

Sanjay Gandhi National Park & Zoo

Annual Report for the year

2018-19



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1. Report of the Officer-in-charge

The Sanjay Gandhi National Park & Zoo presently displays a Tiger Safari, Lion Safari & Deer Park.

- | | |
|-----------------|---|
| 1. Tiger Safari | 7 Tigers |
| 2. Lion Safari | 3 Lions |
| 3. Deer Park | 57 Deer Park (Choushinga Spotted Deer Nilgai) |

In addition to this the zoo also houses leopards & rusty spotted cats in a non-display area. Leopard rescue center has been constructed in 7/12 Magathane 34 B (P). It is in a designated an un-classed land & outside the notified forest area of Sanjay Gandhi National Park. The area is commonly called MAFCO since previously a MAFCO bacon factory was operated in this land. The tiger safari, lion safari & deer park are operated in the recreational zone of the Sanjay Gandhi National Park, Division area.

A master plan was submitted to Center Zoo Authority on June 16th 2011 under which the zoo was designed in the area of 100 ha, magathane S/no. 34/b unclassified forest land outside notified area of Sanjay Gandhi National Park. Presently the Sanjay Gandhi National Park & Zoo recommends & proposes the zoo to be established in the 100 ha mafco area & thereby submitting the vision document for the same area.

The management of the Zoo proposes to have following enclosures. The detailed proposal for the same will be submitted to the CZA for approval in near future.

1. Tiger Safari
2. Lion Safari
3. Herbivore Safari
4. Leopard Safari
5. Reptile Enclosure
6. Primate Enclosure
7. Aviary
8. Herbivore Enclosure
9. Nocturnal animal house

The visitors vehicles will be parked in the proposed parking enclosure; and then the visitors will be taken in BOV to various enclosures / ticketing area of various safari's and enclosure areas. The enclosures can be visited by foot, whereas the various safaris can be visited by the BOV operated vehicles at the safari ticket counter on a circular route.

2. History of the Zoo

The Sanjay Gandhi National Park and Zoo is a unique facility as the zoo is on the fringe of Mumbai city and on the border of Sanjay Gandhi National Park. This is an unquestionable asset for Mumbaikar's for creating conservation awareness and knowledge of India's wild creatures. Apart from its superb landscape the zoo is virtually within an evergreen forest ecosystem of both recreational and educational value. In fact few zoos in India are better situated to meet the needs of different categories of zoo visitors. A visit to this zoo even though it has a handful of species is a memorable experience. The capacity of the zoo to cater to the needs of public awareness and conservation research is a major opportunity that needs development. The zoo also incorporates a major off-display rescue and lifetime care facility that houses a large number of leopards that the Forest Department has rescued over the last several years. This also should be developed into a state of the art Leopard Safari display facility.

This unique zoo is contiguous with the Sanjay Gandhi National Park and is pertinent to note that lies outside the notified area of Sanjay Gandhi National Park. The zoo area has a combination of rich wild biodiversity in the term of forest ecosystem this gives it a high status as an eco sensitive area, with very high biotic pressures due to its location on the fringes of Mumbai. The zoo also traditionally is great asset for nature awareness and wildlife tourism for Mumbaikars. Sanjay Gandhi National Park and adjacent zoo area has immense environmental importance due to its life support services for Mumbai as a major green space and water catchment.

3. Vision

The zoo will foster conservation awareness through the safari experience and a walk through the forested paths of a well designed and easily interpreted nature trail. As a modern zoo is expected to act as ex-situ conservation centre to safeguard endangered species, this zoo will strive to save species such as the Rusty Spotted Cat from extinction using its existing unique initiative in successively breeding this endangered species to enhance its population in the wild.

4. Mission

To create and develop 'near natural' wilderness ecosystem through four major unique safaris for predators such as lion, tiger, leopard, and herbivorous animals sambar, cheetal, barking deer etc. through which a pro conservation ethos will be developed among the people of Mumbai.

5. Objective

Sanjay Gandhi National Park and the zoo's new objectives are to fulfill all the functions of a modern zoo. Its new thrust will be to enhance its collection and to establish a major conservation breeding facility for the Rusty spotted cat to begin with and other important species in future. The zoo has reviewed its mission and vision to align itself with the new needs of a state of the art zoo. As the major thrust is to offer naturalistic safari parks, the up gradation of this zoo style will be consciously advanced in the new mission statement.

A comprehensive vision document for the future course and action plan have been considered based on its currently well known environmental asset's.

The objectives that the zoo has envisioned include:

1. To expand the scope and unique features of a safari experience
2. To conserve protected fauna and establish scientific breeding of endangered species.
3. To bring home to the people of Mumbai the needs of both in-situ and ex-situ conservation through a major conservation education outreach facility.
4. To provide a real life nature experience for the people of Mumbai, which is an expanding megacity.

6. About us

S.No.	Particulars	Information
Basic Information about the zoo		
1.	Name of the zoo	Sanjay Gandhi National Park and Zoo
2.	Year of Establishment	Lion Safari 1975-76 Tiger Safari 1998
3.	Address of the zoo	Sanjay Gandhi National Park and zoo, Borivli West, Mumbai-66
4.	State	Maharashtra
5.	Telephone Number	28860716/28864567/28860362
6.	Fax Number	
7.	E-mail address	sgnpsmumbai@gmail.com , lionsafaripark@gmail.com
8.	Website	
9.	Distance form nearest	Airport: CST Mumbai Railway Station: Borivli Bus Stand: Borivli
10.	Recognition Valid upto (Date)	March 2020
11.	Category of zoo	Mini Zoo
12.	Area (in Hectares)	110 hectares
13.	Number of Visitors (Financial Year)	Adult: Children: Total Visitors:
14.	Visitor's Facilities Available in Zoo	1. Deer Park 2. Tiger Safari 3. Lion Safari 4. Mini Train 5. Boating
15.	Weekly Closure Day of the Zoo	Monday

