

**Research Activity Report**  
**Supported by “Leading Graduate Program in Primatology and Wildlife Science”**  
 (Please be sure to submit this report after the trip that supported by PWS.)

	2017. 07, 18
<b>Affiliation/Position</b>	Wildlife Research Center/D2
<b>Name</b>	Nachiketha Sharma

<b>1. Country/location of visit</b>
Japan Monkey Center, Inuyama, Japan
<b>2. Research project</b>
Zoo Museum Course
<b>3. Date (departing from/returning to Japan)</b>
2017. 07. 08 – 2017. 07. 10 (3days)
<b>4. Main host researcher and affiliation</b>
Dr. Gen’ichi Idani, Professor and Director, WRC/Japan Monkey Center Masato Ohbuchi, Assistant Professor, Japan Monkey Center
<b>5. Progress and results of your research/activity</b> (You can attach extra pages if needed)
Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.
<p>In earlier days, the zoos were mainly considered to exhibit different animals for the rich/elite class people. As time progressed, the general public got the access as well. Zoos were operated and animals were displayed based on simple and effortless ideas. Animals were captured, brought and kept in small enclosures with no set protocols to monitor their welfare and management. This issue of no proper conceptualization behind opening the zoos gave rise to the long-lasting debate on the pros and cons of keeping animals in zoos. This debate is still on between researchers, local people, activists and other concerned authorities. Well, the answer is left to one’s perception. For a researcher, the zoos play a vital role in ex-situ conservation and captive-breeding of endangered animals whose survival in the wild is threatened otherwise. For an activist, the zoo might be a place where basic freedom and rights of captured animals are restricted. For instance, an author of a famous book “Zoo story: Life in the Garden of Captives”, Thomas French, wrote:</p> <p><i>“Despite all their flaws, zoos wake us up. They invite us to step outside our most basic assumptions. Offered for our contemplation, the animals remind us of nature’s impossibly varied schemes for survival, all the strategies that species rely upon for courtship and mating and protecting the young and establishing dominance and hunting for something to eat and avoiding being eaten. On a good day, zoos shake people into recognizing the manifold possibilities of existence, what it’s like to walk across the Earth, or swim in its oceans or fly above its forests—even though most animals on display will never have the chance to do any of those things again, at least not in the wild”.</i></p> <p>While for common people who cannot afford to travel to different places to learn and explore about the animals they love, the zoos may act as one essential source of observing different animals. To some extent, all these perceptions are right until the mental, physical and physiological health status of the displayed animals is regularly monitored to ensure their betterment. Zoos, however, provide a hope for the captive breeding of endangered animals. I will be discussing about this, in detail, during the course of this report.</p> <p>I attended the three-days Zoo/Museum course, hosted by the Japan Monkey Center (JMC). I always wanted to learn about the significance of the zoo/museum and this course provided me an excellent opportunity as there were very essential topics covered during a short period. The hands on training on handling and managing animals, providing a better enrichment and preserving specimens for anatomical research and also for lectures on science-communication gave me a good insight. The course started with Professor Idani Sensei’s detailed introduction to the history of JMC and</p>

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Japanese Primatology. During his lecture, I found that the success story behind the blooming research on Japanese Primatology is very fascinating and is based on the serendipity when the researchers observing horses discovered that some monkeys were washing/processing potatoes before eating. Since then, primatology in Japan has come a long way. Dr Itani and team were one of the pioneers in establishing JMC. In 1985, Dr. Nishida successfully helped to establish “Mahale Mountain National Park” at Tanzania. After all these interesting pieces of information that I learnt during the lecture, the course proceeded with a tour around the JMC, which holds the world record for having 60 different species of primates from all around the globe.

**Role of zoos in education:**

As I discussed earlier, a common man would come to the zoo to see the animal of his/her interest to understand more about them or some for a recreational purpose. That’s where zoos play a vital role in educating and the common people to make a greater impact on the process of animal conservation. Educating visitors involve two different processes. First, is to understand the perceptions of visitors towards the displayed animals in the enclosures. To attain this, we conducted a small survey in JMC. The survey helped us to understand the varied trends of thought-processes in visitors. Such as, most of them were interested to know about the societies of animals, a few of them were interested about the smell/odor of animals and a few about the morphology of animals. Even though, these information may sound trivial but can be taken forward to achieve the second goal of educating people more about animal’s life history and behavior with the help of science communication. For instance, the smell/odor is also a kind of communication which animals used to find mates or to recognize their conspecifics. Similarly, the variation in morphology will demonstrate the physiological, reproductive, social state and animals way of living. For example, female Japanese macaques have pink faces to display their physiological state; gibbons have long legs to support them for the canopy life-style. Such small information could provide a huge impact on educating visitors about the life-history traits and behaviours of displayed animals.



