



ANNUAL REPORT

2014-15

Bannerghatta Biological Park (BBP)



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Design
Sony KT



A Non-Governmental Organization (NGO) working on the front of Environment, Forests, Communities and Tourism (EFCT), and bring about qualitative inputs that will help in the planning and strategizing for a sustainable framework. The focus areas include Policy, Research and Advocacy, Ecotourism Consulting, Responsible Tours, Environmental Impacts, Environment Education and Rural Livelihoods.

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All inputs provided have been thoroughly researched and verified.

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What is our Vision

The vision of the Bannerghatta Biological Park is to create an opportunity to the citizens - specially to children of Bengaluru Metropolitan City to have a Biological Recreation Center very close to the city in the midst of the forests

We achieve our Vision through this mission

To inculcate the awareness of nature conservation, provide natural habitat to all the animals suitable for their conservation and propagation through educational program and to connect visitor and wild animals through exemplary welfare, care and best educational practice to foster public support in ex-situ conservation.

Our commitment is to achieve these objectives

- a) 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.
- b) Supporting the conservation of endangered species by giving species, which have no chance of survival in 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
- c) 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.
- d) 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.
- e) Bring awareness to the public on conservation and propagation of wildlife by conducting regular awareness and education campaigns and programs
- f) Providing dedicated facilities for the rescued and orphaned wild animals by providing appropriate housing, clinical and management facilities in off-the display area
- g) To serve as gene pool and germplasm reserve for future biological research on wild animals and to extend facilities for studies on behaviour and breeding of different animals.
- h) To provide recreational opportunity to the visiting tourists.
- i) To sustain the founder population and also to augment the depleting populations of endangered species in the wild.



Thoughts from the Distinguished Member Secretary

The Zoos in India were established with diverse objectives ranging from Wildlife Preservation and recreation and other activities with the establishment of Central Zoo Authority in New Delhi, the management of the Zoos which were hitherto managed by various bodies was streamlined under various guidelines issued by the Central Zoo Authority.

The Zoos in India have moved away from recreation to nature education and in-situ conservation activities.

The Bannerghatta Biological Park was initially established in the early 1970s as a Children's Park. This was a part of the present Bannerghatta National Park. About 731 Hectares of Land was carved out of Bannerghatta National Park and christened as Bannerghatta Biological Park. When the Zoo Authority of Karnataka was formed in 2001 it was brought under its control.

The Bannerghatta Biological Park over the years has grown by leaps and bounds and this annual report of 2014-15 showcases the achievements of the Executive Director, Bannerghatta Biological Park, his officers and staff who have put in all their effort. This Annual Report also promises to make BBP grow further.



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R.S. Suresh, IFS.,
Additional Principal Chief Conservator of Forests
and Member Secretary,
Zoo Authority of Karnataka

From the Desk of the Executive Director

The Bannerghatta Biological Park (BBP) has become a destination of choice for all those who like to experience nature and the wild. Today, BBP as it stands has grown leaps and bounds. Acting on the plan approved by the Central Zoo Authority, the BBP has ensured standard designs are coming up across locations within the BBP enclosures. This will ensure that the future Zoo management will be easier and provide for a better experience of the visitors.

The Annual Report in your hand is no doubt a report that provides for our achievement, but it is a document that will help build on the future opportunities and innovations as well.

There is scope for improvement, and we have been moving step by step to ensure quality in the environment. With the ever increasing number of visitors, we have to cater to different tastes, including the visitors who are challenged. The idea of setting up a Center for the visually impaired, will see the light of day in the near future, and Bannerghatta will be one of the few to host an infrastructure of this kind. We have even envisaged a braille center where specimens will be kept for the visually impaired to experience nature. We have contemplated vehicles for the challenged, such that, they too can enjoy nature by learning through the Zoo and the other products that are available for public view.



We look forward to contribute to the betterment of the Zoo through the voluntary support through the animal adoption scheme which has been one of the most successful across the Zoos in India.

Animal exchanges is another area, where we are focusing and we will ensure that the visitors get to see the best of animals, from across the country.

Sri. Rangegowda IFS

Chief Conservator of Forests and Executive Director,
Bannerghatta Biological Park, Bengaluru



The Past: How it all began, the story of Bannerghatta Biological Park

The Bannerghatta Biological Park (BBP) as we know of it today, was created in 2002 with 545.00 Hectares of forest from the National Park being set aside to constitute the Biological Park, which was further extended to 731.88 Hectares.

Panning the pages of History one comes across the name of Shri YML Sharma, IFS, the then Chief Conservator of Forests and also the Head of the Forest Department, who was responsible for identifying the need of a place where Bengaluleans can enjoy the solitude of the wilderness. He was instrumental in visualizing and creating the Bannerghatta National Park (BNP). It was his intervention. The support he received from the then Governor of Karnataka, Shri Dharma Vira, and Shri Ramakrishna Hegde was noteworthy. Shri Dharma Vira, promulgated the notification declaring 104.27 square kilometers of forest as the National Park in 1974.

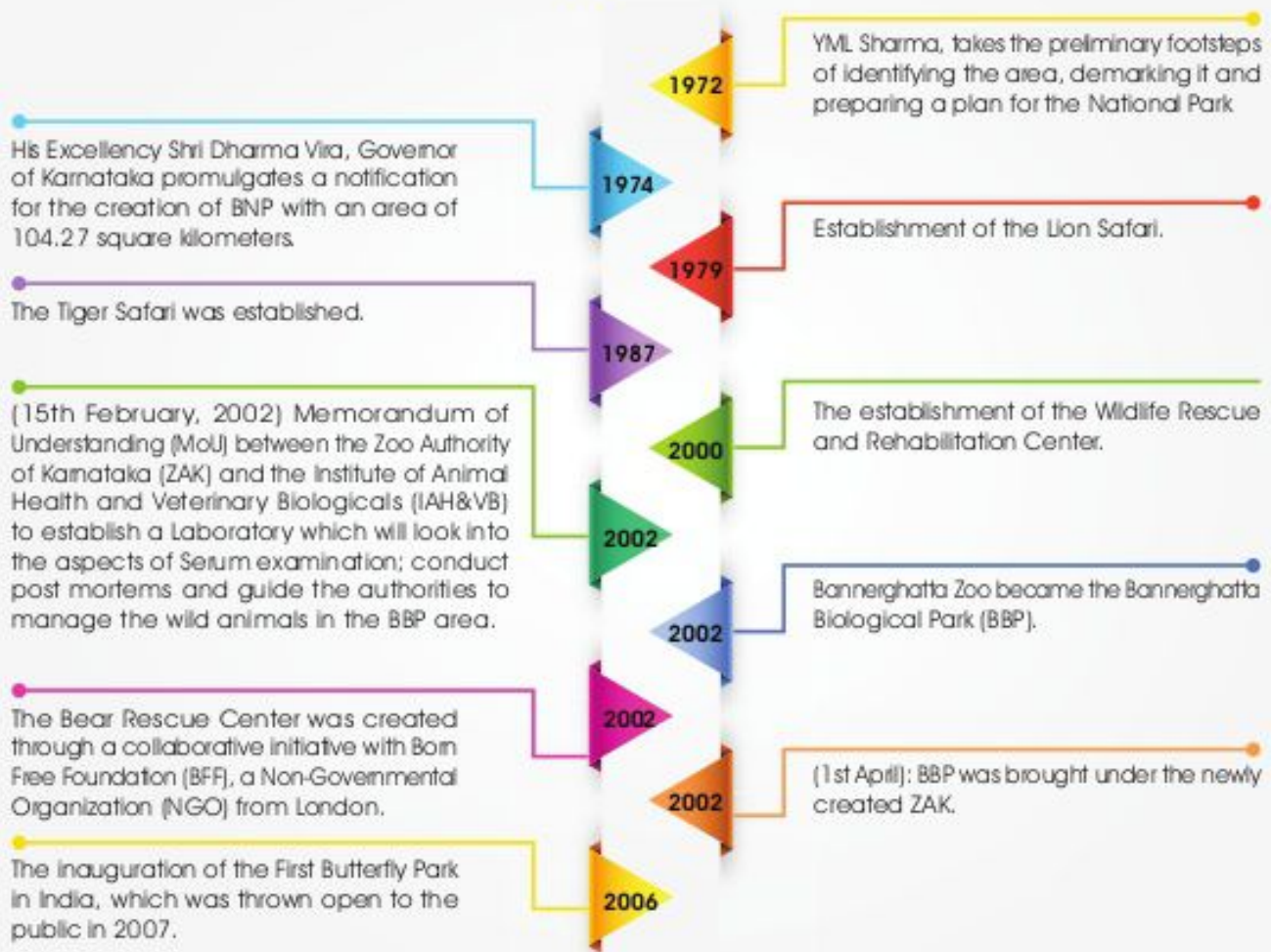
List of officers headed Bannerghatta Biological Park after bifurcation of Bannerghatta National Park and Bannerghatta Biological Park

1. Sri B.M.T.Rajeev, IFS –
2. Sri N.L. Raghava – 27-06-2003 to 30-06-2003

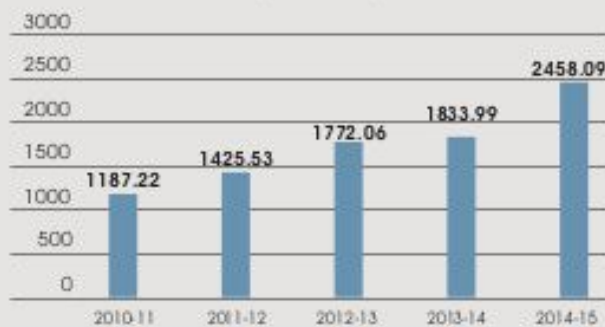
3. Sri K.B. Markandiah, IFS – 1-7-2003 to – 25-06-2006
4. Smt. Geethanjali, IFS – 26-06-2006 to 08-03-2007
5. Sri K.B. Markandiah, IFS – 08-03-2007 to 05-05-2008
6. Sri Millo Tago, IFS – 05-05-2008 to 09-03-2011
7. Sri Chandrashekhar (in-charge) – 09-03-2011 to 29-04-2011
8. Dr. R.Raju, IFS – 29-04-2011 to 06-03-2013
9. Sri N.Devaraju, IFS – 06-03-2013 to 16-09-2013
10. Sri Range Gowda, IFS – 16-09-2013 to till date.

The history of BBP as we see today is one of glory and a contribution of the forest officers and their teams, who have strived to the BBP a better place not only for the animals but the visitors to ensure a qualitative experience of the wild animals. BBP stands head on for more glory in the future and surely will reach to the global levels of Zoo management.

Milestones at a glance:



BBP Total Revenue (In Lakhs)



BBP Visitors (in Lakhs)



The year that was...glimpses of the events of 2014-15

Approval of Master Plan to Bannerghatta Biological Park by the Central Zoo Authority, New Delhi

Master Plan for the development of Bannerghatta Biological Park for the period 2014-34 i.e. for 20 years is prepared as per the norms and guidelines prescribed by Central Zoo Authority, New Delhi and got approved vide letter No. F.No.19-80/92-CZA(125)(Vol.IX)(M)/6414 dated: 10-12-2014. As per the design and layout plan approved, 7 new animal holding enclosures are taken up for construction.

Participation towards the development of Bannerghatta Biological Park by M/s Infosys Foundation, Bengaluru

Infosys Foundation, Bengaluru has participated and donated towards the development of Bannerghatta Biological Park (BBP) by doing the following at BBP.

- i. Construction of Over Head tank with a capacity of 2 lakhs liters
- ii. Construction of Tiger enclosure
- iii. Digging of 5 bore-wells in the premises of BBP
- iv. Gift to the contract employees as a token of appreciation.

Total cost of all above works to a tune of 190.00 lakhs is donated by Infosys foundation, Bengaluru for which BBP is grateful to them.

