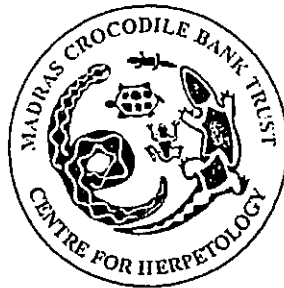
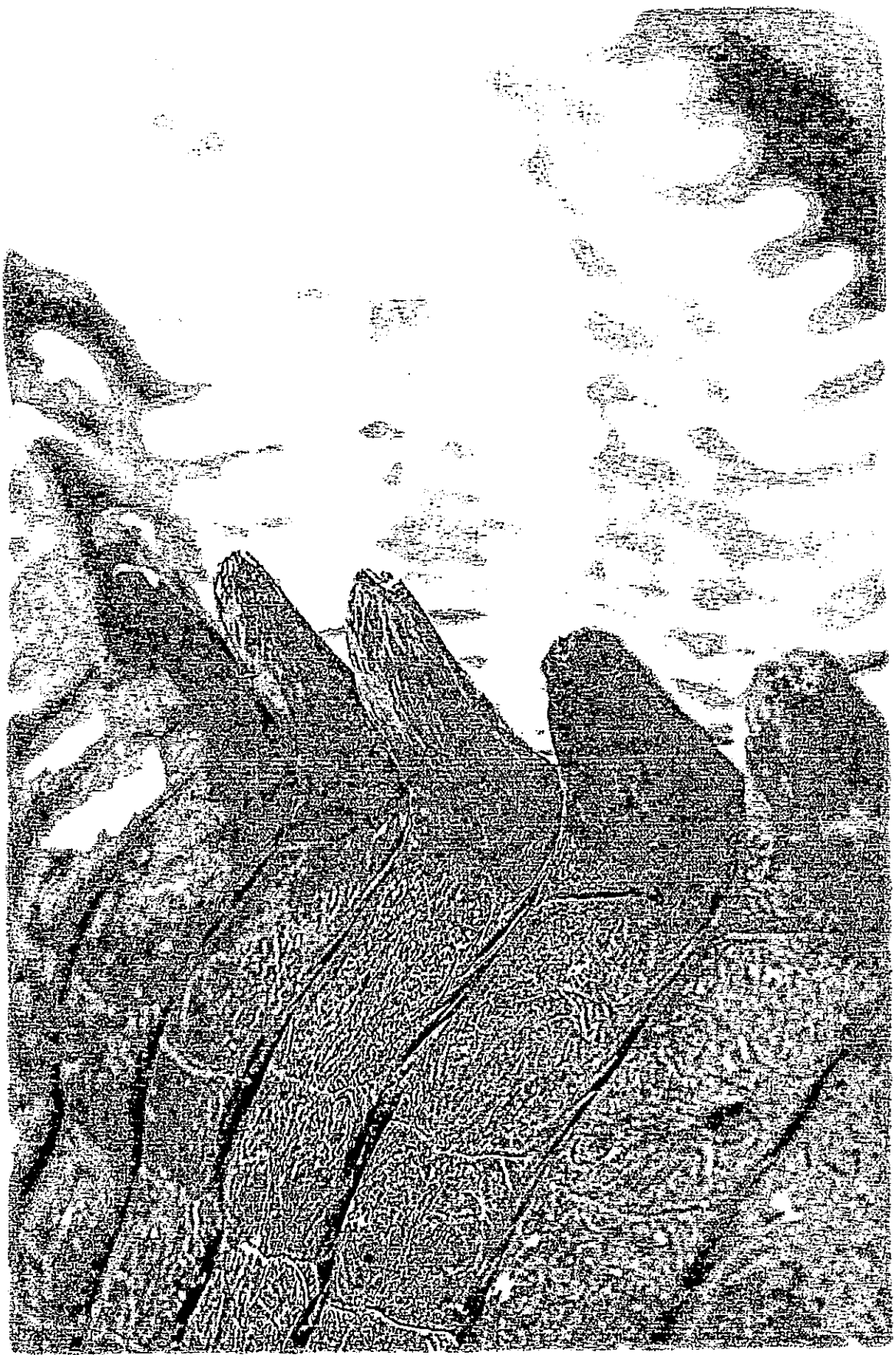


# MADRAS CROCODILE BANK TRUST / CENTRE FOR HERPETOOGY

Post bag No.4, Vadanemmelli Village, East Coast Road, Mamallapuram-603 104, Tamil Nadu, India

## Annual Report for the year 2021- 2022





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## 1. Report of the Officer-in-charge

### Looking beyond the pandemic

This year (2021-2022) has had its share of ups and downs for Croc Bank, yet, it has been better than the uncertainties of last year. As we come to the end of another season, we reflect on how we began it, right in the middle of the second wave that led to our second lockdown from April 20th to August 24th. The next few months flew by, with the hope that COVID-19 was behind us, with visitors waiting for a break after being cooped up in their homes for ages. It didn't last long as the third wave hit Chennai around the Pongal festival which is normally our best season. A partial lockdown was back in place but people were cautious this time and stayed indoors. COVID is the new norm that we will have to get used to, just like we overcame earlier epidemics like the bird flu and the swine flu. Our staff has been vaccinated and safety precautions continue at the zoo.

The transfer of crocodiles from MCBT to Gujarat will help to ease up the space constraint and pave the way for the modernization of our zoo. We are now gearing ourselves to start up a major crowdfunding campaign to raise funds to execute our Master Plan that has been on the cards since 2013. Although virtual programs still continue to happen, we will gradually introduce physical events. Volunteers have started visiting our zoo in small numbers but our special educational programs like the night safari and snake walks are still on hold. An olive ridley turtle hatchery has been set up on our beach and eggs were collected during the nesting season. A film about snakebites in the northeast is almost complete and ready to be launched. The Vet lab has been upgraded with new equipment that would pave the way for more accurate diagnosis and research. To top it all, our dear friend Jaws is back, preserved for posterity, as our star display in the Reptiles Interpretation Centre.

We end this year, with gratitude, and optimism....gratitude for how our supporters and friends responded to our call for action and stood by us through this journey, and yes, optimism as we undertake rebuilding in the wake of the pandemic to emerge as a world-class attraction with exciting exhibits and newer additions to our already exhaustive collection.