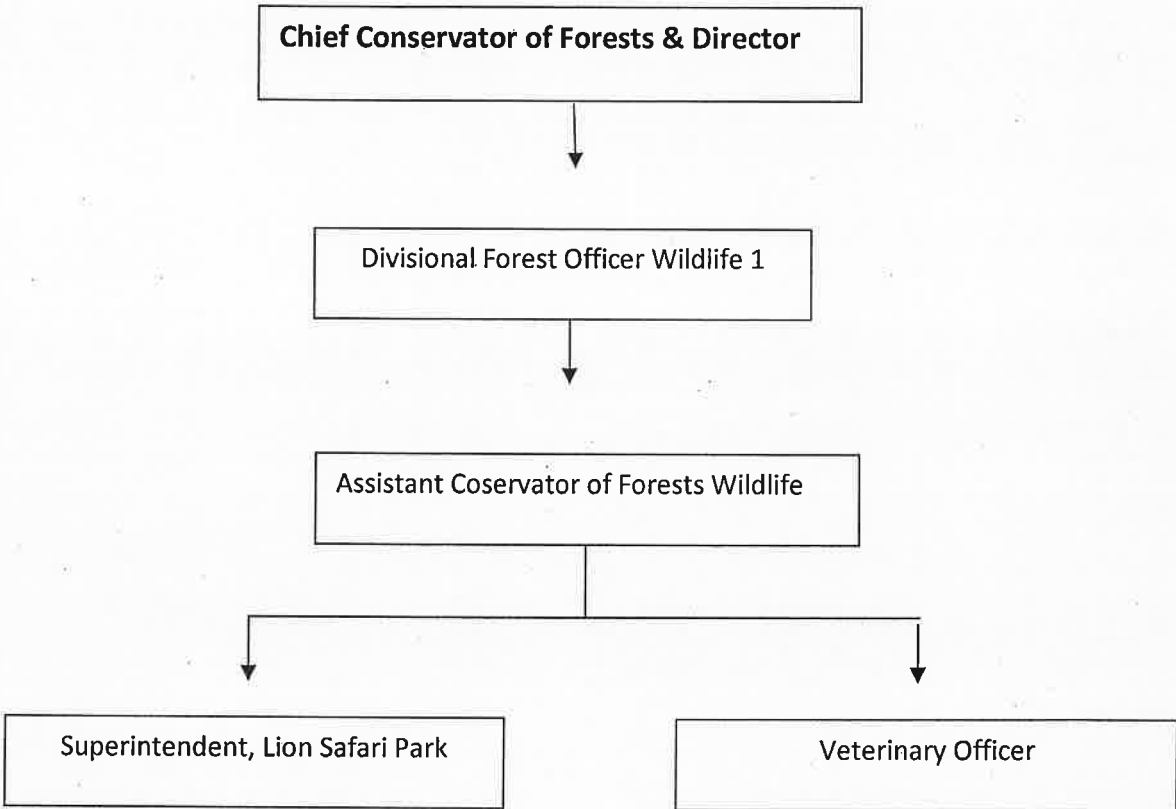
Management Personnel of the zoo		
16.	Name with designation of the Officer in - Charge	1. Mr. Anwar Ahmed IFS CCF & Director 2. Mr. Waghmode, Superintendent Lion Safari Park
	Name of the Veterinary Officer	Dr. Shailesh G Pethe, (V.O)
	Name of the Curator	
	Name of the Biologist	
	Name of the Education Officer	Miss. Megha Chaugale Mr. Jayesh Vishwakarma
	Name of the Compounder/ Lab Assistant	
Owner / Operator of the zoo		
17.	Name of the Operator	
18.	Adders of the Operator	
19.	Contact details/phone number of Operator	
20.	E-mail address of Operator	

Rule 2(m) of the Recognition of Zoo Rules, 2009.

“Zoo Operator” means the person who has ultimate control over the affairs of the zoos provided that

- I. In the case of a firm or other association of individuals, any one of the individual partners or members thereof; or*
- II. In the case of a company, any director, manager, secretary or other officer, who is in-charge of and responsible to the company for the affairs of the zoo; or*
- III. In case of zoo owned or controlled by the Central Government or any State Government or Union Territory Administration or any Trust or Society Funded by the Central Government or a State Government or a Union Territory Administration, the Secretary of the concerned Department of the Government, or as the case may be the Union Territory Administration, shall be deemed to be the zoo Operator.*

7. Organization Chart



8. Human Resources

Manpower of the zoo

S.No	Designation	Number of Sanctioned Posts	Name of the incumbent
1.	Chief Conservator and Director	1	Shri Anwar Ahmed
2.	Superintendent Lion Safari Park Officer In Charge	1	Shri SN Waghmode
3.	Veterinary Officer SGNP	1	Dr Shailesh G Pethe.
4.	Animal Keeper	2	Shri Namdeo Jirve. Shri Harishchandra Bhoir
5.	Animal Keeper	2	On Daily Temporary Basis

Please give above mentioned information in respect of all zoo personnel, from the Officer in-charge upto the Animal Keeper.

9. Capacity Building of zoo personnel

S.No	Name of designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1.	Dr Shailesh G Pethe. Veterinary Officer SGNP	Wildlife Forensics	2 nd to 6 th April 2019	Banglore
2.	Shri S.N. Waghmode Dr Shailesh Pethe & All animal Keeper	Rusty Spotted cat Breeding	26 th to 28 th Feb 2019	SGNP Borivali
3.	Shri S.N. Waghmode Dr Shailesh Pethe	Workshop for Middle level zoo organized by MZA	18 – 19 March	SGNP Borivali
4.	Mr. Rajendra Bhoir (Animal Keeper) & Mr. Vaibhav patil (Animal Keeper)	Training for Zoo keepers	04/03/2019 To 10/03/2019	Organized by CZA at Surat Zoo Gujarat

10. Zoo Advisory Committee:-

At present not independently constituted however the health committee in discussion with the senior officers of the SGNP management taking appropriate decisions

- a. Date of constitution
- b. Members
- c. Dates on which Meetings Held during the year

11. Health Advisory Committee:-

- a. Date of Constitution: 29/07/2016
- b. Member: As under

Sr.No	Name of Committee Members	Post
1.	Dr. Chandrakant. C.Wakankar	Retd Professor Department of Surgery
2.	Dr. K. D.Batve	Retd Veterinary Officer, SGNP, Borivli
3.	Dr. Rajeev. V. Gaikwad	Professor Department of Medicine
4.	Dr. D. U.Lokhande	Professor Department of Surgery
5.	Dr. Ramteke	Asso Professor Department of Nutrition
6.	Dr. G. P.Bharkad	Asso Professor Department of Parsitology
7.	Dr. Prashant Gadhawe	Pathologist Dept of Pathology
8.	Dr.R. R.Pharande	Assistant Professor Dept of Microbiology
9.	Dr. Manish Pingle	Veterinary Practitioner.
10.	Dr. Kazvin Umrikar	Veterinarian, Wildlife Consultant.

- c. Dates on which Meetings held during the year
Date:- a) 19/10/2018 b) 01/03/2019

12. Statement of income and Expenditure of the zoo

Income

Year	Adult	Adult Amt	Child	Child Amt
2018-19 Lion Safari	131489	9204230	42204	1223916

Expenditure

Year	Wages	Maintenance and Upkeep	Diet and Medical	Total
2018-19 Lion Safari In lakhs	58.50	4.80	12.55	75.85

13. Daily feed Schedule of animals

Sr.No	Species	Feed item	Quantity		Day of Fasting
			Winter	Summer	
1.	Panthera Leo	Fresh	8-10 kgs	8-10kgs	Thursday
2.	Panthera Pardus	Buffalo Beef	2.5-3.0 kgs	2.5-3.0 kgs	Thursday
3.	Panthera Tigris		8-10 kgs	8-10 kgs	Thursday
4.	Prionalilarus Rubiginosus	Fresh Chicken	150-200gms	150-200gms	Thursday
5.	Axis axis	As Under			
6.	Teracerus Quadricornis				
7.	Boselaphus Tragoçamelus				

Below the Feeding regime for herbivores animals mentioned by you

1. Chital:
Concentrate mixture: 1.25 kg/head/day
Greens – 1 kg or 5 kg
2. Choushinga:
Concentrate mixture: 0.5 kg/head/day
Greens 0.5 kg or 2.5 kg
3. Nilgai:
Concentrate mixture: 2.5 kg/head/day
Greens: 4-5 kg
Below the example of concentrate mixture

Ingredients	Parte per 100 kg concentrate mixture
Maize	25
Jowar	10
Soybean meal	20
Chana/ Tur Chuni	22
Wheat bran	20
Mineral mixture	02
Salt	01
<u>Total</u>	<u>100</u>

Ingredients can be changed depending on availability and cost

Note:-

1. Concentrate contain: crude protein : 16-18% and TDN: 65-70%
2. If legume roughages like Lucerne are not available roughages which are conventionally / regularly fed on park can be utilized for feeding.