Establishment of Leopard Safari

An area for 20.90 Ha is earmarked for establishment of leopard safari and layout plan is approved by the Central Zoo Authority. As a 1st phase, design of chain link fencing and animal holding house has been approved by the CZA and estimate is prepared at a cost of 143.00 lakhs and sent to PWD for technical scrutiny and clearance.

Osmosis Plant (Shudha Ganga Project) at Bannerghatta Biological Park

Joint venture with Sri Kshethra Dharmasthala Rural Development (R) and Bannerghatta Biological Park, on the basis of 50:50 share an Osmosis Plant (Shudha Ganga Project) has taken up and put into use for the visitors and tourists for Drinking Water Supply in the zoo. About 3000 tourists every day are benefited by this project.

Special safari vehicles to corporate and other tourists for safari

Tourists who are visiting to BBP is day by day increasing hence it was felt necessary to give comfortable facilities and to increase revenue to BBP. Special safari vehicles such as AC mini buses, AC and Non-AC jeeps are put into services for visiting tourists.

Operation of 3D theater

It is to inspire among zoo visitors empathy for wild animals, an understanding and awareness about the need for conservation of natural resources, the involvement of every visitor is important. The visual media is one of the most important tools of imparting the knowledge of conservation in the minds of visiting tourists. Realizing this importance, Bannerghatta Biological Park has established a sophisticated 3D auditorium built within the zoo premises. The air conditioned auditorium is fully equipped with designed audio and video system. This auditorium is having the capacity of 120 seats, films on conservation, nature education and wildlife management are screened on day to day basis for the benefit of interested visitors.

Elephant Care Centre for housing captive elephants

BBP has recently opened a new setup for the management of captive elephants referred to as "Elephant Care Centre". CZA has approved an area of 49.50 Ha of scrub and dry deciduous forest with water holes. This area is covered by solar fencing.





Presently 19 elephants are housed in the enclosure during day. An area of 0.65 Ha of land within the enclosure is earmarked for emergency Care. To keep watch on the elephants, it is proposed to construct 1.61 km elephant proof barricading. The facilities like kitchen and shelter, drinking water facility are also proposed. Routine health checkup of elephants are being attended by veterinarians.

Membership of World Association of Zoos and Aquariums (WAZA)

BBP has awarded the Institutional Membership of the World Association of Zoos and Aquariums (WAZA) and hence our organization is recognized as one of the global zoo membership agency.

Exchange of animals between BBP and Foreign Zoos

CZA has approved the proposals of exchange of animals BBP, Bengaluru and between Safaripark Zoo, Halle-Sturkerboik, Germany for African Lions and Elands and Zebras from Zoological Centre Tel Aviv, Ramat Gan, Israel. Import permission from the competent authority is received and the animals will be exchanged as per proposals.

Sunder elephant

As per Hon'ble Supreme Court's order, an Elephant by name Sunder was brought to Bannerghatta Biological Park (BBP) on 6th June 2014 from Kolhapur, Maharashtra (Owned by Jyotiba Temple Management Committee, Kolhapur).

People for the Ethical Treatment of Animals India, (PETA), Delhi based an NGO came forward to sponsoring Sunder's lifelong care. They also came forward to construct solar

fence around the Elephant care Centre and construction of one (1) 0.65-acre emergency care within the Enclosure to contain and separate the elephants, for medical emergencies and bouts of uncontrollable aggression. Regarding this MoU was executed between BBP & PETA on 11th September 2014.

Renewal of MoU between Wildlife SOS and Forest Department for upkeep and maintenance of Rescued Bears at Bannerghatta Bear Rescue and Rehabilitation Centre.

The existence of Wildlife SOS arises due to an agreement between MS, ZAK and Wildlife SOS during November 2005. As a result an area on 8.00 acres within the existing bear safari was allowed to use by the Wildlife SOS for providing the maintenance care to the rescued dancing bears brought from outside legally. This agreement has the currency period of 10 years and will come to an end on 30.11.2015. However the Government of Karnataka has permitted for the renewal of MoU by extending another 20 years vide letter No. AaPaJee/326/FWL/2013 dated: 10-12-2013.

Renewal of MoU between ZAK & BFF

Born Free Foundation, a charitable organisation having its office at United Kingdom, the agreement with Zoo Authority of Karnataka to run life time care for the rescued tigers from London Circus. The Memorandum of Understanding between Zoo Authority of Karnataka and Born Free Foundation expired on 31st March 2011. However the Government of Karnataka has permitted for the renewal of MoU from 29-11-2013 by extending another 10 years vide letter No. AaPaJee/321/FWL/2013 dated: 10-12-2013



Participation towards the development of Bannerghatta Biological Park by M/s Ashrya Hashta Trust, Bengaluru in collaboration with Narayana Hrudayalaya Pvt. Ltd., Bengaluru

M/s Ashrya Hashta Trust, Bengaluru in collaboration with Narayana Hrudayalaya Pvt. Ltd, Bengaluru has donated the following medical equipments for the health care of captive animals.

Sl.No	Item Name	Manufacturer/model
1	ECHO USG Machine	GE Logic P8
2	Non Invasive Monitor	Mindray MEC 1200
3	Portable X-Ray	GE
4	OT Table	Confidential
5	Tranquilizing gun	DAN – Inject JMDB.13 Rifle

ISO 9001-2008 Certification to BBP

Quality Management System certificate covering the assessment and certification of our organization to the International Standard ISO 9001-2008 has received by a German Certification Body with QCI Accreditation. The Bannerghatta Biological Park has been awarded a Certificate of Registration to ISO 9001:2008. Bannerghatta Biological Park becomes ISO 9001:2008 certified organization w.e.f. 12-06-2015 due to collective efforts of BBP Management Financial Assistance for the various development works at Bannerghatta Biological Park by Central Zoo Authority, New Delhi

Financial Assistance for 193.92 lakhs as share of Central Zoo Authority to Bannerghatta Biological Park is granted by the Central Zoo Authority for the following development works at Bannerghatta Biological Park, Bengaluru.

Sl.No	Name of the work	Amount approved as CZA Share (in lakhs)
1	Construction of Nilgiri Langur Exhibit	56.99
2	Construction of Lion Tailed Macaque Exhibit	51.93
3	Construction of exhibit for Himalayan Black Bear	85.00

127th GC meeting held on 29-10-2014

1. Exchange of animals between zoos

Bannerghatta Biological Park (Species to be given)	Nos	Sepahijala Zoological Park, Tripura (Species to be acquired)	Nos
Lion	1:1	Spectacle Langur	1:2
Sambar	1:1	Macaque Pig Tailed	1:2
Porcupine	1:1	Himalayan Black Bear	1:1
Black Buck	1:2	-	-

2. Exchange of animal proposals between Bannerghatta Biological Park and Sri Chamarajendra Zoological Gardens, Mysore

Bannerghatta Biological Park (Species to be given)	Nos	Sri Chamarajendra Zoological Gardens, Mysore (Species to be acquired)	Nos
Indian Gaur	1:0	Hog Deer	5:5
Pelicans	3:3	Nilgai	5:10
-	-	Indian Gaur	2:3
-	-	Wallaby	2:2

3. Exchange of animal proposals between Bannerghatta Biological Park and Nandankanak Biological Park, Bhubaneswar

Bannerghatta Biological Park (Species to be given)	Nos	Nandankanak Biological Park, Bhubaneswar, (Species to be acquired)	Nos
Indian Gaur	1:0	Barking Deer	4:4
Pelicans	3:3	Four Horned Antelope	1:2
-	-	Open Bill Stork	0:0:4
-	-	Jungle Cat	2:2

Battery operated vehicles for tourists to go around zoo

Eco friendly and non polluting Battery Operated vehicles to go round the zoo for senior citizen, children, handicapped tourists have been provided by entusting on tender bass.

4. Execution of MoU between Bannerghatta Biological Park and PeTA, India for upkeep of elephant "Sunder"
5. Financial Assistance of Rs. 1.50 lakhs for the project "Physio-biochemical and reproductive endocrinological parameters in captive tigers"
6. Permission to condemn and auction the vehicle which are not in good working conditions
7. Purchasing two Toyota Innova Cars for Special Safari
8. Permission to dismantling the old structures/enclosure as per the Master Plan
9. Constitution of works Technical Committee of Bannerghatta Biological Park

128th GC meeting held on 24-01-2015

1. Construction of Leopard safari to BBP, Bengaluru
2. Purchase of 2 new utility Jeeps to BBP, Bengaluru
3. Holiday allowances to Daily wages/contract employees of Bannerghatta Biological Park, Bengaluru
4. Holidays (COMENSATORY HOLIDAY) to daily wages/contract employees of Bannerghatta Biological Park, Bengaluru
5. Implementation of ESI benefits to daily wages/contract employees of Bannerghatta Biological Park, Bengaluru
6. Permission to Wildlife SOS for assistance in care of rescued wild caught leopards housed at Rescue Center at Bannerghatta Biological Park, Bengaluru
7. Construction of 4 number of vendor shops by the side of Suvanamukhi garden in Bannerghatta Biological Park, Bengaluru
8. Purchase of 2 new 20 seater mini buses to Bannerghatta Biological Park, Bengaluru
9. Exchange of animals between zoos



10. Exchange of animal proposals between Bannerghatta Biological Park and Mahendra Chaudary Zoological Park, Chhatbir, Chandigarh

Bannerghatta Biological Park (Species to be given)	Nos	M.C Zoological Park, Chhatbir, Chandigarh (Species to be acquired)	Nos
Tiger	1:1	Black Buck (Albino)	2:3
Star Tortoise	5:5	Assamese Macaque	1:1
Grey Pelican	4:4	Goral	1:1

11. Exchange of animal proposals between Bannerghatta Biological Park and Sajjangarh Biological Park, Udaipur, Rajasthan

Bannerghatta Biological Park (Species to be given)	Nos	Sajjangarh Biological Park, Udaipur, Rajasthan (Species to be acquired)	Nos
Tiger	1:0	-	
Lions	1:1	-	

13. Exchange of animal proposals between Bannerghatta Biological Park and Chennai Snake Park

Bannerghatta Biological Park (Species to be given)	Nos	Chennai Snake Park (Species to be acquired)	Nos
River Terrapin	1:1	Reticulated Python	2:3
Star Tortoise	15		

14. Exchange of animal proposals between Bannerghatta Biological Park and Jaipur Zoo

Bannerghatta Biological Park (Species to be given)	Nos	Jaipur Zoo (Species to be acquired)	Nos
Indian Wolf	2:0	Indian Wolf	0:2

15. Financial Assistance for the upkeep and maintenance of Rescued animals housed at Bannerghatta Biological Park under CAMPA funds for Rs. 150 lakhs

16. Providing financial allocation of Rs. 5.00 lakhs per annum to Wild Animals Disease Diagnostic Laboratory at BBP

Major developmental works carried out during 2014-15

Sl. No	Particulars
1	Construction of Hippopotamus enclosure in the premises of zoo
2	Construction of Himalayan Bear enclosure in the premises of zoo
3	Construction of Assamese Macaque enclosure in the premises of zoo
4	Construction of common langur enclosure in the premises of zoo
5	Construction of Nilgiri langur enclosure in the premises of zoo
6	Construction of Lion Tailed Macaque enclosure in the premises of zoo
7	Resurfacing of asphalt road inside the Herbivore Safari and Elephant Care Center at Bannerghatta Biological Park, Bengaluru
8	Resurfacing of asphalt road inside the Bear Safari
9	Construction of visitors path from existing Sangal Deer enclosure upto loop road in the premises of zoo
10	Construction of size stone masonry wall at old herbivore safari entrance gate in the zoo premises of zoo
11	Resurfacing of asphalt road from Butterfly Park entrance to Rescue Centre entrance
12	Construction of size stone masonry wall near rock garden in the zoo premises of zoo
13	Construction of Watch Tower in Elephant Care Centre at Bannerghatta Biological Park, Bengaluru
14	Desilting and upgradation of various tanks in the safari area
15	Construction of compound wall around Rescue Center at Bannerghatta Biological Park, Bengaluru
16	Concrete pavement near culverts for Road in the safari roads at Bannerghatta Biological Park, Bengaluru
17	Providing cobble stone pavement to the Butterfly park pathway in place of B S slab at Bannerghatta Biological Park
18	Rising of compound wall and providing chain link Fencing and Barbed wire for zoo outer compound wall at Bannerghatta Biological Park, Bengaluru
19	Supply, Erection, Commissioning and Demonstration of New electric weigh bridge 20 MT
20	Construction of Chinese Ring Necked Pheasant enclosure in the premises of zoo
21	Construction of 33 Scarlet Macaw enclosure in the premises of zoo
22	Construction Galah Parrot enclosure in the premises of zoo



What to expect and attractions on offer- Bannerghatta Biological Park

A rendezvous with our animal inmates - the Zoo

Being an integral part of the BBP, the Zoo attracts large crowds throughout the year. On an average 1.5 million visitors come to the Zoo every year. The area of the zoo is



a saddle between the *Champakahama* hill and *Mirza* hill in the Bannerghatta Sandal Reserve. The vegetation of the area is encompassed over a very good tree growth of lofty height and large number of bamboo breaks with a natural stream running from north to south (seasonal). The location of the zoo is in between the hills and therefore, it always maintains a cool climate throughout the year with a lush green and salubrious nature.

