



**Annual Report  
2020 - 21  
Zoological Garden  
Thiruvananthapuram**



# Zoological Garden, Thiruvananthapuram

## Annual Report 2020 - 2021

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## 1. Report of the Director

The Zoological Garden, Thiruvananthapuram has been the centre of attraction for the animal lovers who visit the temple city of Kerala. Ever since its establishment in 1859 as the second Zoo in India, the Thiruvananthapuram Zoo has seen a steady progress in the number and variety of its animal collection.

Ever since the approval of the Master Plan, the institution has taken due care to stick on to the Master Plan in execution of the development activities. The institution could also raise to the expectations of the visitors coming from various parts of the Country and abroad. Apart from Zoo the visitors also cherish the Botanical Garden, Art Museum, Natural History Museum and Art Galleries present in the compound.

With limited research available on the risk corona virus poses on wildlife, the Zoological Garden could manage the zoo animal well during the pandemic. The Keeper were screened multiple times before entering the Zoo periphery. The entire campus was sanitized in association with Kerala Fire and Rescue Department. The prevailing COVID protocol was strictly maintained. During this period, different types of food items were stocked in advance as per the diet schedule. The COVID pandemic has slowed the developmental activities to large extent.

**Director  
Museums and Zoos**



## 2. History of the Zoo



The Thiruvananthapuram Zoo is the oldest zoo in India continuing to exist in its original location in the heart of the temple city Thiruvananthapuram. Swathi Thirunal Maharaja (1816 – 1846), illustrious King and Music composer who had ruled Travancore during 1830 – 1846 is said to be the visionary behind the establishment of the Thiruvananthapuram Museum and Zoo. He had a good collection of animals including elephants in his horse breeding centre. To the Trivandrum stables he incorporated a menagerie and kept tigers, panthers, cheetahs, deer, bears and a lioness there. It was however left to his brother Uthram Thirunal Marthanda Varma and the then British Resident General Cullen which consequenced the establishment of the Museum and Zoo in Thiruvananthapuram. A committee was formed in 1855 with the Maharaja of Travancore as patron, General Cullen as President, the Elaya Raja as Vice President and Mr. Allen Brown as Secretary of the Committee and the Director of Museum. The Museum was thrown open to the public in September 1857. But the Museum by itself could not attract the people much, and therefore a Zoo and a park were started in 1859.

This Zoological Garden is unique in India for its breathtaking landscapes and luxuriant growth of vegetation. Royal look of lofty trees, towering bamboos, lush green landscapes give it a rare distinction of being one of the most beautiful zoos in South East Asia. Spread over 36 acres of land and located in the heart of the city it provides a respite for the people of Thiruvananthapuram as much it offers tourism and recreation for visitors reaching from outside Kerala and overseas.

### 3. Vision

Conservation of bio-diversity with special focus on the Endemic and Endangered Fauna of Western Ghats through Scientific Captive Breeding.

Fostering curiosity, empathy and learning about animals in order to stimulate a sense of responsibility for the natural environment.

Environmental education, Wildlife conservation and Research

### 4. Mission

- a. To make Zoological Garden Thiruvananthapuram as a leading academic organization in India on animal based research activities
- b. To participate in local, regional, and international conservation plans, to contribute to them from our scientific knowledge, and to maintain breeding cores of endemic and endangered species.
- c. To be a part of the nature conservation community and to function as a nucleus for various nature conservation activities
- d. To become a central and leading body in nature conservation research.

### 5. Objective

- a. Provide ample opportunity for research in animal care, wildlife behavior, nutrition, reproduction etc.
- b. Enhanced visitor experience thus inspiring them to contribute to the cause of wildlife conservation.

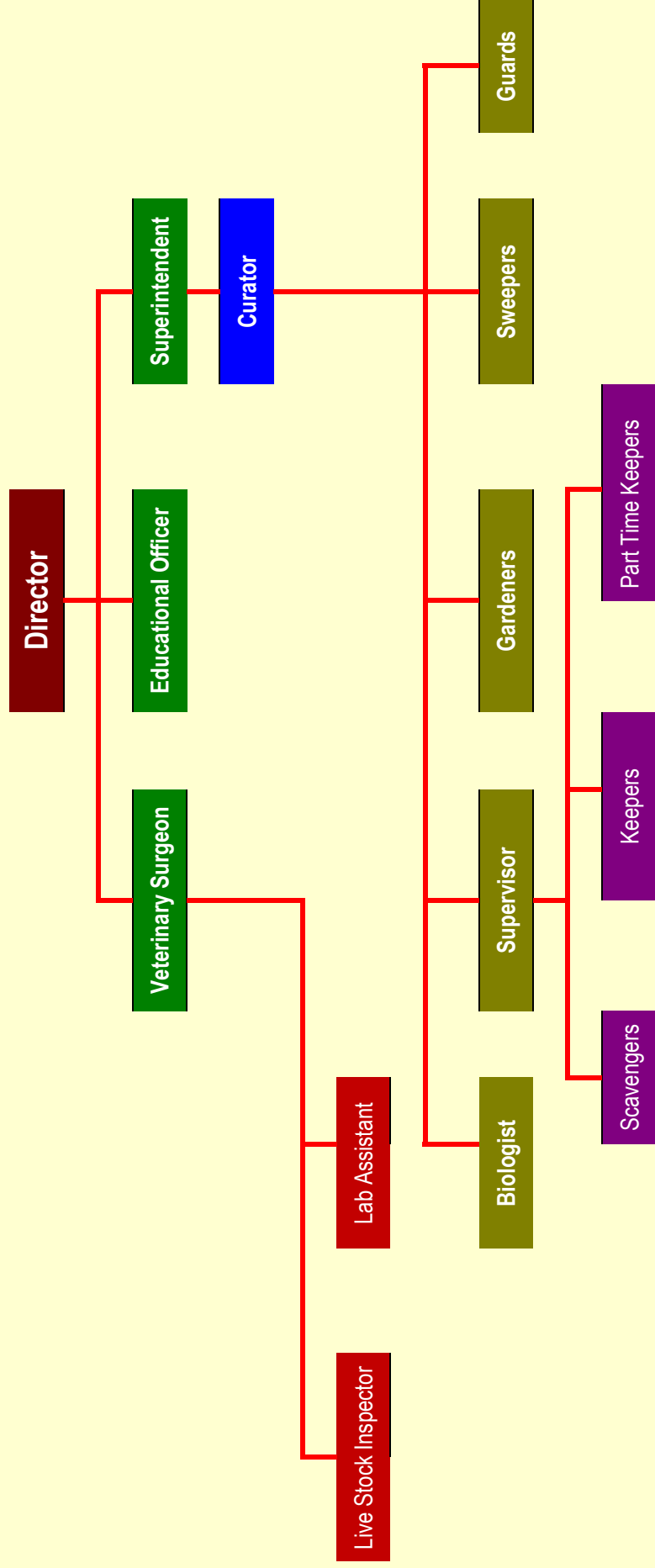
## 6. About Us

Sl. No.	Particulars	Information
<b>Basic information about the Zoo</b>		
1	Name of the Zoo	Zoological Garden, Thiruvananthapuram
2	Year of Establishment	1857
3	Addres of the Zoo	Museums and Zoo Campus Vikas Bhavan (P.O.) Thiruvananthapuram - 695033 Kerala State
4	State	Kerala
5	Telephone Number	0471-2316275, 2318294
6	Fax Number	0471-2318294
7	E-mail address	museumzoo@gmail.com
8	Website	www.keralamuseumandzoo.org
9	Distance from Nearest	Airport : 9 Kms. Railway Station : 3 Kms. Central Bus Stand : 3 Kms
10	Recognition valid upto (Date)	19 <sup>th</sup> August 2023
11	Category of Zoo	Large
12	Area (in Hectares)	36.02 Acres
13	Number of Visitors (2020 - 21)	Adult : 2,48,817 Children : 20,532 <b>Total Indian : 2,69,349</b> Total Foreigners : 74 <b>Total Visitors : 2,69,423</b>

14	Visitors' facility available in Zoo	Battery Operated Vehicles, E - Toilets, She Toilets, Morning Walks, Childrens Park, 3-D Theatre, Art Museum, Aquarium, Art Gallery, Natural History Museum, Rain Shelters, Purified Drinking Water Points, Food Court, Restaurant, Caffetarea, Parking Facility Wheel Chairs, Parking Facility etc.
15	Weekly Closure Day of the Zoo	Monday
<b>Management Personnel of the zoo</b>		
16	Name with Designation of the Officer in-charge	T.V.Anilkumar, Superintendent, Zoological Garden
	Name of the Veterinary Officer	Dr. Jacob Alexander
	Name of the Curator	Mrs. Sangeetha Mohan
	Name of the Biologist	V. Sumam
	Name of the Education Officer	
	Name of the Compounder/ Lab Assistant	Renjith Kumar T
<b>Owner / Operator of the Zoo</b>		
17	Name of the Operator	Rajeshkumar Singh IAS
18	Address of the Operator	Secretary (Zoo), Cultural Affairs Department, Government Secretarait, Thiruvananthapuram
19	Contact details/Phone number of Operator	0471-2322903
20	E-mail address of Operator	secy.ahd@kerala.gov.in



## 7. Organizational Chart



## 8. Human Resources

### Manpower of the Zoo

Sl. No.	Designation	Number of Sanctioned posts	Names of the incumbent
1	Director	1	S. Abu
2	Superintendent	1	T.V. Anilkumar
3	Curator	1	Sangeetha Mohan
4	Veterinary Surgeon	1	Dr. Jacob Alexander
5	Education Officer	1	P. Vijayalekshmi
6	Livestock Inspector	1	Renjith Kumar T
7	Lab Assistant	1	S.M. Ragi
8	Supervisor	2	Thulaseedharan C
9			B. Saji
10	Keeper	31	A. Radhakrishnan Nair
11			R. Sudheesan
12			N. Muraleedharan Nair
13			K. Babu
14			S. Jayan
15			S. Vasudevan Nair
16			B. Rajesh
17			M. Ramachandran
18			D. Manoharan
19			V.A. Sreekumar
20			R. Ratheesh
21			N. Raveendran Nair
22			T.R. Radhakrishnan
23			V.S, Manu
24			S.S. Rajesh Kumar
25			V. Anilkumar

26			S.L. Sreejith
27			A. Harshad
28			K. Subhash
29			A.S. Saji
30			Mithun KS
31			Kiran Babu B
32			Biju R
33			S. N. Rajesh
34			Shaji R
35			Biju VR
36			Sajan S
37			Shaiju G
38			Sabeer AA
39			Maneesh KS
40			Binu S
41			D. Muraleedharan Nair
42			K.S. Sunil
43	P.T. Keeper	4	N. Gopakumar
44			Bhaskaran C
45			T. Sajikumar
46	Scavengers	3	B. Leela
47	Blacksmith	1	A.K. Rajan
48	Carpenter	1	Vacant
49	Mason	1	Vacant
50	Pump Operator	1	Harish Madhavan
51	Driver	1	B. Shameer
52	Van Cleaner	1	Nevit Paul
53	Senior Civil Police Officer	1	Vacant

54	Civil Police Officer	10	B.T. Prajeesh		
55			B. Shibu		
56			S. Sunilkumar		
57			M.S. Mahesh Raj		
58			K. Jayakumar		
59			V.S. Ajidas		
60			S. Gireesh Kumar		
61			P. Pradeep		
62			Sergeant	1	Vacant
63			Guards	14	Suresh Roy P
64	K. Suresh				
65	V M Sudheesan				
66	V.P. Prasobhan				
67	K. Ranjith Kumar				
68	C.S. Ajikumar				
69	B.Babu				
70	Ragesh Cherotta				
71	M.K. Vijeesh				
72	Ajeesh Vargheese				
73	Prince J				
74	Sujith EM				
75	Nithin Sajan				

## 9. Capacity Building of Zoo personnel

No training could attended or conducted due to COVID-19 restruictions.

