Ltd., #813/C, 13th Cross, JSS College Circle, 7th Block, Jayanagara, Bangalore - 560032	Tigress - Sindu	100000
30	Sri Nagarjun. G.D #403/75, Gowri Nilaya, 7th Cross, 1st Block, Jayanagara, Bangalore	Rat Snake - 1 No	1000
31	Deepak Raj Acharya, #84, 3rd Block, PWD Quarters, Wilson Garden, Bangalore - 560027	Sparrow	1000
32	Nikita Joshi, Villa 248, Himagiri Meadows, Gottigere, Bangalore - 560 083	King Cobra - 1 No, Barn Owl - 1 No	7000
33	Navdeep Joshi, Villa 248, Himagiri Meadows, Gottigere, Bangalore - 560 083	White Tiger - 1 No	100000
34	Sri Abhishek Tiwari, D1-404, Alpine Eco Apartments, Doddanakundi, Bangalore- 560037	Red eared slider turtle	2000
35	Sri Paritosh, #422, 1st Main, 3rd Cross, Ideal Homes, R.R.Nagar, Bangalore	Crocodile- 1 No, Indian Cobra - 1 No, Rhea - 1 No	19500
36	Dr. B.S. Sridhara, 727, "Heramba", 9th Main, 3rd Block, 3rd Stage, Basaveshwaranagara, Bangalore-560079	1. Asiatic Elephant 2. Asiatic Lion 3. White tiger 4. Bengal tiger 5. Leopard	510000
37	Vedika Nidhi Reddy, #207, 24th Cross, Doddanekunddi, Bangalore - 560037	India Cobra	2000
38	Monika. P, #946, 16th Cross, Kumaraswamy Layout, Bangalore - 560 078	Star Tortoise, Peacock	5500
39	Sahana Prasad, #1281, 48th Cross, BSK 5th Stage, Uttarahalli, Bangalore -560061	Startortoise	2000
40	Sri Punith. H.C, #102, Bilba 2nd main, 2nd Pahse, Vijayanagara, Bangalore - 40	Lady Amherst's Pheasant	3500
41	Shilpa. C.S, #1/1, 12th 'A Main, Rajajinagar, Bangalore	White Peacock, Spotted Deer	11000
42	M/s Siemens, Bangalore	Indian Cobra	2000
43	Vimal K.G, #1/39, VOC Nagar, Kavaipudur, Coimbatore, Tamil Nadu - 641042	Indian Cobra - 10 Nos	10000



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