

1. Report of officer in charge

The Tiger and Lion Safari, Thyavarekoppa, Shimoga initially was an enclosed area of 27.50 Ha with three safari exhibits namely the Lion, Tiger & Herbivorous that were started and now the whole Zoo and safari area is augmented to 195.00 Ha.

The animals housed in the municipal Zoo of Shimoga were also relocated to this place after the Central Zoo Authority of India de-recognized its existence.

This zoo has been recognized as a small zoo with Safari by the Central Zoo Authority of India and now steps have been taken up by the Zoo Authority of Karnataka for the betterment of this zoo permitting it to carry out necessary developmental works to create a good infrastructure. This zoo has all the potential to become one of the finest zoos in the country in near future days.

It is the fundamental duty of the zoo to provide a natural habitat for captive wild animals birds and reptiles. Our constitution has protected wildlife and biodiversity with utmost care. On behalf of this, National Zoo Policy came into existence in 1988.

Zoos play a significant role in conserving and preserving the biodiversity. Animal species which are physically, genetically, behaviorally healthy and stable are exhibited in an ideal naturalistic way for the visitors.

Zoos are not a source of entertainment they are the centers for education, research and conservation. zoos are potential close links for protecting wildlife and maintenance of life supporting amenities in nature. Zoo Education covers a wide spectrum from inspiration to positive action for the betterment of conservation

Central Zoo Authority has taken initiation to consider Zoo activities as forestry activities. Thus the Ministry of Environment, Forest and Climate Change has issued a notification stating that "Zoo" shall be treated as forestry activities and work shall be managed as per master/management plans that are approved by Central Zoo Authority. On this regard, with the provision of revision after 10 years, the present master plan for Tiger & Lion Safari, Shivamogga is prepared for a period of 20 years from 2021-22 to 2041-42. This master plan is drawn in accordance with the principles enunciated in the National Zoo Policy and guidelines related with zoo management.

2. About Shivamogga

Shivamogga is a large city which is located in the central part of the state of Karnataka, India. The city lies on either side of the banks of the Tunga River. Being the gateway for the hilly region of the Western Ghats, the city is popularly nicknamed as "Gateway of Malnad".

3. History of the zoo

The foundation stone for Tiger and lion safari was laid on 1984 and was established in the year 1988, at Thyavarekoppa village situated 10 Kms away from Shimoga city in the Shimoga District of Karnataka State. The total extent of the TLST is 195.00 hectares. It was developed with the financial assistance mainly from Zilla Panchayat, Shimoga and supported by Malnad Area Development Board (MADB), Mysore Paper Mill (MPM) Ltd. Bhadravathi, few voluntary organisations, Karnataka Forest Department (KFD), ZAK and CZA.

Zoo

The animals that were housed in the mini zoo located at Municipal Park of Shivamogga city were shifted to TLST, Shimoga on December 1992 as per the Government of India notification dated 04th August 1992 which derecognized the Municipal Zoo at Shivamogga city.

Separate enclosures were constructed for Leopards, Striped Hyenas, Sloth Bears, Jackals, Crocodiles and Porcupine during 1996-97. Different varieties of birds and few other small mammals were also housed in the Zoo.

Zoo displays native and exotic animal species in its natural habitat providing conservation education and experience based tourism activities. At present there are 295 individuals of 32 species. Some of the exotic animals are displayed such as Ostrich, Emu and some Pheasants of the world. Even among the native fauna there is a great diversity comprising of felids, canids, deer (cervids), reptiles, birds and other beautiful and majestic animals that can be seen in open natural enclosure. Hence, a visit to the Shivamogga zoo is quite a rejuvenating and rewarding experience .

Safari

The Tiger and Lion Safari, Tyavarekoppa (TLST) is the second safari established in Karnataka after Bannerghatta Biological Park. It was started with three safari enclosures viz. Lion of 21 ha, Tiger of 20 ha and Herbivore safaris covering an extent of 30 ha.

Shivamogga zoo has 5 tigers with male female ratio of (3:2) 4 lions with (2:2) ratio and herbivores of about 145 numbers.

Tigers and lions were introduced to the safari from various zoos to their respective safari enclosures.

A diversity of herbivore species like Spotted deer, Sambar deer, Blackbucks, Hog deer and Nilgai were introduced to the herbivore safari over the period of time.

Safari vehicle:

Shivamogga zoo and safari has 3 (three) buses of 20 (twenty) seats to take the visitors around the safari. Safari experience provides for a large group of people and ensure uninterrupted service, there are 7 temporary drivers for the safari buses. Two safari jeeps Mahindra Bolero were also introduced to safari during 2018, for the closest view of the animals and privacy of the visitors.

It has also been proposed to change the name of Tiger Lion safari to Shimoga zoo and safari.

4. Vision: To inspire the public for valuing the presence of wildlife in their lives, in turn providing an enjoyable educational experience about wildlife and its conservation.

5. Mission: Shivamogga zoo will be a dynamic center for animal breeding and exhibition which would inspire people to love, care and protect wildlife and its habitat.

6. Objectives

- Provides the best possible care for our animals
- Display of wild animals in natural habitat area and enclosure to connect with the nature
- Animal welfare

- Participating in conservation breeding programs
- Deliver best wildlife education training and research
- Rescue and rehabilitation of wild animals and birds
- Education and recreation for general visitors and tourist

7. About us:

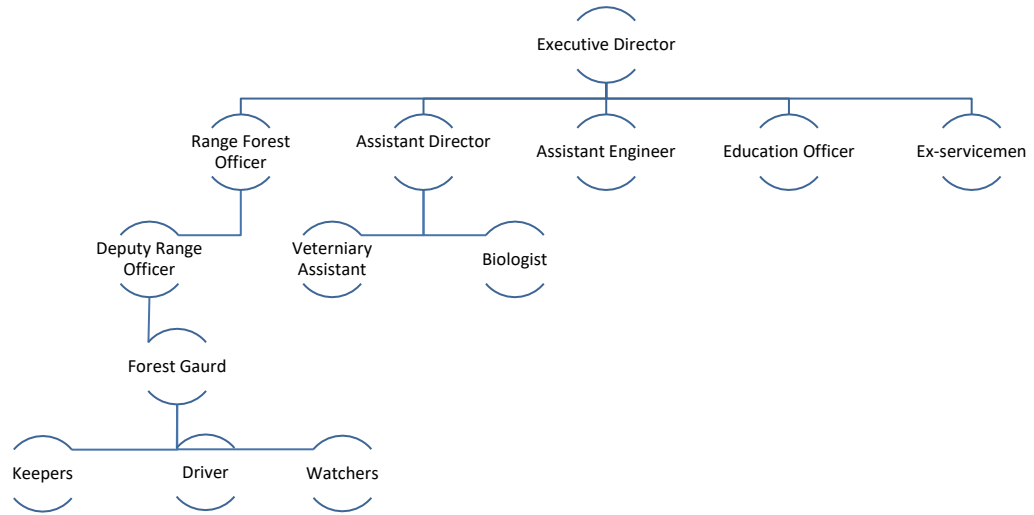
Sl.No.	Particulars	Information
Basic Information about the Zoo		
1	Name of the Zoo	Tiger & Lion Safari, Tyavarekoppa
2	Year of Establishment	1988
3	Address of the Zoo	Thyavarekoppa, Shimoga
4	State	Karnataka
5	Telephone Number	9448125892
6	Fax Number	-
7	E-mail address	tigerlionsafari@gmail.com
8	Website	www.shivamoggazoo.com
9	Distance from nearest	Airport: 184 km Mangalore International Airport
		Railway Station: 13 km Shivamogga Town Railway Station
		Bus Stand: 10 km K.S.R.T.C Bus Stand, Shivamogga
10	Recognition Valid up to (Date)	Sep-
11	Category of zoo	Small Zoo