## 10. Zoo Advisory Committee

a.	Date of constitution	:	
b.	Members	:	Not constituted during the financial year (the same has been constituted during the year 2018 -19)
c.	Dates on which meeting held during the year	:	

## 11. Health Advisory Committee

a.	Date of constitution	:	28.2.2018
b.	Chairman	:	Principal Chief Conservator of Forests (WL) and Chief Wildlife Warden, Kerala
c.	Members	:	i. Chief Forest Veterinary Officer ii. Forest Veterinary Officer iii. Veterinary Officer of the concerned Zoo
d.	Dates on which meeting held during the year	:	

## 12. Statement of income and expenditure of the Zoo

Sl. No.	Particulars	Income
1	Entry Ticket	77,56,500
2	Aquarium	7,74,780
3	Battery operated vehicle	5,34,640
4	Vehicle parking	22,18,650
5	Selling of manures	1,09,680
6	Miscellaneous	8,386
	<b>Total</b>	<b>1,14,02,636</b>

Sl. No.	Particulars	Expenditure
1	Dietary articles for Zoo inmates	4,26,32,251
2	Developmental works inside the Zoo	5,49,82,959



### 13. Daily feed schedule of animals

#### CARNIVORES

Sl. No.	Name of Livestock	Beef (Kg.)	Liver (Kg)	Milk	Carnivore Mineral Mixture (g)
1	Tiger	7	0.25		
2	White Tiger	10	0.25		
3	Lion	7	0.25	500 ml	25g/Kg of feed
4	Leopard	3	0.25		
5	Jaguar	3	0.25		
6	Jackal	0.7			
7	Jungle Cat	0.2			
8	Cinerous Vulture	0.75			
9	Himalayan Vulture	0.75			
10	Bengal Vulture	0.25			

## BIRDS

Sl. No.	Name of Livestock	Fish (Kg)	Meat (g)
1	White Necked Stork	0.2	
2	Adjutant Stork	0.5	
3	Painted Stork	0.2	
4	Pelican - Rosy	0.5	
5	Pelican - Grey	0.5	
6	Spoonbill	0.15	
7	White Ibis	0.15	
8	Grey Heron	0.2	
9	Night Heron	0.15	
10	Pond Heron	0.15	
11	Purple Heron	0.15	
12	Darter	0.15	
13	Pariah Kite	0.04	50
14	Brahminy Kite	0.1	50
15	White bellied sea eagle	0.3	100
16	Barn Owl	0.25	50
17	Brown fish owl	0.1	250
18	Spot bellied eagle owl	0.13	250

Sl. No	Name of Livestock	Greens/ Coriander leaves (g)	Green chilly (g)	Green gram (g)	Poultry Feed (g)	Rice (cooked) (g)	Garlic (g)	Wheat (g)	Caged birds Mineral Mixture (g)
1	Pea fowl	30	20	20	30	100		30	55g/Kg of feed
2	Guinea fowl	30	20	20	30	100		30	
3	Ring Necked Pheasant	20	10	10	25	10	5	20	
4	Silver Pheasant	20	10	10	25	10	5	20	
5	Silver Golden Pheasant	20	10	10	25	10	5	20	
6	Golden Pheasant	20	10	10	25	10	5	20	
7	Khalij Pheasant	20	10	10	25	10	5	20	
8	Lady Amherst Pheasant	20	10	10	25	10	5	20	

## EXOTIC BIRDS

Sl No	Name of Livestock	Sugarcane (g)	Sunflower/maize/jowar/ Groundnut (WH) and WOH/badam (mix) (g)	Banana (g)	Apple (g)	Guava (g)
1	Green winged macaw	55	80	55	35	35
2	Blue gold macaw	55	80	55	35	35
3	Scarlet macaw	55	80	55	35	35
4	Sulphur Cockatoo	55	80	55	35	35
5	Palm Cockatoo	55	80	55	35	35
6	Yellow Collared Macaw	55	80	55	35	35

Sl No	Name of Livestock	Sugarcane (g)	Sunflower/maize/jowar/Gr oundnut (WH) and WOH/badam (mix) (g)	Banana (g)	Apple (g)	Guava (g)	Papaya (g)	Grapes (g)
1	Electus parrot	50	20	40	15	15	65	
2	Orange winged amazon	50	20	40	15	15	65	
3	African grey Parrot	50	20	40	15	15	65	
4	Sun Conure	50	20	40	15	15	65	
5	Salmon crested cockatoo	50	20	40	15	15	65	

6	Violet turaco			20			25	25	25	25	50
7	Hartlaubs Turaco			20			25	25	25	25	50
8	Blue crowned Pigeon			20			25	25	25	25	50

SI No	Name of Livestock	Banana(g)	Greens/ spinach (g)	Dog Feed (g)	Layer/ Ostrich feed (g)	Green gram (g)	Cucumber (g)	Bread (g)	Carrot (g)	Raw rice (g)	Caged birds Mineral Mixture (g)
1	Ostrich	500	15 Kg	400							
2	Emu	750	500		250	250	250	200		250	55g/ Kg of feed
3	Emu (juvenile)		500		150				400		
4	Farm Ostrich		5 Kg		250						

SI No.	Name of Livestock	Greens/ Spinache (g)	Poultry Feed (g)	Boiled Eggs with shell	Heart of beef (cooked) 9G0	Cauliflower (g)	Cabbage (g)	Carrot (g)	Caged birds Mineral Mixture (g)
1	Rhea	1,000	270	1 No.	200	150	100	100	55g/ Kg of feed
2	Rhea (juvenile)	750	200	1 No.				500	

SI No.	Name of Livestock	Bengal Gram (g)	Guava (g)	Grapes (g)	Ground nut (WH) (g)	Groundnut WOH (g)	Mango/ Apple (g)
1	Parakeets	25	20	30	25	20	50

SI No.	Name of Livestock	Thina (g)	Rice cooked (g)	Cucumber (g)	Spinache (g)	Green gram (g)	Egg (No.)	Caged birds Mineral Mixture (g)
1	Black Swan	20	40	110	40	40	half	55 g / Kg of feed.
2	Crusted duck	20	40	110	40	40	half	
3	Lesser Whistling teal	20	40	110	40	40	half	

## HERBIVORES

SI No.	Name of Livestock	Guava (g)	Grapes (g)	Coconut (g)	Mango/Apple/Pineapple (g)	Bread (g)	Orange (g)	Papaya (g)	Water Melon (g)	Cowpea (g)
1	Giant Squirrel	60	65	20	40	40	40	40	50	51

SI No.	Name of Livestock	Banana (g)	Grapes (g)
1	Toddy Cat	250	150



Sl No.	Name of Livestock	Jaggery (g)	Bread (g)	Grapes (g)	Honey (g)	Cucumber (g)	Milk (g)	Orange (g)	Water Melon (g)	Ground Nut WH & WOH (g)	Egg boiled (no.)
1	Sloth bear	45	300	400	100	1,000	1	200	1,250	200 WH 35 WOH	1
2	Himalayan Black Bear	45	300	400	100	1,000	1	200	1,500	200 WH 35 WOH	2

Sl No	Name of Livestock	Cattle feed (Kg)	Cucumber (Kg)	Water Melon (Kg)	Banana (Kg)	Carrot (Kg)	Ragi (g)	Wheat bran (Kg)	Rice (Kg)	Grass (Kg)	Fodder (Kg)	Guinea grass (Kg)	Onion (g)	Cowpea (Kg)	Mineral Mixture	Salt	Asafoetida
1	Rhino	4	2	3	2	5	250	4	1	20	30	15	800	4.5	2%	1 %	200 gms per month
2	Hippo							2.5	1	50	2						

Sl. No.	Name of Livestock	Pineapple (g)	Tapioca (g)	Water Melon (g)	Bread (g)	Plantain(g)	Grapes (g)
1	Porcupine	80	300	500	45	600	150

Sl. No.	Name of Livestock	Grass (Kg)	Fodder (Kg.)	Cattle feed (Kg)	Bengal gram (g)	Green gram (g)	Cotton seed (g)	Herbivore Mineral Mixture	Salt
1	Spotted deer	1	4	1	60	60	60		
2	Hog deer	1	3	1	60	60	60		
3	Sambar deer	1.5	7	1.5	80	80	80		
4	Barking deer	1	2	0.5	40	50	40	2 % of concentrate	1 % of concentrate
5	Black buck	1	2	1	50	50	50		
6	Nilgai	7	8	3	0.5	0.5	0.5		
7	Cape buffalo	10	15	4	0.5	0.5	0.5		
8	Gaur	12.5	12.5	4	0.5	0.5	0.5		

Sl. No	Name of Livestock	Guinea grass (g)	Fodder (g)	Cattle feed (g)	Wheat bran (g)	Cucumber (g)	Banana (g)
1	Barasingha	1,000	500	250	1,000	700	500

Sl. No.	Name of Livestock	Guinea grass (g)	Karuka grass (g)	Plantain (g)	Wheat bran (g)	Carrot (g)	Equimine Mineral Mixture (g)	Salt (g)
1	Zebra	5	5	500	1	1	150 g daily for each inmates	2 % of concentrate

Sl. No.	Name of Livestock	Fresh fish (Kg)
1	Otter	3

## PRIMATES

Sl. No.	Name of Livestock	Banana / Plantain	Bread	Guava/ Tomato/ Orange	Coconut	Mango/ Apple/ Water Melon	Grapes	Groundnut WH	Pineapple/Papaya	Egg boiled
1	Lion Tailed Macaque	150 gm each	30 gm	50 gm	40 gm	120 gm	150 gm	40 gm	40 gm	1
2	Nilgiri Langur	151 gm each	30 gm	50 gm	40 gm	121 gm	151 gm	40 gm	40 gm	1
3	Common Langur	152 gm each	40 gm	50 gm	40 gm	122 gm	152 gm	40 gm	40 gm	1
4	Rhesus Macaque	153 gm each	40 gm	50 gm	40 gm	123 gm	153 gm	40 gm	40 gm	1

Sl. No.	Name of Livestock	Chicken live/Rabbit	Mice	Mice/Chicks	Egg/Mice	Mice	Rat snake	Lizard	Fish
1	Python	Weekly 1							
2	King cobra						Weekly 1		
3	Cobra			Weekly 1					
4	Anaconda	Once in 3 days							
5	Sandboa red				Weekly 1				
6	Common sandboa					Weekly 1			
7	Viper					Weekly 1			
8	Krait		Weekly 1						
9	Rat snake			Weekly 1					
10	Trinket Snake					Weekly 1			
11	Checked keelback Water Snake								daily 20 g
12	Smooth Water Snake								
13	Ornate Flying Snake							Weekly 4	

Sl. No.	Name of Livestock	Fish	Meat
1	Gharial	1.100 Kg	
2	Spectacled Caiman	160 g	200 g weakly
3	Indian flapshell turtle	20 g	
4	Indian black turtle	20 g	
5	Red eared slider	20 g	

Sl. No.	Name of Livestock	Meat	Egg (Boiled)
1	Monitor Lizard/ Varanus	100 g	1
2	Crocodile Marsh (Mugger)	1.5 Kg weekly	200 g weakly

Sl. No.	Name of Livestock	Spinache (g)	Cabbage (g)	Banana (g)	Cactus (g)	Cucumber (g)	Carrot (g)	Vallipayar (g)	Apple (g)
1	Land Tortoise	80	80	80					
2	Star Tortoise	13	200 g weakly		13	13		26	
3	Iguana	30		30					30

## 14. Vaccination Schedule of animals

Sl. No.	Species	Disease vaccinated for	Name of the vaccine and dosage/quantity used	Periodicity	Remarks
1	Primates	Poliomyelitis	Modified Live Virus Vaccine	Annual	The periodicity and essentiality of vaccination of wild animals are only taken up based on epidemiological intelligence reports and prevalence of the diseases
2		Measles	Modified Live Virus Vaccine	Annual	
3		Mumps	Modified Live Virus Vaccine	Annual	
4		DPT/Tetanus	Killed/Toxoid	Annual	
5		Rabies		Annual	
6	Canidae	Canine Distemper	Modified Live Virus Vaccine	Annual	
7		Canine Adenovirus 2	Modified Live Virus Vaccine	Annual	
8		Canine Parvovirus	Killed	Annual	
9		Canine Parainfluenza	Modified Live Virus Vaccine	Annual	
10		Rabies	Killed	Annual	
11		Leptospira bacteria	Killed	Annual	
12	Felidae	Feline panleukopaenia	Killed	Annual	
13		Feline rhinotracheitis	Killed	Annual	
14		Feline Calciviruses	Killed	Annual	
15		Rabies	Killed	Annual	
16		Canine Distemper	Killed	Annual	



17		Canine Adenovirus 2	Killed	Annual	Vaccination for avians especially New Castle Disease, Duck Plague Virus, Avian Influenza is taken up only after screening.
18	Ursidae	Leptospira bacterin	Killed	Annual	
19		Rabies	Killed	Annual	
20	Hyaenidae	Canine Distemper	Modified Live Virus Vaccine	Annual	
21		Feline panleukopaenia	Killed	Annual	
22	Artiodactyla	FMD	QAC Asia	Biannual	
23	Ruminantia	HS+BQ	Killed	Annual	
24	Equidae	Equine rhinopneumonitis	Killed	Every 4 months	
25	Perissodactyla	Leptospira bacteria	Killed	Annual	Chaemoprophylactic agents are delivered in control diseases like trypanosomiasis based on index case/lab findings.
26		Tetanus	Toxoid	Biannual	
27	Proboscidea	FMD	QAC Asia 1	Biannual	
28		Anthrax	Killed	Annual	