From a Layout perspective, the Bannerghatta Zoo was evolved over a period of time and developed in a more traditional way without a comprehensive plan and vision. But then over a period of time, the Zoo evolved and the Management Plan is helping in ensuring the Zoo evolves further on scientific lines.

Today we see the lawns, garden and tree growth within the Zoo are being paid more attention and efforts are on to create a congenial atmosphere through scientific planning.



The arterial roads within the Zoo are being asphalted and foot paths for the movement of buggies and people has ensured easier access to the sight-seeing spots within the Zoo. For the young, middle aged and the old, the Zoo management has ensured shelters in the form of pergolas and stone benches at vantage points which would help one to relax and move around. The rest room facilities within the Zoo has also been well appreciated. Drinking water facilities and off course the small cafeterias and restaurants have ensured visitors need not have to come out of the park for food.

Consider this, the BBP Zoo have moved in hierarchy from a menagerie to Mini Zoo to today being a large Zoo¹ by the Central Zoo Authority (CZA)², for its sheer size and animal population. Though there are a total of 58 enclosures as at present, qualitative and scientific works are being done to accommodate all existing animals on a theme basis, which will add to the nuance of conservation, preservation, and recreation.

Clearly one can see that the Management Plan evolved for BBP by the officers under the framework of the CZA will

ensure qualitative and scientific growth and development. If one were to see the easily available map of the Zoo area from a satellite image, it is very clear.

Hence, if one were to analyze the intent of the founding fathers, who wanted to have a Safari Park, a Picnic Corner for the people of Bengaluru, the Zoo at BBP has come a long way to ensure the objective of conservation, preservation and recreation.

Satellite Image (shaded for easy identifying)³



Satellite Image (more refined, once can see the other destinations as well)⁴



Captive Animals and Birds#

Type	Number of Species	Total Number
Mammals	31	354
Birds	44	779
Reptiles	15	186
TOTAL	90	1319

as on 31st March, 2015

1 CZA recognition provided during the year 2013-14

2 www.cza.nic.in

3 <http://wikimapia.org/#lang=ja&lat=12.801339&lon=77.574002&z=17&m=b> accessed and retrieved on 6th June, 2015

4 <http://wikimapia.org/#lang=ja&lat=12.799791&lon=77.577682&z=16&m=b> accessed and retrieved on 6th June, 2015

Statement of animals (housed in the Zoo)⁵

Sl. No.	Name of the animal	M	F	U	T
Schedule I and II Species (Wildlife)					
Birds					
1	Great Indian Horn Bill	0	1	0	1
2	Pea fowl Indian	2	5	0	7
3	Spoon bill	1	0	0	1
4	Kalij Pheasant	2	4	0	6
5	Fowl jungle grey	2	0	0	2
6	Red jungle fowl	7	3	0	10
	Total	14	13	0	27
Other Schedule and Exotic Species (Wildlife)					
1	Baya Weaver	0	0	2	2
2	Budgeriger	0	0	3	3
3	Cockatiels	8	7	0	15
4	Heron Night	20	35	0	55
5	Ibis White	1	5	0	6
6	Love Birds	48	45	0	93
7	Munia Black Headed	5	5	0	10
8	Barn Owl	0	0	1	1
9	Eurasian Eagle Owl	2	1	0	3
10	Parakeet Alexandrine	1	3	0	4
11	Parakeet rose ring	17	4	0	21
12	Pelican grey	17	14	0	31
13	Red crested pochard	2	2	0	4
14	Stork painted	0	1	0	1
15	Golden Pheasant	1	0	0	1
16	Emu	3	4	0	7
17	Pea Fowl white	2	2	0	4
18	Lady Amherst Pheasant	2	2	0	4
19	Ostrich	1	2	0	3
20	Chinese ring necked Pheasant	1	1	0	2
21	Black swan	1	0	0	1
22	Silver Pheasant	5	5	0	10
23	Green Winged Macaws	2	2	0	4
24	Rhea	2	2	0	4
25	Amazon Parakeet	1	1	0	2
26	African grey parrot	1	1	0	2
27	Sun Conure Parrot	3	1	2	6

5 BBP Master Plan, 2014-15 to 2033-34

Sl. No.	Name of the animal	M	F	U	T
28	Black Crowned crane	1	1	0	2
29	Blue gold Macaws	1	1	0	2
30	Palm cockatoo	1	1	0	2
31	Electus parrot	1	1	0	2
32	Sulphur crested cockatoo	1	1	0	2
33	Scarlet Macaw	1	1	0	2
34	Galah Parrot	1	1	0	2
35	Mottled wood owl	0	0	2	2
36	Rainbow lorikeet	0	0	2	2
37	Red Lorikeet	0	0	6	6
	Sub Total	153	152	18	323
	Total	167	165	18	350

Mammals

Schedule I and II Species (Wildlife Protection Act)					
1	Black Buck	4	11	0	15
2	Leopard	12	12	0	24
3	Lion Tailed Macaque	1	1	0	2
4	Himalayan black bear	4	2	0	6
5	Jackal	2	3	3	8
6	Macaque Rhesus	3	7	0	10
7	Common Langur	1	3	0	4
8	Indiann Giant Squirrel	1	2	0	3
9	Shanghai Deer	3	6	0	9
10	Mouse deer	0	1	0	1
11	Wild dogs	2	0	0	2
12	Indian Grey Wolf	3	0	0	3
	Sub Total	36	48	3	87
Other Schedule and Exotic Species (Wildlife)					
1	Hippopotamus	2	5	0	7
2	Porcupine	3	3	5	10
3	Cat toddy	1	1	2	4
4	Chital/Spotted Deer	4	12	0	16
5	Marmosets	1	0	0	1
6	Hog Deer	5	8	0	13
	Sub Total	16	28	7	51
	Total	52	76	10	138

Reptiles

Schedule I and II Species (Wildlife Protection Act)					
1	Crocodile long snouted Gharial	0	4	0	4
2	Crocodile Marsh	2	2	0	4

Sl. No.	Name of the animal	M	F	U	T
3	Indian Rock Python	2	2	0	4
4	Cobra Indian	10	10	0	20
5	King Cobra	1	1	0	2
6	Viper Russells	4	2	2	8
7	Common Indian Monitor Lizard	0	0	1	1
8	Rat snake	0	0	30	30
Sub Total		19	21	33	73
Schedule I and II Species (Wildlife Protection Act)					
1	Snake Sand Boa	1	1	0	2
2	Tortoise Indian Star	4	5	0	9
3	Crocodile Caiman	15	11	0	26
4	Red eared slider turtle	0	0	78	78
5	Batagar Terrapin/River Terrapin	12	8	0	20
6	Indian Mud or Flapshell Turtle	3	2	0	5
7	Morelet's crocodile	1	1	0	2
8	Iguana Green	1	0	0	1
Sub Total		37	28	78	143
Total		56	49	111	216

Our colourful winged beauties - the Butterfly Park

According to estimates, there are about 20,000 different butterfly species in the world, of which 1,501 exist in India⁶. Butterflies, attract attention of all for their beauty, the grace, and the efforts they take at survival. Besides, of course Scientists and the common man get attracted to Butterflies which fall under the invertebrate group, for the metamorphosis, one of the most remarkable phenomena of nature⁷, which the Butterfly demonstrates. Metamorphosis involves four stages:



6 <http://www.hindustantimes.com/newdelhi/butterfly-park-coming-up-in-delhi/article1-1239719.aspx> accessed and retrieved on 3rd May 2015

7 <http://www.bhoygupta.com/nature/butterfly-parks-of-india-46/> accessed and retrieved on 2nd May 2015

Egg:

The female butterfly lays eggs on the underside of leaves of plants so that when caterpillars later emerge from the eggs, they can immediately get food from the plant leaves.

Larva:

Also called caterpillar, emerge from the eggs after a few days. The caterpillar is an eating machine and spends most of its time eating.

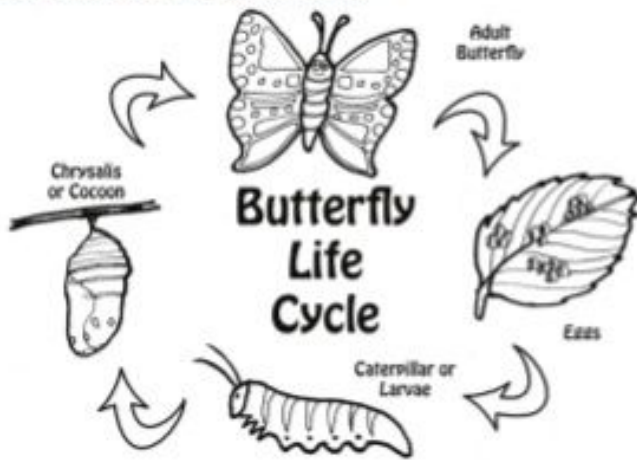
Pupa: (Chrysalis)

When the caterpillar has finished growing, it stops eating and forms a protective shield called Pupa. It is this stage of the Metamorphosis that the transformation from a Pupa to a butterfly takes place inside the Pupa.

Butterfly:

The pupa undergoes transformation and the caterpillar metamorphoses into a butterfly which emerges from the pupa.

Metamorphosis illustration⁸



One glance at the Circular Conservatory which occupies an area of 10,000 square feet with a Polycarbonate roof

and plays host to 20 species of Butterflies; one feels that a small insect like the Butterfly commands so much respect on account of the support it provides to the Ecosystem. Inaugurated on 25th November 2006; the Butterfly Park in Bannerghatta is the First Butterfly Park in India.

The Zoo Authorities visualized the Butterfly Park in 2001; as a result the Zoo Authority of Karnataka (ZAK) and the Department of Biotechnology, Government of India, jointly envisaged the project with a financial outlay of INR 297.85 Lakhs during the year 2003 under a Special Master Plan. The construction was initiated in 2003 and completed in 2007 and opened to public. The Bannerghatta Butterfly Park in many ways is an ensemble of best practices that can be emulated using the knowledge and information gathered over a period time to establish more such Parks anywhere in India and across the Globe. The Butterfly park is ably run with the help of Mr Yatesh, Entomologist Entomologist, Ms. Madhuri, Laboratory Assistant and other support staff.