Sl.No.	Particulars	Information
12	Area (in Hectares)	195.00 Ha
13	Number of Visitors (Financial Year)	Adult : 228856
		Children : 46180
		Total Indian : 275036
		Total Foreigners : 1282
		Total Visitors: 276318
14	Visitors' Facilities Available in Zoo	<ol style="list-style-type: none"> 1. Parking Space 2. Drinking Water (R.O.Plant Installation) 3. Reception Hall 4. Pergolas 5. Children Park 6. Watch and Ward facilities 7. Canteen 8. Rest rooms 9. Museum 10.Security 11.Interpretation center
15	Weekly Closure Day of the Zoo	Tuesday
Management Personnel of the zoo		
16	Name with designation of the Officer in-charge	Sri. B.Mukunda Chandra Executive Director & Deputy Conservator of Forests, Tiger and Lion Safari, Thyavarekoppa, Shivamogga.
	Name of the Veterinary Officer	Sri. Dr.Sujay C.S
	Name of the Curator	Nagesh Balegar
	Name of the Biologist	Ms.Sameena Iza
	Name of the Education Officer	Ms.Sameena Iza

Sl.No.	Particulars	Information
	Name of the Compounder/ Lab Assistant	Ranganatha. B
Owner / Operator of the Zoo		
17	*Name of the Operator	Sri Sandeep Dave, IAS
18	Address of the Operator	Additional Chief Secretary to Government, Forest, Environment and Ecology Department, Karnataka Government Secretariat, Room No.447, 4th Floor, Gate No.2, M.S.Building, Bangalore.
19	Contact details/Phone number of Operator	080-22256722/ 22032509
20	E-mail address of Operator	prsfee@gmail.com

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8. Organizational Chart



9. Human Resources

Manpower of the Zoo*

Sl.No.	Designation	Number of Sanctioned Posts	Names of the incumbent
1	Executive Director (Deputy Conservator of Forests)	1	Sri.B.Mukunda Chandra
2	Assistant Director	1	Dr.Sujay C.S
3	Range Forest Officer	1	Sri.Nagesh Balegar
4	Deputy Range Forest Officer	3	Sri.Guru C. Sri.Yashodhar B.H
5	Forest Guard	1	Vacant
6	Forest Watcher	3	Vacant
7	Driver	1	Vacant
8	Attender	1	Vacant
Total		12	-

10. Capacity Building of zoo personnel

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	Dr. Sujay C.S	Birth control operation in monkeys	15-17 th June, 2020	Veterinary college Shivamogga
2	Sameena Iza	Zoo sensitization	16-17 th feb 2021	Sri Chamarajendra Zoological Garden
3	Animal keepers	Zoo sensitization	16-17 th feb 2021	Sri Chamarajendra Zoological Garden

11. Zoo Advisory Committee

- a. Date of constitution- Nil
- b. Members proposed:
 - The Addl. Principal Chief Conservator of Forests and Member Secretary, Zoo Authority of Karnataka, Mysore- Chairman
 - Executive Director, Tiger & Lion Safari, Thyavarekoppa, Shimoga
 - Assistant Director (V.S), Tiger & Lion Safari, Thyavarekoppa, Shimoga
 - Range Forest Officer, Tiger & Lion Safari, Thyavarekoppa, Shimoga
 - Executive Engineer, Banneghatta Biological Park, Bangalore
- c. Dates on which Meetings held during the year: Nil

12. Health Advisory Committee–

a. Date of constitution :23.12.2019

b. Members

Joint director, Deputy director and Animal husbandary and veterinary science

HOD: Clinical medicine veterinary college Shivamogga

Executive Director, Tiger & Lion Safari, Thyavarekoppa, Shimoga-convener

Assistant Director (V.S), TLS, Shimoga

Regional research Officer/ scientist-1, RRL, IAH & VB, Shimoga

Dates on which Meetings held during the year: -23.12.19, 16.01.20

13. Statement of income and expenditure of the Zoo

Sl. No.	Year	Revenue Collected (Rs.)	Expenditure (Rs.)
1	2016-17	17768875.00	24182637.00
2	2017-18	17596145.00	33317785.00
3	2018-19	21802750.00	51243119.00
4	2019-20	26605615.00	76906800.00
5	2020-21	17364055.00	105947431.00

14. Daily feed schedule of animals

Sl.No.	Species	Feed item	Quantity		Day of fasting
1	Tiger	Beef	10 kg		1 day (Tuesday)
2	Leopard	Beef	3 kg		1 day (Tuesday)
3	Other animals	Copy attached	Copy attached		Nil
			(No significant seasonal variations noted)		

15. Vaccination Schedule of animals

Sl. No.	Species	Disease vaccinated for	Name of the Vaccine and dosage/ quantity used	Periodicity	Remarks
1	Felids	Feline Calci Virus Infection, Infectious Feline Rhinotrachitis, Feline pan Leukopenia and rabies	Feligen 1 ml ARV	Yearly Yearly	Combined vaccine
2	Canids	Leptospirosis, CD, CPV, Rabies	Nobivac 1 ml ARV	Yearly Yearly	Combined vaccine

16. De-worming Schedule of animals

Sl.No.	Species	Drug used	Month
1	All animals	Closantal Oxyclosinide levamizole Fenbendazole Albendazole/ivermectin	Jan April July Oct

17. Disinfection Schedule

Sl no	Animal	Daily	Weekly	Monthly	Quarterly	Annually
		Holding house and periphery	water tank/trough / pond cleaning	Anit viral spray	Gas burning	Pesticide sprays
1	Lion	Daily	I week	II week	Jan / May/ Sep	Mar
2	Tiger	Daily	II week	I week	Feb/ June/ Oct	Apr
3	Zoo				Mar/ July/ Nov	May
	Leopards	Daily	III week , Mon	IV week, Mon		
	Bear	Daily	III week, Wed	IV week, wed		
	Hyena/ jackal	Daily	III week, Thu	IV week, Thu		
	Crocodile	Daily		IV week, Fri Pond cleaning and spray		
	Python	Daily	III week, Wed	IV week, Wed		

