

National Zoo Keeper's Training on Captive Management of Reptiles



**Indira Gandhi Zoological Park,
Vishakhapatnam**

**In collaboration with
Central Zoo Authority, New Delhi**

15-03-2021 to 17-03-2021

PATRTICIPANTS FOR THE TRAINING PROGRAM

SI No	Name of the ZOO	Name of the State	Participant Name
1.	Sri Sayjibaug Zoo	Vadodara, Gujarat	Shaik Vajid
2.	MC Zoological Park	Chhatbir, Punjab	1. Jaspal Singh 2. Vishal Singh
3.	Machia Biological Park	Jodhpur, Rajasthan	Raju Singh
4.	Padmaja Naidu Himalayan Zoological Park	Darjeeling, Himachal Pradesh	1. Binod Subba 2. Anil Rai
5.	Kamala Nehru PraniSangrahalay	Indore, Madhya Pradesh	1. Gabbar Nath 2. Ankit Raikwar
6.	Van Vihar National Park – Zoo	Bhopal, MP	Roop Kumar Mehar
7.	Rasikbeel Mini Zoo	West Bengal	1. Dipankar Sarkar 2. Dabir Hossain
8.	Greens Zoological Rescue & Rehabilitation Center	Jam Nagar, Gujarat	1. Rakesh Karjee 2. Shiv Kumar Gurung
9.	Dr. Shyamaprasad Mukherjee Zoological Garden	Surat, Gujarat	Manohar A. Desale
10.	North Bengal Wild Animals Park	Salugara, West Bengal	Krishna Adhikary Bibek Roy
11.	Veermata Jijabai Bhosale Udayan & Zoo	Dr BR Ambedkar Road, Mumbai, Maharashtra	Siddharth Babu Kadam Mahesh Kashte
12.	Bhagawan Birsa Biological Park	Ranchi, Jarkhand	Sanjeev Kumar Mahto Vivekanand Kumar
13.	Arignar Anna Zoological Park	Vandalur, Chennai, TN	Thiru G. Palani R. Venkatesam
14.	National Zoological Park	Mathura Road, New Delhi	Vinod Nath Ghure Lal
15.	Sri Venkateswara Zoological Park	Tirupathi, Andhra Pradesh	G. Bhaskar Naidu C. Pachheppa
16.	G.B. Pant High Altitude Zoo	Nainital, Uttarakhand	Kamal Singh Bisht Devendra Kumar
17.	Bannerghatta Biological Park	Bangalore, Karnataka	Shivananjappa B.T
18.	People For Animals	Wardha,	Rohit Rajesh Kangale

		Maharashtra	
			Rushikesh Vinod Godse
19.	Maharaja Martand Singh Judeo White Tiger Safari and Zoo	Mukundpur Satna (M.P.)	Satendra Pratap Singh
			Kaleem Khan
20.	Himalayan Zoological Park	Gangtok, Sikkim	Nim Tempa Sherpa
			Ongdi Bhutia
21.	Zoological Garden,	Alipore, Kolkata, West Bengal	Prabir Dey
			Somnath Gulimajhi
22.	Surulia Mini Zoo	Purulia, West Bengal	Sri Yudhisthir Rajwar
			Ganesh Rajwar
23.	Biological Park	Itanagara, Arunachal Pradesh	Tagiam Mosu
			Ms Anita Flago
24.	Assam State Zoo cum Botanical Garden	Guwahati, Assam	Rajani Kt Deka
			Mochindra Bhumiz
25.	Gadag Zoo	Karnataka	Suban Hosamani
			Praveen Bidari
26.	Gar Chumuk Deer Park	Howrah, West Bengal	Subrata Bag
			Tapan Das
27.	Gorewada International Zoological Park,	Fetri, Nagpur, Maharashtra	Shubham Chapekar
			Dinu Radheshyam Bhaware
28.	Rajiv Gandhi Zoological Park	Pune, Maharashtra	Sandip Shankar Raykar
29.	Bondla Zoo,	Ponda, Goa	Ram Vithu Gaonkar
			Siddhesh Ramnath Surlikar
30.	Nehru Zoological Park	Hyderabad, Telangana	A. Prabhakar
			K. Mahesh
31.	Indira Gandhi Park Zoo	Rourkela, Odisha	Hema Mishra
32.	Minni Zoo Bir Talab	Bathinda, Punjab	Rupinder Singh
			Rajpal Sharma
33.	Gandhi Zoological Park	Gwalior, MP	Anurag Singh
			Adarsh Singh
34.	Nagaland Zoological Park	Nagaland	Onenjungshi
			Disurai Kaurinta
35.	Patiala Zoo	Patiala, Punjab	Ravinder Kumar
			Jaipal