## 15. De-worming schedule of animals

Sl. No.	Species	Drug used	Month	Remarks
1	Primates	Broad spectrum antihelminthics	December	There is lot of resistance developing to antihelminthes due to regular deworming schedule. No new molecules are being discovered in this area. The present concept is to deworm only if indicated by laboratory tests.
2	Canidae		April, October	
3	Felidae		April, October	
4	Ursidae		May	
5	Artiodactyla		November, May	
6	Perissodactyla		April	
7	Proboscidea		November	
8	All Birds		September	
9	All reptiles		October	

## 16. Disinfection Schedule

Sl. No	Species	Type of enclosure	Disinfectant used and method	Frequency of disinfection	Remarks
1	Primates	Animal House	PP solution - Scrub	daily	PP - Potassium Permanganate  QAC - Quarterly Ammonium Compounds
2		Foot bath	PP/QAC/Bleach	daily	
3	Canidae	Animal House	Bleach/QAC	Once in a week	
4		Foot bath	PP/QAC/Bleach	daily	
5	Felidae	Animal House	PP	daily	
6			Turmeric	Once in a month	
7			Bleach	Once in two months	
8		Enclosure	Fire - Diesel & Petrol	Once in five years	
9		Foot bath	PP/QAC/Bleach		
10	Ursidae	Animal House	PP	daily	
11		Foot bath	PP/QAC/Bleach	daily	
12		Enclosure	Salt/Bleach		
13	Hyaenidae	Animal House	PP	daily	
14			Bleach/QAC	Once in a month	
15		Enclosure	Salt/Bleach	Once in a month	
16	Artiodactyla	Animal House	QAC/ 3 % Sodium hypochlorate	Once in a week	
17		Foot bath	QAC/Bleach	daily	
18		Enclosure	Salt/Sodium hypochlorate	Rainy season/ FMD	
19	Equidae/Perissodactyla	Animal House	QAC/Bleach	Once in a month	
20		Foot bath	Bleach/QAC	daily	
21		Enclosure	Bleach	Once in a year	
22	Proboscidea	Animal House	QAC/Bleach	Once in a month	
23		Foot bath	Bleach/QAC	daily	
24		Enclosure	Bleach	Once in a year	

## 17. Health Check up of employees for Zoonotic diseases

1. Health checkup was conducted during the year 2020 - 21.

## 18. Development works carried out in the Zoo during the year

1. Construction of Butterfly park
2. Construction of Quarantine station in Zoological Garden, Thiruvananthapuram
3. Renovation of various animal enclosures
4. Zoo Store cum Office Building.

## 19. Educational and Awareness programmes during the year

No educational activities or awareness could be conducted due to COVID-19 restrictions.

## 20. Important events and happenings

1. Birth of Tiger Cub

## 21. Seasonal special arrangements for upkeep of animals

1. Provided water coolers, showers, airconditioners, pedestal fans, special diet for animals like Tigers, Himalayan Bears, Nilgais, Ostriches, Anacondas etc during last summer season.

## 22. Research work carried out and publications

## 23. Conservation Breeding Programme of the Zoo

1. Thiruvananthapuram Zoological Garden is a participant Zoo along with Arignar Anna Zoological Park, Vandallor, Chennai and Chamarajendra Zoological Garden, Mysore for the Conservation Breeding of Lion Tailed Macaques

## 24. Animal acquisition/transfer/exchange during the year

Animals arriving in the Zoo				
A	Species	Number (M:F)	From which Zoo	Date of arrival in the Zoo
	King Cobra	2 : 1	Pilikula Zoo, Mangalore	2.3.2021
	Whitaker's Boa	2 : 2		
B	Species	Number (M:F)	Going to which Zoo	Date of deposition from the Zoo
	Rhea	2 : 2	Pilikula Zoo, Mangalore	2.3.2021

## 25. Rescue and Rehabilitation of wild animals carried out by the Zoo

Sl. No	Date of Rescue	Species with number of animals rescued with their sex (M:F:U:T)	Received from	Date of submission of Report to the CWLW/CZA	Action taken	
					Date and place of rehabilitation in their habitat	Reasons for housing in the Zoo, if not released in their habitat
1	Nil					

## 26. Annual Inventory of animals

Sl. No.	ANIMAL NAME	OPENING STOCK			BIRTHS			ACQUISITIONS			DISPOSALS			DEATHS			CLOSING STOCK AS on 31.03.2021									
		M	F	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T						
<b>Endangered Species (Schedule I and II)</b>																										
1	Bird	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1					
2	Bird	9	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18					
3	Bird	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
4	Bird	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
5	Bird	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
6	Bird	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2					
7	Bird	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1					
	<b>TOTAL</b>	<b>12</b>	<b>12</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>12</b>	<b>2</b>	<b>24</b>			
8	Mammal	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2				
9	Mammal	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10	Mammal	22	39	6	2	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	28	33	6	67		
11	Mammal	4	3	4	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	4	14		
12	Mammal	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4		
13	Mammal	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3		
14	Mammal	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
15	Mammal	10	15	0	25	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	8	13	0	21
16	Mammal	10	5	0	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	5	0	16
17	Mammal	2	3	3	8	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	2	10	
18	Mammal	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
19	Mammal	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	







	TOTAL	123	313	24	460	4	3	11	0	0	0	0	0	0	20	13	0	110	307	26	443
66	Reptile	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
67	Reptile	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1
68	Reptile	1	0	6	7	0	0	0	0	0	0	0	0	0	0	4	0	1	0	2	3
69	Reptile	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1
70	Reptile	0	0	4	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
71	Reptile	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
72	Reptile	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2
73	Reptile	0	0	10	10	0	0	3	0	0	0	0	0	0	0	0	0	0	0	13	13
74	Reptile	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
75	Reptile	4	4	4	12	0	0	0	0	0	0	0	0	0	0	1	0	4	3	4	11
76	Reptile	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2	0	4
	TOTAL	9	6	29	44	0	0	3	2	2	0	0	0	0	4	7	0	10	5	25	40

#### Exotic Species

77	Bird	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
78	Bird	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
79	Bird	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
80	Bird	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
81	Bird	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	22
82	Bird	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1
83	Bird	0	5	0	5	0	0	0	0	0	0	0	0	0	0	2	0	0	3	0	3
84	Bird	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
85	Bird	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
86	Bird	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
87	Bird	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1



## 27. Mortality of Animals

Sl.No	Date	Animal	Sex	Cause of death
1	10.04.2020	Sloth bear	F	Tuberculosis
2	11.04.2020	Hog deer	M	Infighting
3	25.04.2020	Star tortoise	M	Urinary calculi and destruction
4	29.04.2020	Hog deer	F	Pneumonia
5	04.05.2020	Spotted deer	F	Pneumonia
6	04.05.2020	Barn owl	M	Infighting
7	05.05.2020	Smooth Watersnake	M	Pneumonitis
8	07.05.2020	Rheabrown	U	PM not done (sub adult)
9	09.05.2020	Spotted deer	M	Infighting - penetrating wound
10	10.05.2020	Cinerous vulture	M	Old age
11	13.05.2020	Nilgai	M	Pneumonitis and pericarditis
12	13.05.2020	Rhesus macaque	M	Old age
13	14.05.2020	Rheawhite	U	PM not done (sub adult)
14	15.05.2020	Rheawhite	U	PM not done (sub adult)
15	15.05.2020	Star tortoise	M	Urinary calculi and destruction
16	24.05.2020	Barn owl	M	Infighting
17	24.05.2020	Oriental Darter	M	Putrified in pond
18	29.05.2020	Rheawhite	U	PM not done (sub adult)
19	29.05.2020	Barn owl	M	Infighting
20	02.06.2020	Barn owl	M	Infighting
21	02.06.2020	Barn owl	M	Infighting
22	04.06.2020	Barn owl	M	infighting
23	06.06.2020	Spotted deer	M	Infighting-Internal bleeding
24	06.06.2020	Rheawhite	F	Starvation during incubation of egg
25	12.06.2020	Rheawhite	U	PM not done (sub adult)

26	13.06.2020	Blackbuck	M	Infighting
27	20.06.2020	Ornate snake	M	Pneumonia
28	25.06.2020	Spotted deer	F	Old age- Crow peck wound complication
29	27.06.2020	King cobra	M	Old age
30	07.07.2020	Spotted deer	F	Old age (Cancer of uterus)
31	09.07.2020	Golden pheasant	M	Fatty liver haemorrhagic syndrome
32	21.07.2020	Spotted deer	M	Suppurative arthritis
33	23.07.2020	Hippopotamus	F	Cardiac failure(Enterotoximia)
34	24.07.2020	Blackturtle	F	Septicaemia
35	26.07.2020	Crested duck	M	Predator attack
36	27.07.2020	Yellow golden pheasant	M	Internal haemorrhage due to Trauma
37	27.07.2020	Jungle cat	M	Old age Pyothorax
38	29.07.2020	Barn owl	M	Infighting
39	02.08.2020	Spotted deer	M	Old age (both eyes blind)
40	08.08.2020	Nilgai	M	Enterotoximia
41	08.08.2020	Nilgai	F	Enterotoximia
42	09.08.2020	Barn owl	M	Old age- blind in both eyes
43	10.08.2020	Black buck	F	Cardiopulmonary failure
44	11.08.2020	Swamp deer	M	Infighting
45	23.08.2020	Spotted deer	M	Infighting
46	28.08.2020	Barn owl	M	Infighting
47	29.08.2020	Spotted deer	M	Infighting
48	08.09.2020	Blackbuck	F	Acute tympanitis
49	09.09.2020	Rheawhite	U	PM not done (sub adult)
50	11.09.2020	Tiger( Ponni )	F	Rupture of uterus
51	17.09.2020	Spotted deer	M	Infighting
52	23.09.2020	Rheabrown	U	PM not done (sub adult)
53	27.09.2020	Red sand boa	F	Scale rot

54	03.10.2020	Green whip snake	F	Pneumonitis
55	04.10.2020	Viper	M	Pneumonitis
56	05.10.2020	Hog deer	F	Impaction
57	16.10.2020	Sulfur crested cockatoo	M	Old age- got entangled in mesh
58	17.10.2020	Hog deer	M	Infighting
59	23.10.2020	Leopard (Aswini)	F	Old age- cardio pulmonary failure
60	23.10.2020	Spotted deer	M	Infighting
61	24.10.2020	Swamp deer	F	Infighting
62	26.10.2020	Krait	M	PM not done
63	06.11.2020	Red sand boa	F	Scale rot
64	08.11.2020	Spotted deer	F	Old age,Pneumonitis
65	10.11.2020	White Ibis	M	Traumatic injury and drowning
66	14.11.2020	Spotted deer	F	Old age- uterine tumour
67	22.11.2020	Malabar Giant Squirrel	F	Cardiac failure
68	25.11.2020	Leopard(Sheena)	F	Bone cancer
69	29.11.2020	Blackbuck	F	Acute tympanitis
70	03.12.2020	Peafowl	M	Infighting -head injury- cirrhosis
71	05.12.2020	Spotted deer	M	Infighting
72	12.12.2020	Black buck	F	Stress myopathy
73	14.12.2020	Red sand boa	F	Scale rot
74	17.12.2020	Black buck	F	Stress myopathy
75	19.12.2020	Nilgai	F	Penetrating injury Diaphragmatic hernia
76	22.12.2020	Grey heron	M	Entangled in root and hypothermia
77	22.12.2020	Emu	F	Fracture of leg
78	25.12.2020	Black buck	F	Obstruction due to bezoars due to concrete & green mesh
79	25.12.2020	Ornate snake	M	Traumatic injury
80	02.01.2021	Blackbuck	F	Stress myopathy
81	04.01.2021	Sambar deer	F	Fallen into moat, Infighting

82	11.01.2021	Spotted deer	M	Abdominal displacement
83	16.01.2021	Common langur	F	Old age -Salmonellosis
84	17.01.2021	Red sand boa	F	Septicaemia
85	23.01.2021	Spotted deer	M	Infighting-Traumatic injury to chest
86	28.01.2021	Rheawhite	F	Haemorrhagic enteritis
87	29.01.2021	Swamp deer	F	Old age- blind in both eyes
88	30.01.2021	Common sandboa	F	Septicaemia
89	31.01.2021	Sambar deer	M	Infighting Punctured wound
90	09.02.02021	Spotted deer	M	Old age and loss of teeth
91	10.02.2021	Hog deer	F	Prolapse of intestine due to infighting
92	22.02.2021	Sambar deer	M	Infighting - penetrating wound
93	04.03.2021	Sambar deer	M	Infighting
94	05.03.2021	Spotted deer	F	Cardiac tamponade
95	09.03.2021	Blackbuck	F	Infighting- rupture of intestine
96	10.03.2021	Blackbuck(leucistic)	M	Infighting- peritonitis
97	15.03.2021	Nilgai	M	Infighting - rupture of rumen
98	25.03.2021	Emu	F	Oopheritis & Haemorrhage
99	30.03.2021	Sambar deer	F	Old age,blind,pneumonis
100	30.03.2021	Lady amherst pheasant	F	Predator attack

## 28. Compliance with conditions stipulated by the Central Zoo Authority

Sl. No.	Rule 10. Norm No.	Conditions stipulated	Time period to comply	Remarks
<b>1 General Requirements</b>				
1	10.1(1)	The zoo should maintain information from studbook regarding the genetic lineage and relatedness of animals so that the population remains physically, genetically and behaviourally healthy and infusion of new blood through breeding exchange programme should be initiated.	Three months.	Efforts are being made to acquire animals from participating zoos for conservation breeding programme.