Pramila Rajan  
Director

## 2. History of the Zoo

It was started in 1976 by a group of idealistic conservationists including Rom Whitaker initially with private funds and a lot of goodwill and support from friends and family, as a desperate effort to save India's dwindling crocodilian populations from extinction. At that time the gharial was particularly endangered, with only 300 or so left in the wild. The mugger and saltwater crocodile were in better shape but hunting and habitat depletion were serious threats for them as well. Today, after 40 years of cutting-edge science/research and grassroots education and awareness building, the Croc Bank is recognized as a world leader in the field of frontline conservation of species and habitats. Its infrastructure and programs include a reptile zoo on the East Coast Road south of Chennai, and field stations and study sites reaching as far afield as the Nicobar Islands.

The zoo receives about 4.5 lakh visitors annually, making it one of the popular tourist attractions in the region. Originally designed to be a living repository of crocodilians for genetic safekeeping, the Croc Bank is now no longer confined to crocodile conservation but includes all reptiles in its mandate and its title includes "Centre for Herpetology". The release of captive bred crocodiles into the wild, which was the original goal, has not happened because of shrinking wilderness areas and the lack of suitable habitats. The mandate has also extended to crocodilians from other countries, in fact all the world's species, ie 27. Of these, 15 are housed at the Croc Bank currently, the only place in India where such a sizeable chunk of the total species can be seen. Of the 15 species represented, 3 are listed as Critically Endangered by the IUCN.

In 2003, the Trustees of the Croc Bank decided to expand its mandate and reach, and become a centre for herpetology. Its work now includes the conservation of all reptiles, ie snakes, chelonians and lizards as well. The need for chelonian conservation has grown in recent years and MCBT now breeds several threatened species including 2 that are listed as Critically Endangered by IUCN.

## 3. Vision

To develop and run a world-class reptile zoo, and to promote the conservation of reptiles and amphibians and their habitats through education, scientific research and captive breeding.

## 4. Mission

Efforts are focused on, but are not limited to, Indian species and ecosystems and include both in-situ and ex-situ components.

## 5. Objective

- Conservation breeding of endangered species in captivity and to maintain a gene bank of endangered reptiles.
- Facilitate research and scientific study on reptile behaviour, enclosure enrichment, Feed, nutrition and reproductive biology.
- Promote education & awareness amongst visitors on the role of reptiles in the natural world and the importance of reptile conservation.
- Ensure comfortable housing for all reptiles with special emphasis on health care, animal welfare and excellent animal husbandry.

## 6. About us

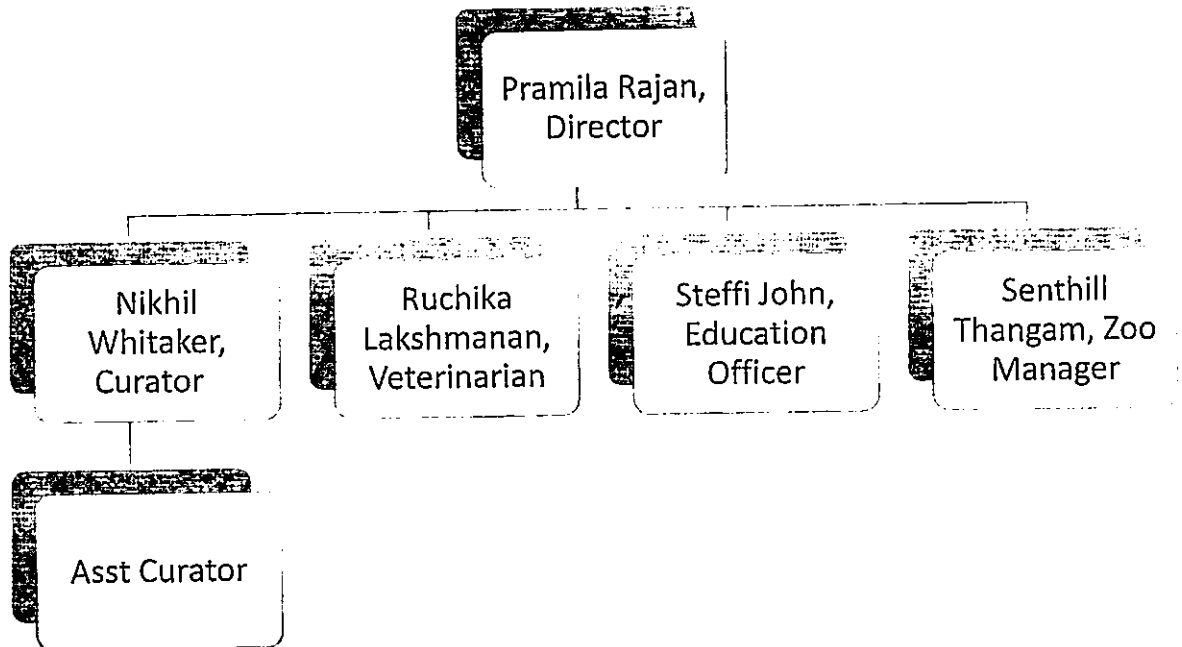
S.No.	Particulars	Information
<b>Basic Information about the Zoo</b>		
1	Name of the Zoo	Madras Crocodile Bank Trust/ Center for Herpetology
2	Year of Establishment	1976
3	Address of the Zoo	Center for Herpetology Madras Crocodile Bank Trust Post Bag 4, Mamallapuram, Tamil Nadu - 603 104
4	State	Tamil Nadu
5	Telephone Number	+91 9677013445
6	Fax Number	-
7	E-mail address	<a href="mailto:info@madrascrocodilebank.org">info@madrascrocodilebank.org</a>
8	Website	<a href="http://www.madrascrocodilebank.org">www.madrascrocodilebank.org</a>
9	Distance from nearest	Airport: 40km
		Railway Station: 55km
		Bus Stand: 10 meters
10	Recognition Valid upto (Date)	August 19 <sup>th</sup> , 2022