36.	East & West Garo Hills	Tura, Meghalaya	Dr Sengbat Saka Momin
37.	Varanasi Van Prabhag	Uttara Pradesh	Amit Kumar Dubey
			Ramdhan Singh
38.	KananPendari Zoological Garden	Bilaspur, Chhattisgarh	Mukesh Kumar Yadav
			Jitendra Yadav
39.	Kurumbapatty Zoological Park	Salem,Tamil Nadu	S.Sadhana
40.	Sambalpur WL Range	Odisha	Sushantha Kumar
			Rajkishore Behera
41.	Indira Gandhi Zoological Park, Visakhapatnam	Visakhapatnam, Andhra Pradesh	Y Apparao G. Chinnarao Y. Rambabu T. Nageswara Rao B. Appala Reddy M.K. Rama Krishna K. Rama Rao Ch. Bangaru Reddy T. Narsinga Rao A. Pydi Raju M. Naresh Y. Appala Raju S. Dileep S. Appala Reddy U. Siva Kesava Rao K.M.S.S.S. Prasad M. S. Rama Krishna T.Lakshman Kumar
		Total Number of Participants	89
		Online Participants	65
		Offline Participants	24

Participants Apart from keepers

S.No	Participant Name	Contact Number
1.	P. RAVI TEJA	9502096752
2.	KMVVR VAMSI	8886318369
3.	BV CHETAN	9441756584
4.	JAYASREE HATANGADI	9441225338
5.	SUNITHA KONA	9701023597
6.	SARFAZ SINGH	9867248254
7.	R. NARENJITHU	9489807243
8.	S AJAY BABU	7893602817
9.	K NITHIN	9032392539

Day 1 (15-03-2021)

The National Zoo Keeper's Training on Captive Management of Reptiles started on 15th March, 2021 with the major objective of imparting training to the zoo keepers of Indian zoos with a special focus on the animal keepers' working in the reptile section of the various Indian zoos. It aimed to emphasise the importance of Zoo keepers in the captive management of reptiles, as the Zoo keepers possess first-hand knowledge about animals, their health condition, behaviour, etc. and they are directly involved in feeding and handling the animals daily, and also, they are directly involved in the protection and safety of animals and visitors.



Pic. 1. Inaugural session

Pic. 2. Unveiling of IGZP 2019-2020 Annual Report by distinguished guests

The three days of training started with the inaugural session chaired by Sh. N.Prateep Kumar, IFS, PCCF (HoFF) and PCCF (WL) & CWLW, Andhra Pradesh, in the august presence of Sh. Rahul Pandey, IFS, CCF (Wildlife), Sh. P. Ram Mohan Rao, IFS, Conservator of Forests, Visakhapatnam, Dr.NandaniSalaria, IFS, Curator, IGZP, Sh. Anant Shankar, IFS, DFO, Visakhapatnam and Dr. Gowri Mallapur, Veterinary Consultant, CZA, New Delhi. The special guests present through online mode were Dr. S. P. Yadav, IFS, Member Secretary, CZA, New Delhi & MS, NTCA (Project Tiger) & Dr. Sonali Ghosh, IFS, DIG-Forests, CZA, New Delhi. Other officers present during the inaugural session were Sh. Lakshman, DFO, Social Forestry, Visakhapatnam, Sh. SuryaNarayana, DFO, Flying Squad Sh. Janaki Rao, DFO, Social Forest, Vizianagaram, Sh. Dharmarakshith, Sub DFO, Visakhapatnam and staff of IGZP, Visakhapatnam.