14. Vaccination Schedule of Animals

Sr.No	Species	Disease vaccinated for	Name of the Vaccine and dosage/quantity used	Periodicity	Remarks
1.	Panthera Leo	Panleucopenia Calici Herpes Rabies	Biofel PCHR 1 ml S/c	Yearly basis	
2.	Panthera Pardus				
3.	Panthera Tigris				

15. De-worming Schedule of Animals

Sr.No	Species	Drug used	Month
		The following drugs have been used on alternate basis	18/04/2018, 31/08/2018, 18/01/2019
1.	Panthera Leo	Praziplus / Fenbendazole	18/04/2018, 31/08/2018, 18/01/2019
2.	Panthera Pardus	Praziplus / Fenbendazole	18/04/2018, 31/08/2018, 18/01/2019
3.	Panthera Tigris	Praziplus / Fenbendazole	18/04/2018, 31/08/2018, 18/01/2019
4.	Prionailarus Rubiginosus	Praziplus / Fenbendazole	18/04/2018, 31/08/2018, 18/01/2019
5.	Axis axis	Albomar / Zyclox	18/04/2018, 31/08/2018, 18/01/2019
6.	Tetracerus Quadricornis	Albomar / Zyclox	18/04/2018, 31/08/2018, 18/01/2019
7.	Multiacus Muntjak	Albomar / Zyclox	18/04/2018, 31/08/2018, 18/01/2019
8.	Boselaphus Trangocamelus	Albomar / Zyclox	18/04/2018, 31/08/2018, 18/01/2019

16. Disinfection Schedule

Sr.No	Species	Type of Enclosure	Disinfectant used and method	Frequency of disinfection
1.	Panthera Leo	Cages, Kraal	Korsulin Washing	Complete washing with water on daily basis. Twice a week. korsulin
2.	Panthera Pardus			
3.	Panthera Tigris			
4.	Prionailarus Rubiginosus	Night Shelter	Sodium hypochloride spraying	Once a week
5.	Axis axis			
6.	Tetracerus Quadricornis			
7.	Prionailarus Rubiginosus			

17. Health Check-up of employees for zoonotic diseases

Sr.No	Name	Designation	Date of Health Check-up	Findings of Health Check-up
1.	The employees have been sent for medical checkup.			

18. Development Work carried out in the zoo during the year

1. Construction of enlarged Lion Safari.
2. Repair of Lion & Tiger cages and safari.
3. Construction of squeeze cage at Leopard Rescue Centre.
4. Reconstruction of Deer enclosure fencing & internal watering & feeding areas.
5. Repair Beef Room in front of Lion cage in LSP range in SGNP Borivali
6. Construction / providing & fixing medical treatment cage for Lion Safari, Tiger Safari & Rescue centre.

19. Education and Awareness programmes during the year

Other than the awareness programmes as mentioned in the point 20. As below awareness programmes were also held in various cooperative housing societies, govt institutions, schools, fire brigade, police stations. Installing CCTV camera at all cages.

Fire Department	Date	No. of Attendees
Kandivali	19th May, 2018	20
Dahisar	19th May, 2018	20
Marol	20th May, 2018	25
Dhindoshi	20th May, 2018	20
Borivali	24th May, 2018	20
Mira Bhayendar	25th May, 2018	20
Mulund	26th May, 2018	25
Vikroli	26th May & 2nd June, 2018	50
Total		200

Schools	Venue	Date	No. of attendees
Ryan International	Gokuldham, Goregaon	15th June, 2018	100 students
Yashodham school	Gokuldham, Goregaon	13th July, 2018	1050 students
DAV school	Mulund	17th July, 2018	110 students
Lakshadham school	Gokuldham, Goregaon	24th July, 2018	1000 students
Guru Gobind Singh	Mulund	4th August, 2018	800 students
Ryan International	Borivali west	21st August, 2018	120 students

Cambridge International	Kandivali	24th August, 2018	1050 students
Swami Vivekanand Shivaji school	Appa pada, Malad	1st & 8th September, 2018	1390 students
	Appa pada, Malad	12th September, 2018	900 students
Total			6520
Housing colonies	Location	Date	No. of attendees
Sagar Residency & Green square	Kasarvadavli, Thane	4th July, 2018	40
Rutu Enclave	Kasarvadavli, Thane	5th July, 2018	30
Gundhecha VOF	Kandivali	15th August, 2018	350
Ekta Meadows	Kandivali	15th August, 2018	250
Ghodbhunder village	Ghodbhunder road	29th September, 2018	70
Neo Shastri nagar	Mulund	30th September, 2018	50
Shankar Tekdi	Shastri nagar, Mulund	2nd October, 2018	40
Total			830

Police Stations	Location	Date	No. of attendees
Bhandup	Bhandup	30th August, 2018	20 Policemen

Schools	Venue	Date	No. of Attendees
Jijamata school	Appa pada, Malad	4th October 2018	550 students
Vidharba school	Appa pada, Malad	6th October 2018	500 students
Singhania school	Thane	22nd December 2018	250 students

Residents	Venue	Date	No. of Attendees
Girikunj & Girishikar Wimbledon Society	Goregaon (east)	2nd December 2018	50 residents
	Thane	3rd March 2019	60 participants

Police Department	Date	No. of Attendees
Aarey Police station	3rd January 2019	20

Others	Venue	Date	No. of Attendees
BMC staff	Khindipada	12th November 2018	25 staff members
HPCL Refineries	Chembur (east)	15th November 2018	35 staff members
NITIE	Vihar lake road	1st February 2019	100
BMC (Recci)	Pimripada	7th February 2019	Thane FD & MfSGNP
BMC session	Pimripada	16th February 2019	10 staff members

20. Important Events and happenings

The following were celebrated in the SGNP Nature Information Centre to make the citizens of Mumbai aware of the importance of nature, ecology and biodiversity

Sr No	Date	Celebrated Day
1.	22 April	World Biodiversity Day
2.	5 th June	World Environment Day
3.	28 th July	World Nature Day
4.	1 to 7 th July	Forest Day
5.	29 th July	World Tiger Day
6.	1-7th Oct	World Wildlife week
7.	9 th Jan	Swacha Bharat Abhiyan
8.	8 th March	World Women Day
9.	20 th March	World Sparrow Day
10.	21 st March	World Forest Day
11.	22 nd March	World Water Day
12.	23th March	World Weather Day
13.	24 th March	World Biodiversity Week
14.	3 rd March	World Wildlife Day

21. Seasonal special arrangements for upkeep of animals

Mumbai being a hot , humid and high rainfall climate Following measures have been undertaken at the animals cages and display enclosures

1. Heavy duty fans have been installed at all the tiger, lion and leopard cages.
2. Water showers/ spraying facilities are done at all cages esp Tigers
3. The animals are given wooden platforms for resting to prevent winter stress.
4. Herbivores are given mineral-lick blocks