S.No.	Particulars	Information
11	Category of zoo	Medium
12	Area (in Hectares)	3.2
13	Number of Visitors (Financial Year)	Adult :1,30,274
		Children : 30, 399
		Total Indian : 1,60,589
		Total Foreigners : 84
		Total Visitors: 1,60, 673
14	Visitors' Facilities Available in Zoo	Restrooms, Interpretation Centre, Wheel-chairs, R.O. water points.
15	Weekly Closure Day of the Zoo	Monday
<b>Management Personnel of the zoo</b>		
16	Name with designation of the Officer in-charge	Pramila Rajan, Director
	Name of the Veterinary Officer	Ruchika Lakshmanan
	Name of the Curator	Nikhil Whitaker
	Name of the Biologist	-
	Name of the Education Officer	Steffi John
	Name of the Compounder/ Lab Assistant	NIL
<b>Owner / Operator of the Zoo</b>		
17	*Name of the Operator	Trust operated Zai Whitaker, Managing Trustee
18	Address of the Operator	Madras Crocodile Bank Trust Post bag No.4, Vadanemmelli Village, East Coast Road, Mamallapuram-603 104, Tamil Nadu, India



S.No.	Particulars	Information
19	Contact details/Phone number of Operator	+91 9487409737
20	E-mail address of Operator	<a href="mailto:zai@madrascrocodilebank.org">zai@madrascrocodilebank.org</a>

## 7. Organizational Chart



8. Human Resources

Manpower of the Zoo\*

Sl.No.	Designation	Number of Sanctioned Posts	Names of the incumbent
1	Managing Trustee	1	Zai Whitaker
2	Director	1	Pramila Rajan
3	Zoo Manager	1	Senthil Thangam
4	Curator	1	Nikhil Whitaker
5	Asst. Curator	2	Ambika Yelahanka / Abhijith S
6	Veterinarian	1	Ruchika Lakshmanan
7	Education Officer	1	Steffi John
8	Project Coordinator, Snakebite Mitigation	1	Gnaneswar CH
9	Conservation Officer	1	Ganesh Muthiah
10	Accountant	1	M. Mohan
11	Assistant Accountant	1	M. Pavithra
12	Chief Reptile Keeper	1	V. Gangadurai
13	Chief Reptile Keeper	1	S. Nagarathinam
14	Zoo Educator	1	C. Dhanasekaran (Retired on 04.02. 2022)
15	Maintenance Supervisor	1	L. Gunasekaran
16	Curatorial Assistant	1	V. Mohanasundaram
17	Supervisor, Entrance and pen watchers	1	T. Mohan
18	Senior Office Assistant	1	C. Purushothuman
19	Ticket checker	1	N. Selvamani
20	Ticket checker	1	R. Gnanamurthy
21	Senior Housekeeper	1	M. Indradevi (Retired on 09.06.2021)
22	Enclosure Maintenance and Housekeeping	1	E. Amutha
23	Chelonian Keeper	1	J. Shanthi
24	Enclosure Maintenance	1	S. Parimala (Retired on 14.05.2021)
25	Driver	1	M. Ramu
27	Animal Keeper	1	S. Janakiraman

28	Croc Shop Operator	1	N. Pushparani
29	Chief Cook	1	G. Ashok Somai Magar
30	Cleaning and Maintenance Asst	1	S. Mohan
31	Animal Keeper	1	G. Gowri Shankar
32	Security Guard	1	Tek Bahadur Somai Magar
33	Security Guard	1	Budibal Somai Magar
34	Security Guard	1	Krishna Bahadur Somai Magar
35	Enclosure Maintenance	1	V. Yuvarani
36	Maintenance and cook	1	A. Kumari
37	Maintenance Assistant	1	K. Elumalai

#### 9. Capacity Building of zoo personnel

Sl.No.	Name and designation of the zoo personnel	Subject matter of Training	Period of Training	Name of the Institution where the Training attended
1	P.Gowri Shankar, Reptile Keeper	Reptile Management	3 days	Arignar Anna Zoological Park
2	G. Mohan, Research Assistant	Reptile Management	3 days	Arignar Anna Zoological Park
3	Steffi John, Education Officer	Conservation Education in Zoos	4 days	IZE and EAZA
4	Dr Ruchika Lakshmanan, Veterinarian	Annual Conference	5 days	AAZV/EAZWV

**10. Zoo Advisory Committee –**

**a. Date of constitution: 1976**

**b. Members**

Romulus Whitaker III, the famous “snake man of India”, who is a founder of MCBT.  
Zai Whitaker, also one of the founders, and currently Managing Trustee of MCBT.  
Samit Sawhny, Managing Director, Barefoot Resorts.  
Ashish Gupta, Managing Director, Milesworth Travels.  
Kamini Sundaram, Founder and Director, Abacus Montessori School.  
M.M. Venkatachalam, Director, Coromandel International Ltd.  
Venu Srinivasan, Chairman and Managing Director, TVS Motor Company, India.  
Meera Anna Oommen, Associate Director, Dakshin Foundation.

**c. Dates on which Meetings held during the year**

1. 10-07-2021
2. 23-10-2021
3. 08-01-2022
4. 16-04-2022

**11. Health Advisory Committee–**

**a. Date of constitution: April 1<sup>st</sup> 2021**

**b. Members**

Dr. RUCHIKA LAKSHMANAN, VETERINARY OFFICER, MCBT  
NIKHIL WHITAKER, CURATOR, MCBT  
AMBIKA YELAHANKA, ASSISTANT CURATOR, MCBT  
PRAMILA RAJAN, DIRECTOR, MCBT  
SENTHIL THANGAM, ZOO MANAGER, MCBT

**c. Dates on which Meetings held during the year**

1. 30-06-2021
2. 30-09-2021
3. 29-12-2021
4. 25-03-2022

12. Statement of income and expenditure of the Zoo (to fill in)

Income

1	Ticket Sales	1,46,14,900
2	Research Grants	95,63,216
3	Donations & Rent	53,98,037
4	Environment Education	49,90,612
5	Adopt an Animal	13,02,950
6	Bank Interest	39,42,343
7	Croc Shop sales	9,02,765
8	Other income	3,08,470
9	ARRS	12,21,294
	<b>Total</b>	<b>4,22,44,587</b>