*A lecture on how to conduct visitor’s survey*



*Visitors learning about Gorilla’s behavior*

**Role of zoos in research and conservation:**

The best example of the role of zoos in research and conservation is the story of the bird “black robin” from New Zealand. The species almost got extinct, if local scientists and zoos didn’t collaborate. In late 1980’s, only five individuals were left in the wild with only a single breeding female. But now, there are 250 of them. There are several instances (such as, in conserving Hawaiian crow) where zoos played a major role in the conservation of a species or almost extinct species. This section of the course was very enlightening and was very well-explained by Dr. Takashi Hayakawa, a curator and Assistant Professor, JMC. We learnt about the research collaboration in JMC, which has made considerable contribution to the research on some of the endangered species of primates.

**Animal welfare and enrichment:**

Though I learnt that zoos play a major role in ex-situ conservation and breeding, the argument of animal welfare should also come into the picture. Previously discussed roles of the zoo and captivity may hold good to some extent, but not if they do not consider the basic rights and welfare

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of the exhibited animals. Since, the animals in zoos are kept in the relatively small enclosures as compared to their actual natural range, the zoo authorities should develop an artificial habitat which mimics with animals’ natural habitats. However, this may not be possible and feasible in all cases. For example, if an animal such as an elephant is kept in a zoo, it’s a Herculean task and nearly impossible to develop an artificial habitat, which is suitable for them and mimics with their natural habitats supporting their bigger body size and greater home range. In such case, keeping in account the resource limitation, we can provide following enrichments: create an artificial salt-lick, mud bath areas as elephants love mudbathing, adding more enrichments to keep elephants occupied, preventing them for exhibiting the stereotypical behaviours and keeping them in groups as elephants are highly social animals (specially females). However, this may reduce the stress animals undergo in captivity. The concept of enrichment and animal welfare was introduced by Mr. Vatanoki Kohshiro, a curator, JMC. Later, he taught us in detail about the different kinds of enrichments. They are:

1. *Physical*: Making enclosures similar to the natural habitat, such as planting trees etc.
2. *Food based*: Provide foods which mimic their natural diet
3. *Sensory*: Hide food, make animals to find them through smell
4. *Social*: Allowing animals to interact with their conspecifics
5. *Cognitive*: Presenting novel objects to animals

We also got a hands-on experience on how to perform physical enrichment by constructing puzzles for chimpanzees and gorillas. We also learnt on how to manage specimens in museum from Mr Tomo Takano, which involved preserving, naming, identifying specimens for the academic as well educational purposes. We learnt about usage of anesthesia and its role in the treatment of zoo animals by the veterinarian of JMC. Overall, this course gave me a holistic idea about how to manage zoos and museum.

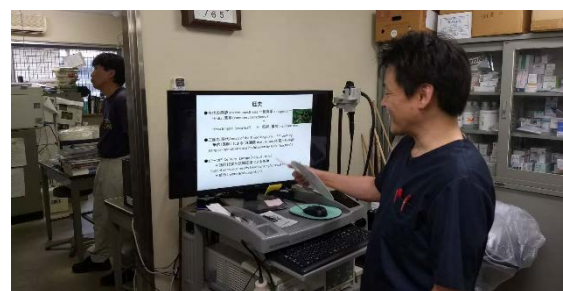
Now, I understood running a zoo is not as easy as it appears to be.



*Examining the preserved specimens of Japanese Macaque*



*Making food puzzles for chimpanzees*



*Veterinary doctor explaining about anesthesia*

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**6. Others**

Sincere gratitude to Cr. Masato Ohbuchi for helping and guiding throughout the course. I thank Idani sensei and PWS for providing me an opportunity to be a part of this course. I thank all the staffs of JMC for the support and guidance.