<b>2. Administrative and Staffing pattern</b>				
2	10.1(2)	The naturalistic environment has been marred by introducing concrete structures which does not merge with the landscape. In hyena enclosure large concrete mushroom have been created in front of animal house, which should be dismantled or camouflaged as it spoils the naturalness of landscape. The efforts to plant trees, bamboos and shrubs has been minimal though several animal houses are in direct view of visitors and must be appropriately camouflaged. There are residential buildings close to the Zoo boundary and can be seen overlooking the enclosure and spoils the naturalness and educational value of exhibits. Trees and shrubs to be planted to obscure the view.	Six months	Efforts are being made to plant tree saplings and bamboos to camouflage the animal houses. Tree saplings have been planted near to the Zoo boundary to mask the residential buildings.
3	10.1(2)	Occurrence of ornamental plants in Zoo and in stand-off barrier spoils the naturalness and these must be removed and replaced by shrubs. There is a need to plant hedge plants between moat and stand - off barrier at several enclosures.	Six months	Complied.
4	10.1(3)	The visitors' movement is as per the visitor flow approved in Master Plan; however it requires improvement as the LTM conservation breeding centre and the animal houses and Kraal are in the visitor's pathway. The Animal houses of leopard, Tiger and Kraal are visible to visitors. The visitor pathway should be restricted excluding this area and sufficient camouflage should be provided by planting shrubs and trees.	Six months	Visitor pathway is restricted at the animal houses of leopard, Tiger and Kraal.
<b>2. Administrative and staffing pattern:</b>				
5	10.2(2)	The zoo requires additional Veterinary Surgeon as per the Recognition of Zoo Rules, 2009, to carry out duties for providing health care of animals.	Immediately	The matter been brought to the notice of the Government.

<b>3. Development and Planning</b>				
6	10.3(3)	There are few animal enclosures/structures located and because of the terrain, visible to the visitors and these needs to be adequately camouflaged by planting trees and shrubs. (Toilet block and enclosure for wolf, Rhino etc.)		Planting tree saplings is in progress.
7	10.3(7) & 10.3(8)	The zoo has accepted a rescued Leopard without having any Rescue and Quarantine facility and adequate enclosure for housing the animal. This must be sent to a rescue facility after approval of the Chief Wildlife Warden.	Immediately	The construction of Quarantine station is in final stage.
<b>4. Animal housing, display of animals and animal enclosures.</b>				
8	10.4(1)	The residential houses are visible from several enclosure, especially along the backside of the enclosure for Sambar, this needs to be camouflaged with tall trees and shrubs.	Immediately	Tree saplings have been planted at these sites.
9	10.4(1)	The rear wall near toilet block of Museum is visible from the visitors' pathway leading to Lion tailed macaque enclosure which should be appropriately camouflaged.	Immediately	Complied.
10	10.4(1)	The aviaries are provided with metal and plastic support for perching which could be harmful for the birds, these should be replaced by natural wooden perches.	Immediately	Complied.
11	10.4(2) & 10.4(3)	The One horned rhinoceros enclosure lacks appropriate naturalistic vegetation and the doors of the enclosure requires repairs. Hedge should be raised all around and viewing areas to be delineated.	Immediately	Kerala Public Works Department is entrusted to repair the doors of the enclosure. Hedges been planted around the enclosure.
12	10.4(3)	All along the boundary wall, green buffer be provided specially where it is close to roads with vehicular traffic to reduce sound pollution.	Immediately	Tree saplings have been planted at these sites.
13	10.4(5) & 10.4(8)	The White Tiger is kept in kraal and the lion enclosure is partitioned for housing white Tiger and Lion. The design of such partitioning along with space allocated for Lion and Tiger holding facility should be submitted to the CZA for approval.	Immediately	Yet to be done.



14	10.4(5) & 4(8)	Two White Tigers (1 male : 1 female) are kept in a Kraal as appropriate housing is not available and the existing Lion enclosure is being partitioned for providing housing. The partition design is to be approved by the CZA and then only any other animal should be introduced in the enclosure.	Immediately	Yet to be done.
15	10.4(10)	The Zoo has placed several signboards for providing with relevant information on the biology, behaviour and the population status of the species in the. There is need for additional signboards including direction signage.	Immediately	Additional sign boards are being prepared.
<b>5. Upkeep and Healthcare of animals.</b>				
16	10.5(3)	The feed Storage condition needs improvement as the storage building is old with dampness, damaged flooring is to be repaired and slabs provided in adequate number to keep the food items free from contamination. The meat house is old and close to the dry store house and needs improvement of floor and slabs to maintain hygienic condition.		The construction of new building with all modern facilities been completed.
<b>6. Veterinary and infrastructure facilities.</b>				
17	10.6(3)	The Quarantine facility of appropriate size to house animals should be constructed urgently.	Nine months	The construction of Quarantine facility is in final stage.
<b>7. Post-mortem and disposal of carcasses of animals.</b>				
18	10.7(4)	The carcasses of the animals, after the post-mortem has been conducted, is either burnt or disposed of by burying and this pollutes the Zoo neighbourhood, therefore a modern incinerator should be installed.	Six months	Yet to be done.
<b>9. Acquisition and breeding of animals.</b>				
19	10.9(2)	Two species of primates (Nilgiri langur and Common langur) not kept in social group. Other primates LTM (5:5) and Rhesus Macaque (3:4) are not compatible and can not be arranged into social group. A behavioural study should be conducted and efforts for bonding should be initiated.	Immediately	Yet to be done.

20	10.9(4)	Several single and unpaired species listed below are housed in the Zoo. (Whit-bellied Eagle (0:0:1), Khalij Pheasant (1:0), Black Vulture (1:0), White backed Vulture (0:1), Sloth Bear (0:1), Small Indian Civet (1:0), Indian one horned Rhino (1:0), Mugger Crocodile (1:0), Monitor Lizard (1:0), King cobra (1:0), Gharial (0:6). The zoo should try to acquire animals from other zoos for pairing and in the event the zoo can not find a male within a period of six months, these species should be transferred or exchanged or given on breeding loan to any other zoo in accordance with the norms specified by the Central Zoo Authority.	Immediately	Yet to be done.
21	10.9(6)	The Conservation Breeding Plan for Lion-tailed Macaque is to be reviewed as the enclosure is in a central location and is not an off-exhibit facility and there is lack of scientific input nor any exchange has occurred between coordinating and participating Zoos.	Three months.	Yet to be complied.
<b>11. Education and outreach activities</b>				
22	10.11(1)	The Education Officer should make more efforts to conduct educational and outreach program and to formulate calendar of activities for holding events round the year.	Immediately.	Efforts are in progress.

## 29. List of free living wild animals within the Zoo premises

1. Peafowl
2. Bonnet macaque

# Zoological Garden, Thiruvananthapuram

## Annual Report 2020 - 2021

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## 1. Report of the Director

The Zoological Garden, Thiruvananthapuram has been the centre of attraction for the animal lovers who visit the temple city of Kerala. Ever since its establishment in 1859 as the second Zoo in India, the Thiruvananthapuram Zoo has seen a steady progress in the number and variety of its animal collection.

Ever since the approval of the Master Plan, the institution has taken due care to stick on to the Master Plan in execution of the development activities. The institution could also raise to the expectations of the visitors coming from various parts of the Country and abroad. Apart from Zoo the visitors also cherish the Botanical Garden, Art Museum, Natural History Museum and Art Galleries present in the compound.

With limited research available on the risk corona virus poses on wildlife, the Zoological Garden could manage the zoo animal well during the pandemic. The Keeper were screened multiple times before entering the Zoo periphery. The entire campus was sanitized in association with Kerala Fire and Rescue Department. The prevailing COVID protocol was strictly maintained. During this period, different types of food items were stocked in advance as per the diet schedule. The COVID pandemic has slowed the developmental activities to large extent.

**Director  
Museums and Zoos**

## 2. History of the Zoo



The Thiruvananthapuram Zoo is the oldest zoo in India continuing to exist in its original location in the heart of the temple city Thiruvananthapuram. Swathi Thirunal Maharaja (1816 – 1846), illustrious King and Music composer who had ruled Travancore during 1830 – 1846 is said to be the visionary behind the establishment of the Thiruvananthapuram Museum and Zoo. He had a good collection of animals including elephants in his horse breeding centre. To the Trivandrum stables he incorporated a menagerie and kept tigers, panthers, cheetahs, deer, bears and a lioness there. It was however left to his brother Uthram Thirunal Marthanda Varma and the then British Resident General Cullen which consequenced the establishment of the Museum and Zoo in Thiruvananthapuram. A committee was formed in 1855 with the Maharaja of Travancore as patron, General Cullen as President, the Elaya Raja as Vice President and Mr. Allen Brown as Secretary of the Committee and the Director of Museum. The Museum was thrown open to the public in September 1857. But the Museum by itself could not attract the people much, and therefore a Zoo and a park were started in 1859.

This Zoological Garden is unique in India for its breathtaking landscapes and luxuriant growth of vegetation. Royal look of lofty trees, towering bamboos, lush green landscapes give it a rare distinction of being one of the most beautiful zoos in South East Asia. Spread over 36 acres of land and located in the heart of the city it provides a respite for the people of Thiruvananthapuram as much it offers tourism and recreation for visitors reaching from outside Kerala and overseas.

### 3. Vision

Conservation of bio-diversity with special focus on the Endemic and Endangered Fauna of Western Ghats through Scientific Captive Breeding.

Fostering curiosity, empathy and learning about animals in order to stimulate a sense of responsibility for the natural environment.

Environmental education, Wildlife conservation and Research

### 4. Mission

- a. To make Zoological Garden Thiruvananthapuram as a leading academic organization in India on animal based research activities
- b. To participate in local, regional, and international conservation plans, to contribute to them from our scientific knowledge, and to maintain breeding cores of endemic and endangered species.
- c. To be a part of the nature conservation community and to function as a nucleus for various nature conservation activities
- d. To become a central and leading body in nature conservation research.

### 5. Objective

- a. Provide ample opportunity for research in animal care, wildlife behavior, nutrition, reproduction etc.
- b. Enhanced visitor experience thus inspiring them to contribute to the cause of wildlife conservation.