Expenditure

1	Salary and Wages	1,57,92,013
2	Reptile Feed Costs	67,56,431
3	Maintenance and Upkeep	56,82,334
4	Research	1,18,17,768
5	Environmental Education Expenses	1,75,335
6	ARRS	22,13,502
7	Croc Shop Expenses	7,82,608
8	Administrative Expenses	10,86,331
9	Capital Assets	82,45,231
	<b>Total</b>	<b>5,25,51,553</b>

### 13. Daily feed Schedule of animals

Sl.No.	Species	Feed item	Quantity (in kg)	Day of fasting
			per week	
1	Marsh Crocodile	Fish	800	NA
		Chicken	870	
		Buffalo	565	
2	Saltwater Crocodile	Chicken	37	NA
		Buffalo	37	
3	African Slender Snout Crocodile	Chicken	5	NA
		Buffalo	5	
4	Cuban Crocodile	Chicken	11	NA
		Buffalo	10	
5	West African Dwarf Crocodile	Fish	1	NA
		Chicken	1	
6	Siamese Crocodile	Fish	1	NA
		Chicken	4	
		Buffalo	4	
7	Morelet's Crocodile	Fish	5	NA
		Chicken	5	
		Buffalo	4	
8	Nile Crocodile	Chicken	6	NA
		Buffalo	6	
9	Gharial	Fish	80	NA
10	Tomistoma	Fish	4	NA
		Chicken	5	
		Buffalo	5	
11	American Alligator	Chicken	5	NA
		Buffalo	4	
12	Dwarf Caiman	Fish	6	NA
13	Yacare Caiman	Fish	6	NA
		Chicken	2	
14	Black Caiman	Chicken		NA
15	Spectacled Caiman	Fish	11	NA
		Chicken	1	
16	Northern River Terrapin	Fish	4	NA
		Greens	2	

17	Red Crowned Roof Turtle	Fish Greens	1 2	NA
18	Aldabra Giant Tortoise	Greens Fruits Vegetables	3 2 2	NA
19	Indian Star Tortoise	Greens Fruits Vegetables	1 1 1	NA
20	Leith's Softshell Turtle	Fish Chicken	1 1	NA
21	Indian Flapshell Turtle	Fish	1	NA
22	Gangetic Softshell Turtle	Fish	1	NA
23	Indian Roofed Turtle	Fish Greens	1 2	NA
24	Travancore Tortoise	Greens Fruits Vegetables	2 2 2	NA
25	Indian Tent Turtle	Fish Greens		NA
26	Three-Striped Roofed Turtle	Fish Greens	1 2	NA
27	Asian Water Monitors	Fish	1	NA
28	Green Iguana	Greens Fruits Vegetables	1 1 1	NA
29	Blue tongue skinks	Vegetables Superworms Rat pinkies	1 Misc. Misc.	NA
30	Basilisk lizard	Vegetables Rat pinkies	1 Misc.	NA
31	Komodo Dragon	Chicken	3	NA
32	Indian Rock Python	Rats	Misc.	NA
33	Reticulated Python	Rats	Misc.	NA
34	Green Anaconda	Rats	Misc.	NA
35	Yellow Anaconda	Rats	Misc.	NA

36	Rat Snake	Rats	Misc.	NA
37	Trinket Snake	Rats	Misc.	NA
38	Corn Snake	Rats	Misc.	NA
39	Whitaker's Sand Boa	Rats	Misc.	NA
40	Russell's Viper	Rats	Misc.	NA
41	Saw Scaled Viper	Rats	Misc.	NA
42	Common Krait	Rats	Misc.	NA
43	Banded krait	Rats	Misc.	NA
44	Spectacled Cobra	Rats	Misc.	NA
45	Monocled Cobra	Rats	Misc.	NA

#### 14. Vaccination Schedule of animals

Sl.No.	Species	Disease vaccinated for	Name of the Vaccine and dosage/ quantity used	Periodicity	Remarks
N/A					

#### 15. De-worming Schedule of animals

Sl.No.	Species	Drug used	Month
1.	Snakes	Metronidazole Fenbendazole	August, 2021



16. Disinfection Schedule

Sl.No	Species	Type of enclosure	Disinfectant used and method	Frequency of disinfection
1	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Twice a month
1A	American Alligator	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
1B	African Slender Snout Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
1C	Cuban Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
3A	West African Dwarf Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month
3B	Yacare Caiman	Open air	Manual Scrubbing and Cleaning	Once a month
4	Yacare Caiman	Open air	Manual Scrubbing and Cleaning	Once a month
5	Gharial	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
6	Siamese Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
7	Nile Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
8	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
9A	Green Iguana	Open air	Manual Scrubbing and Cleaning	Once a month

9B	Asian Water Monitors	Open air	Manual Scrubbing and Cleaning	Once a month
9C	Dwarf Caiman	Open air	Manual Scrubbing and Cleaning	Once a month
10	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
11	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
11A	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
12A	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
12B	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
12C	Nile Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
13	Gharial	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
13A	Black Caiman	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
14	Spectacled Caiman	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
15	Morelet's Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
15A	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month

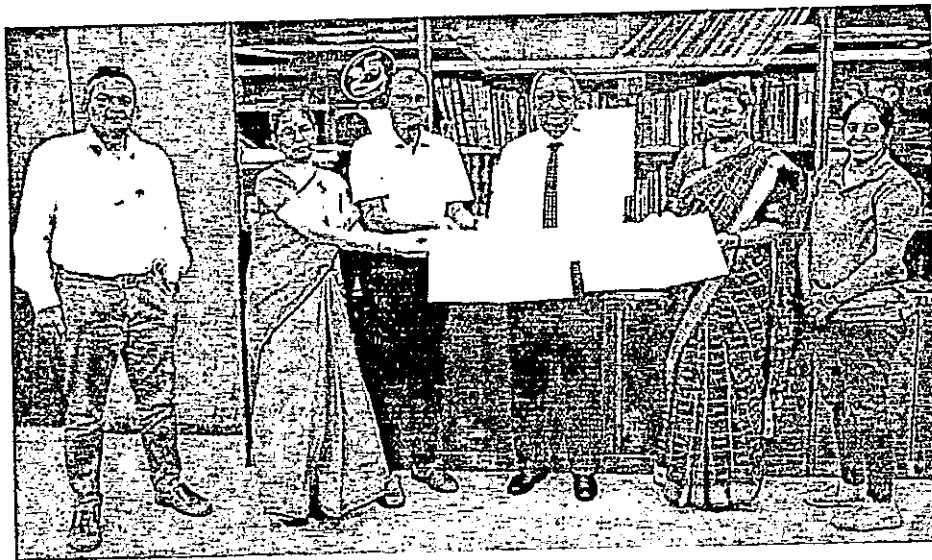
15B	Morelet's Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month
16	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month
16A	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
17	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month
18	Tomistoma	Open air	Manual Scrubbing and Cleaning	Once a month
19	American Alligator	Open air	Manual Scrubbing and Cleaning	Once a month
20A	Saltwater Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
20B	Northern River Terrapin	Open air	Manual Scrubbing and Cleaning	Once a month
21	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Twice a month
22	Marsh Crocodile	Open air	Manual Scrubbing and Cleaning	Twice a month
23A	Morelet's Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
23B	Northern River Terrapins	Open air	Manual Scrubbing and Cleaning	Once a month
24	Gharial and Red Crowned Roof Turtles	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months

