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.)

	2017.5.29
Affiliation/Position	Center for Ecological Research
Name	Genki Yumoto

1. Country/location of visit

Kyoto University, Japan

2. Research project

Genome Science Course

3. Date (departing from/returning to Japan)

2017. 5.22 – 2017. 5.29 (8 days)

4. Main host researcher and affiliation

Primatology and Wildlife Science Leading Graduate Program, 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.

Purpose (Plant group in this course)

Fern has two stages in life cycle, sporophyte and gametophyte. So far, gametophyte is very small, and its morphology is very similar between species, so it is very difficult to identify gametophyte's species from their morphology. However, now, DNA analysis techniques are developed, and we can use them for species identification. Therefore, in this course, we tried to identify gametophyte's species by DNA analysis, and we make a poster about both of Yakushima Field Science Course and Genome Science Course, and present our result.

Below is the schedule of this course;
5/22 Design of experiment, DNA extraction
5/23 DNA extraction, Sequencing
5/24-29 Discussion, Making a poster

In this course, we performed 4 things. First, we extract and purify DNA from gametophyte samples by Tissue-direct PCR. Second, we decided their sequence by Sanger method. Third, we analyzed results of Sanger method and make diagrams from them by MEGA7. Finally, we made a poster for "The 6th International Seminar on Biodiversity and Evolution: Wildlife Science by New Biologging studies" and presented our result in the seminar.

5/22

In the morning, we tried to extract DNA from gametophyte samples by Tissue-direct PCR, but we thought that this schedule is not enough to make a poster, so we modified the experimental schedule. Then, we managed to finish all DNA extraction in this day.

5/23

We performed purification, electrophoresis, and sequencing for DNA sample which we got on 5/22.

5/24

We analyzed, by MEGA7 and BLAST, sequencing results which we made yesterday. Then, we discussed whether we experiment more or not, finally, we decided not to experiment.

5/25-28

We discussed our results and made a poster for International Seminar.

5/29

We practiced for presentation.

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DNA extraction

6. Others

Thank prof. Fuse, prof. Shinohra for assisting me in laboratory and discussion, and other lectures and students for assisting me in this course. Finally, I am grateful to PWS for funding this course and CEOBio for giving us an opportunity to present our results.