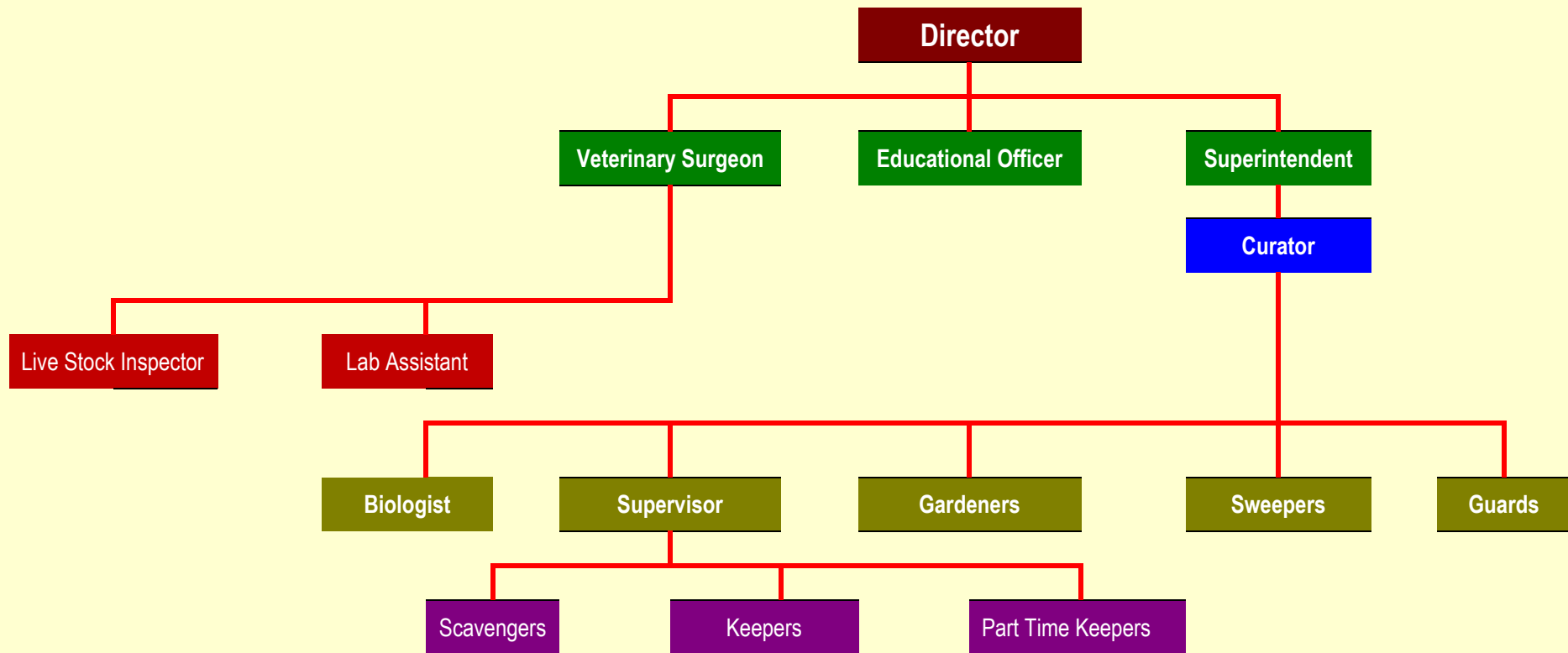
## 6. About Us

Sl. No.	Particulars	Information
<b>Basic information about the Zoo</b>		
1	Name of the Zoo	Zoological Garden, Thiruvananthapuram
2	Year of Establishment	1857
3	Addres of the Zoo	Museums and Zoo Campus Vikas Bhavan (P.O.) Thiruvananthapuram - 695033 Kerala State
4	State	Kerala
5	Telephone Number	0471-2316275, 2318294
6	Fax Number	0471-2318294
7	E-mail address	museumzoo@gmail.com
8	Website	www.keralamuseumandzoo.org
9	Distance from Nearest	Airport : 9 Kms. Railway Station : 3 Kms. Central Bus Stand : 3 Kms
10	Recognition valid upto (Date)	19 <sup>th</sup> August 2023
11	Category of Zoo	Large
12	Area (in Hectares)	36.02 Acres
13	Number of Visitors (2020 - 21)	Adult : 2,48,817 Children : 20,532 <b>Total Indian : 2,69,349</b> Total Foreigners : 74 <b>Total Visitors : 2,69,423</b>

14	Visitors' facility available in Zoo	Battery Operated Vehicles, E - Toilets, She Toilets, Morning Walks, Childrens Park, 3-D Theatre, Art Museum, Aquarium, Art Gallery, Natural History Museum, Rain Shelters, Purified Drinking Water Points, Food Court, Restaurant, Caffetarea, Parking Facility Wheel Chairs, Parking Facility etc.
15	Weekly Closure Day of the Zoo	Monday
<b>Management Personnel of the zoo</b>		
16	Name with Designation of the Officer in-charge	T.V.Anilkumar, Superintendent, Zoological Garden
	Name of the Veterinary Officer	Dr. Jacob Alexander
	Name of the Curator	Mrs. Sangeetha Mohan
	Name of the Biologist	V. Sumam
	Name of the Education Officer	
	Name of the Compounder/ Lab Assistant	Renjith Kumar T
<b>Owner / Operator of the Zoo</b>		
17	Name of the Operator	Rajeshkumar Singh IAS
18	Address of the Operator	Secretary (Zoo), Cultural Affairs Department, Government Secretarait, Thiruvananthapuram
19	Contact details/Phone number of Operator	0471-2322903
20	E-mail address of Operator	secy.ahd@kerala.gov.in



## 7. Organizational Chart



## 8. Human Resources

### Manpower of the Zoo

Sl. No.	Designation	Number of Sanctioned posts	Names of the incumbent
1	Director	1	S. Abu
2	Superintendent	1	T.V. Anilkumar
3	Curator	1	Sangeetha Mohan
4	Veterinary Surgeon	1	Dr. Jacob Alexander
5	Education Officer	1	P. Vijayalekshmi
6	Livestock Inspector	1	Renjith Kumar T
7	Lab Assistant	1	S.M. Ragi
8	Supervisor	2	Thulaseedharan C
9			B. Saji
10	Keeper	31	A. Radhakrishnan Nair
11			R. Sudheesan
12			N. Muraleedharan Nair
13			K. Babu
14			S. Jayan
15			S. Vasudevan Nair
16			B. Rajesh
17			M. Ramachandran
18			D. Manoharan
19			V.A. Sreekumar
20			R. Ratheesh
21			N. Raveendran Nair
22			T.R. Radhakrishnan
23			V.S, Manu
24			S.S. Rajesh Kumar
25			V. Anilkumar

26			S.L. Sreejith
27			A. Harshad
28			K. Subhash
29			A.S. Saji
30			Mithun KS
31			Kiran Babu B
32			Biju R
33			S. N. Rajesh
34			Shaji R
35			Biju VR
36			Sajan S
37			Shaiju G
38			Sabeer AA
39			Maneesh KS
40			Binu S
41			D. Muraleedharan Nair
42			K.S. Sunil
43	P.T. Keeper	4	N. Gopakumar
44			Bhaskaran C
45			T. Sajikumar
46	Scavengers	3	B. Leela
47	Blacksmith	1	A.K. Rajan
48	Carpenter	1	Vacant
49	Mason	1	Vacant
50	Pump Operator	1	Harish Madhavan
51	Driver	1	B. Shameer
52	Van Cleaner	1	Nevit Paul
53	Senior Civil Police Officer	1	Vacant

54	Civil Police Officer	10	B.T. Prajeesh		
55			B. Shibu		
56			S. Sunilkumar		
57			M.S. Mahesh Raj		
58			K. Jayakumar		
59			V.S. Ajidas		
60			S. Gireesh Kumar		
61			P. Pradeep		
62			Sergeant	1	Vacant
63			Guards	14	Suresh Roy P
64	K. Suresh				
65	V M Sudheesan				
66	V.P. Prasobhan				
67	K. Ranjith Kumar				
68	C.S. Ajikumar				
69	B.Babu				
70	Ragesh Cherotta				
71	M.K. Vijeesh				
72	Ajeesh Vargheese				
73	Prince J				
74	Sujith EM				
75	Nithin Sajan				

## 9. Capacity Building of Zoo personnel

No training could attended or conducted due to COVID-19 restruictions.

## 10. Zoo Advisory Committee

a.	Date of constitution	:	
b.	Members	:	Not constituted during the financial year (the same has been constituted during the year 2018 -19)
c.	Dates on which meeting held during the year	:	

## 11. Health Advisory Committee

a.	Date of constitution	:	28.2.2018
b.	Chairman	:	Principal Chief Conservator of Forests (WL) and Chief Wildlife Warden, Kerala
c.	Members	:	i. Chief Forest Veterinary Officer ii. Forest Veterinary Officer iii. Veterinary Officer of the concerned Zoo
d.	Dates on which meeting held during the year	:	

## 12. Statement of income and expenditure of the Zoo

Sl. No.	Particulars	Income
1	Entry Ticket	77,56,500
2	Aquarium	7,74,780
3	Battery operated vehicle	5,34,640
4	Vehicle parking	22,18,650
5	Selling of manures	1,09,680
6	Miscellaneous	8,386
	<b>Total</b>	<b>1,14,02,636</b>

Sl. No.	Particulars	Expenditure
1	Dietary articles for Zoo inmates	4,26,32,251
2	Developmental works inside the Zoo	5,49,82,959

### 13. Daily feed schedule of animals

#### CARNIVORES

Sl. No.	Name of Livestock	Beef (Kg.)	Liver (Kg)	Milk	Carnivore Mineral Mixture (g)
1	Tiger	7	0.25		25g/Kg of feed
2	White Tiger	10	0.25		
3	Lion	7	0.25	500 ml	
4	Leopard	3	0.25		
5	Jaguar	3	0.25		
6	Jackal	0.7			
7	Jungle Cat	0.2			
8	Cinerous Vulture	0.75			
9	Himalayan Vulture	0.75			
10	Bengal Vulture	0.25			

## BIRDS

Sl. No.	Name of Livestock	Fish (Kg)	Meat (g)
1	White Necked Stork	0.2	
2	Adjutant Stork	0.5	
3	Painted Stork	0.2	
4	Pelican - Rosy	0.5	
5	Pelican - Grey	0.5	
6	Spoonbill	0.15	
7	White Ibis	0.15	
8	Grey Heron	0.2	
9	Night Heron	0.15	
10	Pond Heron	0.15	
11	Purple Heron	0.15	
12	Darter	0.15	
13	Pariah Kite	0.04	50
14	Brahminy Kite	0.1	50
15	White bellied sea eagle	0.3	100
16	Barn Owl	0.25	50
17	Brown fish owl	0.1	250
18	Spot bellied eagle owl	0.13	250



Sl. No	Name of Livestock	Greens/ Coriander leaves (g)	Green chilly (g)	Green gram (g)	Poultry Feed (g)	Rice (cooked) (g)	Garlic (g)	Wheat (g)	Caged birds Mineral Mixture (g)
1	Pea fowl	30	20	20	30	100		30	55g/Kg of feed
2	Guinea fowl	30	20	20	30	100		30	
3	Ring Necked Pheasant	20	10	10	25	10	5	20	
4	Silver Pheasant	20	10	10	25	10	5	20	
5	Silver Golden Pheasant	20	10	10	25	10	5	20	
6	Golden Pheasant	20	10	10	25	10	5	20	
7	Khalij Pheasant	20	10	10	25	10	5	20	
8	Lady Amherst Pheasant	20	10	10	25	10	5	20	

## EXOTIC BIRDS

SI No	Name of Livestock	Sugarcane (g)	Sunflower/maize/jowar/ Groundnut (WH) and WOH/badam (mix) (g)	Banana (g)	Apple (g)	Guava (g)
1	Green winged macaw	55	80	55	35	35
2	Blue gold macaw	55	80	55	35	35
3	Scarlet macaw	55	80	55	35	35
4	Sulphur Cockatoo	55	80	55	35	35
5	Palm Cockatoo	55	80	55	35	35
6	Yellow Collared Macaw	55	80	55	35	35

SI No	Name of Livestock	Sugarcane (g)	Sunflower/maize/jowar/ Groundnut (WH) and WOH/badam (mix) (g)	Banana (g)	Apple (g)	Guava (g)	Papaya (g)	Grapes (g)
1	Eclectus parrot	50	20	40	15	15	65	
2	Orange winged amazon	50	20	40	15	15	65	
3	African grey Parrot	50	20	40	15	15	65	
4	Sun Conure	50	20	40	15	15	65	
5	Salmon crested cockatoo	50	20	40	15	15	65	

6	Violet turaco		20		25	25	25	50
7	Hartlaubs Turaco		20		25	25	25	50
8	Blue crowned Pigeon		20		25	25	25	50

SI No	Name of Livestock	Banana(g)	Greens/ spinach (g)	Dog Feed (g)	Layer/ Ostrich feed (g)	Green gram (g)	Cucumber (g)	Bread (g)	Carrot (g)	Raw rice (g)	Caged birds Mineral Mixture (g)
1	Ostrich	500	15 Kg	400							55g/ Kg of feed
2	Emu	750	500		250	250	250	200		250	
3	Emu (juvenile)		500		150				400		
4	Farm Ostrich		5 Kg		250						

SI No.	Name of Livestock	Greens/ Spinache (g)	Poultry Feed (g)	Boiled Eggs with shell	Heart of beef (cooked) 9G0	Cauliflower (g)	Cabbage (g)	Carrot (g)	Caged birds Mineral Mixture (g)
1	Rhea	1,000	270	1 No.	200	150	100	100	55g/ Kg of feed
2	Rhea (juvenile)	750	200	1 No.				500	