25A	Spectacled Caiman	Open air	Manual Scrubbing and Cleaning	Once a month
25B	Leith's Soft Shell Turtle	Open air	Manual Scrubbing and Cleaning	Once a month
25C	Morelet's Crocodile	Open air	Manual Scrubbing and Cleaning	Once a month
26	Northern River Terrapins	Open air	Manual Scrubbing and Cleaning	Once a month
27	Cuban Crocodile	Open air	Manual Scrubbing and Cleaning	Once in 3-4 months
28	Nursery	Open air	Savlon Disinfection/ Manual Cleaning	Once in 10 days
29	Out Office	Open air	Savlon Disinfection/ Manual Cleaning	Once in 10 days
30	Venomous Snakes	Closed Room	Savlon Disinfection/ Manual Cleaning	Once a week
31	Non-Venomous Snakes	Closed Room	Savlon Disinfection/ Manual Cleaning	Once a week
32	Indian Rock Python	Open Air in Mesh Cage	Savlon Disinfection/ Manual Cleaning	Once a week
33.	Reticulated Python	Closed Room	Savlon Disinfection/ Manual Cleaning	Once a week

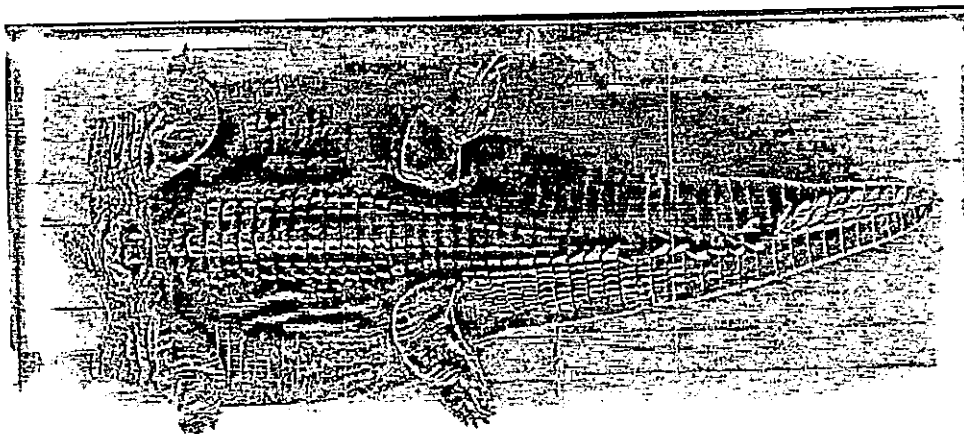
17. Health Check-up of employees for zoonotic diseases

Sl.No.	Name	Designation	Date of Health Check up	Findings of Health Check up
COVID Vaccination was conducted for the staff during the Pandemic.				

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



MCBT signed a MoU with Tamil Nadu Veterinary and Animal Sciences University, to collaborate on histopathology, molecular biology and microbiological analysis



Permission was granted under the relevant sections of the Wildlife (Protection) Act, 1972, to display Jaw's skin. The skin is now on display at Reptales

19. Education and Awareness programmes during the year

Programs	Date	No. of participants
Turtle or Tortoise	Apr 12 2021	15
Meet the curatorial team with Rom Whitaker	May 05 2021	10
Reptile 101 (Turtles & Tortoises)	Jun 13 2021	10
Reptile 101 (Crocodiles & Lizards)	Jun 20 2021	10
Reptile 101 (Snakes)	Jun 27 2021	10
Tiny Tots	Jun 30 2021	29
FORD - Turtles and zoo tour	Jun 11 2021	40
FORD - Crocodiles and zoo tour	Jun 18 2021	35
FORD- Snakes and zoo tour	Jun 25 2021	20
FORD - Lizards and zoo tour	Jul 02 2021	10
FORD - Tortoises and zoo tour	Jul 09 2021	20
Tiny Tots Take 2	Aug 22 2021	17
Origin of Species with Rom & Curatorial team	Sep 05 2021	7
Reptiles at the Croc Bank	Sep 15 2021	23
Education program	Oct 15 2021	10
Guided tour	Oct 14 2021	15
Avinash education trip	Oct 18 2021	44
Guided tour	Nov 07 2021	15
Vruksha school - virtual program	Feb 07 2022	40
Guided tour	Feb 10 2022	4
Guided tour	Feb 18 2022	5
Nature's Eye - virtual program	Feb 27 2022	9
Guided tour	Mar 10 2022	5
Guided tour	Mar 11 2022	6
KC High - zoo visit	Mar 17 2022	24

## 20. Important Events and happenings

- We have transferred a male and female Nile crocodile to Vandalur Zoo, in exchange for a male reticulated python from them.
- We have transferred 300 mugger crocodiles to GZRRC, without any mortality between November 2021 - February 2022.

## 21. Seasonal special arrangements for upkeep of animals

- a. UV bulbs, air conditioners, misters, mulch for reptiles to bury in.
- b. Shade cloth, sprinklers, hides.