22. Research work carried out and publications

Research Project From 2014 to 2018

Sr No	Researcher Name	Project Name	Period for research
1.	Shrimati Supriya Radheshyam Jhunjhunwala	Permission to Conduct research on eco system services provided by the SGNP Mumbai.	15-6-2013 to 30-9-2014
2	Dr. ShrutiSamant, Associate Professor, Bhavan`s College,	Permission to sample to fallen leaf litter in some areas of SGNP Mumbai.	July 2014 to june 2015
3	Rebecca Hui, Nation Geographic Young Explorer, Full bright-Nehru Student Research Scholar,	Permission for conducting research project mapingurban interferences in SGNP Mumbai.	
4	Ms Emilie Edelblutte	Human and leopard territories; political ecology of natural protected Area in the Mega city of Mumbai India and involves the Tungreshwar Wildlife Sancturary and its extended environment including the Sanjay Gandhi National Park	
5	Ms Yanni Gunnell	Urban National Parks; Evolution of protected areas in two emergent megacities- Rio de janeiro Brazil and Mumbai India.	
6	Mr. Steve Winter, Senior Editor, Natural History, National Geographic magazine,	National Geographic Magzine story on Leopards of SGNP Mumbai.	1-4-2014 to 31-1-2015
7	ShriMayukhDey, Fergusson College, Pune.	Conserving Crocodiles and their natural habitat	
8	VidhyaVenkatesh, Sonu Sing and SunetroGhosal	Mumbaikar`s for sgnp Proposed plan for phase 2	
9	Ms. Swati N.Hade	Studies on biological activity of Lupeol A terpenoid from Crataevanurvalabuch -Ham	From 2012 upto completion of research project work
10	Mr. NikitSurve	Ecology leopard in SGNP in its	Dec-2014 to june -2015

		abundance prey selection and food habits	
11	Yogesh kashikar	Observe leopard habitat/behaviour	Dec-2014 to march 2015
12	Krishna Tivari	Wildlife Documentary- Title ONE PLANT-URBAN with still photographs	12 Jan 2015 to 12 march 2015
13	Zeeshan Mirza and Nilesh Mane	Archnida of Sanjay Gandhi National Park and Tungreshwar wildlife	1-10-2015 to 31-10-2016
14	Shomita Mukherji Salim Ali Centre	Survey for small cat in Sanjay Gandhi National Park	
15	Shri Nilesh Nikam	Floral diversity of Sanjay Gandhi National Park	
16	Santosh L Yadav and Mr. Shardul S.Bajikar	Quantitative assessment and mapping of plant diversity in SGNP	1-1-2016 to 31-12-2016
17	Nikit Survey	Ecology of Leopards (Panthera Pardus) in Tungreshwar Wildlife Sanctuary	March 2016 to July 2016
18	Sunetro Ghoshal	Understanding of human-leopard interaction in SGNP Landscape	1-3-2016 to 31-1-2017
19	Prof. Haripriya Gundimeda	Humanities and Social sciences Quantifying the ecosystem services of SGNP	1-3-2016 to 30-11-2016
20	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	Research proposal for change detection of encroachment and urban sprawl around the boundary of Sanjay Gandhi National Park and Tungreshwar WLS Mumbai	Sept 2016
21	Dr. Sanjay Molur, Mr Keerthi Krutha, Dr. Neelesh Dahannukar	Evaluation and Impact of Chytridiomycosis on The Endemic and Highly Threatened Amphibians of the Western Ghats	1-1-2014 to 31-12-2014
22	Nikit Surve	Ecology of leopards in Tungreshwar Wildlife Sanctuary maharashtra	February 2016 to July 2016
23	Prof Haripriya Gundimeda	What is the real value of ecosystem services provided	December 2015 to November 2016

		by Sanjay Gandhi National Park	
24	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	A digital Spatial planning and management support system- A digital spatial perspective Sanjay Gandhi National Park, Mumbai	2016
25	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	Planning and designing state of art zoo in sanjay Gandhi National Park and assessing its Eco tourism and Research correlaes- An education and Research Hub Perspective.	
26	Mumbaikars for SGNP	Mumbaikars for SGNP	2016-17
27	Mr. Shivaji Chavan Wildlife and we protection foundation	Assessment planning and management of an Ecological corridor for long term conservation and human well being a western Maharashtra perspective	2016
28	Nikit Survey	Monitoring Desity and Movement of Leopards and its prey base within Sanjay Gandhi National Park and along its periphery.	January 2017 to July 2017
29	Dr. Jitendra Ramgaokar DCF Thane forest Division thane	Proposal for study of disease prevalence in Stray dog population around SGNP and its implication for wild carnivores in SGNP	Recommended for approval
30	Dr Kazveen Umrigar	Ascertaining the sero-prevalence of Antibodies of Canine Distemper Virus in Leopards at the Rescue Centre of Sanjay Gandhi National Park, BorivaliMaharshtra	Recommended for approval D-8/WLP/Research/1353/27-3-2018
31	Vidya Athreya and Nikit Surve	Long term Monitoring of Density and Movement of Leopards in the Sanjay Gandhi National park landscape	Recommended for approval D-8/WLP/Research/1353/27-3-2018
32	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	Catchment Area Treatment plan for management of Ecosystem Services for Human Well being A Sanjay	Recommended for approval D-8/WLP/Research/1353/27-

		Gandhi National Park Perspective	3-2018
33	Mr. Shivaji Chavan Wildlife and we protection foundation	Develop payment of Ecosystem services Mechanisms for Sanjay Gandhi National Park- AReenue Generating Model	Recommended for approval D-8/WLP/Research/1353/27-3-2018
34	Mr. Raza Hussain Msc Student Bhavan's College	Development of a wildlife Monitoring Protocol in Sanjay Gandhi National Park, with emphasis on mammals	12-3-2018 to 12-5-2018
35	Dr, Bilal Habib Faculty WII	Tracking the Urban Leopards; Understanding the Space use and Movement in and around Sanjay Gandhi National Park Mumbai India.	
36	Miss Priya James Msc Student B.N. Bhandodkar College	Assessment of Human-monkey conflict/ interaction in and around Sanjay Gandhi National Park	Recommended for approval D-8/WLP/Research/1353/27-3-2018
37	Mr. Shivaji Chavan Wildlife and we protection foundation	Ecosystem Services Assessment and Evaluation of Sanjay Gandhi National Park for Human well-being	

Sanctioned Research Project From 2015 to 2018

Sr No	Researcher Name	Project Name	Period for research
1	Ms. Swati N.Hade	Studies on biological activity of Lupeol A terpenoid from Crataevanurvalabuch -Ham	From 2012 upto completion of research project work
2	Mr. Nikit Surve	Ecology leopard in SGNP in its abundance prey selection and food habits	Dec-2014 to June -2015
3	Yogesh kashikar	Observe leopard habitat/bevaiour	Dec-2014 to March 2015
4	Krishna Tivari	Wildlife Documentary- Title ONE PLANT-URBAN with still photographs	12 Jan 2015 to 12 March 2015

5	Zeeshan Mirza and Nilesh Mane	Archnida of Sanjay Gandhi National Park and Tungareshwar wildlife	1-10-2015 to 31-10-2016
6	Shomita Mukherji Salim Ali Centre	Survey for small cat in Sanjay Gandhi National Park	
7	Santosh L Yadav and Mr. Shardul S.Bajikar	Quantitative assessment and mapping of plant diversity in SGNP	1-1-2016 to 31-12-2016
8	Nikit Survey	Ecology of Leopards (Panthera Pardus) in Tungareshwar Wildlife Sanctuary	March 2016 to July 2016
9	Sunetro Ghoshal	Understanding of human-leopard interaction in SGNP Landscape	1-3-2016 to 31-1-2017
10	Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	A digital Spatial planning and management support system- A digital spatial perspective Sanjay Gandhi National Park, Mumbai	2016
11	Nikit Surve	Ecology of leopards in Tungareshwar Wildlife Sanctuary Maharashtra	February 2016 to July 2016
12	Prof Haripriya Gundimeda	What is the real value of ecosystem services provided by Sanjay Gandhi National Park	December 2015 to November 2016
13	Mr. Shivaji Chavan Wildlife and we protection foundation	Assessment planning and management of an Ecological corridor for long term conservation and human well being a western Maharashtra perspective	2016
14	Nikit Survey	Monitoring Density and Movement of Leopards and its prey base within Sanjay Gandhi National Park and along its periphery.	January 2017 to July 2017

RESERCH REPORT YEARWISE(2012-2018)

Sr No	Year	Researcher Name	Project Name
1	2012	Ms. Swati N.Hade	Studies on biological activity of Lupeol A terpenoid from Crataevanurvalabuch -Ham
2	2013	Shrimati Supriya Radheshyam Jhunjunwala,	Permission to Conduct research on eco system services provided by the SGNP Mumbai.