Butterfly species displayed at the Bannerghatta Butterfly Park⁹

Sl. No.	Common Name	Scientific Name
1	Crimson Rose	<i>Pachlopta hector</i>
2	Common Rose	<i>Pachlopta aristolochiae</i>
3	Blue Bottle	<i>Graphium sarpedon</i>
4	Common Jav	<i>Graphium Agamemnon</i>
5	Sport Sword Tail	<i>Graphium nomius</i>
6	Common Mime	<i>Papilio clivia</i>
7	Lime Butterfly	<i>Papilio demoleus</i>
8	Common Mormon	<i>Papilio demoleus</i>
9	Blue Mormon	<i>Papilio polymnestor</i>
10	Common Emigrant	<i>Catopsilla Pomania</i>
11	Mottled Emigrant	<i>Catopsilla pvanthe</i>
12	Grass Yellow	<i>Eurema hecabe</i>
13	Common Jezebel	<i>Dellias eucharis</i>
14	Psyche	<i>Leptasia nina</i>
15	Common Gull	<i>Cepora nerissa</i>
16	Pioneer	<i>Anaphaelis aurata</i>
17	White Orange Tip	<i>Mias Marianne</i>
18	Yellow Orange Tip	<i>Mias pvrene</i>
19	Common Wanderer	<i>Pareronia valerica</i>
20	Tawny Coster	<i>Acraea volae</i>



⁸ http://www.greenplattypusgardens.com/uploads/1,0/5/8/10588254/butterfly_life_cycle_complete.jpg accessed and retrieved on 2nd May 2015

⁹ List enumerated as per the Bannerghatta Management Plan of 2014-15 to 2033-34

Sl. No.	Common Name	Scientific Name
21	Common Leonard	<i>Phalanta phalantha</i>
22	Common Castor	<i>Ariadne merione</i>
23	Plain Tiger	<i>Danaus chrysippus</i>
24	Blue Tiger	<i>Tirumala limnace</i>
25	Striped Tiger	<i>Danaus genutia</i>
26	Common Crow	<i>Euploea core</i>
27	Red Pierrot	<i>Tallicada nyseus</i>
28	Brown Owl	<i>Badamia exclamationis</i>
29	Three-spot Grass Yellow	<i>Eurema blanda</i>
30	Giant Redeve	<i>Gangara thyrsis</i>
31	Indian Skipper	<i>Spialia galba</i>
32	Spotless Grass Yellow	<i>Eurema laeta</i>
33	Crimson Tip	<i>Callitis danae</i>
34	Common Sailer	<i>Neptis hylas</i>
35	Malabar Tree Nymph	<i>Idea Malabarica</i>
36	Common Pierrot	<i>Castallus rosiman</i>

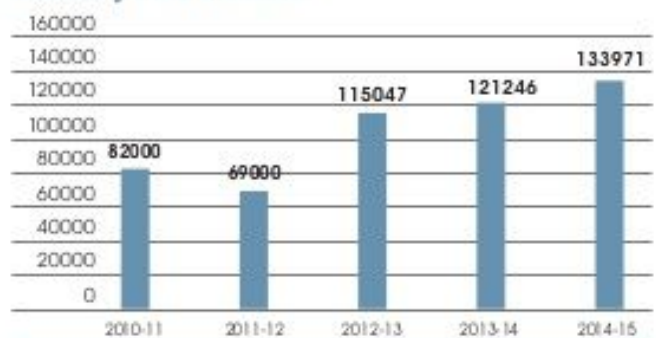


The dome where one finds the butterfly, which are released on a periodic basis, has a controlled environment and a temperature of 18° to 20° celcius has been maintained. The primary reason most of the butterflies cannot withstand the temperature beyond 21° centigrade. The visitors are wonderstruck as the butterflies hover around them and literally welcome them into the butterfly microcosm.

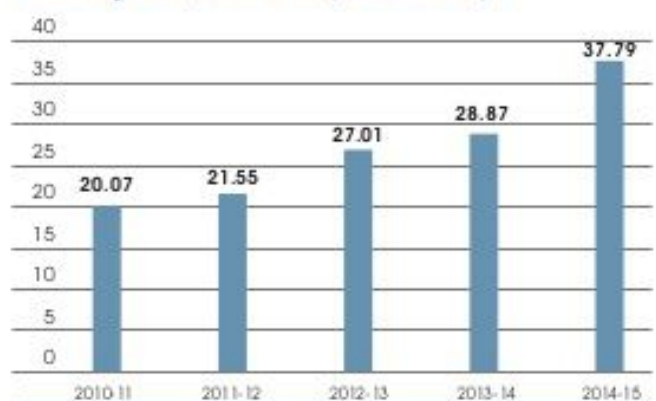
The breeding of the butterflies is no doubt a challenge, but the BBP has created an environment wherein the butterflies thrive for the short life span that they have and ensure visibility to the visitor besides educating them in a multitude of ways.



Butterfly Park Visitors



Butterfly Park, Revenue (Rs in Lakhs)



Trailing to witness our free roaming animals - the Safari

One of the important flagship products of BBP is the Safari, which has attracted visitors of all hues and in thousands. The Safari is one of the most invigorating and adrenaline pumping activity in the BBP. Jointly managed and monitored by BBP and the Karnataka State Tourism Development Corporation (KSTDC); with the BBP fixing the fee for the visitor, the KSTDC focusing on the counter sales, revenue collection, and physically monitoring the 20 mini buses with a capacity of 30 per bus that ply in the Safari route. Revenue sharing is on a 50 : 50 basis. Two high end Air Conditioned bus are also made available for high end visitors wherein Safari tours are conducted with the Naturalist helping visitors to understand by interpreting flora and fauna. This apart, BBP also conducts Safari by Jeep for the benefit of families and groups of upto four in number.



The present Safari boasts of the following:

Sl. No.	Safari enclosure	(Extent) Area (in Hectares)	Name of the Forest	Year of establishment
1	Herbivore Safari	68.00	Banneghatta Reserve Forest	Developed in the 1970's opened to Public in 2002
2	Bear Safari ¹⁰	20.00	Ragihalli Reserve Forest	2002
3	Elephant Care Center	49.50		
4	Tiger Safari	15.00	Ragihalli Reserve Forest	1987
5	Lion Safari	6.00	Ragihalli Reserve Forest	1979
Total Area:		158.5 Hectares		

Our horned vegetarians - the Herbivores

One of the largest segments of the Safari enclosure, Herbivores Safari, has evolved from the 1970's and was opened to public view in 2002. The Herbivore Safari enclosure has been barricaded with stone wall along with the additional support of solar power fence and Elephant proof trench (EPT). What is very visible in the enclosure is the vegetation that has ensured the Herbivore population survives with vigor. Species such as bamboo and anogassius interspread along with the water bodies, and the edible grass species such as *sacharam*, *symopogon* and *heteropogon* are common to the grass land and constitute as the main fodder for animals. The patches of *shorea telura* provide for shade of the animals. The water bodies, viz., *Deepankere*, *Chennamanakere*, *Gowdanakere* and *Seegadikunte* cater to the animals throughout the year. Besides the naturally available Wild Boar, porcupine and pangolin to mention a few, larger



animals like the Gaur, Sambar, Cheetal, Barking Deer, Black Buck and Nilgai were brought to BBP and released under the rescue and rehabilitation program. Over two decades, all the animals in the Herbivores enclosure has naturalized and the population has multiplied substantially, thus creating a best practice for others to emulate.

The king of the Indian Jungles- the Lion

An open enclosure of 6.00 Ha of the Ragihalli Reserve Forest, the designated Lion Safari area has tall Chain Link mesh with a height of around 15 feet, and a moat all around the Chain link mesh that has been created to avoid trespass of any wild animals; thereby avoiding conflict and also providing safety and security. A total of 11 holding rooms have been provided with the retrieval area for day time rest. The holding rooms also have a squeeze cage facility (three in number) to treat and attend the animal for any clinical or routine observations by



¹⁰ Includes 8 hectares allocated to Wildlife SoS (WSoS)

the Veterinarians and other Park staff. The Lion Pride has benefited the most and groups of Lions on a rotational basis are allowed into the Safari for the benefit of the visitors who throng in large numbers.

Our striped wonder - the Tiger

William Blake (1757 – 1827) in his Poem, The Tiger, has very eloquently spoken about the Tiger the Pride of our Jungles by mentioning the following:



TIGER, tiger, burning
bright
In the forests of the night,
What immortal hand or eye
Could frame thy fearful symmetry?

Very eloquently said about the Tiger, whom the visitors vie for a space in the vehicle traveling into the Safari to get a glimpse of the White Tiger and the Bengal Tiger. The Tiger Safari area has three different units within itself:

Sl. No.	Tiger Safari Unit	(Extent) area in Hectares
1	Indira Gandhi Tiger Safari	6.00
2	Appalah Tiger Safari	8.00
3	White Tiger Safari	1.00

The peripheral boundary has been created for all the three units by digging open moat and erecting chain link mesh fence. All the three areas have been compartmentalized as autonomous areas and provided with housing complexes as follows:

Indira Gandhi Tiger Safari



The Indira Gandhi Tiger Safari has three different units of animal housing facilities. A total of 11 rooms with 3 squeeze cages and retrieval are at the backyard are to be found.

Appaiah Tiger Safari

The 2 animal housing complexes, together have 10 animal holding rooms with the primary facilities of water and sanitation as required for the animals in the enclosures.



White Tiger Safari

This facility has 2 animal housing buildings, with 8 animal holding rooms and 3 squeeze cages are provided besides the regular water and sanitation facilities.



Our Black beauty - Bear safari

Located in the Ragihalli Reserve Forest, the Bear Safari has a peripheral open moat and an outer wall of the moat which is embedded with stone slabs all round in order to prevent the sloth bears from escaping or to avoid trespass of any other animal from the free range area. A total of 5 animal housing facilities is christened as *Panchavati*, *Chitrakuta*, *Kishkinda*, *Dr. GVK Block*¹¹ and *Jambava*¹² are home to the sloth bears. The facility also has a kitchen to take care of the needs of the bears.



The huge mass of power - Elephant Care Centre for housing captive elephants

BBP has recently opened a new setup for the management of captive elephants referred to as a "Elephant Care Centre". CZA has approved an area of 49.50 Ha of scrub and dry deciduous forest with water holes. This area is covered by solar fencing. Presently 19 elephants are housed in the enclosure during day. An area of 0.65 Ha of land within the enclosure is earmarked for emergency operations i.e., for segregating the elephants for administration of medicines and also to ensure that aggressive animals are kept out. To keep watch on the elephants, it is proposed to construct 1.61 km elephant proof barricading. The facilities like kitchen and shelter, drinking water facility are also proposed. Routine health checkup of elephants are being attended by veterinarians.



11. Constructed by Wildlife SoS (WSoS). Wildlife SoS has an Agreement with the Zoo Authority of Karnataka (ZAK), which is in force from November, 2005 to provide maintenance and care to the dancing bears rescued from the *Khatandars*. These bears have a human imprint on them. The agreement between ZAK and WSoS is to end on 30th November, 2015.

12. Constructed by Wildlife SoS

Animal Strength in the Safari Area¹³

Sl. No.	Name of Animal and Scientific Name	Safari enclosure	Male	Female	U	T	
Schedule I and II species							
1	Lion (Asiatic) <i>Panthera Leo</i>	Lion Safari	1	0	0	1	
Other Schedule Exotic species							
2	Lion (Hybrid <i>Panthera Leo</i>)	Lion Safari	14	11	0	25	
			Total	15	11	0	26
3	Tiger (Royal Bengal) <i>Panthera tigris tigris</i>	Tiger Safari	12	9	0		
4	White Tiger (Royal Bengal) <i>Panthera tigris tigris</i>		5	3	0		
			Total				
Schedule I and II species							
5	Black Buck Antelope <i>cervicapra</i>	Herbivores Safari	3	2	0	5	
6	Gaur (Indian Bison) <i>Bos gaurus</i>		3	2	0	5	
Other Schedule Exotic species							
7	Chital (Spotted Deer) <i>Axis axis</i>	Herbivores Safari	100	96	0	196	
8	Barking Deer <i>Muntiacus muntjak</i>		2	3	0	5	
9	Sambar <i>cervus unicolor</i>		83	87	0	170	
			Total	191	190	0	381
10	Sloth Bear <i>Melursus ursinus</i>	Bear Safari	41	43	0	84	

The staff to manage the Safari¹⁴

Considered the main flagship product of BBP, the Safari area has been efficiently managed by the following staff under the overall supervision of the Executive Director:



Sl. No.	Category Posts	Number
1	Range Forest Officer (RFO)	1
2	Veterinary Officer ¹⁵	1
3	Assistant Curator	1
4	Forester	1
5	Animal Supervisor	2
6	Plumber	1

13 As per the Bannerghatta Biological Park, Master Plan, 2014-15 to 2033-34, document authored by Dr. R. Raju, as per the set parameters of the Central Zoo Authority.