	Ostrich, emu	Daily	III week, Fri	IV week, Fri		
	Other mammals and birds	Daily	III week, Sat and Sun	IV week, sat and Sun		
	Duck pond area				Mar / July/ Nov Pond cleaning, anti-viral spray and gas burning	
4	Herbivore safari	Daily	IV week	III week	Apr/ Aug/ Dec	

18. Health Check-up of employees



Dental checkup for zoo employees



KFD vaccines for zoo employees

19. Development works and facilities created

Enclosure works





Construction of Rhea bird enclosure





Construction of Emu enclosure





Construction of Ostrich enclosure





Construction of Hippopotamus enclosure





Construction of Nilgai enclosure





Construction of Barking deer enclosure





Construction of Hog deer enclosure





Construction of Spotted deer enclosure



Construction of Sambar deer enclosure



Construction of Baboon enclosure





Construction of enclosure for Hyena



SILVER PHEASANT enclosure



GOLDEN PHEASANT enclosure



GREEN PHEASANT enclosure



LADY AMHERST'S PHEASANT enclosure



CHINESE RING NECKED PHEASANT enclosure



African GREY PARROT enclosure



SUN CONURE enclosure



YELLOW GOLDEN MACAW enclosure



BLUE WINGED MACAW enclosure



SULFUR CRESTED COCKATOO enclosure



ROSE RINGED PARAKEET enclosure



RED JUNGLE FOWL enclosures



GREY JUNGLE FOWL enclosures



Construction of LION enclosure and holding house is in progress





Construction of TIGER enclosure and holding house is in progress



Construction of LEOPARD enclosure and holding house is in progress





Construction of INDIAN GAUR Enclosure, holding house is in progress

Infrastructural works



2.50 Lakh litres capacity RCC Intz type Over Head Tank on 15.00m staging



Providing Chainlink mesh around the outer boundary (Length = 2.67 km)



Construction of new Toilet Block



Construction of size stone masonry wall around Outer Boundary of Tiger & Lion Safari

(Block I: 210.00m)



Construction of size stone masonry wall around Outer Boundary of Tiger & Lion Safari

(Block II: 140.00m)



Construction of size stone masonry wall around Outer Boundary of Tiger & Lion Safari

(Block III: 355.00m)





Laying of feeder main from OHT to zoo enclosures is in progress



Construction of 2.00 lakh capacity GLSR is in progress

Zoo Hospital, Tiger and Lion Safari, Shimoga

The Zoo hospital is the epicenter of treatment and care for the variety of animals housed in Tiger and Lion Safari. It is a small dispensary equipped with basic infrastructure and facilities. It has a basic diagnostic laboratory and an operation theatre set up. The hospital is attached to an in-patient/quarantine facility for large carnivores. This facility is managed by a Veterinary Officer deputed from Dept. of Animal Husbandry and Veterinary Services who looks after the upkeep of the animals of the zoo.

Facilities available at zoo hospital:

- **Operation Theater** : Operation Table, Stretcher, Crash Cart And Other Emergency Rescue Equipment's
- IP Camera Solar For Observation And Recording
- Oxygen Cylinders And Masks
- Transit Cages Pet Carriers
- Diagnostic Laboratory
 - Blood Auto Analyzer
 - Serum Semi Auto Analyzer
 - Olympus Compound Light Microscope
 - Kits And Equipment's For Analysis
 - Centrifuge
 - Autoclave
 - Water Bath
 - Refrigerator
 - Deep Freezer
 - 3.5 kW UPS And 5 kW Generator For Uninterrupted Electricity
 - Ultra Violet Lamps
 - Deep Freezer Unit
- Store

➤ Office

Medication purchased and stocked at zoo hospital:

The Zoo hospital has a stock room with a variety of medications for emergencies, treatment and prophylaxis.



Tranquilizing Equipments:

The Zoo Hospital is equipped with a standard set of tranquilizing equipments and drugs that are used for drug delivery and immobilization of animals under various situations.



Blow Pipe Projector and Syringes



Tranquilizing Projector and Syringes



Tele-Dart Projector with its accessories.(RD 706)

LABORATORY EQUIPMENTS FOR DISEASE DIAGNOSIS:

The Zoo hospital has a standard laboratory set up for basic hematology, serology and disease diagnosis.



Centrifuge unit



Semi auto-analyzer for serological works



Auto analyzer for blood parameters



Electrical compound microscope

Equipment's proposed for operation theatre:

1	Veterinary scrub station	1	Cleaning
2	Veterinary Dental scaler and polisher	1	Teeth and oral health
3	Veterinary endoscope	1	Diagnosis
4	Veterinary ultrasonography unit	1	Diagnosis
5	X ray machine portable	1	Diagnosis
6	CR system with accessories and cassettes	1	Diagnosis
7	Laser physiotherapy unit	1	Healing
8	IR thermogram camera	1	Diagnosis
9	Complete online UPS systems with accessories 5 kW	1	1 unit
10	20 KVA generator with wiring	1	1 unit

11	Stretcher for shifting animals with tire base, hydraulic lifting	1	To lift animals in field conditions and transport to ambulance
12	Special surgical instruments	Set	Perform surgeries
13	Instrument trolleys	4	Surgery / treatment
14	Orthopedic set		Orthopedics
15	Gas vaporizer with portable stand and delivery unit workstation	1	Anesthesia
16	Patient monitoring system	1	Monitoring
17	Thermos cautery	1	Arrest bleeding
18	SPO2 unit	1	Health monitoring
19	Otoscope	1	Examination
20	Laryngoscope fiber optic	1	Examination
21	Ophthalmoscope	1	Examination
22	Small animal restraint squeeze cages – SS 304	2	Restraint
23	ET tubes size 1 – 15	1 set each	Ventilation
24	Suction pump	1	Aspiration
25	Egg incubator	1	Incubation
26	Infant incubator	1	Neonatal care
27	Air conditioner	2	OT sterility
	Oxygen concentrator	1	Oxygenation
	Torch high beam	1	Emergency
	Portable UPS half hr. back up	1	Emergencies in field
	Post mortem kit	1	PM
	Hair blow drier	1	Instant heating of animals suffering from cold shock
	Centrifuge	1	Lab purpose
	Compound electric Microscope with camera	1	Lab purpose
	Veterinary defibrillator	1	Revival of patient
	Shelves, cupboards and furniture	All rooms as per	Storage

		plan	
	Washing machine	1	Cleaning clothes
	Veterinary ambulance : SaraMazda mini bus, complete A/C, interiors and convertible treatment animal care unit, refrigerator mini, generator 2kv, interiors	1	Treatment and transportation

Treatment and health care management undertaken in the zoo

Feeding, care and treatment of four Spotted owllet fledglings.