SI No.	Name of Livestock	Bengal Gram (g)	Guava (g)	Grapes (g)	Ground nut (WH) (g)	Groundnut WOH (g)	Mango/ Apple (g)
1	Parakeets	25	20	30	25	20	50

SI No.	Name of Livestock	Thina (g)	Rice cooked (g)	Cucumber (g)	Spinache (g)	Green gram (g)	Egg (No.)	Caged birds Mineral Mixture (g)
1	Black Swan	20	40	110	40	40	half	55 g / Kg of feed.
2	Crusted duck	20	40	110	40	40	half	
3	Lesser Whistling teal	20	40	110	40	40	half	

## HERBIVORES

SI No.	Name of Livestock	Guava (g)	Grapes (g)	Coconut (g)	Mango/ Apple/Pineapple (g)	Bread (g)	Orange (g)	Papaya (g)	Water Melon (g)	Cowpea (g)
1	Giant Squirrel	60	65	20	40	40	40	40	50	51

SI No.	Name of Livestock	Banana (g)	Grapes (g)
1	Toddy Cat	250	150

SI No.	Name of Livestock	Jaggery (g)	Bread (g)	Grapes (g)	Honey (g)	Cucumber (g)	Milk (g)	Orange (g)	Water Melon (g)	Ground Nut WH & WOH (g)	Egg boiled (no.)
1	Sloth bear	45	300	400	100	1,000	1	200	1,250	200 WH 35 WOH	1
2	Himalayan Black Bear	45	300	400	100	1,000	1	200	1,500	200 WH 35 WOH	2

SI No	Name of Livestock	Cattle feed (Kg)	Cucumber (Kg)	Water Melon (Kg)	Banana (Kg)	Carrot (Kg)	Ragi (g)	Wheat bran (Kg)	Rice (Kg)	Grass (Kg)	Fodder (Kg)	Guinea grass (Kg)	Onion (g)	Cowpea (Kg)	Mineral Mixture	Salt	Asafoetida
1	Rhino	4	2	3	2	5	250	4	1	20	30	15	800	4.5	2%	1%	200 gms per month
2	Hippo							2.5	1	50	2						

Sl. No.	Name of Livestock	Pineapple (g)	Tapioca (g)	Water Melon (g)	Bread (g)	Plantain(g)	Grapes (g)
1	Porcupine	80	300	500	45	600	150

Sl. No.	Name of Livestock	Grass (Kg)	Fodder (Kg.)	Cattle feed (Kg)	Bengal gram (g)	Green gram (g)	Cotton seed (g)	Herbivore Mineral Mixture	Salt
1	Spotted deer	1	4	1	60	60	60	2 % of concentrate	1 % of concentrate
2	Hog deer	1	3	1	60	60	60		
3	Sambar deer	1.5	7	1.5	80	80	80		
4	Barking deer	1	2	0.5	40	50	40		
5	Black buck	1	2	1	50	50	50		
6	Nilgai	7	8	3	0.5	0.5	0.5		
7	Cape buffalo	10	15	4	0.5	0.5	0.5		
8	Gaur	12.5	12.5	4	0.5	0.5	0.5		

Sl. No	Name of Livestock	Guinea grass (g)	Fodder (g)	Cattle feed (g)	Wheat bran (g)	Cucumber (g)	Banana (g)
1	Barasingha	1,000	500	250	1,000	700	500

Sl. No.	Name of Livestock	Guinea grass (g)	Karuka grass (g)	Plantain (g)	Wheat bran (g)	Carrot (g)	Equimine Mineral Mixture (g)	Salt (g)
1	Zebra	5	5	500	1	1	150 g daily for each inmates	2 % of concentrate

Sl. No.	Name of Livestock	Fresh fish (Kg)
1	Otter	3

## PRIMATES

Sl. No.	Name of Livestock	Banana / Plantain	Bread	Guava/ Tomato/ Orange	Coconut	Mango/ Apple/ Water Melon	Grapes	Groundnut WH	Pineapple/Papaya	Egg boiled
1	Lion Tailed Macaque	150 gm each	30 gm	50 gm	40 gm	120 gm	150 gm	40 gm	40 gm	1
2	Nilgiri Langur	151 gm each	30 gm	50 gm	40 gm	121 gm	151 gm	40 gm	40 gm	1
3	Common Langur	152 gm each	40 gm	50 gm	40 gm	122 gm	152 gm	40 gm	40 gm	1
4	Rhesus Macaque	153 gm each	40 gm	50 gm	40 gm	123 gm	153 gm	40 gm	40 gm	1

Sl. No.	Name of Livestock	Chicken live/Rabbit	Mice	Mice/Chicks	Egg/Mice	Mice	Rat snake	Lizard	Fish
1	Python	Weekly 1							
2	King cobra						Weekly 1		
3	Cobra			Weekly 1					
4	Anaconda	Once in 3 days							
5	Sandboa red				Weekly 1				
6	Common sandboa					Weekly 1			
7	Viper					Weekly 1			
8	Krait		Weekly 1						
9	Rat snake			Weekly 1					
10	Trinket Snake					Weekly 1			
11	Checkered keelback Water Snake								daily 20 g
12	Smooth Water Snake								
13	Ornate Flying Snake							Weekly 4	



Sl. No.	Name of Livestock	Fish	Meat
1	Gharial	1.100 Kg	
2	Spectacled Caiman	160 g	200 g weakly
3	Indian flapshell turtle	20 g	
4	Indian black turtle	20 g	
5	Red eared slider	20 g	

Sl. No.	Name of Livestock	Meat	Egg (Boiled)
1	Monitor Lizard/ Varanus	100 g	1
2	Crocodile Marsh (Mugger)	1.5 Kg weekly	200 g weakly

Sl. No.	Name of Livestock	Spinache (g)	Cabbage (g)	Banana (g)	Cactus (g)	Cucumber (g)	Carrot (g)	Vallipayar (g)	Apple (g)
1	Land Tortoise	80	80	80					
2	Star Tortoise	13	200 g weakly		13	13		26	
3	Iguana	30		30					30

## 14. Vaccination Schedule of animals

Sl. No.	Species	Disease vaccinated for	Name of the vaccine and dosage/quantity used	Periodicity	Remarks
1	Primates	Poliomyelitis	Modified Live Virus Vaccine	Annual	The periodicity and essentiality of vaccination of wild animals are only taken up based on epidemiological intelligence reports and prevalence of the diseases
2		Measles	Modified Live Virus Vaccine	Annual	
3		Mumps	Modified Live Virus Vaccine	Annual	
4		DPT/Tetanus	Killed/Toxoid	Annual	
5		Rabies		Annual	
6	Canidae	Canine Distemper	Modified Live Virus Vaccine	Annual	
7		Canine Adenovirus 2	Modified Live Virus Vaccine	Annual	
8		Canine Parvovirus	Killed	Annual	
9		Canine Parainfluenza	Modified Live Virus Vaccine	Annual	
10		Rabies	Killed	Annual	
11		Leptospira bacteria	Killed	Annual	
12	Felidae	Feline panleukopaenia	Killed	Annual	
13		Feline rhinotracheitis	Killed	Annual	
14		Feline Calciviruses	Killed	Annual	
15		Rabies	Killed	Annual	
16		Canine Distemper	Killed	Annual	

17		Canine Adenovirus 2	Killed	Annual	
18	Ursidae	Leptospira bacterin	Killed	Annual	
19		Rabies	Killed	Annual	
20	Hyaenidae	Canine Distemper	Modified Live Virus Vaccine	Annual	Vaccination for avians especially New Castle Disease, Duck Plague Virus, Avian Influenza is taken up only after screening.
21		Feline panleukopaenia	Killed	Annual	
22	Artiodactyla	FMD	QAC Asia	Biannual	
23	Ruminantia	HS+BQ	Killed	Annual	
24	Equidae	Equine rhinopneumonitis	Killed	Every 4 months	
25	Perissodactyla	Leptospira bacteria	Killed	Annual	
26	Proboscidea	Tetanus	Toxoid	Biannual	Chaemoprophylactic agents are delivered in control diseases like trypanosomiasis based on index case/lab findings.
27		FMD	QAC Asia 1	Biannual	
28		Anthrax	Killed	Annual	

## 15. De-worming schedule of animals

Sl. No.	Species	Drug used	Month	Remarks
1	Primates	Broad spectrum antihelminthics	December	There is lot of resistance developing to antihelminthes due to regular deworming schedule. No new molecules are being discovered in this area. The present concept is to deworm only if indicated by laboratory tests.
2	Canidae		April, October	
3	Felidae		April, October	
4	Ursidae		May	
5	Artiodactyla		November, May	
6	Perissodactyla		April	
7	Proboscidea		November	
8	All Birds		September	
9	All reptiles		October	

## 16. Disinfection Schedule

Sl. No	Species	Type of enclosure	Disinfectant used and method	Frequency of disinfection	Remarks
1	Primates	Animal House	PP solution - Scrub	daily	PP - Potassium Permanganate  QAC - Quarterly Ammonium Compounds
2		Foot bath	PP/QAC/Bleach	daily	
3	Canidae	Animal House	Bleach/QAC	Once in a week	
4		Foot bath	PP/QAC/Bleach	daily	
5	Felidae	Animal House	PP	daily	
6			Turmeric	Once in a month	
7			Bleach	Once in two months	
8		Enclosure	Fire - Diesel & Petrol	Once in five years	
9		Foot bath	PP/QAC/Bleach		
10	Ursidae	Animal House	PP	daily	
11		Foot bath	PP/QAC/Bleach	daily	
12		Enclosure	Salt/Bleach		
13	Hyaenidae	Animal House	PP	daily	
14			Bleach/QAC	Once in a month	
15		Enclosure	Salt/Bleach	Once in a month	
16	Artiodactyla	Animal House	QAC/ 3 % Sodium hypochlorate	Once in a week	
17		Foot bath	QAC/Bleach	daily	
18		Enclosure	Salt/Sodium hypochlorate	Rainy season/ FMD	
19	Equidae/Perissodactyla	Animal House	QAC/Bleach	Once in a month	
20		Foot bath	Bleach/QAC	daily	
21		Enclosure	Bleach	Once in a year	
22	Proboscidea	Animal House	QAC/Bleach	Once in a month	
23		Foot bath	Bleach/QAC	daily	
24		Enclosure	Bleach	Once in a year	

## 17. Health Check up of employees for Zoonotic diseases

1. Health checkup was conducted during the year 2020 - 21.

## 18. Development works carried out in the Zoo during the year

1. Construction of Butterfly park
2. Construction of Quarantine station in Zoological Garden, Thiruvananthapuram
3. Renovation of various animal enclosures
4. Zoo Store cum Office Building.

## 19. Educational and Awareness programmes during the year

No educational activities or awareness could be conducted due to COVID-19 restrictions.

## 20. Important events and happenings

1. Birth of Tiger Cub

## 21. Seasonal special arrangements for upkeep of animals

1. Provided water coolers, showers, airconditioners, pedestal fans, special diet for animals like Tigers, Himalayan Bears, Nilgais, Ostriches, Anacondas etc during last summer season.