14 Illustration as per the Bannerghatta Management Plan of 2014-15 to 2033-34

15 Attached to the Hospital within the Zoo enclosure

16 There are a total of 9 gates in the Safari area. The Carnivores and the Bear Enclosures have a total of 7 gates and the Herbivores has 2 gates in operation. At any given point in time, the gates require two gate keepers to operate to ensure safety of all. The 16 gate keepers are engaged on an outsource basis from the nearby area of BBP. The gates are operational for the visitors from 09:00 to 16:30. The gate keepers are ferried into and out of the Safari area in the morning and in the evening by the Park authorities.

Sl. No.	Category Posts	Number
7	Animal Keepers	14
8	Computer Operator	1
9	Forest Guards	3
10	Forest Watchers	3
11	Attender (Peon)	1
12	Assistant Animal Keepers	5
13	Gate Operators	16 ¹⁶

Proposed for the future:

Considering the success factors in the Safari enclosure, it is clear that more attractions can be added over a period of time, which will also ensure that the best practices that have been learnt and understood over a period of time. The following are the proposal as per the Bannerghatta Biological Park Management Plan.

Sl. No.	Safari enclosure	Area (in Hectares)
1	Lion Safari	20.75
2	Leopard Safari	20.90
3	Conservation Breeding Center	26.45
4	Tiger Safari	6.00
Total		74.10



For our elusive hunter - Establishment of Leopard Safari

An area for 20.90 Ha is earmarked for establishment of leopard safari and layout plan is approved by the Central Zoo Authority. As a 1st phase, design of chain link fencing and animal holding house has been approved by the CZA and estimate is prepared at a cost of INR 143.00 lakhs and sent to PWD for technical scrutiny and clearance.

Out of bounds - for our injured animals to rest and recuperate - the Rescue Centre

The Zoo, the Safari, the Butterfly Park, are areas that attract lakhs of visitors every year. However, one area with the BBP that has been considered as off-display area is the Rescue Center (RC) that was established on account of the opportunity provided by the Central Zoo Authority of India. The Center was established after diligently identifying 17.50 hectares of land within the BBP limits in the year 1999 at a cost of INR 227 Lakhs. The center started functioning in the year 2000.

The RC has two compartments one each for Lions and Tigers. L-Block is designated for the Lions, and a total of 72 Lions can be housed through the 12 independent houses (each house provides for 6 lions). Each of the independent houses have a common open enclosure ranging from 1 to 2 acres. The Tiger Block or T-Block has a total of 5 housing units with each house able to hold 6 Tigers. Center also houses Leopards that have been rescued.

Animals at the Rescue Center¹⁷

Species	Male	Female	Total
Lions (Circus rescued)	14	12	26
Lions (Safari animals house in RC)	2	5	7
Tigers (Safari animals house in RC)	3	2	5
Leopards	9	9	18

¹⁷ The Leopards have been relocated from Kanakapura, HD Kote, Mysore and other areas of Karnataka.

The two independent Meat Rooms support in providing clean chopped meat to the animals at the center. A Veterinary clinic with transit facilities for storing emergency medicines is also part of the rescue center landscape. Beef, mutton and chicken that is served to the animals at the Rescue Center, is certified by the Veterinarian attached to the Center on a day to day basis after meat supplied by the tender contractor is received at the Meat Room.



Staff required to manage the Rescue Center¹⁸

Sl. No.	Post Category	Number
1	Range Forest Officer (RFO)	1
2	Veterinary Officer	1
3	Assistant Curator	1
4	Forester	1
5	Horticulture Assistant	1
6	Animal Supervisor	1
7	Plumber	1
8	Electrician	1
9	Animal Keepers	12
10	Computer Operator	1
11	Forest Guards	3
12	Forest Watchers	3
13	Attender	1
14	Assistant Animal Keeper	5
Total		33





Our Veterinary Care

Right in the middle of Bannerghatta Biological Park (Bannerghatta Zoo), the Zoo Hospital (estb: 2002) with three veterinarians and other hard working staff have been catering to the health needs of the animals at the Zoo, the Rescue Center and the Safari.

Motivated with the sole objective of serving animals and creating a good environment for the visitors who flock to the Park, the Zoo Hospital team has overseen a multitude of functions and ensured management of health of the animals in the Park.

Located within the Zoo premises, the Zoo Hospital, also referred as the Veterinary Section, caters to the needs of Health care and Management of animals that are housed in the Zoo, Safari area, and the Rescue Center. Besides the Zoo Hospital within the Zoo premises, there are 2 Veterinary clinics one each at the Rescue Center and the Safari area.

Operation theatre:

The Zoo hospital has a well-equipped, designed, spacious and air conditioned Operation theatre to cater to the surgical requirements and other interventions of the captive animals. The common operations at the Zoo hospital have been in the domain of lacerations, abdominal

injuries, fractures, spinal decompression on account of the infighting amongst the animals.



Sl. No.	Name	Designation	Qualifications	Specialization in MVSc
1	Dr. Manjunath Reddy	Assistant Director (VS) (Incharge)	BVSc, MVSc and JRF	Pathology
2.	Dr. Nirupama Jaisingh	Veterinarian	BVSc&AH and MVSc	Microbiology (Salmonella)
3.	Dr. Pa. Kalaignan	Veterinarian	BVSc (Pondicherry) and MVSc (TNUVA)	Wild Life Science
4.	Dr. Mirza Vaseem	Veterinarian	BVSc & AH (Karnataka), Post Graduate Diploma in Veterinary Clinical Sciences, Wildlife Health and Conservation and MVSc (New Zealand)	Wildlife Medicine and Conservation

Other Staff: Computer Assistant – 1, Hospital Assistants – 2



Story of Lioness Preksha

Preksha came to the Zoo Hospital with all symptoms of death. The team at the Hospital was clear that Preksha was in the last leg of its life; but the remotest chance of making an effort of saving her began with right earnest. The efforts of the team over five days through continuous treatment which ensured the animal recovered and today lives on with all its glory. The team believes that this was one of the best achievements in the recent past.

Animal exchange program:

The Hospital team supported in the Animal exchange program for identifying a White Tiger of BBP in exchange for a Bengal Tiger; which was primarily done to avoid inbreeding, besides increasing the gene pools. Constant endeavor between the Zoo Authorities and the Hospital team has ensured qualitative exchange of animals with the other Zoos of India. Thereby giving opportunity for the visitors to see animals that are from another landscape.

Animal Enrichment: means to augment Natural behavior in captive animals:

The Veterinarians at the Zoo under the able direction of the Executive Director, have taken up the task of providing enrichment to the animals on an experimental basis. The initial observations have been of behavioral changes, this over a period would lead to lessening the stress on the animals; which will eventually lead to less of interaction between the animals and the keepers, and thence of self-engagement. Leading to a qualitative interaction between the keepers and animals. The experiment which is being implemented worldwide is being tried at the BBP and providing for good results; which are being documented as a best practice. Some of the animals and the enclosures where the efforts are visible are:

- Visual inspection of the animal¹
- Cleaning and feeding;
- Human/animal interaction for enrichment;
- Providing food or object enrichment;
- Moving animals from one location to another;
- Augmenting its instinctive behavior (as the animals do not express the wild qualities once in captivity);
- Performing veterinary procedures or research protocols.

¹ http://www.activeenvironments.org/pdf/IPS_JAWWS_paper.pdf accessed and retrieved on 30th April 2015



Case of the wounded leopard

There was a case of a Leopard who had injured his limb; and had a wound that was festering forcing it to eat away its own fingers. This was off course in the wild. The Park team brought the animal to the Hospital where the team amputated the fore limb on account of the setting in of gangrene. As at present the Leopard, is in the Rescue Center, recuperating well and getting acclimatized to the new environment.



Positive Reinforcement Training System²

The use of Positive Reinforcement Training (PRT) as an animal care and management tool offers many benefits to biomedical facilities and to their animals, staff, and researchers. It allows managers to pro-actively address a wide range of situations that have significant implications for animal care and welfare. Primary among these is the ability to gain voluntary cooperation of animals in husbandry, veterinary, and research procedures. Through desensitization, the fear and stress associated with these procedures can be significantly reduced. Training can be applied in a wide array of situations. When appropriately and skillfully applied, positive reinforcement techniques represent a viable option to the traditional approach to the management of laboratory animals. By making the shift to a more positive reinforcement-based system, the welfare of animals is significantly enhanced.

Zoo Information Management System (ZIMS):

The BBP Zoo Hospital uses the Zoo Information Management System (ZIMS), which was created by the International Species Information System (ISIS)³, an international non-profit organization serving more than 912 zoos and aquariums in 87 countries worldwide. ISIS and the Central Zoo Authority of India (CZA) have a five-year memorandum of understanding with a primary goal of migrating the majority of zoos in India into the ZIMS database. Clearly, the usage of ZIMS has helped to maintain database on every animal that will ensure a 'framework' centric approach and also supports sharing of information, leading to best practices across the Zoos.

The global mission⁴ of ZIMS has been to develop, deploy and maintain a comprehensive information system that

supports a wide range of animal management and conservation activities associated with zoological institutions (aquariums and zoos) and the zoological community.

ZIMS includes the following features⁵:

- o Clinical Notes
- o Diagnosis and Procedures
- o Treatments and Prescriptions
- o Drug inventory management
- o Anesthesia
- o Samples and tests management
- o Medical Terms, Test and Treatment dictionaries
- o Reporting

ZIMS Screen shots:

Screen Shot 1⁶



Screen shot 2⁷



2 Ibid.,

3 <http://www2.isis.org/products/Pages/default.aspx> accessed and retrieved on 4th May 2015

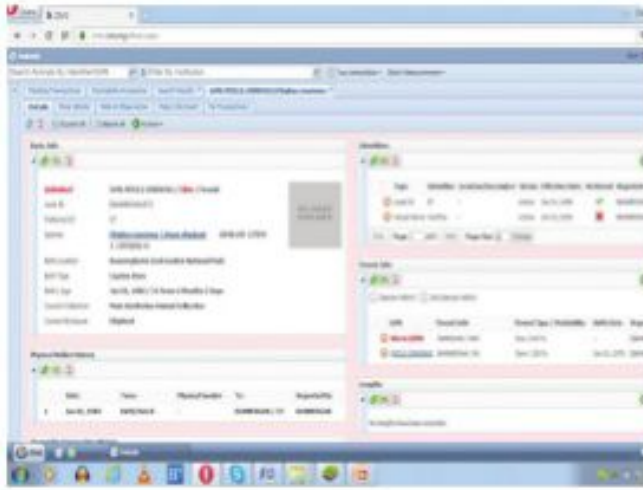
4 Ibid.,

5 <http://www2.isis.org/products/Pages/ZIMSQuotes.aspx> accessed and retrieved on 4th May 2015

6 <https://zims.isis.org/Login.aspx?ReturnUrl=%2f> accessed and retrieved on 4th May 2015

7 Courtesy: Dr. Nirupama Jaisingh, Veterinarian, BBP Zoo Hospital

Screen shot 3⁹



Screen shot 4⁹

Live shot of Bannerghatta as per the ZIMS website.