These fifteen day old Spotted owllets were hand raised with commercial diet (royal canine Recovery). Feeding was done initially 5 times a day mainly during the night and later on reduced to two time feeding. They were later on weaned to chicken.



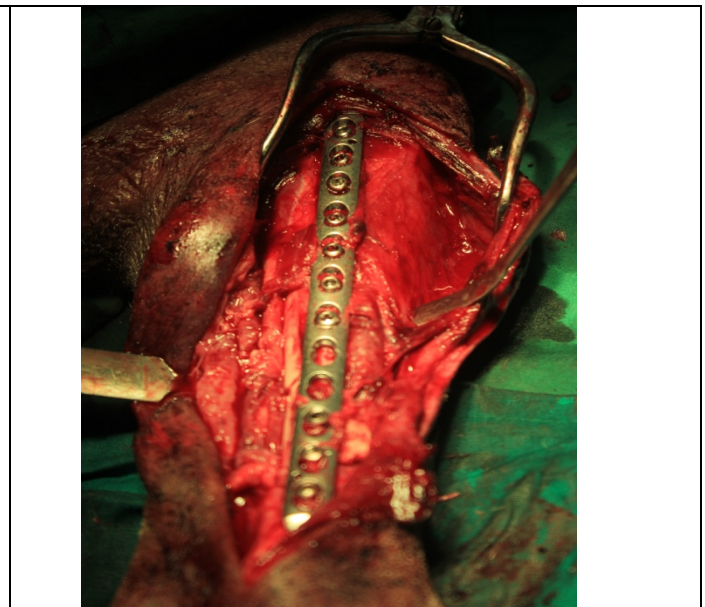
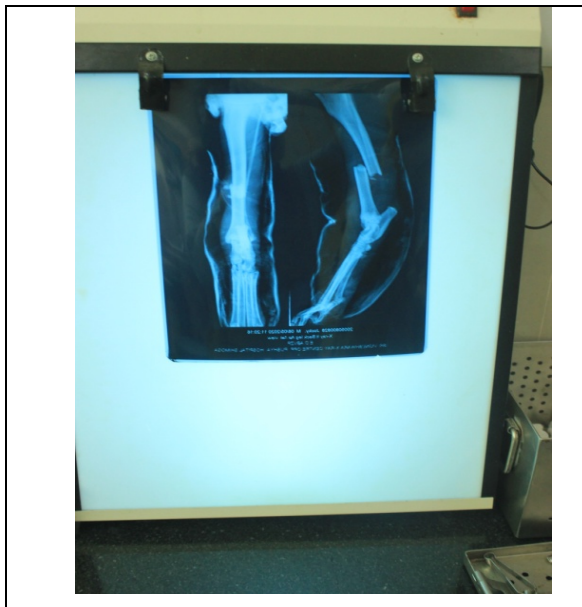
Management of post trauma complications in a female blackbuck.

An adult female black buck was presented to the hospital with severe blunt force trauma to the hind limbs. The animal was sedated and suitable treatment along with fluid therapy was conducted. Post recovery the animal was reintroduced to the group.



Surgical management of Tibial fracture by Veterinary dynamic compression plating.

An Indian Grey wolf was presented with a complicated transverse fracture of the tibial midshaft from Hampi zoo. Post radiograph the fracture was confirmed and the route of treatment was decided as internal fixation by Veterinary dynamic compression plating. The animal was sedated and shifted to the veterinary college, Shimoga where the procedure was carried out by Capt. (Dr) Ravi Raidurd, HOD, Dept of Surgery and Radiology. The affected limb was also plastered with Fiber cast and animal was allowed to heal post-op in a squeeze cage. Unfortunately, the animal succumbed to secondary complications by haemoprotozoan infection.





Restraint and treatment of Female Mugger Crocodile:

A female mugger crocodile housed at Shimoga zoo was displaying signs of inappetance and senility. The animal was physically restrained followed by blood sample collection and necessary medications were administered.



Treatment of an injured Hanuman Langur rescued from a nearby village.

An adult male Hanuman Langur was rescued from a nearby village due to conflict, the animal was sedated and a health assessment was carried out. Upon a clean bill of health the animal was shifted to the zoo.



Fracture management in a Jackal puppy:

A male jackal displayed limping of right forelimb. Radiographic evidence showed a complex overriding fracture of the Ulna bone. Animal was sedated and external fixation using splinting and Fibercast application was done, leaving a window for routine dressing.





Treatment and management of *Colibacillosis* in an Ostrich.

An adult male Ostrich was initially displaying diarrhea and inappetence. Based on clinical signs initially it was diagnosed as a viral infection. Standard treatment protocol for viral infection was followed. On further investigation, *E.coli* was confirmed and treatment in the form of suitable antibiotics and rehydration therapy by insertion of a stomach tube was done.

Post 15 days of treatment, the animal succumbed. Post-mortem examination revealed severe hepatitis, gastro-enteritis and confirmed an antibiotic resistant strain of *E.coli*.



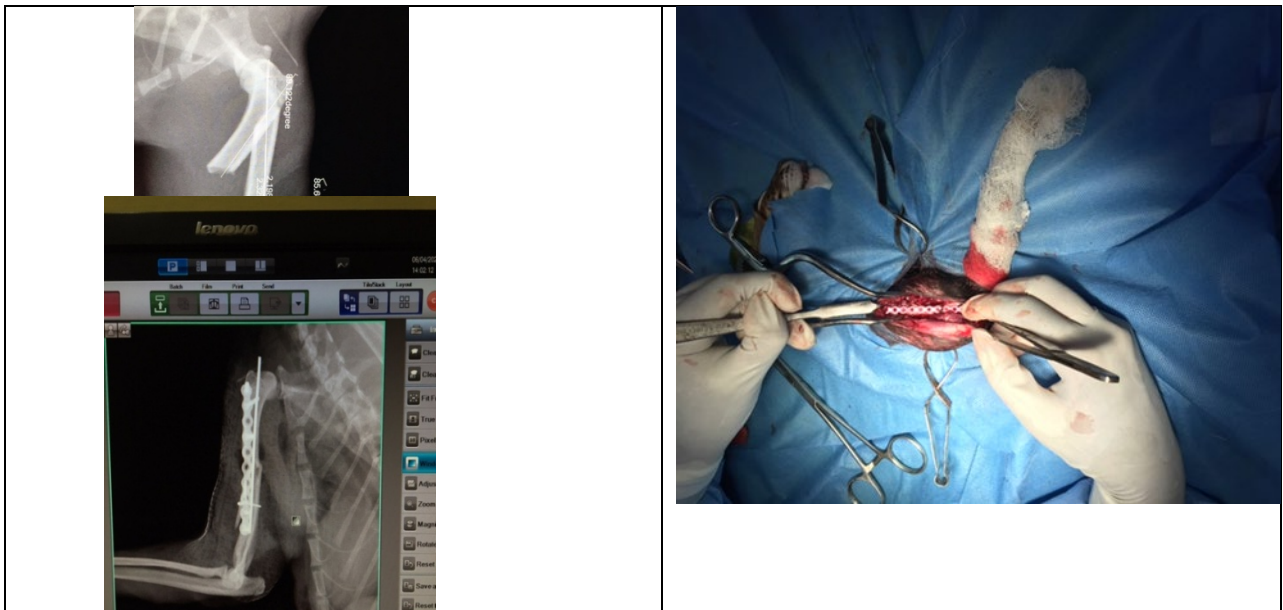
Treatment and wound management in Indian Rock Python:

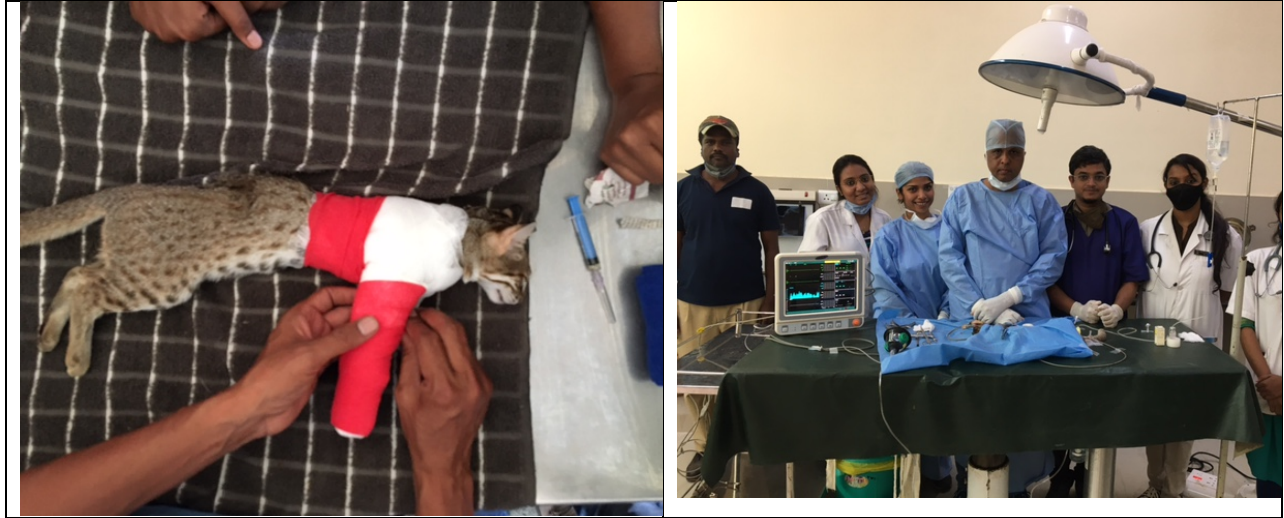
A male Indian Rock Python displayed a severe laceration of musculature around the first 1/3rd of the snake's body. The reptile was physically restrained and appropriate dressing and medications were administered. The animal made an uneventful recovery.



Surgical Management of transverse fracture of Humerus in a Rusty Spotted Cat by Dental Compression Plate:

A young, male Rusty spotted cat displayed signs of lameness post fall from a height upon sedation and radiographic intervention, it was confirmed to be a transverse fracture of the humerus. The best course of treatment was decided to be plating, the felid was sedated and taken to the Veterinary College Shimoga. An internal fixation was done using an appropriate size dental plate along with K-wire. The animal was confined to a small area post-op and made an uneventful recovery.





Treatment of Sloth Bear female for general systemic infection and age related complications.

An adult female Sloth bear, was displaying signs of gastritis and senility. The animal was immobilized and shifted to zoo hospital for further diagnostic tests and treatment. Follow up treatment was carried out by oral medications and the animal recovered uneventfully.



Leopard translocation from Shimoga zoo to Belagavi zoo under animal exchange program.



Translocation of Spotted Deer to Chitradurga Zoo from Shimoga zoo under animal exchange program.



Leopard vasectomy program as a part of animal birth control protocol at TLST.

Shimoga zoo and safari was housing 18 Leopards(10:8) in a limited sized holding house. As a part of the animal birth control program and as per instructions from CZA and ZAK vasectomy procedures were performed on select male individuals.



Thesis project work of MV.Sc(Wildlife) student on “Comparative study between Dexmedetomidine and Xylazine as preanesthetics for Ketamine anesthesia in Vasectomy of leopards.”



Health committee for Control and Management of Avian Influenza

Experts from Veterinary College, Shimoga attended a health committee for advice on the control and management of avian influenza upon the notification on its outbreak by the center and state.



Annual health committee meeting 2020-21

A health committee was conducted on 16.01.2021 to review the health and veterinary management status of the zoo. The committee proceedings involving the recommendations have been submitted to the Director and are being implemented.



Beef checking and weighing

Meat inspection room fitted with weighting scale, UV lamp and hot water for controlling microbes.



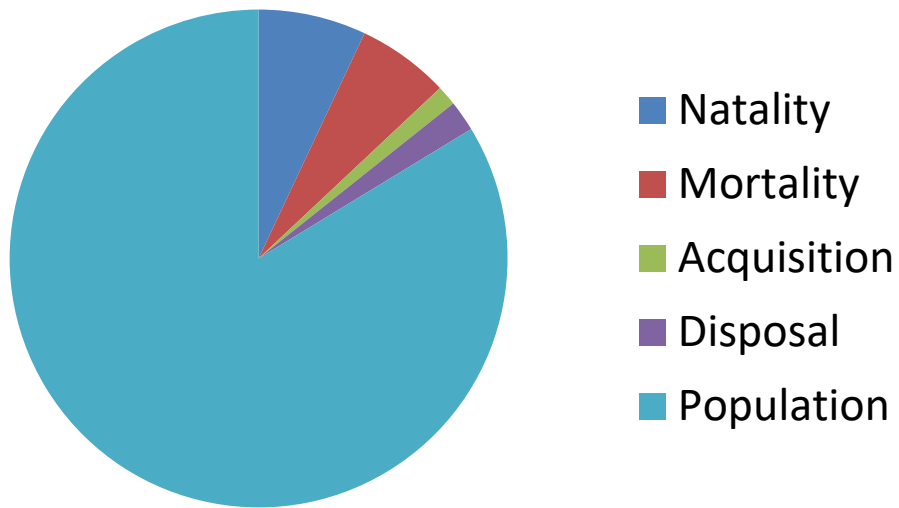
Zoo Hospital



Renovation of Operation theatre:

