

**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.)

	2019.4.6
<b>Affiliation/Position</b>	PRI/D3
<b>Name</b>	Shintaro Ishizuka

<b>1. Country/location of visit</b>
Kalinzu Central Forest Reserve, Uganda
<b>2. Research project</b>
Comparison of male genetic differentiation between groups in the genus Pan
<b>3. Date (departing from/returning to Japan)</b>
2019.3.6-4.5 (31 days)
<b>4. Main host researcher and affiliation</b>
Dr. Furuichi, Dr. Hashimoto
<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>This research trip in Uganda was aimed to observe wild chimpanzees and collect their non-invasive DNA resources. I had observed wild bonobos in total three field researches, but never observed wild chimpanzees yet. I had looked forward to seeing and knowing differences in social systems between the two <i>Pan</i> primates, which is well known to primatologists. The schedule was as below:</p> <p>2019/3/6 Leaving from Narita International Airport          2019/3/7 Arriving at Entebe          2019/3/8 Arriving at Kalinzu Research Forest Reserve          2019/4/3 Leaving from Kalinzu and arriving at Entebe          2019/4/4 Leaving from Entebe          2019/4/5 Arriving at Narita International Airport</p> <p>Recent studies have shown that extent of male reproductive skew is greater in bonobo groups than in chimpanzee groups. Given that male mate competition seems more severe in chimpanzees than in bonobos, these findings are interesting. These results have been explained by strong maternal effects in bonobos, or higher gregariousness of group members in bonobos. However, I felt that as another explanation for those results, male chimpanzees are so busy that their reproductive success may not be skewed. When one female chimpanzee gets in estrous, most of resident males range with the female. However, if males range with many other males in their parties, they get engaged in various interactions with them. For example, they are supposed to greet higher-ranked males, and attack lower-ranked males, and groom some males to gain their supports. I felt that because all males are engaged in too many social interactions, anyone of them cannot monopolize mating opportunities with the female. Contrary in bonobos, most females gather around the highest -ranked males who tend to be sons of high-ranked females in parties. This is why the highest-ranked males may be able to access estrous females easily, and gain the highly skewed reproductive success.</p> <p>Another thing in which I felt interested was differences in differences in male-male relationships between two study groups. As I described above, male-male relationships seemed complicated in M group. However, in another study group, there were only five adult males and male-male relationships seemed more stable than in M group. Position of alpha male status seemed more stable and the alpha male seemed to monopolize mating opportunities. As many previous studies have clarified, the number of males within groups may be one of the most important factors to regulate mating system in social animals. Also I felt necessity to understand intra-species variation in mating systems from perspectives of ethology, and genetics.</p> <p>Fortunately, I could observe tool-using and hunting, which are famous in repertoire of chimpanzee behaviors. These experiences were so impressive for me, and I would like to make use of them for my further researches.</p>

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**A male chimpanzee**



**An infant chimpanzee**

**6. Others**

This program was supported by PWS Leading Program. I would like to appreciate this program and Dr. Furuichi, and Dr. C. Hashimoto, who supervised me, and Mr. A. Toge, and Mr. S. Shibata, who supported me in various ways.