8 Ibid.

9 <http://www2.lsis.org/products/Pages/ZIMSlive.aspx> accessed and retrieved on 4th May 2015

Equipment that are used in the Zoo hospital

Ultra sound machine – Radiography

Gaseous Anesthesia

Neo Natal Incubator

Egg Incubator

Deep freezer

Dart Rifle (tranquillization) (immobilizing)





Of Diagnosis and Prognosis- The Laboratory at BBP

Animals die in captivity; one needs to ascribe reasons behind the death; hence, along with the Hospital in the BBP premises, a Laboratory, established out of a Memorandum of Understanding (MoU) between the Zoo Authority of Karnataka (ZAK) and the Institute of Animal Health and Veterinary Biologicals (IAH&VB), gets to the post-mortem of the concerned animal.

What is important? The conclusions, the inputs that are observed, the reasons for the death; are critical for one to evaluate, as this would be a rare or rare case, or is

it endemic to the species. Clearly the Laboratory looks into the diagnosis and prognosis of zoo animals and also looks into the finer aspect of research. Most, if not all the treatments being meted out to the animals are based on the Pathology reports of the Laboratory.

The MoU between ZAK and IAH&VB has ensured that manpower and the equipment come from the Institute and the work scenario benefits all stakeholders within the BBP; viz., the Zoo Hospital, the Rescue Center (WRRC), and Wildlife SoS, besides off course the Administrators of the Zoo.

The process of treatment:

1. The Blood, serum, urine and Fecal samples are provided by the Zoo Hospital team; and the same is processed through the equipment and a software;
2. This provides for instant results, which are shared;
3. The report is shared with the Zoo Hospital;





4. Wherein Antibiotic sensitivity test performed for antibiotic selection every time.

Routine activities of WADDL Lab.

- Haematology
 - Clinical Examination of Blood from the Wild Animals
 - 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 suggestions to taking control measures to control the diseases in the BBP, 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 / Ziel Neelson staining for the Acid fast bacteria such as mycobacterium species.
- Confirmation of the bacterial, viral and parasitic diseases in the wild animals by PCR method.
- Wild animal research and publication of the new data about wild animal diseases and management.
- The material sent to IAH&VB Hebbal for further confirmation and further study.

Laboratory Manpower:

1. Scientist-1 - one post
2. Technical grade-1 - one post
3. Lab attendant - one post

The Laboratory is currently headed by Dr. Majunath, BVSc and MVSc, who has also held a Junior Research Fellowship.

The other staff members are: Mr. Mahesh (Technician) and Mrs. Hemavathi (Laboratory Assistant).

Equipment at the Laboratory:

1. PCR Unit for the molecular work and disease confirmation,
 2. Hematology Auto analyses for blood,
 3. Semi-automated Serology analyses for various biochemical parameters,
 4. Urine analyses strip based for various parameters,
- The BSL -2 laboratory is currently under construction.

Achievements in 2014-2015:

A laboratory in any Zoo plays a dynamic role; as it caters to the unseen health issues that the animals face. The laboratory along with the hospital at BBP plays a role which many consider invisible as they look into the very facet of health of every animal housed in the Zoo.

The Laboratory has looked into the issues of Foot and mouth disease (FMD) that had become rampant in the Safaris of BBP; it was the proactive action taken in tandem with the Zoo hospital that helped mitigate the issue. A few watchwords that the Laboratory considers as important, are to be proactive, and ensure that based on the environment, the eco-systems, the modalities, they are able to foresee issues, if any and thereby bring about a better health scenario working in tandem with the internal and external stakeholders of the BBP.



Type and number of Laboratory Samples received and analyzed from the BBP

SL.NO	TEST CONDUCTED	April	May	June	July	Aug.	Sept.	Oct	Nov	Dec	Jan	Feb	Mar	Total	Last year-213
1	HAEMATOLOGY	9	37	22	20	22	48	11	23	45	21	21	12	291	218
2	BLOOD SMEAR	9	37	22	20	22	42	11	23	43	16	21	12	278	197
3	BIOCHEMISTRY	61	320	253	164	223	427	105	223	412	197	205	120	2710	2960
4	POSTMORTEM	8	8	11	18	11	19	8	16	7	14	12	22	154	99
5	HISTOPATHOLOGY	3	9	3	5	8	7	8	9	8	8	5	10	83	42
6	MICROBIOLOGY	7	8	3	10	8	15	7	13	11	20	14	16	132	103
7	IMPRESSIONSMEAR	30	27	28	67	53	62	37	60	48	51	38	61	562	189
8	URINE ANALYSIS			1	3	2	3	9	4	4	7	4	2	39	19
9	FAECAL SAMPLE	25	47	25	49	46	98	41	58	36	35	55	48	563	532
10	AFB	4	24	10		4	6	6	10	13	12	8	13	110	126

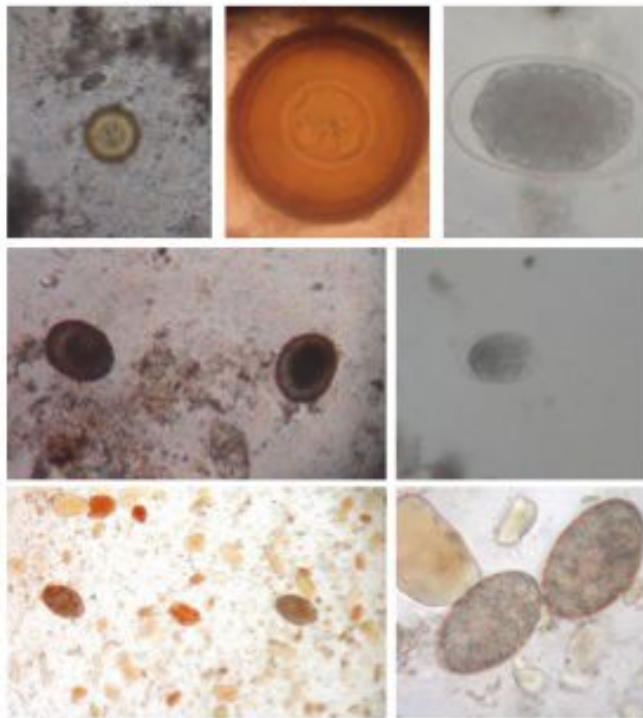
Species wise data

Sl. No.	Test Conducted	Mongoose	Civet cat	Spotted deer	Asian Koel	Rose Ring Parakeet	Indian Myna	Black Ite / coucal	Purple heron	Rat snake / cobra	Crocodile	Slender Ioris	Rock Python	OB Stork	BM Lizard	Rabbit	Barn owl	Other
1	HAEMATOLOGY	1	2	2														
2	BLOOD SMEAR	1	2	2														
3	BIOCHEMISTRY	10	20	20									10					
4	POSTMORTEM		1	8	5	8	7	7	3	11	3	1	4	4	1	3	10	22
5	HISTOPATHOLOGY		1			1	1	1	2	7	2	1	4	4	1	2	1	4
6	MICROBIOLOGY		1	7	2	2	2	4	1	9	3	1	4	4	1	2	5	9
7	IMPRESSIONI SMEAR		3	24	12	12	19	18	9	31	9	3	11	16	3	13	17	49
8	URINE ANALYSIS																	
9	FAECAL SAMPLE		1	8	5	8	7	7	3	15	3	1	4	17	1	14	10	25
10	AFB		1	6							3	1		2				
11	Others							1	2		1	1	4	4	1	2	1	
12	TOTAL	12	32	77	24	31	36	38	20	73	24	9	43	51	8	36	44	109

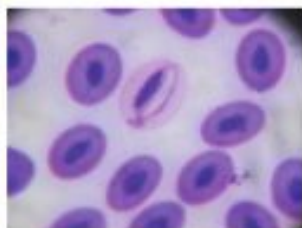
Commonly identified Parasites in 2014-15:

Sl no	Species	Parasites found
1	Tiger	<i>Taxocara cati</i> Spp. ova, <i>Anchylostoma</i> spp ova and <i>Spirometra</i> spp
2	Sloth Bear	<i>Hymenolepis alminuta</i> spp, <i>Taxocara cati</i> Spp. <i>Anchylostomes</i> spp and <i>Tricouris ova</i>
3	Lions	<i>Taxocara cati</i> and Hookworm ova
4	Snakes	<i>Bothridia</i> spp, <i>Ophidascaris</i> spp, <i>Ancylostoma</i> spp ova <i>Rhabdias</i> spp ova
5	Bengal monitor Lizards	<i>Physaloptera</i> spp ova
6	Rabbits	<i>Eimeria</i> oocysts
7	slender lorles	Pin worm ova
8	Elephants	<i>Strongyle</i> eggs and <i>coccidia</i> oocysts.

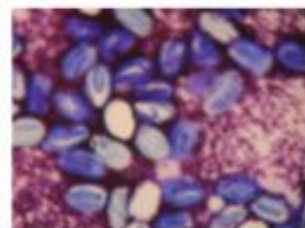
Parasitic eggs (Illustrations)



Haemoprotzoa in RBCs of Rat Snake



Rhabdias eggs in lungs of Cobra snake



Ophidascaris worms in python



Bothridia spp in python



Major Postmortems during the year 2014

Spp.	Bear	Tiger	Lion	Leopard	Hog Deer	wolf	Monkey
Postmortem	6	6	7	7	3	1	5



Become a Care giver: Our Animal Adoption Scheme

A people's movement towards Conservation and Preservation of flora and fauna brings in higher dividends. Zoos across the world have evolved Adoption Scheme with a primary intention of involving general public in the Conservation of endangered animals, birds, and reptiles. Herein lies the fact that, individuals, philanthropists, organizations, corporates can adopt an animal by way of contributing the feed cost of individual animal including its maintenance and veterinary health care. Adoption of animals has been looked at a source of 'revenue generation'¹ by the Zoo authorities in India. The Central Zoo Authority of India has categorically mentioned that all Zoos will develop protocols for receiving aid, fix price or amount of different services and adoption of animals.

Serial No.	Type of Adoption	Amount#	Privileges
1	Level 1	Up to INR 10,000/ annum	Official Certificate of Adoption
2	Level 2	INR 10,000 to 25,000/annum	<ol style="list-style-type: none"> 1. One year complimentary pass for 5 members 2. Official certificate of Adoption 3. Information about the adopted animal 4. Display of name in front of the adopted animal enclosure
3	Level 3	INR 25,000 and above	<ol style="list-style-type: none"> 5. T Shirt + Cap of the BBP 6. Opportunity to participate in the Conference/Workshop organized by BBP 7. Proposed Youth Club membership of one Child in the age group of 7 to 12 years for a one-year period

Income Tax Exemption: All donations under the Adoption Scheme are exempted under Section 80G of the IT Act 1961

1. Zoos of India, 2014, Legislation, Policy, Guidelines and Strategy. Central Zoo Authority, New Delhi

Testimonials by People who have adopted animals of BBP:

As ordinary citizens of the country, we cannot take care of the wild animals, the adoption scheme presents an opportunity to be one with the wild animals. By adopting the animals, we will ensure adequate care is being taken. I currently have adopted a cobra, in the near future would like to adopt birds.

(Maya Menon)

Not many are aware of the adoption scheme, when I learnt from a friend, I immediately took to the adoption scheme. It is good that we are aware that under the adoption scheme the animals are truly well taken care of.