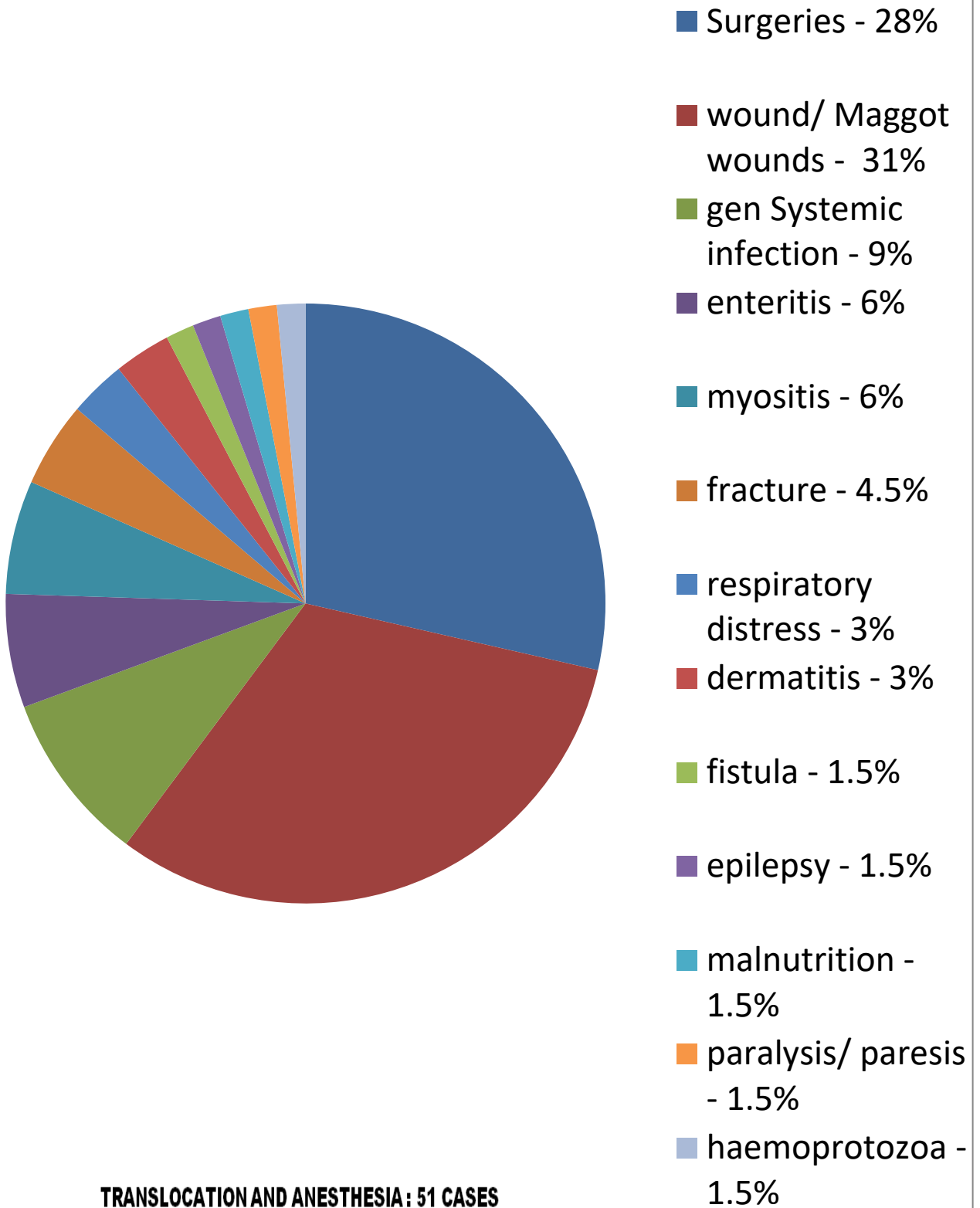


Population dynamics 2020-21



Particulars	Percentage if animals
Natality	7.7 %
Mortality	6.3 %
Acquisition	1.3 %
Disposal	2 %

Health and related issues at TLST 2020-21



TRANSLOCATION AND ANESTHESIA: 51 CASES

20. Education and awareness program during the year

❖ Awareness program for zoo visitors



In reach program for visitors. Session on Types of antlers, horns and antler growth cycle to the zoo visitors



Touch and feel program for zoo visitors
Display of types of bird's feather, eggs and collection of scats and pellets of zoo animals



Interactive session with visitors, on sloth bear
“What do you know about sloth bears”
(survey based)



ZAK app promoting program for visitors



World honey bee day celebration, an awareness program for visitors



In reach program for RFO trainees from gungarghatti training center

Wildlife week celebration



DAY: 1 drawing competition for zoo visitors



DAY: 2 wildlife photography exhibition



DAY: 3 visitors' interaction and activities



DAY: 4 Stone painting competition for students

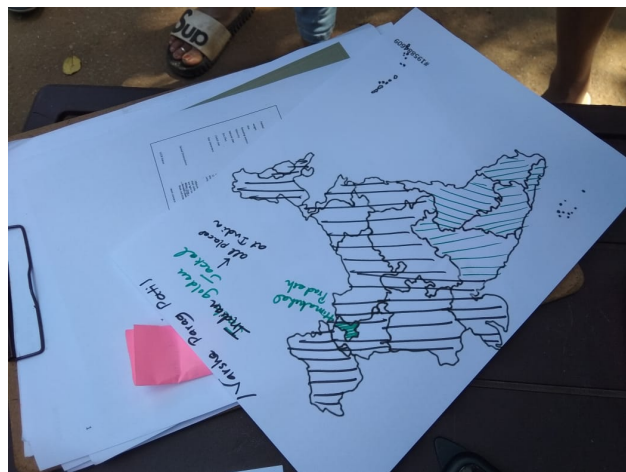


DAY: 5 "how to behave in zoo" skit by junior volunteers



Day: 6 Animal face painting competition for students of different age groups

Zoo Activities for visitors



Distribution of animal, activity using map for visitors



Action cards for kid's session on bird's beak and feet adaptation for visitors

Special day's celebration



World forest day celebration: Matching the animal habitat activity for visitors



World sparrow day celebration: An outreach program for shreerampura government school students



Skit on forest fire by volunteer's team from Kuvempu University



World water day celebration, a conservation talk by Ashpak pasha (Geologist) from Kuvempu University for shreerampura government school students



Bat conservation workshop for sayadhri college students from Rajesh sir citizen scientist and trustee of BCIT, Bangalore



Nest making competition for visitors on account of sparrow day



Awareness program on Importance of forest seeds (why seeds) for visitors



Water conservation awareness activity for visitors

21. ENRICHMENT WORKS

Physical enrichment/Structural enrichment

Enrichment provides a way to increase opportunities for the expression of species specific behavior and decrease the occurrence of abnormal behaviors. As such environmental enrichment an integral part of caring for captive animals.