After delivering of the speeches by the esteemed dignitaries at the inaugural session, there was official release of the Annual Report for the year 2019-20 of IGZP, Visakhapatnam which contains details of the zoo and about the various activities carried out in the year 2019-20, inventory of animals, visitor amenities, etc. Later, the revised map of Vizag Zoo was released by the distinguished guests of the

program which is a useful tool for the visitors to get an overall picture of zoo, location of various enclosures, etc.

Indira Gandhi Zoological Park, Visakhapatnam houses 11 indigenous species and 2 exotic species of reptiles in the most naturalistic enclosures in the country. To give a detailed version of reptiles in IGZP, a video of reptiles done in a very interesting manner was released by the PCCF (HoFF), AP.

Sh. N. Prateep Kumar, IFS, (HoFF) and PCCF (WL) & CWLW, AP addressed the trainers and other audience emphasising the importance of reptiles and their role in the ecosystem. All the Reptile animal keepers from Indian Zoos should utilise this opportunity and learn all practical skills from this program, he said. It is the first of its kind that a training on the reptile captive management & conservation is being organised in the country, he added. He said that reptiles are always around us and there is need to know about them. Animal keepers play an important role in zoos, he added. These types of trainings would be useful for animal keepers to further



**Sh. N. Prateep Kumar, IFS,
PCCF(HoFF) and PCCF (WL) & CWLW, AP**

enhancing their skills. He said it would be nice if similar programs could be conducted offline, but due to this pandemic situation, it is being conducted in hybrid mode, he said. That recording these sessions would be very useful for everyone for reference later, he said.

It was important for everyone involved in the training, both online and offline, to know all about

reptiles, said Chief Conservator of Forests, Sh. Rahul Pandey, IFS, CCF (Wildlife), AP. We

have very good collection of reptiles in IGZP, Visakhapatnam, he added. We need so many skills to maintain a reptile, he said.

All over from India, about 40 zoos' and 80 animal keepers' participation was not a small task & it is being successfully hosted by Indira Gandhi Zoological Park,



**Sh. P. Ram Mohan Rao, IFS, CF
Visakhapatnam**



**Sh. Rahul Pandey, IFS,
CCF (Wildlife), AP**

Visakhapatnam in collaboration with and support of CZA, New Delhi, said Sh.P.Ram Mohan Rao, IFS, Conservator of Forests, Visakhapatnam. All the participants should utilise this opportunity and make sure to know all reptile related practices and should be ready to train someone else, he added. He expressed his happiness over the conducting of first of its kind program at IGZP, Visakhapatnam.

Dr. S. P. Yadav, IFS, Member Secretary, CZA, New Delhi addressed the gathering through online mode on the importance of reptiles with an emphasis on snakes and challenges being faced by the various agencies in conserving them. Reptiles which include Crocodiles, Tortoise, Gharials, and Snakes are highly sensitive, thus, their handling and management needs the best of the skills.



Dr. Sonali Ghosh, IFS, DIG-Forests, CZA, New Delhi said that this program is very informative for people who are fascinated about reptiles. She wished good luck to all the participants and thanked each and everyone who has been involved in initiating this wonderful training session.





SOFT SHELL TURTLE

In the forenoon session of first day of **National Zoo Keepers Training On Captive Management Of Reptiles**, Dr. Devender started the technical session by giving a brief about the Central Zoo Authority, its role and various legislations while managing a zoo.

Later, Dr. Gowri Mallapur explained to the participants about basic biology of two types: hard shell & soft

shell turtles. Soft shell turtle is called as Indian flap shell turtle (*Nilssoniaganetica*), and later she continued the same topic in detail and answered some doubts from online & offline participants.

In the afternoon session, Dr. Gowri Mallapur have addressed the participants about the captive management & husbandry of Turtles & Tortoises, Species Identification followed by practical session on Capture, Handling, Restraint & Marking, Enclosure Enrichment and Behaviour Enrichment. She addressed some interesting facts about tortoises & turtles.