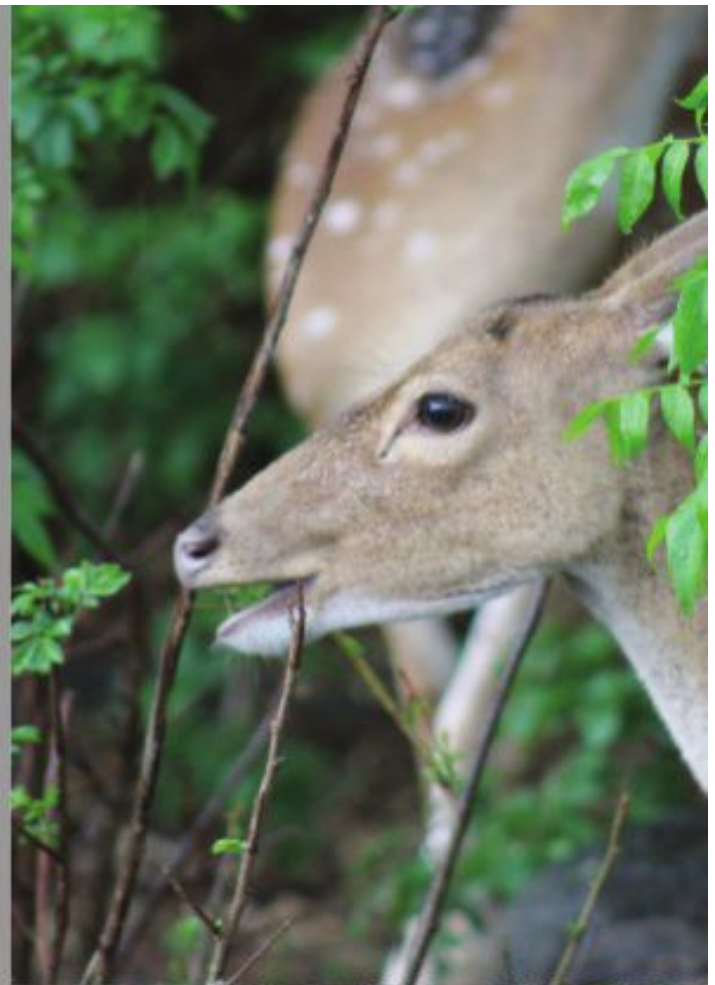
(Anand)

Whenever we visit Bannerghatta National park, we enjoy seeing all the animals. In addition, we also enjoy the monkeys which are playing around in the park. Some times we used to feed them. While feeding we found that they start fighting with each other for bigger share of food. So we stopped feeding. But we wanted to do something for the monkeys. After this incident we decided to adopt one of the monkeys. This has given us immense satisfaction, because at least one monkey we are able to feed and take care throughout the year.

(Vijay Deshpande)

I have always been animal lover, adopting animals in house is totally impossible in today's world. Forest department and the biological park team have done wonderful scheme for adaption of animals, this way animals are being taken care and even the extinction of species will also controlled.

(Manohar Nandi)



List of Donors for 2014-15:

	Particulars	Animal	Amount	From date	To date	Duration
1	FMC India Private Limited, Embassy Star, No.8, Palace Road, High Grounds, Bengaluru-52	Tiger Cubs - 2 Nos	100000.00	1/26/2014	1/25/2015	1 year
2	Ashwin and Aishwarya Hombal, #C3, Vijayanagara Police Quarters, Vijayanagara, Bengaluru	Love Birds	1000.00	4/21/2014	4/20/2015	1 year
3	Smt. Leelavathi Shamanna, No. 1803, 40th A Cross, 9th Block, Jayanagara, Bengaluru-69	King Cobra	3500.00	22.04.2014	21.04.2015	1 year
4	Master Rohan Suresh, No. 1803, 40th A Cross, 9th Block, Jayanagara, Bengaluru-69	Indian Cobra	2000.00	22.04.2014	21.04.2015	1 year
5	Sri Suresh, No. 1803, 40th A Cross, 9th Block, Jayanagara, Bengaluru 069	Indian Python - 1 No	3500.00	22.04.2014	21.04.2015	1 year
6	Sri S. Shyamanna, No. 1803, 40th A Cross, 9th Block, Jayanagara, Bengaluru069	King Cobra	3500.00	22.04.2014	21.04.2015	1 year
7	Team Todd/Cemer, WO131, #2800, Rockcreek Parkway, Kansas City, Missouri 64117, USA	Sulphur Crested Cockatoo	5000.00	4/27/2014	4/26/2015	1 year
8	Shriya Mukund, C-3021, KrestPark Apartments, 39, Old Kanakapura Road, Basavanagudi, Bengaluru	Budgerigar - 1 Common Peacock- 1 King Cobra - 1	8000.00	5/24/2014	5/23/2015	1 year
9	B.C. Shirinivas, #233/B, 8th Main Road, 1st Block, Est Jayanagara, Bengaluru - 11	King Cobra - 2 nos Indian Cobra - 7 nos	21000.00	5/30/2014	5/31/2015	1 year
10	Sri. K. Somashekara Reddy, #301, 3rd Floor, Nandhi Elegance 2, Kalena Agrahara, MLA Layout, Bannerghatta Road, Bengaluru - 76	Indian Cobra - 3 nos	6000.00	5/30/2014	5/31/2015	1 year
11	Chaitra, P.B, #182, Shivakrupa Nilaya, Ground Floor, Near Kairuchi Hotel, 4th Main, JPNagar 2nd Phase, Bengaluru	Peacock-1 no.	3500.00	6/8/2014	6/7/2015	1 year
12	Vishal Muddaraj, #2725, Andave Court, San Jose, CA 95135, USA	Cocktail	1000.00	6/20/2014	6/19/2015	1 year
13	Ramiya Ramamurthy, #26, Clemens Road, Vepery, Chennai - 600007	Red Collared lorikeet - 1 no	2000.00	6/21/2014	6/20/2015	1 year
14	Sunder Chandan Ganeshan, # 39, Ganesh Homes, Vinayaka Layout, 1st Stage, Vijayanagara North, Bengaluru	Peafowl - 1 No	3500.00	6/21/2014	6/20/2015	1 year
15	Sri Mahesh Venkatesh No. 428, 7th Main, 7th Cross, 2nd Stage, Kumaraswamy Layout, Bengaluru - 560 078	Common Barn Owl Barn Owl Brown wood owl	7000.00	7/3/2014	7/2/2015	1 year
16	Sri Shreyas Kuchibhota Flat No. 38 Puyvast House, #6 Haris Street Bension Twon, Bengaluru - 560046	Duck Common Rat Snake	3000.00	7/15/2014	7/14/2015	1 year
17	Sri Cheryl Simon, Accenture Services Pvt Ltd., # 148/1, RM2 Futura 2, Blekahalli Village, Bannerghatta Road, Bengaluru	Elephant	20000.00	8/5/2014	9/20/2015	45 days
18	Smt. Kamal Mukharjee, #2090, 7th Main, K.S. Layout, 2nd Stage, Bengaluru - 78	Blue Gold Macaws	7500.00	8/5/2014	8/4/2015	1 year
19	Sri Dinesh Ilindra, PSS Plaza, # 6, Wind Tunnel Road, Murugesh Palya, Bengaluru - 560 017	Red Lory	2000.00	8/15/2014	8/14/2015	1 year
20	Smt. Pooja Tiwari, Flat No. 603, N.J Block, Shriram Surabhi Apartments, Malasandra Village, Bengaluru 560063	Love Birds	1000.00	8/17/2014	8/16/2015	1 year
21	Sri N. Seshadi, No. 1253, 11th Cross, 1st Phase, 1st Stage, Chandra Layout Bengaluru - 560 072	Spotted deer	7500.00	8/27/2014	8/26/2015	1 year

	Particulars	Animal	Amount	From date	To date	Duration
22	Sri Veeranna, B. Kubasad, Kondawad Ori, Kalaghatgi, Dharwad Dist - 581204	Horn Bill	5000.00	9/6/2014	9/5/2015	1 year
23	M/s Jaya Kamata, #52/2-2, Second Floor, 16th Cross, 8th Main (Opp: Reliance Fresh), Malleshwaram, Bengaluru - 55	Lion	100000.00	9/16/2014	9/15/2015	1 year
24	Sri Prashanth, R., 111/A, Kamala, 7th Main, Chandrashekhara Block, BEML Layout, Rajeshwari Nagara, Bengaluru	Indian Peacock	3500.00	10/8/2014	10/7/2015	1 year
25	Ms.J.Pooja 184/24, 7th Main, 8th Cross, 2nd block, Jayanagara, Bengaluru- 560 011	King Cobra	3500.00	10/24/2014	10/23/2015	1 year
26	Sri Vijaya Deshpande, Flat No. B2-806, L&T South City, Arekere Microlayout, B.G.Road, Bengaluru	LTM	10000.00	10/24/2014	10/23/2015	1 year
27	Smt. Indira Basu, B2 Sriven Apartment, KHB Board 3rd Cross, Sultan Palya, Bengaluru	Rainbow Lorikeet	2000.00	12/1/2014	11/30/2015	1 year
28	Sri Adhrit, R. # 312, BM Serenity, 24th Main, HSR Layout, 2nd Sector, Near KEB Power Yard, Bengaluru - 560 102	White Peacock	3500.00	12/1/2014	11/30/2015	1 year
29	Sri Manohar, N.L. #5/25, 15th Main, 3rd Stage, 1st Block, Opp: Water tank stop, Basaveshwaranagara, Bengaluru	Lion Tailed Macaque	10232.00	12/19/2014	12/18/2015	1 year
30	Geetanjali Chidambaram E-207, Pine Block, Raheja Residency, Koramangala 3rd Block, Bengaluru	Budgerigar	1000.00	12/25/2014	12/24/2015	1 year
31	Prestige Royale Gardens, M/s Prestige Estates Projects Pvt. Ltd, No.1 The Falcon House, Main Guard Cross Road, Bengaluru - 560 001	Tiger, Cheeta, Zebra	200000.00	1/1/2015	12/31/2016	1 year
32	Prestige Mistywaters, M/s Prestige Estates Projects Pvt. Ltd, No.1 The Falcon House, Main Guard Cross Road, Bengaluru - 560 001	Elephant, Owl, Ostrich	200000.00	1/1/2015	12/31/2016	1 year
33	Sri Ravi Varahamurthy, #8, and 10, Shriram Adithya Apartments, Areehalli, Near Abbiah Naidu Studio, Bengaluru	Rat Snake	1000.00	1/4/2015	1/3/2016	1 year
34	Nayanika and Mihika Iyer, # 104, 1st Main Saraswathinagar, Thalaghattapura Main Road, Bengaluru	Gharial	7500.00	1/5/2015	1/4/2016	1 year
35	Mihika and Nayanika Iyer, # 104, 1st Main Saraswathinagar, Thalaghattapura Main Road, Bengaluru	Rat snake- 3 nos	3000.00	1/5/2015	1/4/2016	1 year
36	Sri Nagarajuna G.D, #403/75, 7th Cross, Gaothri Nilaya, 1st Block, Jayanagara, Bengaluru	Rat Snake	2000.00	1/14/2015	1/13/2017	2 years
37	Sri Anand, Soupanika, #40/2173, P.O Kuthiravattam, Calicut - 673016, Kerala	King Cobra	2500.00	2/8/2015	2/7/2016	1 year
38	Orchids International School, Nagarabhatti, Bengaluru	Tiger	13500.00	3/19/2015	7/18/2015	4 months
39	Sri Saravanaraj Marappan, #802, 2nd Floor, 13th Cross, 16th Main, BTM 2nd Stage, Bengaluru	Star tortoise	2000.00	3/1/2015	2/28/2016	1 year
40	Sri Biswajith Mohanty, Judge, Oisaa, High Court, Cuttack	Star finch	1000.00	3/5/2015	3/4/2016	1 year
41	M/s Johnson Controls India Pvt. Ltd., MOSES, # 737, Kheny Plaza, 2nd Floor, CMH Road, Indiranagara 1st Stage, Bengaluru	Love Bird, Budgerigar, Peacock white and common, Spotted Deer, Leopard, Horn Bill, Tortoise	59140.00	3/6/2015	3/5/2016	1 year

A lot of VIPs visit BBP

Besides, the general public, there are plenty of visits by public figures, sports personalities, and others whose presence adds value to the BBP. Some of the dignitaries who visited the BBP facilities and also commented on the various products are as follows:

It is one of the finest Park I have seen. The variety of animals have been accommodated in natural habitat to keep them healthy & good mood. The team who took us around is doing an excellent work. They are professionally dedicated to the project. The park needs full support. I commend their efforts.