Physical enrichment for sloth bear:Environment inside the enclosure should be appreciated for the wellbeing of the animals and avoid abnormal behavior ,regular exercise is required for a healthy and active sloth bear. Hence, the enclosure is provided with logs, ramps and swings to engage them both physically and mentally



Physical enrichment for hanuman langur: enclosure was provided with swings and wooden platforms, hangings ropes sand different part of the enclosure were connected using thick jute ropes.



Physical enrichment for pheasants: Most of the pheasants are partially or sometime completely sedentary beings, they use the same habitat for different activities such as nesting and feeding .in order to keep pheasant active ,various enrichment are provided inside the enclosure. Scattered litter, rotten logs are placed inside the enclosure which gives pheasant a natural food such as white ants, insects etc. perches, plat form for roosting and scatter feed are provided to ensure a healthy and active life for pheasants



Summer enrichment: Each and every bird enclosure is setup with sprinkler to keep their body and habitat cool and fresh during summer



Summer enrichment: ostrich and emu enclosure is provided with a shallow water pool to evade excess temperature during summer and a mud pool to aid mud bath and it also echoes the natural habitat inside the enclosure.



Structural enrichment: Every new enclosure is built with a naturalistic off display area to avoid abnormal behavioral changes and also to avoid visitor's distraction, this also helps in successful breeding during the season

Feeding enrichment: is also known as food based enrichment



Bamboo feeder for sloth bears: Bamboo feeders are stuffed with some favorite food of sloth bears viz (dates, fruits, honey and millipedes, meal worms etc.) where the animals have to spend the time with the feeder to access the treat inside. This helps to reduce stress and increases the playing activity compared to regular days.



Horizontal hanging Bamboo feeders for emu and ostrich: (feeding enrichment) delivers food in different manner and keeps them engaged during the day this prevents various stereotypic activities .viz feather plucking and excessive pebble eating.



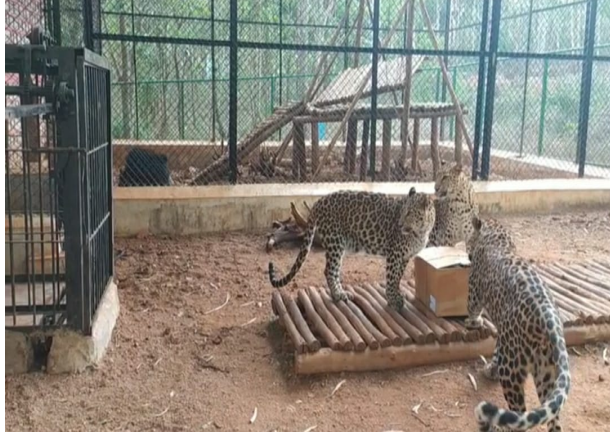
Feeding enrichment for leopards using meat and gunny bag: Meat embedded in a gunny bag is dropped down from the top of the day kraal. The leopards used the log perch and platform to reach out for the treat. This interaction helps in reducing the abnormal behavior and helps in keeping them active for stipulated time.



Hanging Bamboo feeder for small birds: bamboo feeder with separate food and water chambers



Feeding enrichment for emu: A special hanging pumpkin treat, pumpkin filled with greens and fruits is dropped hanging from a tree inside the enclosure.



Feeding cum sensory enrichment for leopards: pumpkin filled with chicken pieces is enclosed in the box (given as a special treat)



Feeding enrichment using coconut shell

hidden food enrichment (using grass and fruits)



Sensory enrichment for lions: box filled with grass and chicken pieces



Melons enrichment: Big cats v/s Melon: melons and pumpkins were presented to big cats. They relished playing with provided stuff .this enrichment keeps the animal busy and very active.

1	Peafowl - <i>Pavo cristatus.</i>	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5
	Total:-	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5
III Reptiles																									
1	Crocodile marsh - <i>Crocodylus palustris</i>	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	0	2
2	Python - Rock <i>Python molurus</i>	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	3
	Total:-	2	5	0	7	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	3	0	5	
	Grand Total:-	3	3	0	6	5	3	0	8	1	1	0	2	0	0	0	0	8	5	0	1	2	3	0	6
		1	2	0	3	5	3	0	8	1	1	0	2	0	0	0	0	8	5	0	3	9	1	0	0

Schedule III and IV

Name of the Zoo: Tiger-Lion Safari, Thyavarekoppa, Shimoga.

S l. N o .	Species	Stock at the opening of the present month				Births				Acquisition				Disposal				Deaths				Stock at the closing of the present month			
		M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
		I	Mammals																						
1	Hyena - Hyena hyena	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	Deer Sambar - Cervous unicolour	1	2	0	3	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		4	4	0	8	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	Deer Spotted - Axis axis	2	6	0	8	3	1	1	5	0	0	0	0	3	3	0	6	0	0	0	0	2	5	1	8
		6	0	0	6	3	1	1	5	0	0	0	0	3	3	0	6	0	0	0	0	6	8	1	5
4	Porcupine - Hystrix indica.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
5	Nilgai -Boselaphus tragocamelus	2	7	0	9	1	1	3	5	0	0	0	0	0	0	0	0	0	0	0	0	3	8	3	4
7	Hog deer - Axis porcinus	1	3	0	4	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	3	0	4
					1				1													4	9	4	1
	Total:-	4	9	0	4	7	4	4	5	0	0	0	0	3	3	0	6	1	1	0	2	7	6	4	7
II	Birds																								
1	white goose - Anser anser.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
2	Muscoxy Ducks - Cairina Moschota	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3

3	Silver pheasant - <i>Lophura nycthemera</i>	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	
4	Emu - <i>Dromaius novae-hollandiae</i>	4	3	0	7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	3	3	0	6
5	Lady Amherst pheasant - <i>Chrysolophus amherstiae</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	2
6	Budgerigar - <i>Melopsittacus undulatus</i>	1	1		2																	1	1		2
		3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6
7	Peach faced love birds - <i>Agapornis roseicollis</i>	9	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	0	1
		8	8	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	0	8
8	Cockatiel - <i>Nymphicus hollandicus</i>	5	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	1
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	0	0
9	Ostrich - <i>Struthio camelus</i>	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	0	2
10	Black Swan - <i>Cygnus atratus</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
11	Yellow Golden Pheasant - <i>Chrysolophus pictus</i>	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	Green Pheasant - <i>Phasianus versicolor</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	Javan Sparrow - <i>Lonchura oryzivora</i>	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5
14	Chinese ring necked pheasant	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
15	Red junglefowl	3	3	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	0	6
		4	4		9																	4	4		8
	Total:-	9	3	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	6	2	1	9
II																									
I	Reptiles																								
1	Star Tortoise- <i>Geochelone elegans</i>	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1	1	0	2
	Total:-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
			1		2																		1		2
	Grand Total:-	9	3		3	7	4	4		1	1	0	2	3	3	0	6	4	2	0	6	4	9	5	8
		3	9	1	3	7	4	4	5	1	1	0	2	3	3	0	6	4	2	0	6	4	9	5	8