Dr. Gowri Mallapur practically explaining about Basic biology of Turtles & Tortoises

DAY – 2 (16-03-2021)



Dr. Gowri practically explaining about Rat Snake at the Serpentarium of IGZP, VISKHAPATNAM

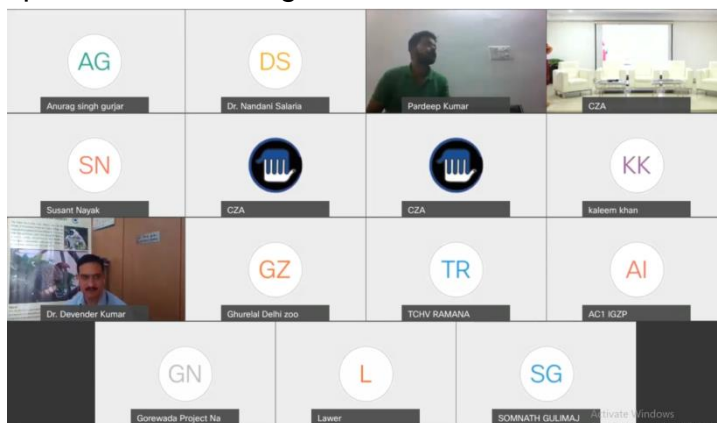
The second day session was all about the fascinating snakes. She explained about the snakes; their basic morphology, feeding behaviour, breeding, sexing & identification. Snakes are generalised feeders, feeding on a variety of preys. Some snakes are specialist feeders like the King cobras feed mostly on other snakes to keep their population under check.

Approximately 25% of Indian snakes are oviparous, said Dr. Gowri Mallapur. She explained about the treatment of snake bite and also do's & don'ts and took a practical session on the snake rescue methods.

There are over 60 species of venomous snakes in India. Among these, four venomous snakes are very common and distributed throughout the country. They are Indian cobra, Russell's viper, Common krait, Saw-scaled viper from which the anti-venom is made of. Coming to the rescue methods, the tools that are needed is a hook as shown in the picture, a bag, PVC pipe of different sizes. The sizes should be used according to the species that is being rescued.



Ch. Gnaneswar is explaining the Pipe & Bag technique



Online Participants who attended from different Zoos in India

DAY -3 (17-03-2021)



Dr. Gowri explaining the saltwater crocodile handling & morphology

Dr. Gowri addressed the participants on theme Basic biology of crocodiles, captive management and husbandry of crocodiles in the morning session. She explained about world distribution of crocodiles, mostly tropical (21 Species) and few sub-tropical (2 species) which include Asia-7, Australia-2, Africa-3, South America-5. Crocodiles have special features, they are ectotherms,

foramen of panizza and 4 chambered heart. They communicate through body signals and vibrations.

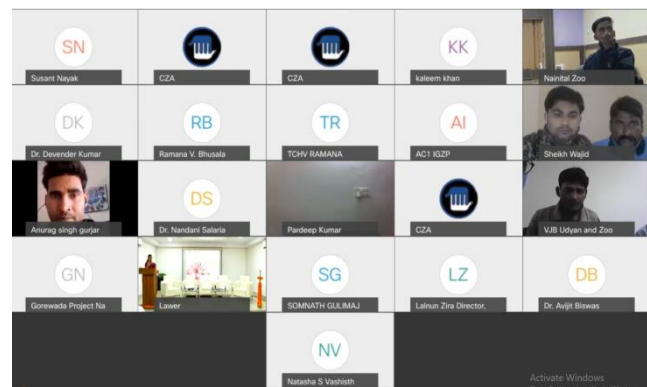


Showing how to take measurements of the juv. saltwater crocodile

During the afternoon session, Dr. Gowri has addressed participants with practical session on theme of capture handling, restraint, marking and identification of sexes. Crocodiles can be identified by their natural colour, pattern, scars, permanent or temporary tags

attached externally. Later she continued with morphological modification followed by colour marking with paint or other comparable materials and telemetric devices. At the end of each session, Dr. Gowri clarified all the doubts of online & offline participants.

Online Participants who attended from different Zoos in India →



Valedictory Session (17/03/2021)

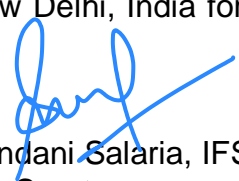


During the Valedictory session, Dr. Nandani Salaria, IFS, Curator, IGZP gave her conclusion remarks, thanking the senior officials of Andhra Pradesh Forest department; senior officials from CZA; Dr. Gowri Mallapur, the Directors of all the participant zoos and the animal keepers who joined as participants; the IGZP team involved in organising this training and the media for giving much publicity to the event. Dr. Sonali Ghosh, IFS, DIG, CZA, New Delhi joined online and congratulated the team of IGZP for successful completion of the three days training program. Participants from online & offline expressed their valuable feedback about the training program and about what they learned. Finally, certificates & souvenir kits were distributed to the participants by Dr. Nandani Salaria, IFS, Curator, IGZP.