H.R Bharadwaj, *(The then Governor of Karnataka)*

A very well maintained nature park & is a boon to the people of Bengaluru and all other nearby places. Forest officers in-charge of the whole facility deserve to be congratulated for their dedication and spirit of public service

D.H. Waghele, *(Chief Justice, High Court of Karnataka)*

This beautiful place brings man closer to nature and provides peace and relaxation to his mind.

Cyriac Joseph, *(The then Chief Justice, High Court of Karnataka)*

We had a lovely experience at Bannerghatta Park. It is a better than most places anywhere in the world. The Butterfly Park, The safaris etc are all excellent. Well done to all and keep up the good work

Rahul David, *(Cricketer, India)*

A Wonderful Place

Brett Lee, *(Cricketer, Australia)*

Very beautifully maintained zoo and safari, the experience was wonderful. Had great sightings of tigers and crocodiles.

D.K.Gupta, *(Project Elephant Division, MoEF, GOI)*

Very impressive both the upkeep and dedication, Congrats and best wishes, keep it up.

Ashok Lavasa, *(Secretary, MoEF, GOI)*

It was my most exciting day to see a wildlife park, so well maintained and with healthy animals. We were explained and shown all the wildlife with great patience & diligence. Well done, God bless.

Lt. Gen. Sanjeev Madhok *(GoC-in-C, Army Training Command, Shimla)*

Wonderful experience inside the vehicles where animals are out and free. Very well maintained. Hope the visitors will feel amazing experiences. I wish for well to the animals.

Justice V.C. Gupta, *(Hon'ble Judge Allahabad High Court)*

It was a very memorable visit this very beautiful zoo. Thank you for the very warm hospitality. We very much enjoyed our time and work forward to visiting again with family and more friends.

Ernest Rwamucyo, *(High Commissioner for Rwanda, New Delhi)*

It was a very wonderful trip with Indian Hospitality. I invite top officials to Rwanda to have Karnataka Rwanda Forest Relationship.

Mohan Suresh, *(Hon. Consul of Rwanda in Bengaluru)*

Safari is wonderful trip with 100% opportunity to watch movements of variety of wild animals in the natural surroundings. Park is beautifully maintained and safari is experience to remember.

Justice Ashok.P Bhangale, *(Hon'ble Judge Bombay High Court)*



“Children are born naturalists. They explore the world with all of their senses, experiment in the environment, and communicate their discoveries to those around them.”
Audubon Nature Preschool, USA

“Teaching children about the natural world should be seen as one of the most events in their lives.”
Thomas Berry (1914-2009)
author of:
The Dream of the Earth

“As children observe, reflect, record, and share nature’s patterns and rhythms, they are participating in a process that promotes scientific and ecological awareness, problem solving, and creativity.”
Deb Matthews Hensley, Early childhood consultant

Our Nature Education program

The BBP has been contributing in a myriad of ways to help the common people cherish the idea of ecology, environment, conservation and preservation for more than four decades. Today, however the need to engage the children, who are the future citizens of the country is more than just cursory, we need to have focused approach, such that, the children of today, grow to be more responsible individuals for the morrow. It is here that BBP will play a dynamic role keeping in mind the closeness to the city of Bengaluru, and the factors of accessibility. Having evolved over a period of time, BBP and its repository of flora and fauna will surely rope the visitors young and old to learn and unlearn and facets of the wild. Hence, it is this opportunity that will help the BBP authorities to engage the stakeholders to come visit the Park with a purpose, a purpose to inculcate the best aspects of preservation and conservation, leading to a thought process of doing something, something good for nature. Hence, by showcasing the flora and fauna, in an organized manner, which will help in the learning process and which will increase the knowledge and levels of awareness and the challenges to nature, hitherto including the human beings as well, will create an army of individuals who will act in their group environment, family, school and society and get to the nuance of, ‘act local, think global’ and build on the philosophy of protecting our environment. Clearly BBP in particular and the Bannerghatta National Park (BNP) in general enlarges the horizon of not only the visitor, young and old alike, but also the Forest Department who can help garnering more support at the time of need. The plan for the future is to ensure a School connect to BBP, wherein Schools of various genre visit on regular basis and create an environment for learning. This becomes an important repository for the future. By organizing painting and quiz competitions the students will be able to garner the best of information about preservation and conservation leading to more hands working for the benefit of environment.





For a comfortable time at BBP- Our Infrastructure and facilities

Any tourist destination if it has to attract tourist and visitors needs to provide facilities. BBP has left no stone unturned and ensured that the best of infrastructure and facilities are provided to the visitors.



Transportation is the key to tourists visiting the Biological Park. For the general public who use public transport,

the BBP has teamed up with the Bengaluru Metropolitan Transport Corporation (BMTC) by allocating 2 acres of land to build a well laid out bus station that caters to the masses. The Bus terminus was inaugurated in 2011. The umpteen number of buses operated by BMTC from every nook and corner of Bengaluru has ensured easy access to the BBP. Most of the visitors who use public transport consider this to be the best of service offerings. Besides the public transportation services, ample parking space





has been provided to visitors who come in their own vehicles or taxi services.

Rest room facilities have been provided for the visitors which dot the Park area both inside and outside. There are four slab sauchalaya facilities outside the Zoo enclosure and two within the Zoo. The rest room facilities are well maintained.



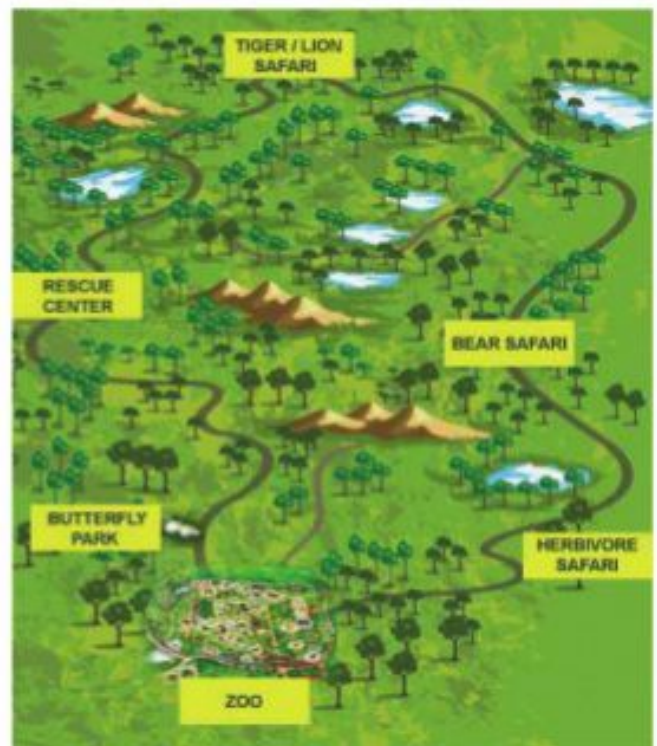
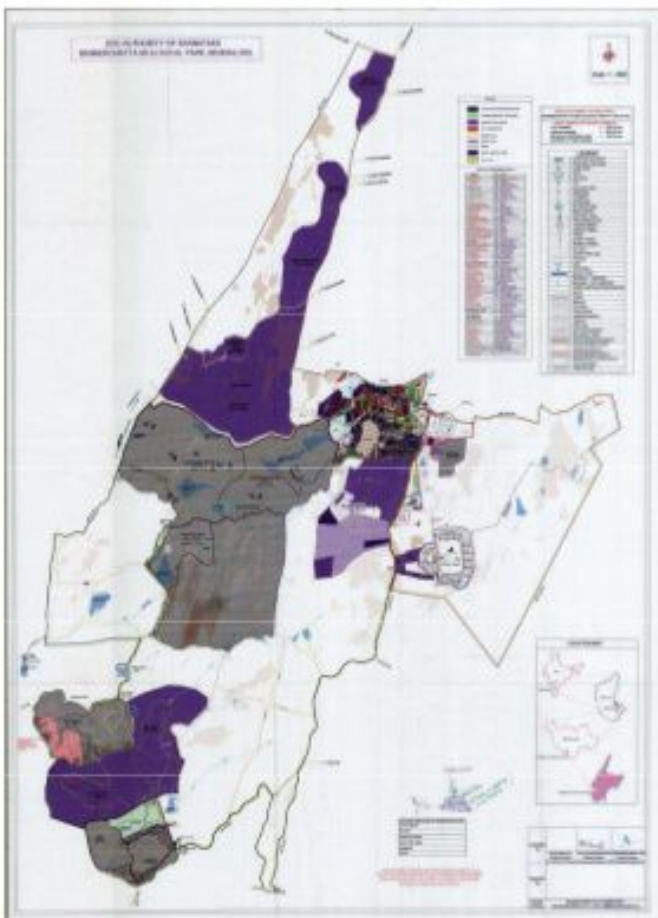
The Lawns, the play areas, the pergolas, sit out benches, have ensured that the visitors of all hues get to relax and ensure they spend maximum time within the BBP area. The well-manicured lawns across the area are pleasing to the eye.

Restaurants and small kiosks that provided for the tourists have been located at vantage points which has ensured the visitors are able to sit with family and friends and enjoy a meal. The Jungle Lodges and Resorts (JLR) has established the Hill View Restaurant within the Zoo area, which is very popular with the visitors. The Karnataka State Tourism Development Corporation (KSTDC), operates the Mayura Vanashree outside the Zoo area, which too attracts many visitors because of the natural setting it is located in.

The signage and directions are well maintained which will help the tourists to move around the enclosures without any issue. The Buggies too provide the elderly and those who would like to have a quick trip of the facility; an opportunity to move around without having to walk.



Annexures



Certificate of Registration

This is to certify that

BANNERGHATTA BIOLOGICAL PARK

**Located at: Bannerghatta, Bangalore – 560 083,
Karnataka, INDIA.**

Operates a quality management system which has been assessed

as conforming to

ISO 9001:2008

for the scope of activities:

**Providing Administration, Governance and
Operational Control for all Biopark Activities**

Permissible Exclusions: Cls 7.3 Design and Development

Certificate No: **TIC/00400**

Issue Date: **12-06-2015**

Valid Till **11-06-2018** subject to adherence to the agreed ongoing audit program, successful endorsement of certification following each audit and compliance with TÜV Intercert Saar India Pvt Ltd (Group of TÜV Saarland) Regulation.

(Original issue date of certificate: **12-06-2015**)



Royak
Head of Certification
CERTIFIED
QUALITY

This Certificate is valid subjected to periodic conductance of Surveillance audits

Regd Office: No 122/1, 3rd Main Road, Margosa Road, Malleswaram, Bangalore - 560 003, India.





*"The best time to plant a tree is
twenty years ago.
The second best time is now."*

*"Animals deserve our compassion,
We must know their pain,
We should nurture this compassion through
education,
Showing concern about animal rights is
respecting their life"*

Jane Goodall

*"It's not whether animals will survive,
it's whether man has the will to save them"*

*"Animals should not require our permission to
live on earth.
Animals were given the right to be here long
before we arrived"*

*When I look into the eyes of an animal I do not
see an animal. I see a living being. I see a friend.
I feel a soul,*

Anthony Douglas Williams
(author of Inside the Divine Pattern)



*“The Greatness of a Nation and its moral
progress can be judged by the way its
animals are treated”*

Mahatma Gandhi



Bannerghatta Biological Park
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