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.)

	2018. 06. 07
Affiliation/Position	Seto Marine Biological Laboratory/M1
Name	Jun Fukuchi

1. Country/location of visit

Japan/Kyoto

2. Research project

Genome Science Course (the Plant Group)

3. Date (departing from/returning to Japan)

2018. 05. 28 - 2018. 06. 1 (5 days)

4. Main host researcher and affiliation

Dr. Koji Takayama, Associate Professor at Department of Botany, 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.

We conducted tissue-direct PCR for fern gametophyte samples collected in Yakushima Field Science Course. Reaction quality of PCR products were evaluated by Agarose gel electrophoresis. After the purification of PCR products, cycle sequencing was performed. Purification of cycle sequencing products was carried out using ethanol precipitation method. DNA samples were sequenced by an ABI 3130xl Genetic Analyzer. In total, 28 partial rbcL sequences were obtained. We performed a BLAST search to identify species of each sequence. Two sequences were identified to the species level and five sequences to the genus level. The distribution pattern of fern sporophytes was analyzed using a software R. Low-altitude sampling sites (Site 1 and 4) show higher Shannon-Wiener index values. In contrast, high-altitude sampling site (Site 3) shows the lowest value. NMDS plot suggested that Site 1 and 4 have a similar fern species composition. We gave a poster presentation at the 8th International Seminar on Biodiversity and Evolution: Wildlife Science by Environmental DNA Analysis.

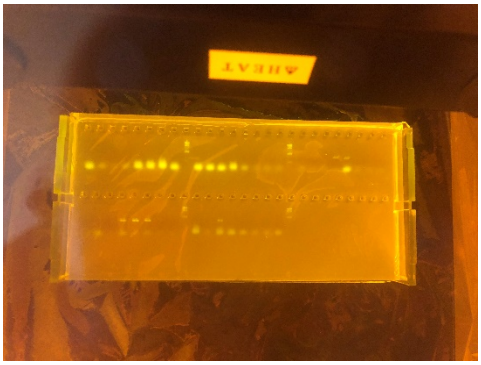

Figure 1. Agarose gel electrophoresis result.

Figure 2. Purification of PCR products.

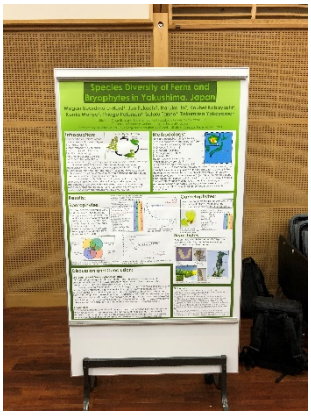

Figure 3. Our research poster.

6. Others

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