## 22. Research Work carried out and publications

### Scientific Papers 2021 – 2022

1. Nikhil Whitaker and Rom Whitaker, Record of Captive Gharial (*Gavialis gangeticus*) Preying on a Bird, Crocodile Specialist Group Newsletter Volume 40, No.2, April 2021 – June 2021.
2. Brinky Desai, Soham Mukherjee, Nikhil Whitaker and Ratna Ghosal, Anecdotal observations of 'double clutching' behaviour in captive Mugger crocodiles (*Crocodylus palustris*), Behaviour (2022) DOI:10.1163/1568539X-bja10153
3. Ananda Shikhara Bhat, Varun Aniruddha Sane, K S Seshadri and Anand Krishnan, Behavioural context shapes vocal sequences in two anuran species with different repertoire sizes, Animal Behaviour.
4. Pranay Bhatnagar, Dayalbagh Educational Institute, Deemed University, Agra, Uttar Pradesh 282005, India, HEBIUS BEDDOMEI (*Beddome's keelback*), Herpetological Review 52 (1), 2021
5. Ruchika Lakshmanan, Ambika Yelahanka and Nikhil Whitaker, Management of Partial paresis in Green Iguana (*Iguana iguana*) – A Case Study, Indian Zoo Year Book Volume IX 2021
6. Nikhil Whitaker and Ambika Yelahanka, Onset Cephalic pigmentation in males in the Red Crowned Roof Turtle, Emydidae, *Batagur kachuga* (GREY, 1887), Indian Zoo Year Book Volume – IX 2021
7. Ruchika Lakshmanan, Ambika Yelahanka and Nikhil Whitaker, Therapeutic Management of stomatitis and rostral abrasions in Reticulated Python (*Malayopython reticulatus*), Indian Zoo Year Book Volume – IX 2021

8. Yatin Kalki, Citizen science and online data: Opportunities and challenges for snake ecology and action against snakebite, *Toxicon* X 9-10 (2021) 100071
9. Rep-tales – in conversation with Zai Whitaker, Interview by Anooja A, Aswathi Asokan, Nanditha Ram Satagopan and Rohith Srinivasan, *Nature Trail* Volume 3.Issue1
10. Yatin Kalki and Sachin Gowda, New Locality Records for the Indian Egg-eating Snake (*Elachistodon westermanni*) and the Stout Sand snake (*Psammophis longifrons*) in Karnataka, India, *Reptiles and Amphibians* 28(1):65-67 April 2021
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12. Pranav C. Khandelwal and Tyson L.Hedrick, How biomechanics, path planning and sensing enable gliding flight in a natural environment, *The Royal Society*
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16. *Dendrelaphis grandoculis* (Large-eyed Bronzeback). Diet (NHN)- Large-eyed Bronzeback feeding on a Malabar Gliding Frog -Herpetological Review- Yatin Kalki & Ajay Giri
17. *Dendrelaphis grandoculis* (Large-eyed Bronzeback). Reproduction (NHN)- First report on clutch size for Large-eyed Bronzeback, obtained from a DOR female -Herpetological Review- Yatin Kalki, Piyush Dholariya, Robin Huizinga, & Ajay Giri
18. *Monilesaurus rouxii* (Roux's Forest Lizard). Diet (NHN)- Roux's Forest Lizard feeding on a Boxer Mantis -Herpetological Review- Yatin Kalki & Chi-Ting Hsu
19. *Naja naja* (Spectacled Cobra). Diet (NHN)- Spectacled cobra feeding on Indian Palm Squirrel pups and a Black Rat -Herpetological Review- Yatin Kalki
20. King cobra (*Ophiophagus hannah*) feeding on Russell's viper. Diet. (NHN) Herpetological Review– Nagraj Belluru, Gurumurthy, Meghana Nagaraja and Ajay Giri.
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23. Conservation Breeding Programme of the Zoo

Gharial (*Gavialis gangeticus*) - 31

River terrapin (*Batagur baska*) - 42

Red crowned roof turtle (*Batagur kachuga*) - 4

24. Animal acquisition / transfer / exchange during the year

A. Animals arriving in the Zoo					
	H.NO.	Species	Number (M:F)	From which Zoo	Date of arrival in the zoo
	1	Reticulated python	(1:0)	Arignar Anna Zoological Park	19 <sup>th</sup> March 2022
B. Animals going from the zoo					
	H.NO.	Species	Number (M:F)	Going to which Zoo	Date of deposition from the zoo
	21	Nile crocodile	(1.1)	Arignar Anna Zoological Park	19 <sup>th</sup> March 2022
B.	16	Mugger crocodile	(25.0)	GZRRC	28 <sup>th</sup> November 2021
B.	16	Mugger crocodile	(25.0)	GZRRC	6 <sup>th</sup> December 2021
B.	16	Mugger crocodile	(50.0)	GZRRC	29 <sup>th</sup> December 2021
B.	16 & 21	Mugger crocodile	(60.0)	GZRRC	11 <sup>th</sup> January 2022
B.	22	Mugger crocodile	(67.0)	GZRRC	28 <sup>th</sup> January 2022
B.	16 & 22	Mugger crocodile	(73.0)	GZRRC	7 <sup>th</sup> February 2022

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

- N/A-











No.	2021-2022 Annual Report	ANIMAL NAME	SCIENTIFIC NAME	Opening stock on 01/04/2021			Births			Acquisitions			Disposal			Deaths			Closing stock on 31/03/2022				
				M	F	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U		
12.	Cuban crocodile	<i>Crocodylus rhombifer</i>	1	3	0	4														1	3	0	4
13.	Leith's softshell turtle	<i>Nilssonina leithii</i>	1	0	0	1														1	0	0	1
14.	Aldabra giant tortoise	<i>Dipsochelys gigantea</i>	2	1	0	3														2	1	0	3
15.	Indian star tortoise	<i>Geochelone elegans</i>	2	10	0	12														2	10	0	12
16.	Pink ringed tent turtle	<i>Pangshura tentoria circumdata</i>	0	0	14	14														0	0	14	14
17.	Indian tent turtle	<i>Pangshura tecta</i>	0	0	2	2														0	0	2	2