## 22. Research work carried out and publications

## 23. Conservation Breeding Programme of the Zoo

1. Thiruvananthapuram Zoological Garden is a participant Zoo along with Arignar Anna Zoological Park, Vandallor, Chennai and Chamarajendra Zoological Garden, Mysore for the Conservation Breeding of Lion Tailed Macaques

## 24. Animal acquisition/transfer/exchange during the year

Animals arriving in the Zoo				
A	Species	Number (M:F)	From which Zoo	Date of arrival in the Zoo
	King Cobra	2 : 1	Pilikula Zoo, Mangalore	2.3.2021
	Whitaker's Boa	2 : 2		
B	Species	Number (M:F)	Going to which Zoo	Date of deposition from the Zoo
	Rhea	2 : 2	Pilikula Zoo, Mangalore	2.3.2021

## 25. Rescue and Rehabilitation of wild animals carried out by the Zoo

Sl. No	Date of Rescue	Species with number of animals rescued with their sex (M:F:U:T)	Received from	Date of submission of Report to the CWLW/CZA	Action taken	
					Date and place of rehabilitation in their habitat	Reasons for housing in the Zoo, if not released in their habitat
1	Nil					

## 26. Annual Inventory of animals

Sl. No.	ANIMAL NAME	OPENING STOCK				BIRTHS			ACQUISITIONS			DISPOSALS			DEATHS			CLOSING STOCK As on 31.03.2021					
		M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T		
<b>Endangered Species (Schedule I and II)</b>																							
1	Bird	Eagle White Bellied	Sea	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
2	Bird	Peafowl		9	10	0	19	0	0	0	0	0	0	0	0	1	0	0	8	10	0	18	
3	Bird	Peafowl (White)		0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
4	Bird	Pheasant Kalij		1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
5	Bird	Vulture Black/ Cinerous		1	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
6	Bird	Vulture Himalayan	Griffon	1	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	
7	Bird	Vulture White Backed	- Bengal	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
		<b>TOTAL</b>		<b>12</b>	<b>12</b>	<b>2</b>	<b>26</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>12</b>	<b>2</b>	<b>24</b>		
8	Mammal	Bear Himalayan Black		1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
9	Mammal	Bear Sloth		0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
10	Mammal	Black Buck (Krishna	Mrig)	22	39	6	67	2	1	6	0	0	0	0	1	8	0	28	33	6	67		
11	Mammal	Black Buck (leucistic)		4	3	4	11	0	0	4	0	0	0	0	1	0	0	5	5	4	14		
12	Mammal	Cat Jungle		5	0	0	5	0	0	0	0	0	0	0	1	0	0	4	0	0	4		
13	Mammal	Civet Common Palm -	Cat Toddy	1	2	0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	3		
14	Mammal	Civet - Small Indian		1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1		
15	Mammal	Swamp Deer		10	15	0	25	1	2	0	0	0	2	2	0	1	2	0	8	13	0	21	
16	Mammal	Gaur (Indian Bison)		10	5	0	15	1	0	0	0	0	0	0	0	0	0	11	5	0	16		
17	Mammal	Hyaena striped		2	3	3	8	0	0	2	0	0	0	0	0	0	0	4	4	2	10		
18	Mammal	Jackal		1	1	0	2	0	0	0	0	0	0	0	0	0	0	1	1	0	2		
19	Mammal	Langur Common		0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	



20	Mammal	Langur Nilgiri	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3
21	Mammal	Leopard (Panther)	4	4	0	8	0	0	0	0	0	0	0	0	0	2	0	4	2	0	6	
22	Mammal	Macaque Lion-Tailed	5	5	0	10	0	0	0	0	0	0	0	0	0	0	0	5	5	0	10	
23	Mammal	Macaque Rhesus	4	4	0	8	0	0	0	0	0	0	0	0	1	0	0	3	4	0	7	
24	Mammal	Otter Common	2	1	0	3	0	0	0	0	1	0	0	0	0	0	0	2	2	0	4	
25	Mammal	Rhinoceros Indian One Horned	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
26	Mammal	Squirrel Giant Malabar / Indian	0	2	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	1	
27	Mammal	Tiger Bengal	4	2	0	6	0	0	0	0	0	0	0	0	0	1	0	4	1	0	5	
28	Mammal	Tiger Bengal (White)	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
		<b>TOTAL</b>	<b>79</b>	<b>92</b>	<b>13</b>	<b>184</b>	<b>4</b>	<b>3</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>16</b>	<b>0</b>	<b>84</b>	<b>83</b>	<b>12</b>	<b>179</b>
29	Reptile	Spectacled Cobra	5	6	12	23	0	0	0	0	0	0	0	0	0	0	0	5	6	12	23	
30	Reptile	Cobra King	1	0	0	1	0	0	0	2	1	0	0	0	0	1	0	0	2	1	0	3
31	Reptile	Crocodile Long Snouted (Gharial)	2	4	0	6	0	0	0	0	0	0	0	0	0	0	0	2	4	0	6	
32	Reptile	Crocodile Marsh (Mugger)	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
33	Reptile	Python Indian - Rock	4	2	2	8	0	0	0	0	0	0	0	0	0	0	0	4	2	2	8	
34	Reptile	Python Regal/ Reticulated	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	
35	Reptile	Snake Keelback Checkered	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
36	Reptile	Snake Rat/ Dhaman	2	2	4	8	0	0	0	0	0	0	0	0	0	0	0	2	2	4	8	
37	Reptile	Tortoise (Indian Star)	1	0	11	12	0	0	0	0	0	1	0	0	0	2	0	0	0	11	11	
38	Reptile	Indian Flap shell turtle	0	0	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	
39	Reptile	Viper Russels	0	0	2	2	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	
		<b>TOTAL</b>	<b>18</b>	<b>16</b>	<b>38</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>18</b>	<b>17</b>	<b>37</b>	<b>72</b>
<b>SPECIES SCHEDULE III and IV)</b>																						
40	Bird	Darter - Snake Bird	3	2	4	9	0	0	3	0	0	0	0	0	1	0	0	2	2	7	11	
41	Bird	Heron Grey	1	2	9	12	3	2	0	0	0	0	0	0	1	0	0	3	4	9	16	

42	Bird	Heron Night	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
43	Bird	Heron Pond	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
44	Bird	Heron Purple	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
45	Bird	Ibis White	12	10	20	42	0	0	3	0	0	0	0	0	1	0	0	11	10	23	44	
46	Bird	Kite Brahminy	2	1	5	8	0	0	0	0	0	0	0	0	0	0	0	2	1	5	8	
47	Bird	Kite Pariah/ Black Kite	2	3	2	7	0	0	0	0	0	0	0	0	0	0	0	2	3	2	7	
48	Bird	Owl Barn	0	0	15	15	0	0	0	0	0	0	0	0	9	0	0	0	0	6	6	
49	Bird	Owl Brown Fish	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	
50	Bird	Owl Eagle Forest	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
51	Bird	Parakeet Alexandrine	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
52	Bird	Parakeet Rose Ring	31	24	81	136	0	0	0	0	0	0	0	0	0	0	0	31	24	81	136	
53	Bird	Pelican Rosy/White	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	
54	Bird	Pelican Spot Billed / Grey	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	
55	Bird	Purple Moorhen	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	
56	Bird	Stork Adjutant	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
57	Bird	Stork Painted	7	9	0	16	0	0	3	0	0	0	0	0	0	0	0	7	9	3	19	
58	Bird	Teal Lesser Whistling	0	0	7	7	0	0	0	0	0	0	0	6	0	0	0	0	0	1	1	
		<b>TOTAL</b>	<b>67</b>	<b>62</b>	<b>147</b>	<b>276</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>64</b>	<b>141</b>	<b>272</b>	
59	Mammal	Deer Barking (Kakar)	2	3	0	5	0	0	0	0	0	0	0	0	0	0	0	2	3	0	5	
60	Mammal	Deer Hog	8	29	7	44	2	2	5	0	0	0	0	0	2	3	0	11	32	5	48	
61	Mammal	Deer Sambar	24	95	0	119	0	0	0	0	0	0	0	0	3	2	0	21	93	0	114	
62	Mammal	Deer Spotted (Chital)	74	176	2	252	0	0	0	0	0	0	0	12	6	0	62	170	0	232		
63	Mammal	Lion Hybrid	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
64	Mammal	Nilgai - Blue Bull	10	7	1	18	2	1	4	0	0	0	0	0	3	2	0	9	6	5	20	
65	Mammal	Porcupine Indian	4	2	14	20	0	0	2	0	0	0	0	0	0	0	0	4	2	16	22	

		TOTAL	123	313	24	460	4	3	11	0	0	0	0	0	0	20	13	0	110	307	26	443
66	Reptile	Krait Common Indian	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
67	Reptile	Sand Boa Common	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1
68	Reptile	Sand Boa Red	1	0	6	7	0	0	0	0	0	0	0	0	0	0	4	0	1	0	2	3
69	Reptile	Common vine snake	1	0	1	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1
70	Reptile	Snake Ornate	0	0	4	4	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	2
71	Reptile	Snake Trinket	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
72	Reptile	Snake Water	0	2	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	2
73	Reptile	Terrapin Red Eared	0	0	10	10	0	0	3	0	0	0	0	0	0	0	0	0	0	0	13	13
74	Reptile	Tortoise Travancore	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
75	Reptile	Turtle Pond	4	4	4	12	0	0	0	0	0	0	0	0	0	1	0	4	3	4	11	
76	Reptile	Whitaker's boa	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	2	2	0	4
		TOTAL	9	6	29	44	0	0	3	2	2	0	0	0	0	4	7	0	10	5	25	40
<b>Exotic Species</b>																						
77	Bird	Amazon Blue Fronted	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
78	Bird	Cockatoo Moluccan/ Salmon Crested	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
79	Bird	Cockatoo Palm	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
80	Bird	Cockatoo Sulphur Crested	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
81	Bird	Conure Sun	0	0	22	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22	22
82	Bird	Duck White Crested	2	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1
83	Bird	Emu	0	5	0	5	0	0	0	0	0	0	0	0	0	2	0	0	3	0	3	
84	Bird	Fowl Guinea Kenya Crested	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
85	Bird	Macaw Blue & Yellow	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2
86	Bird	Macaw Green Winged	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4
87	Bird	Macaw Scarlet	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1

88	Bird	Ostrich	2	1	0	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
89	Bird	Parakeet Eclectus	2	2	0	4	0	0	0	0	0	0	0	0	0	0	0	2	2	0	4	
90	Bird	Parrots African Grey	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	
91	Bird	Patridge Chukar	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
92	Bird	Pheasant Buff Ring Necked	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
93	Bird	Pheasant Golden	3	2	0	5	0	0	0	0	0	0	0	0	1	0	0	2	2	0	4	
94	Bird	Pheasant Lady Amherst	1	1	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	
95	Bird	Pheasant Melanistic	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	
96	Bird	Pheasant Ring Necked	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
97	Bird	Pheasant Silver	3	2	0	5	0	0	0	0	0	0	0	0	0	0	0	3	2	0	5	
98	Bird	Pheasant Yellow Golden	1	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
99	Bird	Pigeon Blue Crowned	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
100	Bird	Rhea	20	15	8	43	1	0	0	0	0	2	2	0	0	2	7	19	11	1	31	
101	Bird	Swan Black	1	1	1	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	
		<b>TOTAL</b>	<b>50</b>	<b>40</b>	<b>31</b>	<b>121</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>5</b>	<b>7</b>	<b>48</b>	<b>33</b>	<b>23</b>	<b>104</b>	
102	Mammal	Buffalo Cape African	1	3	0	4	0	0	0	0	0	0	0	0	0	0	0	1	3	0	4	
103	Mammal	Hippopotamus	2	7	0	9	0	0	0	0	0	0	0	0	0	1	0	2	6	0	8	
104	Mammal	Sugar Glider	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	
		<b>TOTAL</b>	<b>4</b>	<b>11</b>	<b>0</b>	<b>15</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>14</b>	
105	Reptile	Anaconda Green	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
106	Reptile	Caiman Spectacled	1	2	0	3	0	0	0	0	0	0	0	0	0	0	0	1	2	0	3	
		<b>TOTAL</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>4</b>	<b>0</b>	<b>5</b>	
		<b>Grand Total</b>	<b>363</b>	<b>556</b>	<b>284</b>	<b>1,203</b>	<b>12</b>	<b>8</b>	<b>35</b>	<b>4</b>	<b>4</b>	<b>1</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>50</b>	<b>43</b>	<b>7</b>	<b>352</b>	<b>535</b>	<b>266</b>	<b>1,153</b>

## 27. Mortality of Animals

Sl.No	Date	Animal	Sex	Cause of death
1	10.04.2020	Sloth bear	F	Tuberculosis
2	11.04.2020	Hog deer	M	Infighting
3	25.04.2020	Star tortoise	M	Urinary calculi and destruction
4	29.04.2020	Hog deer	F	Pneumonia
5	04.05.2020	Spotted deer	F	Pneumonia
6	04.05.2020	Barn owl	M	Infighting
7	05.05.2020	Smooth Watersnake	M	Pneumonitis
8	07.05.2020	Rheabrown	U	PM not done (sub adult)
9	09.05.2020	Spotted deer	M	Infighting - penetrating wound
10	10.05.2020	Cinerous vulture	M	Old age
11	13.05.2020	Nilgai	M	Pneumonitis and pericarditis
12	13.05.2020	Rhesus macaque	M	Old age
13	14.05.2020	Rheawhite	U	PM not done (sub adult)
14	15.05.2020	Rheawhite	U	PM not done (sub adult)
15	15.05.2020	Star tortoise	M	Urinary calculi and destruction
16	24.05.2020	Barn owl	M	Infighting
17	24.05.2020	Oriental Darter	M	Putrified in pond
18	29.05.2020	Rheawhite	U	PM not done (sub adult)
19	29.05.2020	Barn owl	M	Infighting
20	02.06.2020	Barn owl	M	Infighting
21	02.06.2020	Barn owl	M	Infighting
22	04.06.2020	Barn owl	M	infighting
23	06.06.2020	Spotted deer	M	Infighting-Internal bleeding
24	06.06.2020	Rheawhite	F	Starvation during incubation of egg
25	12.06.2020	Rheawhite	U	PM not done (sub adult)