3	2014	Dr. Shruti Samant, Associate Professor, Bhavan's College,	Permission to sample to fallen leaf litter in some areas of SGNP Mumbai.
4		Mr. Steve Winter, Senior Editor, Natural History, National Geographic magazine,	National Geographic Magazine story on Leopards of SGNP Mumbai.
5		Mr. Nikit Surve	Ecology leopard in SGNP in its abundance prey selection and food habits
6		Yogesh Kashikar	Observe leopard habitat/behaviour
7	2015	Krishna Tivari	Wildlife Documentary- Title ONE PLANT-URBAN with still photographs
8		Zeeshan Mirza and Nilesh Mane	Archnida of Sanjay Gandhi National Park and Tungreshwar wildlife
9		Shomita Mukherji Salim Ali Centre	Survey for small cat in Sanjay Gandhi National Park
10	2016	Santosh L Yadav and Mr. Shardul S. Bajikar	Quantitative assessment and mapping of plant diversity in SGNP
11		Nikit Survey	Ecology of Leopards (Panthera Pardus) in Tungreshwar Wildlife Sanctuary
12		Sunetro Ghoshal	Understanding of human-leopard interaction in SGNP Landscape
13		Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	A digital Spatial planning and management support system- A digital spatial perspective Sanjay Gandhi National Park, Mumbai
14		Nikit Surve	Ecology of leopards in Tungreshwar Wildlife Sanctuary Maharashtra
15		Prof Haripriya Gundimeda	What is the real value of ecosystem services provided by Sanjay Gandhi National Park
16		Mr. Shivaji Chavan Wildlife and we protection foundation	Assessment planning and management of an Ecological corridor for long term conservation and human well being a western Maharashtra perspective
17	2017	Nikit Survey	Monitoring Density and Movement of Leopards and its prey base within Sanjay Gandhi National Park and along its periphery.
18	2018	Dr. Jitendra Ramgaokar DCF Thane forest Division Thane	Proposal for study of disease prevalence in Stray dog population around SGNP and its implication for wild carnivores in SGNP
19		Dr Kazveen Umrigar	Ascertaining the sero-prevalence of

			Antibodies of Canine Distemper Virus in Leopards at the Rescue Centre of Sanjay Gandhi National Park, Borivali Maharashtra
20		Vidya Athreya and Nikit Surve	Long term Monitoring of Density and Movement of Leopards in the Sanjay Gandhi National park landscape
21		Mr. Shivaji Chavan SATS Integrated Conservation Solution Mumbai	Catchment Area Treatment plan for management of Ecosystem Services for Human Well being A Sanjay Gandhi National Park Perspective
22		Mr. Shivaji Chavan Wildlife and we protection foundation	Develop payment of Ecosystem services Mechanisms for Sanjay Gandhi National Park- A Reenue Generating Model
23		Mr. Raza Hussain Msc Student Bhavan's College	Development of a wildlife Monitoring Protocol in Sanjay Gandhi National Park, with emphasis on mammals
24		Dr, Bilal Habib Faculty WII	Tracking the Urban Leopards; Understanding the Space use and Movement in and around Sanjay Gandhi National Park Mumbai India.
25		Miss Priya James Msc Student B.N. Bandodkar College	Assessment of Human-monkey conflict/ interaction in and around Sanjay Gandhi National Park
26		Mr. Shivaji Chavan Wildlife and we protection foundation	Ecosystem Services Assessment and Evaluation of Sanjay Gandhi National Park for Human well-being

23. Conservation Breeding Programme of the zoo

A major interact of the zoo is to breed the Rusty Spotted Cat that is extremely endangered. This rare species is occasionally encountered in the vicinity of the zoo and in the adjacent Sanjay Gandhi National Park. No other National Park is known to have a single population of this species that was thought to the extend in the 1950s. It was rediscovered in Dangs and later in the Sanjay Gandhi National Park, Gir and a few other locations but is evidently present in very small pockets in extremely small and isolated populations. This zoo has been able to breed 6 kittens from a founding stock of 2 males and a female acquired from different locations. These 9 animals are the only known animals of this species in captivity in the world. Presently the female cats have aged out and new individuals are planned to be collected for further breeding of the RSC species.

24. Animal acquisition / transfer / exchange during the year

A.	Animal arriving in the zoo				
	H.No.	Species	Number (M:F)	From which zoo	Date of arrival in the zoo
	No Species Acquired from any zoo in last three years				
B.	Animals going from the zoo				
	H.No.	Species	Number (M:F)	From which zoo	Date of arrival in the zoo
	No Species Acquired from any zoo in last three years				

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

Sr.No	Date of Rescue	Species with number of animals rescued with their sex (M:F:T)	Received form	Date of Submission of Report to the CWLW / CZA	Action taken	
					Date and place rehabilitation in their habitat	Reasons for housing in the zoo, if not released in their habitat
1.	12/07/2018	Male (Atish)	Nagpur			Rescued as orphans and hence not released in the wild.
2.	18/12/18	Male (Surya)	Nagpur			
3.	18/12/2019	Rusty Spotted Cat (2M+1F= 3 Animals)	Pune - Katraj			
Separate Sheet Attached Annexure 1						

26. Annual Inventory of animals

Sr. no	Animal Name	Scientific Name	Opening Stock as on				Births			Acquisition			Disposal			Death			Closing Stock as on			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Separate Sheet Attached Annexure 2																						

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

Other than Endangered Species

Sr. no	Animal Name	Scientific Name	Opening Stock as on				Births			Acquisition			Disposal			Death			Closing Stock as on			
			M	F	U	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
Separate Sheet Attached Annexure 2																						

27. Mortality of animals

Sr.No	Animal Name (with individual identification mark, if any	Scientific Name	Sex	Date of Death	Reason of Death as per the Post- mortem report
Separate Sheet Attached Annexure 3					

28. Compliance with conditions stipulated by the Central Zoo Authority

Sr. No	Norm No.	Condition Stipulated	Time period to comply	Since when pending	Status with regard to compliance of the conditions
Separate Sheet Attached Annexure 4					

29. List of free living wild animals within the zoo premises

Separate Sheet Attached Annexure 5

- a. Mammals
- b. Birds
- c. Reptiles

Annexure 1

Rescue and Rehabilitation of Wild animals carried out by the Zoo

Sr. No	Date of Rescue	Species with Number of Animal Rescued with their Sex (M/F/U)	Received form	Date if 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.	01/03/2018	Leopard (Female)	Malad		Released in SGNP core forest	
2.	18/03/2018	Leopard (Male)	Ulhasnagar		Released in SGNP core forest	
3.	13/05/2018	SRPF (Female)	SRPF Camp		Released in SGNP core forest	
4.	20/02/2019	Satkar Hotel (Male)	Thane		Released in SGNP core forest	

