

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.)

	2019. 10, 25
Affiliation/Position	Wildlife Research Center/D1
Name	James Brooks

1. Country/location of visit	Kumamoto Sanctuary, Kumamoto, Japan
2. Research project	Animal Welfare Course
3. Date (departing from/returning to Japan)	2019.10.21-2019.10.24
4. Main host researcher and affiliation	Dr. Satoshi Hirata, Dr. Naruki Morimura, Wildlife Research Center/Kumamoto Sanctuary
5. Progress and results of your research/activity (You can attach extra pages if needed)	<p>Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.</p> <p>During this visit to Kumamoto Sanctuary, I participated in the animal welfare course. The main goal of the course was designing enrichment for chimpanzees and bonobos that would maximize time spent using the device while minimizing the amounts of calories the animals would receive. Our team designed a device called “tube-in-tube” which consisted of green carton tubes stuffed with peanuts, vegetables, and newspaper, which were then closed on both ends and put tightly into a larger transparent tube, which was closed on one end and finally stuffed with newspaper and vegetables before being partially closed on the other end. With this device the apes had to first remove the newspaper, and then the carton, and then open the carton before receiving the food. The opening was such that they could stick their fingers into the device, but not the whole hand. The devices were then loosely attached to the enclosure. The chimpanzees and bonobos both spent a lot of time using the device, the chimpanzees used it for over half of the hour of observation on average per individual, and one device even still had carton tubes inside at the end of the hour. The bonobos also used quite a bit, but due to slimmer hands found it much easier and extracted all the food much faster than the chimpanzees. Since our device did not depend on visual access to the food, but instead the knowledge the apes at KS have about the typical contents of such green carton tubes, we considered our device “knowledge-based” enrichment. We predict that naïve chimpanzees without experience opening such tubes would be much less motivated to try to extract and open them. We hope to test this at Kyoto City Zoo when we all return to Kyoto, and hope to further develop the idea of “knowledge-based” enrichment. We also had lessons from Morimura-san and Hirata-san about the various types of enrichment, such as sensory and extractive, to help give us ideas in our designs. In the end, we gave short presentations about our devices and gave and received feedback to and from the other team. The experience was very valuable to further think about animal welfare in a captive setting and how to give more stimulation to captive animals, and we hope to continue exploring how our device could be used for chimpanzees and bonobos and what it implies about the effectiveness of knowledge-based enrichment more generally.</p>

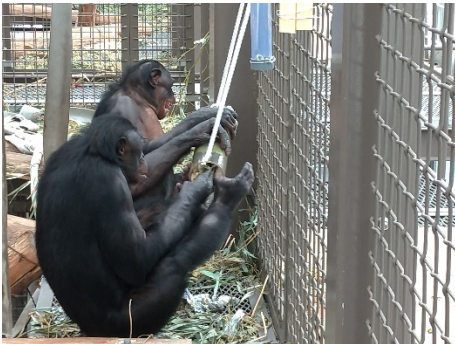
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Assembling the device



Our team with the device



Junior and Ikela the bonobos using the device



Hope the chimp using the device



Close up of one of our devices

**Please have your mentor check your report before submitting it to report@wildlife-science.org.*

6. Others

Thank you to Dr. Hirata and Dr. Morimura for their guidance and insight throughout the course, and to Fukushima-san for her help organizing and planning.