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.)

		2024. 03. 18
Affiliation/Position	Wildlife Research Center/D1	
Name	Kana Arai	

1. Country/location of visit

Kumamoto Sanctuary

2. Research project

Animal Welfare Course

3. Date (departing from/returning to Japan)

2024. 03. 06 - 2024. 03. 09 (4 days)

4. Main host researcher and affiliation

Dr. Satoshi Hirata, Professor at Wildlife Research Center (WRC), Kyoto University

5. Progress and results of your research/activity (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.

For this research activity, I attended the Animal Welfare Course where we observed bonobos and chimpanzees at Kumamoto Sanctuary. Our daily schedule is as follows:

3/6: Travel to Kumamoto Sanctuary and tour of the facility

- 3/7: Chimpanzee feeding, making and installing the hammocks, and eye tracking and cooperation experiments on chimpanzees
- 3/8: Chimpanzee feeding, helping out the crow house, eye tracking experiments on bonobos

3/9: Cleaning up the accommodation and travel back to Kyoto

3/6: Once we arrived in Kumamoto, Hirata-sensei gave us a tour of Kumamoto Sanctuary. We explored various areas, including the enclosures of chimpanzees and bonobos, the operating room, and the mini museum. During the tour of the chimpanzee enclosure, we got to observe their feeding, and I found it fascinating how each individual displayed different personalities, showing their preferences for certain fruits and vegetables they were given.



Feeding of chimpanzee (drinking grape juice).

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3/7: On the second day, we started our day by feeding the chimpanzees. We cut up oranges and other vegetables such as spinach. We then entered the chimpanzee enclosure and strategically placed the oranges and spinach around the enclosure, hidden from view as much as possible, so they can walk around and search for them. This type of enrichment is implemented to encourage each individual to explore the enclosure, and to ensure that weaker individuals have an opportunity to find as well. In my observation, most of the individuals went straight for the oranges, followed by the vegetables like radish and spinach. Some individuals even kept the orange peel, as they enjoyed chewing on the pith after consuming all their food.

After feeding the chimpanzees, we then made a hammock for their enclosure. Using two fire department hoses for sturdiness, we wove them together to create a hammock. Creating the hammock was probably the most challenging task throughout the entire course. It was difficult to weave the hose, as the hoses were thick and rigid. We also had to ensure that the hammock was tightly woven, as any looseness could result in it being unable to support the weight of the chimpanzee. I think most of us had to redo our hammocks halfway through the process due to complicated mishaps (hahaha). Ultimately, we all successfully constructed three hammocks, which we then installed in the enclosure later that afternoon. The chimpanzees



Successfully acquiring an orange!

seemed to like their new hammocks, as they immediately explored and sat inside them.



1. Process of making the hammock.



3. Installed hammock.



2. Installing the hammock from above the enclosure.

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4. Checking the hammock.

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We then observed the eye tracking experiment and cooperation behaviour experiment involving chimpanzees. **Eye tracking experiment:** They gave them juice as a reward for participation. The majority of individuals in this group were cooperative in doing the experiment. During eye tracking, I found that chimpanzees do not really look at the eyes of another individual.



Point of view from the front of the experiment and behind.

Cooperation behaviour experiment: A reward (banana) was placed on a test stand with a rope that could be pulled to obtain the reward. Although there were three to four individuals in the experiment, only two individuals pulled on the rope, while the others simply took the reward without participating. It was intriguing to observe that when no reward was placed in front of the cooperative individuals, the uncooperative individuals still was not willing to pull on the rope despite the presence of a reward in front of them.

3/8: Similar to the previous day, we began our day by feeding the chimpanzees. We then assisted Itahara-san with setting up his crow house, where we cut up bamboo and secured it within the crow house structure to provide perches for the crows.



The setup of the cooperation behaviour experiment.



Setting up the bamboo perches.



Exterior of the crow house.

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We then observed the eye tracking experiment, this time conducted on bonobos. The set up was identical to that used for chimpanzees. I noticed that bonobos appeared to be more relaxed and compliant during the experiment in comparison to chimpanzees. Throughout the experiment, they also exhibited a greater tendency to direct their gaze towards the eyes of another individual compared to chimpanzees. However, despite the initial impression of bonobos being calmer than chimpanzees, throughout the course, I found it challenging to predict their next movements, whereas chimpanzees were more predictable in their movements.



Eye tracking experiment involving bonobos.

Overall, I had a great experience at Kumamoto Sanctuary. Seeing bonobos for the first time in person, touring the sanctuary facilities, observing the experiments conducted by our colleagues, and witnessing the close relationship between Hirata-sensei and the bonobos and chimpanzees at Kumamoto Sanctuary left a lasting impression on me.

6. Others

Acknowledgements: I would like to express my sincere gratitude to Prof. Satoshi Hirata for organizing this course, as well as to James, Spoon, Itahara, and Ena for their kind guidance at Kumamoto Sanctuary.