Annexure 4

Compliance with conditions stipulated by the Central Zoo Authority

Sl.	Norm under RZR, 2009	Particulars of suggestions / recommendation	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions
1	10 (5.5)	The zoo should ensure that the left over feed, excreta of animals and all other wastes are removed promptly from the feeding cells and kraals			The leftover feed and other waste has been instructed to be removed aseptically. The kraal and feeding area is disinfected on daily basis with proper disinfectant. The solid and liquid waste products are effectively disposed off.
2	10 (5.8)	All the animals at the zoo should be screened for parasitic loads as per written schedule			The deworming of all animal is done on tri monthly basis with appropriate dewormers. Following which stool examination is done from veterinary pathology laboratory for screening. As per the reports, animals are re-dewormed if required.
3	10 (5.10)	The zoo should maintain detailed records of observations of biological and social behavior and health status of the animals including			The records are been maintained as recommended by CZA guidelines. Weekly and daily reports are submitted regularly by concerned staff.
4	10 (6.1) a	The zoo should have veterinary facilities with all basic diagnostic facilities, comprehensive range of drugs, operation theatre and in-patients wards. The present veterinary dispensary at the zoo does not have any equipment to carry out the daily routine examination.			The construction of the hospital building has been given to PWD authorities. The process is presently at tendering stage. The authorities have been informed for expediting the matter. Following the construction of new hospital building the recommended Infrastructure can be accommodated and maintained
5	10 (6.1) b	The veterinary unit should have a large space with provision of operation theater and animal treatment			The construction of the hospital building has been given to PWD authorities. The process is presently at tendering stage. The authorities have been informed for expediting the matter. Following the

		room, medicine room, doctor and compounder room and lab etc. with all basis diagnostic facilities including in-patient wards.		construction of new hospital building the recommended Infrastructure can be accommodated and maintained
Sr. No	Norm No.	Particular of suggestins/ recommendation		Time period to comply
General Requirements				
1	10 (1.3)	The train being operated inside the zoo should operate either on battery or electric. It should be noise and pollution free and should not affect the natural behavior of animals housed in adjoining areas near railway track else it should be closed.		KUB range.
Administrative and staffing Pattern				
2	10 (2.2)& (6.5)	The Sanjay Gandhi National Park zoo being categorized as Small zoo should have a Curator, a Biologist cum Education Officer and a Compounder as mandatory under the rules.		The Director is curator himself. Superintendent, Lion Safari is manager. The Biologist is at NIC.
Development and Planning				
3	10 (3.1,2 & 3)	The zoo should expedite the submission of Master (Layout) plan of the area which is in possession of the zoo since its establishment. No new are of Sanjay Gandhi National Park should be included or added into the existing area of the zoo. In case the area of the zoo is to be increased from the existing area, the necessary statutory formalities in this regard should be observed first & all.		The proposal send to CZA
4	10 (3.7)	The zoo shall not accept any rescued animal unless it has appropriately designed enclosure and upkeep facilities for the animal as well as the facilities for keeping it in isolation during quarantine period. Further it is advised that the rescue centre should not house Leopard beyond its carrying capacity.		
Animal housing, display of animals and animal enclosure				
5	10 (4.10)	The signage should be provided in such way that visitors understand the type of Safari available and time taken for each safari. The signage's near the interpretation centre should brief the visitors about Do's and Don'ts.		
Upkeep and healthcare of animals				
6	10 (5.5)	The zoo should ensure that the left over feed, excreta of animals and all other wastes are removed promptly from the feeding cells and Kraals and the feeding cells and Kraals are washed and disinfected as per the advice of		

		the authorized Veterinary Officer and the solid and the liquid waste generated during the process should be disposed off in such a manner that it has no adverse impact in the hygiene and cleanliness of the zoo and the landscape surrounding the zoo.	
7	10 (5.8)	All the animals at the zoo should be screened for parasitic loads as per written schedule prepared by the zoo in consultation with the Veterinary Officer and prophylactic medicines administered as per clinical requirements.	
8	10 (5.10)	The zoo should maintain detailed records of observations of biological and social behavior and health status of the animals including feed intake, medication and treatment provided in the Keeper's Diary, Daily Reports, Animal History Cards and Treatment Cards, as per standards specified by the Central Zoo Authority.	
9	10 (6.1) a	The zoo should have veterinary facilities with all basic diagnostic facilities, comprehensive range of Drugs, Operation Theatre and In-Patient Wards. The present veterinary dispensary at the zoo does not have any equipments to carry out the daily routine examination.	
10	10 (6.1) b	The veterinary unit should have a large space with provision of Operation Theatre and Animal Treatment Room, Medicine Room, Doctor & Compounder Room and Lab etc. With all basic diagnostic facilities including in-Patient wards.	
Maintenance of Records and submission of Inventory			
11	11 (1)	The zoo should submit record of the Births, Acquisitions, Deaths and Disposals of animals of each species in its collection in the manner and in the format prescribed by the Central Zoo Authority.	Record maintained. The inventory records have been submitted to CZA on routine basis.
Non Statutory			
12		The office files dumped inside the hospital building should be removed.	The office files dumped in the hospital are categorized and essential files has been maintained and disposable files has been disposed.
13		The 3 hybrid lions in the Lion Safari should be phased out. The zoo is also directed not to breed any further the hybrid lions and may replace Hybrid lions with Asiatic lions by way of acquisition from recognized zoos.	The request proposal for acquisition of lions has been sent to various zoos in India.
14		The Lion Safari should have minimum area 20 hectares as prescribed by the CZA.	Proposal sent to CZA Office for scrutiny.

Annexure 5

Statement showing check list of Mammals

Sr No	Family	Scientific Name	Common English Name
1.	Pterodidae	Suncus Murinus	Common English Name
2.	Pterodidae	Rousettus leschenaulti	Fulvous Fruit Bat
3.		Pteropus giganteus	Indian Flying Fox
4.		Cynopterus Sphix	Shortnosed Fruit Bat
5.	Emballonuridae	Taphozous Melanopgon	Black-Beared Tomb Bat
6.		Taphozous Soccolaimus	Pouch Bearing Bat
7.	Megadermatidae	Megaderma Spasma	Malay False Vampire
8.		Megaderma Iyra	Indian False Vampire
9.		Rhinolophus Rouxi	Roux's Horseshoe Bat
10.		Hipposideros Sperosis	Schenider's Leaf-nosed Bat
11.		Hipposideros Bicolox	Bicoloured Leaf-nosed Bat
12.		Hipposiderous Gakeritus	Cantor's Leaf-nosed Bat
13.	Vespertilionidae	Pipistrellus Coromandra	Indian Pipistrelle
14.		Pipistrellus Minus	Indian Pigmy Pipstrelle
15.		Pipistrellus Dormeri	Dormer's Bat
16.		Hesperoptenus Tickelli	Indian Tickell's
17.		Scotophilus Heathi	Coomon Yellow Bat
18.		Kerivoula Picta	Painted Bat
19.	Cercopithecidae	Macaca Radiata	Bonnet Macaque
20.		Macaca Mulata	Rhesus Macaque
21.		Presbytis Entellus	Common Langur
22.	Canidae	Canis Aureus	Jackal
23.	Viverridae	Viverricula Indica	Samll Indian Civet
24.		Paradoxurus Hermaphroditus	Toddy cat or Small Indian Civet
25.		Herpestes Edwardsi	Indian Grey Mongoose
26.	Hyaenidae	Hyaena Hyaena	Striped Hyaena
27.	Felidae	Felis Chaus	Jungle cat
28.		Oanthera Pardus	Leopard
29.		Felis Rubiginos	Rusty Spotted Cat
30.	Suidae	Sus Scrofa	Wild Boar
31.	Tragulidae	Trangulus Meminna	Mause Deer or Indian Soptted Chevrotain
32.	Cervidae	Axix axis	Spotted Deer
33.		Cervus Unicolor	Sambar
34.		Muntiacus Muntjac	Barking Deer or Muntjac
35.	Boridae	Teracerus quadricornis	Fourhorned Antelope or Chaousinga

