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.)

	2016. 6. 11
Affiliation/Position	Wildlife Research Center / M1
Name	Mayuko NOMOTO

1. Country/location of visit

Kyoto, Japan

2. Research project

Genome Science Course

3. Date (departing from/returning to Japan)

2016. 5. 30 – 2016. 6. 3 (5 days)

4. Main host researcher and affiliation

Prof. Murayama at Wildlife Research Center, Kyoto University

5. Progress and results of your research/activity (You can attach extra pages if needed)

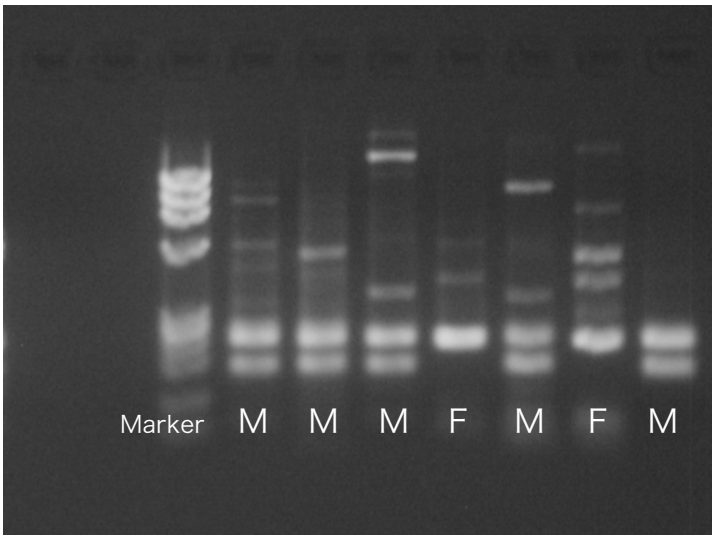
Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.

In this training course, I was assigned to the Deer group same as Yakushima Field Science Course. We conducted the experiments about sex identification and mitochondrial haplotype identification. The aim of Deer group is to understand the way to analyze the DNA which is extracted from fecal samples. This method is non-invasive so that it is useful to investigate endangered species and the species difficult to observe directly.

The schedule was as follows:
5. 30: DNA extraction, PCR amplification
5. 31: Electrophoresis, PCR amplification (2nd time)
6. 1: Electrophoresis (2nd time), Sequencing
6. 2: Sequencing (2nd time)
6. 3: Sequencing analyses

Both experiments failed at first. That was because it takes too much time to prepare the runs. The results show that most individuals we collected their feces are haplotype 1 and social interactions is occurred most between females. There are 4 social interactions between different haplotype individuals, and 3 of them are male-female interactions. This may show that males in this area came from another place to seek female which has another haplotype because of incest avoidance.

Electrophoresis



The Results of Sex Identification (M : male, F : female)

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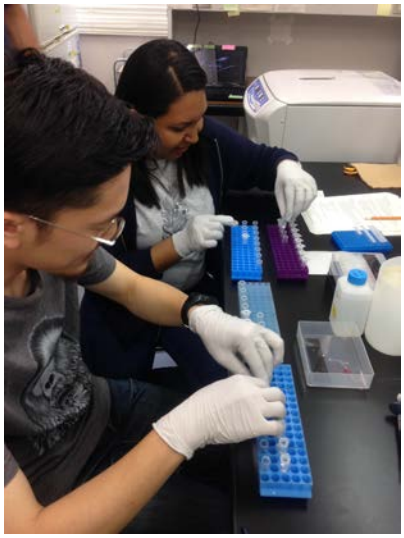

Arranging tubes in a row

Preparation for sequencing

Through this experience, I understood the condition of feces greatly affect the success of the experiment. And I think it is the advantage the Wildlife science has that we can discover something new by combining the results from field and that from laboratory. I have the plan to collect and analyze fecal samples of forest elephants in my research, so this course was very good experience and practice for me. We are working on a poster for The 5th International Seminar on Biodiversity and Evolution.

6. Others

This course was supported by PWS Leading Graduate Program.
I am deeply grateful to Prof. Murayama and all instructors and members who helped me.