No.	2021-2022 Annual Report	ANIMAL NAME	SCIENTIFIC NAME	Opening stock on 01/04/2021			Births			Acquisitions			Disposal			Deaths			Closing stock on 31/03/2022			
				M	F	T	M	F	U	M	F	U	M	F	U	M	F	U	M	F	U	T
25.	Reticulated python	<i>Malayopython reticulatus</i>	0	1	0	1			1										1	1	0	2
26.	Trinket snake	<i>Coeleognathus helena</i>	1	2	1	4													1	2	1	4
27.	Common Krait	<i>Bungarus caereuleus</i>	1	1	0	2													1	1	0	2
28.	Saw Scaled Viper	<i>Echis carinatus</i>	1	2	0	3													1	2	0	3
29.	Rat Snake	<i>Ptyas mucosa</i>	1	1	0	2													1	1	0	2
30.	Common Wolf Snake	<i>Lycodon aulicus</i>	1	1	0	2													1	1	0	2
31.	Green anaconda	<i>Eunectes murinus</i>	1	1	8	10													1	1	0	8



## 27. Mortality of animals

Sl.No.	Animal Name (with individual identification mark, if any)	Scientific Name	Sex	Date of Death	Reason of Death as per the Post-mortem report
1.	Gharial crocodile (G201)	<i>Gavialis gangeticus</i>	UK	06.04.2021	Yolk Sac Retention
2.	Gharial crocodile	<i>Gavialis gangeticus</i>	UK	07.08.2021	Enteritis
3.	Whitaker's sand boa (#WB1 2020)	<i>Eryx whitakeri</i>	UK	03.05.2021	Autolysed
4.	Marsh crocodile	<i>Crocodylus palustris</i>	UK	06.05.2021	Cannibalized
5.	Banded Krait (#B2)	<i>Bungarus fasciatus</i>	Male	22.06.2021	Autolysed
6.	Green anaconda	<i>Eunectes murinus</i>	Female	27.07.2021	Enteritis / Amoebiasis
7.	Green anaconda	<i>Eunectes murinus</i>	Male	18.08.2021	Enteritis / Amoebiasis
8.	Indian Flapshell Turtle	<i>Lissemys punctata</i>	UK	22.09.2021	Anorexia / Emaciation
9.	Travancore tortoise (#5L - Turtle Haven)	<i>Indotestudo travancorica</i>	Female	08.10.2021	Autolysed / Decapitated
10.	Brown basilisk	<i>Basiliscus vittatus</i>	Female	14.11.2021	Anorexia / Emaciation
11.	Gharial crocodile (G-206)	<i>Gavialis gangeticus</i>	Male	15.11.2021	Gastritis
12.	Marsh crocodile (F-26 11 R)	<i>Crocodylus palustris</i>	Female	22.11.2021	Mycotic Gastritis / Enteritis
13.	Travancore tortoise (TT Enclosure)	<i>Indotestudo travancorica</i>	Male	28.11.2021	Anorexia
14.	Yellow anaconda (#YA-06-2017)	<i>Eunectes notaeus</i>	Male	26.12.2021	Respiratory infection
15.	Marsh crocodile (#712-11R)	<i>Crocodylus palustris</i>	Male	04.01.2022	Infighting / Septicaemia

16.	Marsh crocodile (#182 - 13L)	<i>Crocodylus palustris</i>	Female	17.01.2022	Infighting / Autolysed
17.	Indian Rock Python (#10)	<i>Python molurus</i>	Female	17.01.2022	Infighting - Asphyxia, Constriction and Strangulation
18.	Marsh crocodile (#612-16L)	<i>Crocodylus palustris</i>	Female	28.01.2022	Autolysed
19.	Travancore tortoise	<i>Indotestudo travancorica</i>	UK	01.02.2022	Anorexia
20.	Spectacle Caiman (#607)	<i>Caiman crocodilus</i>	Male	08.02.2022	Autolysed
21.	Red Crowned Roofed Turtle (#6R - Tub 1)	<i>Batagur kachuga</i>	UK	11.02.2022	Infighting - Anorexia / Emaciation
22.	Marsh crocodile (#433 - Pen 21)	<i>Crocodylus palustris</i>	Male	02.03.2022	Infighting
23.	Spectacle Caiman	<i>Caiman crocodilus</i>	UK	19.03.2022	Autolysed
24.	Termite Hill Gecko	<i>Hemidactylus triedrus</i>	Female	28.03.2022	Impaction

28. Compliance with conditions stipulated by the Central Zoo Authority

Sr. No	Norm No. under RZR, 2009	Condition Stipulated	Time Period to Comply	Since when pending	Status with regard to compliance of the conditions
		1. General requirements:			
1	10.1(4)	Residence of Director or of any other staff within the premises of zoo should be separated by 2 mts high boundary wall from the ground level with entry/exit separate from zoo premises. The entry to residential area should not be through zoo premises. This should be implemented at the earliest.	Six months.		Under process.
		6. Veterinary and infrastructure facilities:			
2	10.6(6)	The zoo should have formal linkages through a MoU on healthcare, preventive, health management, surgical interventions, clinical tests, disease diagnosis etc with TANUVAS as stated.	Six months.		MoU with TANUVAS signed on 4 <sup>th</sup> Jan 2022
		7. Post-mortem and disposal of carcasses of animals:			
3	10.7(2)	The findings of the post-mortem examination report to be recorded in such format as have been prescribed by the Central Zoo Authority.	Six months.		Done
		9. Acquisition and breeding of animals:			

4	10.9(9)	Excess population of marsh crocodile to be shifted to off-display area as approved by CZA in Master (Layout) Plan of MCBT.	One year	Done
5	10.9(9)	Population control measures should be adopted against over population of Siamese crocodile, Spectacled caiman, Dwarf caiman and Yellow anaconda respectively.		Done
		Other conditions:		
6		The Hotel established adjacent to the park were playing loud earth-shaking music causing disturbance to the animals housed in the park. This noise pollution will affect the animals housed in the park and should be brought to the notice of the concerned officials and redressed at the earliest. Appropriate action should be taken as per provisions under Section 39-J of the Wild Life (Protection) Act, 1972.	Immediately	The hotel has agreed to follow noise control measures suggested by IIT Madras.