36.	Leoporidae	Lepus nigricollis	Indian Black Naped Hare
37.	Sciuridae	Funambulus palmarum	Three Stripped Palm Squirrel
38.		Funambulus pennanti	Five striped Palm Squirrel
39.		Hystrix Indica	Indian Crested Porcupine
40.	Muridae	Ruttus Blanfordi	Whitetailed Wood Rat or Blanford's Rat
41.		Rattus Rattus	House Rat
42.		Mus musculus	House Mouse
43.		Bandicota Bengalensis	Indian Mouse, Rat or Lesser Bandicoot

Statement showing check list of birds

	Family	Scientific Name	Common English Name
	2	3	4
1.	Podicipitide-Grebes	Podiceps Ruficollis capensis	Little Grebe or Dabckick
2.	Phalacrocoacidae	Phaiaerocorax Niger	Little of Pigmy cormorant
3.		Anhinga Rufa Melanogaster	Dartar
4.	Ardeidae	Ardeola-Gray	Pond Heron or paddy bird
5.		Bubulcus ibis, Coromandus	Cattle Egret
6.		Egretta alub modesta	Large Egret
7.		Egretta gazzetta gazzetta	Little Egret
8.		Nicticorax nicticarax nicticorex	Night Heron
9.		Ixobrychus cinnamomeus	Chestnut Bitters
10.	Ciconidae	Anastomus Ositanas	Openbill stork
11.		Ciconia episcopus episcopus	White Necked Stork
12.	Anatidae	Dendrocygna javanica	Lesser Whistling Teal
13.		Anas Acuta	Pintail
14.		Anas poecilorhyncha Poecilor hyneha	Common Teal
15.		Anas quercquedula	Gazganey or Blue Winged Teal
16.		Aythya Ferina	Comman or Redneded Pochard
17.		Aythya nyroca	White Eyed Pochard
18.		Aythya Fuligula	Tuffed Duck
19.		Nettapus Coromandelianus Coromandelianus	Cotton Teal
20.		Accipitridae	Elanus caeruleus vociferus
21.	Pernis ptilorhyncus ruficollis		Crested Honey

			Buzzard
22.		Milvus migrans govinda	Pariah kite
23.		Haliastur Indus indus	Brahminy kite
24.		Accipiter trivirgatus	Crested Goshawk
25.		Accuoter Nisys melaschistos	Sparrow Hawk
26.		Butastur teesa	White Eyed Buzzard
27.		Aquila ropax vindhina	Ta wny Eagle
28.		Ictinactus Malayensis Perniger	Black Eagle
29.		Haliaeetus leucogaster	White Bellied Sea Eagle
30.		Gyps indicus indicus	Indian Longbilled Vulture
31.		Gyps bengalensis	Indian Whitebacked Vulture
32.		Neophron Perenopterus	Indian Scavenger Vulture
33.		Circus macrourus	Pale Harrier
34.		Circus Pygarus	Montagus Harrier
35.		Spilornis Cheel melanotis	Crested Serpent Eagle
36.		Pandion hatiaetus haliaetus	Osprey
37.	Falconidae	Falco tinnunculus tinnunculus	European Kestrel
38.	Phastanidae	Francolinus Pictus	Painted Patridge
39.		Coturnix coturnix coturnix	Common Grey Quail
40.		Coturnix Coromandelica	Blackbreasted or Rain Quail
41.		Perdicula asiatica asiatica	Jungle Bush Quail
42.		Galloperdix Spadicea spadicea	Red Spurfoud
43.		Gallus Sonneratti	Red Jungke Fowl
44.		Gallus Gallus	Red Jungle Fowl
45.		Pavo Cristatus	Common Peafowl
46.		Turnix sylvatica dussumier	Liggle Bustard Quail
47.		Turnix Suscicator Taigoor	Common Bustard Quail
48.	Rallidae	Rallus stviatus albiventer	Blue Brested Banded Rail
49.		Porzana pusilla pusilla	Baillon's Grake
50.		Porzana porzana	Spotted Crake
51.		Amaurornis phoenicurus phoenicurus	White Brested Waterhen
52.		Amaurornis fuscus zelonicus	Ruddy Crake
53.		Gallicrex Chinerea cinerea	Water Gock or Kora
54.		Gallinula Chloropus indica	Moorhen
55.		Porphyrio Porphyrio poliocephalus	Purple Moorhen
56.		Fulica atra atra	Coot
57.	Jacanidae	Hydropha Sianus chirurhus	Pheasant Tailed Jacana
58.		Metopidicus	Bribzewubged Jacana

59.		Haematopus ostralegus	Dyster catcher
60.		Venellus indicus indicus	Red watted lapwing
61.		Vanellus malbaricus	Yellow watted lapwing
62.		Numeniua Phaeopus	Whimbrel
63.		Numenius orquata	Curlew
64.		Tringa tetanus eurhinus	Common Redshank
65.		Tringa stagnatills	Marsh sandpiper
66.		Tringa nebuliaria	Green shank
67.		Tringa ochropus	Green sand piper
68.		Tringa hypoleucos hypoleuccos	Common sand piper
69.		Gappela stenura	Pintail Snipe
70.		Gapella gallinago	Fantail ship
71.		Gapella mihima	Jack shipe
72.		Caldris minutus	Little stint
73.		Caldris temminickii	Temminck's Stint
74.		Phiomachus pugnax	Ruft and Reeve
75.	Rostratulidae	Rostratula benghalensis benghalensis	Painted shipe
76.	Recurvirostridae	Himantopus himantopus himantopus	Blackwinged stilt
77.	Burhinidae	Burhinus ocdicnemus	Stone curlew
78.	Glareolindae	Burhinus	Ocdicenemus
79.	Lardiae	Larus brunnicephalus	Brounheaded Gull
80.		Larus Brunnicephalus	Brounheaded Gulla
81.		Childonias Bybrida indica	Whiskered Tern
82.		Gelochelidon nilotica nilotica	Gullbilled tern
83.		Sterna aurantia	Indian River Tern
84.		Sterna acuticauda	Blackbellied Tern
85.		Sterna albifvons	Little Tern
86.	Ptercolidae	Petrocles exustus	Indain sandgrouse
87.	Columbidae	Treron pompadora affinis	Grey fronted Gveon
88.		Treron pheonicoptera chlorigaster	Pigeon yellow legged green pigeon
89.		Columba livia intermedia	Blue Rock pigeon
90.		Streptopelia decaocto	Indian Ring Dove
91.		Streptopelia tranque baraca	Red Turtle Dove
92.		Stveptopelia chinensis surantemsis	Spotted Dove
93.			Streptopila Senegalensis Combayensis
94.		Chalcophas indica indica	Emerald Dove
95.	Psittacidae	Psittacula eupatria eupatria	Large Alexandrine Parakeet
96.		Psittacula Krameri Manillensis	Roseringed Parakeet
97.		Psittacula Cyanocephala	Blossomheaded Parakeet
98.		Loriculuc Vernalis	Indian Lorikeet
99.	Cuculidae	Clamator Coromandus	Redwinged Crested
100		Clamator jacobinus serratus	Pied Crested Cuckoo