23. Animal exchange /transfer acquisition/mortality/nasality during the year

Animal acquisition

SL.NO	Date	Species	Sex (M:F)	Received
1	13/10/2020	Star tortoise	1:1	Shimoga WL Divison By Court Order Dt: 13/10/2020
2	16/12/2020	Hanuman langur	1:0	Rescued by Honalli Range, Davanagere
3	02-08-2021	Hanuman langur	0:1	Shettihalli forest

Animal disposal

SL.NO	Date	Species	Sex (M:F)	Received
1	01-12-2021	Spotted deer	3:3	Chitradurga zoo

Natality Report

SL.NO	Date	Species	Sex (M:F)	Received
1	04-09-2020	Nilgai	M	Herbivore Safari
2	25/04/2020	Sambar Deer	M	Herbivore Safari
3	05-07-2020	Spotted deer	M	Herbivore Safari
4	21/05/2020	Spotted deer	M	Herbivore Safari
5	06-06-2020	Sambar	F	Herbivore Safari
6	15/06/2020	Nilgai	F	Herbivore Safari
7	18/07/2020	Hog deer	M	Herbivore Safari
8	08-01-2020	Toddy cat	M	Zoo
9	13/10/2020	Spotted deer	F	Herbivore Safari

10	25/10/2020	Sambar deer	U	Herbivore Safari
11	23/11/2020	Nilgai	U	Herbivore Safari
12	20/12/20	Nilgai	U	Herbivore Safari
13	22/01/2020	Spotted deer	M	Herbivore Safari
14	02-10-2021	Sambar deer	F	Herbivore Safari
15	03-03-2021	Spotted deer	M	Herbivore Safari
16	03-07-2021	Blackbuck	M	Herbivore Safari
17	13/03/2021	Blackbuck	M	Herbivore Safari
18	18/03/2021	Blackbuck	F	Herbivore Safari
19	23/03/2021	Blackbuck	F	Herbivore Safari
20	28/03/2021	Hanuman langur	F	Zoo

Mortality report

SL.NO	Date	Species	Sex (M:F)	Received
1	15/04/2020	Black Buck	M	Carnivore Attack
2	17/04/2020	Hog Deer	M	Carnivore Attack
3	20/04/2020	Black Buck	F	Carnivore Attack
4	14/05/2020	Golden pheasant	F	Infighting Injury of Skull, Encephalitis, Increased ICP, Neural Shock
5	22/06/2020	Leopard	M	Frothy Pneumonia & CRF
6	07-11-2020	Jackal	M	Suppurative Peritonitis & Septecemia

7	30/08/2020	Malabar Giant Squirrel	F	Tetanus
8	30/09/2020	Lady Amherest Pheasant	M	Predated by mungus
9	10-09-2020	Leopard	M	Infighting traumatic shock
10	16/10/2020	Blackbuck	M	Stress capture Myopathy leads to cardiac arrest
11	21/10/2020	Blackbuck	F	Stress capture Myopathy leads to cardiac arrest
12	11-08-2020	Leopard	M	Pneurogenic shock & respiratory arrest
13	11-09-2020	Indian Rock Python	F	Chronic Hepatitis & gastrointeraitis with dehydration
14	21/11/2020	Tiger	M	Multiorgan failure, Septecemia & body paraphegia
15	12-11-2020	Tiger	M	Repiratory arrest due to increased thoracic pressure, degenerated necrosis of lungs, multiorgan failure
16	12-12-2020	Indian Crested Porcupine	F	Senility, Multiorgan failure, Hepatic tumour, Cirrhosis
17	17/01/2021	Emu	M	Septecemia
18	02-03-2021	Marsh crocodile	F	Senility leading to multiorgan failure including hepaticCirrhosis & Nerotizing pneumonia
19	15/02/2021	Ostrich	M	Antibiotic resistant E.colisepticemia leading to fatty lever necrosis (Cirrhosis), Hemorrhagic enteritis & renal failure

23. Conservation breeding program of the zoo

The zoo currently does not have any conservation breeding program of any animal in specific and a decision was taken after various levels of discussions and deliberations to start conservation breeding program on Leopard cat, Rusty spotted cat and Jungle cat. The zoo is in the process of proposing a facility for Conservation breeding program for leopard cat ,rusty spotted cat and jungle cat in the form of project proposal.

24. Research work carried out and publications

- Thesis project work of MV.Sc. (Wildlife) student on “Comparative study between Dexmedetomidine and Xylazine as preanesthetics for Ketamine anesthesia in Vasectomy of leopards”.
- Project work on “Olfactory enrichment for captive leopards by Kuvempu University (MSc wildlife) students”.

25. List of free living wild animals, insects and birds within the zoo premises

Birds	Mammals	Reptiles	Insects	Amphibians
Red whiskered bulbul	Leopard	Spectacled cobra	Daddy long leg spider	Dataphrynus melanotictus
Red-vented bulbul	Sloth bear	King cobra	Marbled moth	Minervarya species
Orange minivet	Tiger	Wolf snake	Owlet moth	Common tree frog
Scarlet minivet	Rusty spotted cat	Wine snake	Danid egg fly	Bi colored
Paradise fly catcher	Toddy cat	Common krait	Crimson rose	Srilanka painted frog
Golden oriole	Indian Gaur	Rat snake	Common rose	Skittering frog
Warbler	Spotted deer	Bhraminy skink	Common crow	Golden backed frog
Jungle babblers	Sambar deer	Monitor lizard	Blue leopard	Gliding frog
Leaf bird	Pangolin	Garden lizard		
White cheeked barbet	Small Indian civet	Banded gecko		
Copper smith barbet	Palm squirrel			

Black drongo	Wild bore			
Ashy drongo	Hanuman langur			
Brown headed barbet	Bonnet macaque			
Rocket tail drongo	False Vampire bat			
Ashy drongo	Pipistrelle bat			
Fire breasted flycatcher				
Orange thrush				
Ashy prinia				
Shrike				
Bushcat				
Forest wagtail				
White throated kingfisher				
Hoopie				
Greater flame back wood pecker				
Lesser flame back				
Pigmy hog wood pecker				
Yellow crowned woodpecker				
Rufous treepie				
Blue monarch				
Tailor bird				
Purple Sun bird				
Purple rumped sunbird				

26. Animal adoption scheme

Adoption details

SL.NO	Year	No of people adopted	Adoption amount
1	2020-2021	38	856310.00

List of surplus animals

SL.NO	Name of surplus animal	Sex(M:F)
1	Spotted deer	6:4
2	Sambar deer	12:8

Visitor's details:

Year	Adults	Children	Total
2014-15	226601	45023	271624
2015-16	224886	44968	269854
2016-17	214193	41365	255558
2017-18	205175	46289	251464
2018-19	216640	44036	260676
2019-20	230110	46208	276318
2020-21	142108	16595	158703