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

ARACHNIDS

- |                                    |                               |
|------------------------------------|-------------------------------|
| 1. <i>Argiope versicolor</i>       | St. Andrew's Cross Spider     |
| 2. <i>Argiope aemula</i>           | Oval St Andrew's Cross Spider |
| 3. <i>Argiope anasuja</i>          | Giant cross spider            |
| 4. <i>Argiope pulchella</i>        | Garden cross spider           |
| 5. <i>Gasteracantha geminate</i>   | Oriental Spiny Orb-weaver     |
| 6. <i>Gasteracantha mammosa</i>    | Asian Spinyback Spider        |
| 7. <i>Cyclosa insulana</i>         | Island Cyclosa Spider         |
| 8. <i>Parawixia</i> sp.            | Orb-weaver Spider sp.         |
| 9. <i>Tetragnatha</i> sp.          | Long-jawed orb-weavers sp.    |
| 10. <i>Leucauge decorata</i>       | Decorative silver orb spider  |
| 11. <i>Tetragnatha mandibulata</i> | Big-jawed Spider              |
| 12. <i>Theridion</i> sp.           | Tangle-web spiders            |
| 13. <i>Hippasa</i> sp.             | Wolf spiders                  |
| 14. <i>Citrophora citricola</i>    | Tropical tent-web spider      |
| 15. <i>Citrophora cicatrosa</i>    | Garden tent web spider        |
| 16. <i>Crossopriza lyoni</i>       | Tailed cellar spiders         |
| 17. <i>Oxyopes rufisternum</i>     | Lynx spider                   |
| 18. <i>Peucetia viridans</i>       | Green lynx spider             |
| 19. <i>Oxyopes</i> sp.             | Lynx spider sp.               |
| 20. <i>Pardosa pseudoannulata</i>  | Pond wolf spider              |
| 21. <i>Plexippus petersi</i>       | Common housefly-catcher       |
| 22. <i>Plexippus paykulli</i>      | Pantropical jumper            |
| 23. <i>Telamonia dimidiata</i>     | Two-striped jumper            |
| 24. <i>Thomisus pugilus</i>        | Crab Spider                   |
| 25. <i>Olios milleti</i>           | Green crab spider             |
| 26. <i>Neosparassus</i> sp.        | Badge Huntsman Spiders        |

BIRDS

- |                                   |                         |
|-----------------------------------|-------------------------|
| 1. <i>Turdoides affinis</i>       | White headed babbler    |
| 2. <i>Megalaima haemacephala</i>  | Coppersmith barbet      |
| 3. <i>Merops philippinus</i>      | Blue tailed bee-eater   |
| 4. <i>Merops orientalis</i>       | Small bee-eater         |
| 5. <i>Pycnonotus cafer</i>        | Red vented bulbul       |
| 6. <i>Pycnonotus luteolus</i>     | White browed bulbul     |
| 7. <i>Pycnonotus jocosus</i>      | Red-whiskered bulbul    |
| 8. <i>Corvus splendens</i>        | House crow              |
| 9. <i>Corvus macrorhynchos</i>    | Jungle crow 1           |
| 10. <i>Hierococcyx varius</i>     | Common hawk cuckoo      |
| 11. <i>Cacomantis passerines</i>  | Indian plaintive cuckoo |
| 12. <i>Streptopelia chinensis</i> | Spotted dove            |
| 13. <i>Dicrurus macrocercus</i>   | Black drongo            |



14. <i>Nycticorax nycticorax</i>	Black crowned night heron
15. <i>Ardeola grayii</i>	Indian pond heron
16. <i>Aegithina tiphia</i>	Common iora
17. <i>Ceryle rudis</i>	Pied kingfisher
18. <i>Alcedo atthis</i>	Small blue kingfisher
19. <i>Halcyon smyrnensis</i>	White throated kingfisher
20. <i>Haliastur Indus</i>	Brahminy kite
21. <i>Milvus migrans</i>	Black kite
22. <i>Haliaeetus leucogaster</i>	White bellied sea eagle
23. <i>Eudynamys scolopacea</i>	Asian koel
24. <i>Vanellus indicus</i>	Red-wattled lapwing
25. <i>Acridotheres tristis</i>	Common myna
26. <i>Oriolus oriolus</i>	Eurasian golden oriole
27. <i>Otus bakkamoena</i>	Collared scops owl
28. <i>Athene brahma</i>	Spotted owlet
29. <i>Psittaculla cyanocephala</i>	Blossom headed parakeet
30. <i>Psittaculla krameri</i>	Rose ringed parakee
31. <i>Copsychus saularis</i>	Oriental magpie robin
32. <i>Accipiter badius</i>	Shikra
33. <i>Nectarinia lotenia</i>	Loten's sunbird
34. <i>Nectarinia zeylonica</i>	Purple rumped sunbird
35. <i>Artamus fuscus</i>	Ashy swallow shrike
36. <i>Apus affinis</i>	House swift
37. <i>Cypsiurus balasiensis</i>	Asian palm swift
38. <i>Dendrocitta vagabunda</i>	Indian treepie
39. <i>Amaurornis phoenicurus</i>	White breasted waterhen
40. <i>Dinopium benghalense</i>	Lesser flameback woodpecker
41. <i>Clamator coromandus</i>	Chestnut winged cuckoo
42. <i>Zoothera citrina</i>	Orange headed thrush
43. <i>Ardea alba</i>	Great egret
44. <i>Egretta garzetta</i>	Little egret
45. <i>Bubulcus ibis</i>	Cattle egret
46. <i>Mesophoyx intermedia</i>	Intermediate egret
47. <i>Phalacrocorax niger</i>	Little cormorant
48. <i>Muscicapa dauurica</i>	Asian brown flycatcher
49. <i>Terpsiphone paradisi</i>	Asian paradise flycatcher
50. <i>Dendronanthus indicus</i>	Forest wagtail
51. <i>Motacilla flava</i>	Yellow wagtail
52. <i>Pericrocotus cinnamomeus</i>	Small minivet
53. <i>Tyto alba</i>	Barn owl
54. <i>Pitta brachyura</i>	Indian pitta
55. <i>Ptyonoprogne concolor</i>	Dusky crag martin
56. <i>Centropus sinensis</i>	Greater coucal
57. <i>Otus bakkamoena</i>	Collared scops-owl
58. <i>Upupa epops</i>	Common hoopoe
59. <i>Orthotomus sutorius</i>	Common tailorbird
60. <i>Prinia socialis</i>	Ashy prinia