26	13.06.2020	Blackbuck	M	Infighting
27	20.06.2020	Ornate snake	M	Pneumonia
28	25.06.2020	Spotted deer	F	Old age- Crow peck wound complication
29	27.06.2020	King cobra	M	Old age
30	07.07.2020	Spotted deer	F	Old age (Cancer of uterus)
31	09.07.2020	Golden pheasant	M	Fatty liver haemorrhagic syndrome
32	21.07.2020	Spotted deer	M	Suppurative arthritis
33	23.07.2020	Hippopotamus	F	Cardiac failure(Enterotoximia)
34	24.07.2020	Blackturtle	F	Septicaemia
35	26.07.2020	Crested duck	M	Predator attack
36	27.07.2020	Yellow golden pheasant	M	Internal haemorrhage due to Trauma
37	27.07.2020	Jungle cat	M	Old age Pyothorax
38	29.07.2020	Barn owl	M	Infighting
39	02.08.2020	Spotted deer	M	Old age (both eyes blind)
40	08.08.2020	Nilgai	M	Enterotoximia
41	08.08.2020	Nilgai	F	Enterotoximia
42	09.08.2020	Barn owl	M	Old age- blind in both eyes
43	10.08.2020	Black buck	F	Cardiopulmonary failure
44	11.08.2020	Swamp deer	M	Infighting
45	23.08.2020	Spotted deer	M	Infighting
46	28.08.2020	Barn owl	M	Infighting
47	29.08.2020	Spotted deer	M	Infighting
48	08.09.2020	Blackbuck	F	Acute tympanitis
49	09.09.2020	Rheawhite	U	PM not done (sub adult)
50	11.09.2020	Tiger( Ponni )	F	Rupture of uterus
51	17.09.2020	Spotted deer	M	Infighting
52	23.09.2020	Rheabrown	U	PM not done (sub adult)
53	27.09.2020	Red sand boa	F	Scale rot

54	03.10.2020	Green whip snake	F	Pneumonitis
55	04.10.2020	Viper	M	Pneumonitis
56	05.10.2020	Hog deer	F	Impaction
57	16.10.2020	Sulfur crested cockatoo	M	Old age- got entangled in mesh
58	17.10.2020	Hog deer	M	Infighting
59	23.10.2020	Leopard (Aswini)	F	Old age- cardio pulmonary failure
60	23.10.2020	Spotted deer	M	Infighting
61	24.10.2020	Swamp deer	F	Infighting
62	26.10.2020	Krait	M	PM not done
63	06.11.2020	Red sand boa	F	Scale rot
64	08.11.2020	Spotted deer	F	Old age,Pneumonitis
65	10.11.2020	White Ibis	M	Traumatic injury and drowning
66	14.11.2020	Spotted deer	F	Old age- uterine tumour
67	22.11.2020	Malabar Giant Squirrel	F	Cardiac failure
68	25.11.2020	Leopard(Sheena)	F	Bone cancer
69	29.11.2020	Blackbuck	F	Acute tympanitis
70	03.12.2020	Peafowl	M	Infighting -head injury- cirrhosis
71	05.12.2020	Spotted deer	M	Infighting
72	12.12.2020	Black buck	F	Stress myopathy
73	14.12.2020	Red sand boa	F	Scale rot
74	17.12.2020	Black buck	F	Stress myopathy
75	19.12.2020	Nilgai	F	Penetrating injury Diaphragmatic hernia
76	22.12.2020	Grey heron	M	Entangled in root and hypothermia
77	22.12.2020	Emu	F	Fracture of leg
78	25.12.2020	Black buck	F	Obstruction due to bezoars due to concrete & green mesh
79	25.12.2020	Ornate snake	M	Traumatic injury
80	02.01.2021	Blackbuck	F	Stress myopathy
81	04.01.2021	Sambar deer	F	Fallen into moat, Infighting

82	11.01.2021	Spotted deer	M	Abdominal displacement
83	16.01.2021	Common langur	F	Old age -Salmonellosis
84	17.01.2021	Red sand boa	F	Septicaemia
85	23.01.2021	Spotted deer	M	Infighting-Traumatic injury to chest
86	28.01.2021	Rheawhite	F	Haemorrhagic enteritis
87	29.01.2021	Swamp deer	F	Old age- blind in both eyes
88	30.01.2021	Common sandboa	F	Septicaemia
89	31.01.2021	Sambar deer	M	Infighting Punctured wound
90	09.02.02021	Spotted deer	M	Old age and loss of teeth
91	10.02.2021	Hog deer	F	Prolapse of intestine due to infighting
92	22.02.2021	Sambar deer	M	Infighting - penetrating wound
93	04.03.2021	Sambar deer	M	Infighting
94	05.03.2021	Spotted deer	F	Cardiac tamponade
95	09.03.2021	Blackbuck	F	Infighting- rupture of intestine
96	10.03.2021	Blackbuck(leucistic)	M	Infighting- peritonitis
97	15.03.2021	Nilgai	M	Infighting - rupture of rumen
98	25.03.2021	Emu	F	Oopheritis & Haemorrhage
99	30.03.2021	Sambar deer	F	Old age,blind,pneumonitis
100	30.03.2021	Lady amherst pheasant	F	Predator attack

## 28. Compliance with conditions stipulated by the Central Zoo Authority

Sl. No.	Rule 10. Norm No.	Conditions stipulated	Time period to comply	Remarks
<b>1 General Requirements</b>				
1	10.1(1)	The zoo should maintain information from studbook regarding the genetic lineage and relatedness of animals so that the population remains physically, genetically and behaviourally healthy and infusion of new blood through breeding exchange programme should be initiated.	Three months.	Efforts are being made to acquire animals from participating zoos for conservation breeding programme.



<b>2. Administrative and Staffing pattern</b>				
2	10.1(2)	The naturalistic environment has been marred by introducing concrete structures which does not merge with the landscape. In hyena enclosure large concrete mushroom have been created in front of animal house, which should be dismantled or camouflaged as it spoils the naturalness of landscape. The efforts to plant trees, bamboos and shrubs has been minimal though several animal houses are in direct view of visitors and must be appropriately camouflaged. There are residential buildings close to the Zoo boundary and can be seen overlooking the enclosure and spoils the naturalness and educational value of exhibits. Trees and shrubs to be planted to obscure the view.	Six months	Efforts are being made to plant tree saplings and bamboos to camouflage the animal houses. Tree saplings have been planted near to the Zoo boundary to mask the residential buildings.
3	10.1(2)	Occurrence of ornamental plants in Zoo and in stand-off barrier spoils the naturalness and these must be removed and replaced by shrubs. There is a need to plant hedge plants between moat and stand - off barrier at several enclosures.	Six months	Complied.
4	10.1(3)	The visitors' movement is as per the visitor flow approved in Master Plan; however it requires improvement as the LTM conservation breeding centre and the animal houses and Kraal are in the visitor's pathway. The Animal houses of leopard, Tiger and Kraal are visible to visitors. The visitor pathway should be restricted excluding this area and sufficient camouflage should be provided by planting shrubs and trees.	Six months	Visitor pathway is restricted at the animal houses of leopard, Tiger and Kraal.
<b>2. Administrative and staffing pattern:</b>				
5	10.2(2)	The zoo requires additional Veterinary Surgeon as per the Recognition of Zoo Rules, 2009, to carry out duties for providing health care of animals.	Immediately	The matter been brought to the notice of the Government.

<b>3. Development and Planning</b>				
6	10.3(3)	There are few animal enclosures/structures located and because of the terrain, visible to the visitors and these needs to be adequately camouflaged by planting trees and shrubs. (Toilet block and enclosure for wolf, Rhino etc.)		Planting tree saplings is in progress.
7	10.3(7) & 10.3(8)	The zoo has accepted a rescued Leopard without having any Rescue and Quarantine facility and adequate enclosure for housing the animal. This must be sent to a rescue facility after approval of the Chief Wildlife Warden.	Immediately	The construction of Quarantine station is in final stage.
<b>4. Animal housing, display of animals and animal enclosures.</b>				
8	10.4(1)	The residential houses are visible from several enclosure, especially along the backside of the enclosure for Sambar, this needs to be camouflaged with tall trees and shrubs.	Immediately	Tree saplings have been planted at these sites.
9	10.4(1)	The rear wall near toilet block of Museum is visible from the visitors' pathway leading to Lion tailed macaque enclosure which should be appropriately camouflaged.	Immediately	Complied.
10	10.4(1)	The aviaries are provided with metal and plastic support for perching which could be harmful for the birds, these should be replaced by natural wooden perches.	Immediately	Complied.
11	10.4(2) & 10.4(3)	The One horned rhinoceros enclosure lacks appropriate naturalistic vegetation and the doors of the enclosure requires repairs. Hedge should be raised all around and viewing areas to be delineated.	Immediately	Kerala Public Works Department is entrusted to repair the doors of the enclosure. Hedges been planted around the enclosure.
12	10.4(3)	All along the boundary wall, green buffer be provided specially where it is close to roads with vehicular traffic to reduce sound pollution.	Immediately	Tree saplings have been planted at these sites.
13	10.4(5) & 10.4(8)	The White Tiger is kept in kraal and the lion enclosure is partitioned for housing white Tiger and Lion. The design of such partitioning along with space allocated for Lion and Tiger holding facility should be submitted to the CZA for approval.	Immediately	Yet to be done.

14	10.4(5) & 4 (8)	Two White Tigers (1male : 1 female) are kept in a Kraal as appropriate housing is not available and the existing Lion enclosure is being partitioned for providing housing. The partition design is to be approved by the CZA and then only any other animal should be introduced in the enclosure.	Immediately	Yet to be done.
15	10.4 (10)	The Zoo has placed several signboards for providing with relevant information on the biology, behaviour and the population status of the species in the. There is need for additional signboards including direction signage.	Immediately	Additional sign boards are being prepared.
<b>5. Upkeep and Healthcare of animals.</b>				
16	10.5(3)	The feed Storage condition needs improvement as the storage building is old with dampness, damaged flooring is to be repaired and slabs provided in adequate number to keep the food items free from contamination. The meat house is old and close to the dry store house and needs improvement of floor and slabs to maintain hygienic condition.		The construction of new building with all modern facilities been completed.
<b>6. Veterinary and infrastructure facilities.</b>				
17	10.6(3)	The Quarantine facility of appropriate size to house animals should be constructed urgently.	Nine months	The construction of Quarantine facility is in final stage.
<b>7. Post-mortem and disposal of carcasses of animals.</b>				
18	10.7(4)	The carcasses of the animals, after the post-mortem has been conducted, is either burnt or disposed of by burying and this pollutes the Zoo neighbourhood, therefore a modern incinerator should be installed.	Six months	Yet to be done.
<b>9. Acquisition and breeding of animals.</b>				
19	10.9(2)	Two species of primates (Nilgiri langur and Common langur) not kept in social group. Other primates LTM (5:5) and Rhesus Macaque (3:4) are not compatible and can not be arranged into social group. A behavioural study should be conducted and efforts for bonding should be initiated.	Immediately	Yet to be done.

20	10.9(4)	Several single and unpaired species listed below are housed in the Zoo. (Whit-bellied Eagle (0:0:1), Khalij Pheasant (1:0), Black Vulture (1:0), White backed Vulture (0:1), Sloth Bear (0:1), Small Indian Civet (1:0), Indian one horned Rhino (1:0), Mugger Crocodile (1:0), Monitor Lizard (1:0), King cobra (1:0), Gharial (0:6). The zoo should try to acquire animals from other zoos for pairing and in the event the zoo can not find a male within a period of six months, these species should be transferred or exchanged or given on breeding loan to any other zoo in accordance with the norms specified by the Central Zoo Authority.	Immediately	Yet to be done.
21	10.9(6)	The Conservation Breeding Plan for Lion-tailed Macaque is to be reviewed as the enclosure is in a central location and is not an off-exhibit facility and there is lack of scientific input nor any exchange has occurred between coordinating and participating Zoos.	Three months.	Yet to be complied.
<b>11. Education and outreach activities</b>				
22	10.11(1)	The Education Officer should make more efforts to conduct educational and outreach program and to formulate calendar of activities for holding events round the year.	Immediately.	Efforts are in progress.

## 29. List of free living wild animals within the Zoo premises

### 1. Peafowl

### 2. Bonnet macaque