Overall, conducting this training for the team of IGZP, Visakhapatnam was a great opportunity and a challenge for the training being conducted in a hybrid mode. This was first of its kind in mainly 2 ways: training conducted in hybrid mode and dedicated training for the Captive management of Reptiles for the



zoo keepers. This definitely opened doors to conducting more of such specialised trainings. As a tangible outcome of this training, IGZP, Visakhapatnam has produced the videos of theoretical and practical sessions by Dr. Gowri on Captive Management of Reptiles; which will be a resource for all the zoos in India and abroad. We are thankful to Central Zoo Authority, new Delhi, India for giving us this opportunity.


Dr. Nandani Salaria, IFS
Curator,

Indira Gandhi Zoological Park, Visakhapatnam

National Zoo Keepers' Training on Captive Management of Reptiles

Training Schedule

Schedule	Theme/Topic	Resource Person
Day 1: 15/03/2021		
10:00-10:30am	Inaugural session	CZAHQ & IGZP
10:30-11:15am	About Central Zoo Authority and its role; laws and policies governing captive and rescued wildlife	Dr. Devender, EMO, CZA
11:15-11:30am	Tea Break	
11:30am-12:15pm	Basic Biology of Turtles and Tortoises	Dr. Gowri Mallapur, Veterinary Consultant, CZA
12:15pm-01:00pm	Captive Maintenance and Husbandry of Turtles and Tortoises	
01:00pm-02:00pm	Lunch Break	
2:00pm-3:30pm	Species Identification	Dr. Gowri Mallapur, Veterinary Consultant, CZA
3:30pm-3:45pm	Tea break	
3:45pm-5:00pm	Practical session on Capture, Handling, Restraint and Marking; Enclosure enrichment & Behaviour enrichment	Dr. Gowri Mallapur, Veterinary Consultant, CZA

Schedule	Theme/Topic	Resource Person
Day 2: 16/03/2021		
10:00am-10:30am	Basic Biology of Snakes	Dr. Gowri Mallapur, Veterinary Consultant, CZA
10:30-11:15am	Captive Management and Husbandry of Snakes	
11:15-11:30am	Tea Break	
11:30am-12:15pm	Identification of Species	Dr. Gowri Mallapur, Veterinary Consultant, CZA
12:15pm-01:00pm	Snake bite prevention and management	
01:00pm-02:00pm	Lunch Break	
2:00pm-3:30pm	Practical session on Capture, Handling, Restraint and Marking; Identification of Sexes	Dr. Gowri Mallapur, Veterinary Consultant, CZA
3:30pm-3:45pm	Tea break	
3:45pm-5:00pm	Collection of Eggs, Processing, Candling and Incubation; Enclosure Enrichment & Behavior enrichment	Dr. Gowri Mallapur, Veterinary Consultant, CZA

Schedule	Theme/Topic	Resource Person
Day 3: 17/03/2021		
10:00am-10:30am	Zoonosis and Public Health considerations	Dr. Gowri Mallapur, Veterinary Consultant, CZA
10:30-11:15am	Basic Biology of Crocodiles; Captive Management and Husbandry of Crocodiles	
11:15-11:30am	Tea Break	
11:30am-12:15pm	Equipment used in species care and management; Techniques- Sample collection assistance to a veterinarian, Enrichment	Dr. Gowri Mallapur, Veterinary Consultant, CZA
12:15pm-01:00pm	Practical session on Capture, Handling, Restraint and Marking; Identification of Sexes	
01:00pm-02:00pm	Lunch Break	
2:00pm-3:30pm	Enclosure enrichment; Visit to Zoo	Dr. Gowri Mallapur, Veterinary Consultant, CZA
3:30pm-3:45pm	Tea break	
3:45pm-5:00pm	Valedictory session; Experiences sharing by participants	CZA (HQ) & Curator, IGZP