101		Cuculus Varius Varius	Common Hawk, Cuckoo or Brain Gever Bird
102		Cuculus Micropterus Micropterus	Indian Cuckoo
103		Cuculus canorus	Cuckoo
104		Cacomantis sonneratti	Indain baybanded Cuckoo
105		Cacomantis Merulinus	Indian Plaintive Cuckoo
106		Surniculus ligubris dicruroides	Drongo Cuckoo
107		Eudynamys Scolopacea scolopacea	Koel
108		Tancocua leschenaultii	Sipkeer Cuckoo
109		Centropus Sinensis parroti	Gow Pheasant or Coucal
110	Strigidae	Tyto alba stertens	Barn Owl
111		Otus Scops	Scops Owl
112		Bubo bub	Great Horned Owl or Eagle Owl
113		Bubo Zeyionensis	Brown Fish Owl
114		Glaucidium radiatum radiatum	Barred Jungle Owlet
115		Athene brama brama	Spotted Owlet
116		Asio flammeus flammeus	Shorteared Owl
117	Carrimulgidae	Caprimulgus indicus indicus	Indian Jungle Nightjar
118		Caprimulhus asiaticus	Common Indian Nightjar
119	Apodidae	Apus affnis affinis	House Awiff
120		Cypsiurus parvus batasiensis	Palm swift
121	Trogonidae	Harpactes fasciatus legerli	Cnetal Indan Trogon or Malabar Tyogon
122	Alcedinidae	Ceryle rudis	Lesser Pied Kingfisher
123		Alcedo atthis taprobana	Small Blue or Common Kingfisher
124		Ceyx erithacus	Three Toed Kingfisher
125		Halcyon smyrnesis fusca	White Breasted Kingfisher
126		Halcyon Pileata	Black capped Kingfisher
127	Meropidae	Merops Philippinus Phillipinus	Blue Tailed Bee-eater
128		Merops Orientails Orientails	Green Bee-eater
129	Coracudae	Coracias benghalensis indica	Indian Roller or Blue Jay
130	Upupidae	Upupa-Epops	Hoopoe
131	Bucrotidae	Tockus griseus	Malabar Indian Grey Hornbill
132	Capitonidae	Magalaima Zeylanica inornata	Large Green Barbet
133	Picidae	Megalaima huemacephala indica	Crimsonbreasted Barbet or Copper smith

			warbler
204		<i>Prinia subflava inarnata</i>	Plain wren warbler
205		<i>Prinia socialis socialis</i>	Ashy wren warbler
206		<i>Prinia sylvatica</i>	Jungle wren warbler
207		<i>Orthotornus sutorius gusuratus</i>	Tailor Bird
208		<i>Acrocephalus stentoreus brunnescens</i>	Indian Great Reed Warbler
209		<i>Acrocephalus dumetorum</i>	Blyth's Reed Warbler
210		<i>Acrocephalus agricola</i>	Paddyfield warbler
211		<i>Hippolais caligata caligata</i>	Booted Treewarbler
212		<i>Syivia curruca blythi</i>	Lasser whitethroat
213		<i>Phylloscopus collybita</i>	Brown leafwarbler or chiffchaff
214		<i>Phylloscopus tytleri</i>	Tytler's leas warbler
215		<i>Phylloscopus inornatus</i>	Yellow browed leaf warbler
216	Sub-Family Tudinae	<i>Erithacus aveicuc</i>	Blue throat
217		<i>Copsychus saularis saularis</i>	Magpie Robin
218		<i>Copsychus Malabaricus Malabaricus</i>	Shama
219		<i>Saxicoloides fulicata intermedia</i>	Indian Robin
220		<i>Monticola cinclothynchus</i>	Blue headed Rock Thrush
221		<i>Monticola Solitarius pandoo</i>	Blue Rock Thrush
222		<i>Myiophonus horsfieldii horsfieldii</i>	Malabar whisting thrush
223		<i>Zoothera Cithrina cyanotus</i>	White throated Ground Thush
224		<i>Turdus herula Nigropileus</i>	Blackbird or Black Caped
225		Family- Motacillidae	<i>Anthus trivialis trivialis</i>
226	<i>Anthus Godlewskii</i>		Blythe pipit
227	<i>Montacilla citreola citreola</i>		Yellow headed wagtail
228	<i>Motacilla alba dukhunensis</i>		White or pide wagtail
229		<i>Dicaeum ezythorhynchos ezythorhynchos</i>	Tickell's flower
230		<i>Dicaeum agile agile</i>	Thickbilled flower pecker
231	Family- Nectarinidae	<i>Nectarinia Zeylonica Sola</i>	Purplerumped sunbird
232		<i>Nectarinia lotenia hindustanica</i>	Lotn's sunbird
233		<i>Nectarinia asiatica asiatica</i>	Purple sunbird
234		<i>Aethopyga siparaja vigorsii</i>	Yellow backed sunbird
235	Family-ploceidae	<i>Passer domesticus indicus</i>	House Sparrow
236	Sub-family- passerinae	<i>Petunia xanthocllis zanthocllis</i>	Yellow throated sparrow
237	Sub-family- ploceinae	<i>Ploceus philippinus philippinus</i>	Baya or weaver Bird
238		<i>Estrilda amandava amandave</i>	Red Munid or Avadavat

239		Lonchura malabarica malabarica	White throated Munia
240		Louchura striata striata	White backed Munia
241		Louchura punetulata punctulata	Spotted Munia
242		Louchura Malacca malacca	Blackheaded Munia
243	Family-Fringillidae	Carpodacus erythrinus roseatus	Common Rosefinch or Scarlet Grosbeak
244		Emberiza melanoc eahala	Backeaded Bunting

Statement showing checklist of reptiles

	Family	Scientific Name	Common English Name
1.	Crocodyliae	Crocodyles palustris	Indian Marsh Crocodile or Muggar
2.	Emyoidae	Geomyda triguga trijuga	Pond Tortoise
3.	Testudinidae	Testudo elegans	Star Tortoise
4.	Trionychidae	Trionyx lebthi	
5.	Gekkonidae	Hemida ctylus maculatus	Rock Gecko
6.		Hemidactylus Brook	Brok's Gecko
7.		Hemidactylus leschenaulti	Bark Gecko
8.		Hemidactylus triedrus	Termite Hill Gecko
9.		Eublepharis macularius	Fat Tailed Gecko
10.	Agamidae	Calotes versicolor	Common Garden Lizard or Blood Sucker
11.		Calotes rouxi	Forest Calotes
12.		Psmmophilus blanfordanus	Rock Lizard
13.	Chamreleonidae	Chamaeleon zeylanicus	Indian Chamaeleon
14.	Scinidae	Mabuya carinata	Common or Brahmiv Skink
15.	Varanidae	Varanus Monitor	Common monitor
16.	Typhlopidae	Typhlina bramina	Common worm or blind snake
17.	Boidae	Python moluxu	Indian python
18.		Eryx conicus	Russel's sand Boa
19.		Eryx johni	Jhon's Sand Boa
20.	Colubridae	Acrochordus granulatus	Want snake
21.		Eleaphe helena	Trinket Snake
22.		Ptyas mucosus	Dharman or Common Rat Snake