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.)

	2015. 11, 29
Affiliation/Position	Primate Research Institute/M1
Name	Gao Jie

1. Country/location of visit

Kumamoto Sanctuary

2. Research project

Animal welfare course, enrichment for bonobos and chimpanzees

3. Date (departing from/returning to Japan)

2015. 11. 24 – 2015. 11. 27 (4 days)

4. Main host researcher and affiliation

Dr. Hirata, Professor, Dr. Morimura, Associate Professor, Wildlife Research Center, 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.

(Tower in chimpanzee outdoor enclosure)

During this animal welfare course, we observed chimpanzees and bonobos in Kumamoto Sanctuary, made enrichment devices for them, and held a birthday party for bonobo Suzuken.

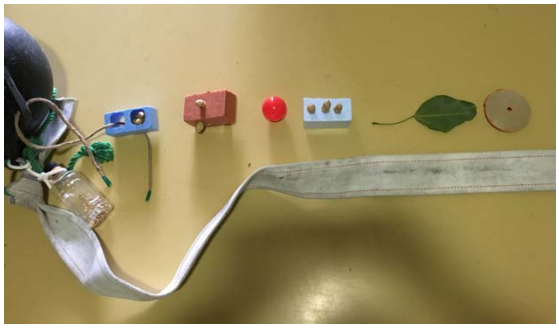
Kumamoto Sanctuary has 57 chimpanzees, 6 bonobos, and many humans (plus 2 cats).

First we paid a visit to chimpanzee and bonobo living places, and then we observed box enrichment. Care takers put many attractive things in boxes, including milk, tubes filled with nuts, and bottles filled with fruit blocks. They put the boxes in accessible places for chimpanzees and bonobos. The animals came to the boxes and explored them, then they enjoyed milk, nuts and fruits after making their way to open the containers. I think this is a very good method for food based enrichment, and it is quite easy to operate.

Our major mission was to invent enrichment devices for chimpanzees and bonobos, and to make three identical devices for each species. Sasaki-san and I were in the same team.

Our idea was to have devices for them to play, and we named our devices "Toy Ball". We chose "toys" for bonobos and chimpanzees and put them in a ball that was made a hole on. The toys we chose were ropes, plastic blocks with peanuts inserting in, small plastic balls, leaves, the circle materials that had been the hole part in the ball, and bottles with soybeans or sun flower seeds inside. Also, we thought the ball could be hung in their enclosure, so they could play it as a swing.

(One Toy Ball)



(Contents of one ball)

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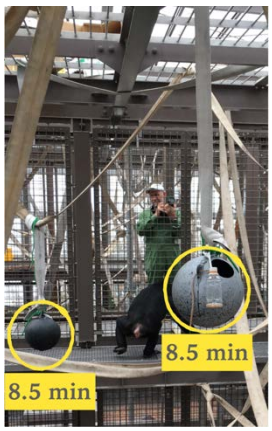
(Making holes. Photo credit: Morimura)

(Preparing the little toys. Photo credit: Yamanashi)

(Adding strings. Photo credit: Morimura)

(Finished! Photo credit: Yamanashi)

We put the six balls in bonobo and chimpanzee enclosures, three balls each, and then conducted observation for 1 hour, and recorded the time duration of animals playing with the devices.



(Three balls in bonobo enclosure. Photo credit: Morimura)

(Three balls in chimpanzee enclosure)

In one hour, the total engaging time of the three balls in bonobos is 29.5 minutes, and that in chimpanzees is 43.5 minutes. Also, we found that chimpanzees spent more time in the items from the balls that fall to places far away from the balls in the enclosure. Chimpanzees enjoyed longer time than bonobos. They engaged more in manipulating the items in toy balls.
We also checked change of engaging time. The engaging time for bonobos and chimpanzees decreased along the time. Probably this was because of he shortage of the resources they can eat. However, the engaging time decreased slower in chimpanzees than bonobos. One possible explanation is that chimpanzees are also interested in the non-food items, while the three bonobos seemed to focus on food more.

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Actually we had hoped them to enjoy "Toy Ball" as "playground equipment". For example, they could use the ball as a swing, or make a necklace using the rope in the ball. However, they seemed to use it as "a hung feeding box." They couldn't enjoy them for a long time because the items in the toy balls were taken out soon. Nevertheless, chimpanzees seemed to be able to manipulate the items better and to be more joyful about the non-food objects than bonobos.


(Chimpanzee holding a plastic block)

We had some reflections about making enrichment devices. When we try to make a toy ball that we expect them to enjoy for more time, it would be better to have more complex structure so that they could not take out all all the items immediately. Also, actually younger chimpanzees or bonobos would be more interested in toys, so we need to make our "toys" more interesting and attractive when the devices are for adult chimpanzees and bonobos.
The most importantly, in order to keep safe, we must choose stuffs for enrichment enrichment devices carefully. This time we were asked to modify our devices before putting them into the enclosures, because the long and soft ropes we initially used could be very dangerous to them.


(Chimpanzee opening a bottle)

We also held a birthday party for bonobo Suzuken. We made a "cake" for her.


(Birthday cake)


(Decorating the enclosure)


(Happy Suzuken. Photo credit: Yamanashi)

In this course, I had a great experience making enrichment devices for bonobos and chimpanzees and evaluating them. I was also very excited to see so many chimpanzees and also bonobos living in good facilities and enjoying various enrichment in Kumamoto Sanctuary. This course helped me understand more about animal welfare in a very vivid and enjoyable way.


(Group photo)

6. Others

Many thanks to Prof. Hirata, Prof. Morimura, Yamanashi-san, and Kano-san for their guidance and help in this course, especially in making enrichment devices for bonobos and chimpanzees.