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.)

	2014. 11, 19
Affiliation/Position	Primate Research Institute/ M1
Name	Natsumi Aruga

1. Country/location of visit

Yakushima Island, Primate Research Institute

2. Research project

Yakushima Field Course, Genom Course

3. Date (departing from/returning to Japan)

2014. 10. 19 - 24 (Yakushima), 2014. 10. 27 – 31(Genom), 2014. 11. 6 (Presentation)

4. Main host researcher and affiliation

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.

The scope of this report is on Yakushima Field Course and Genom Course.

Yakushima Field Course

On the first day, we walked along the Seibu-rindou. We saw Japanese macaques and deer nearby. Japanese macaques did not go away even if our car approached them. We observed them eating fruits of camphor trees (*Cinnamomum camphora*) and grooming in a pair of a mother and (possibly) her infant. I was impressed that the body size of deer in Yakushima is much smaller than those in other places. At night, Prof. David A. Hill demonstrated his research methods on bats by using a bat detector and a harp trap with an acoustic lure. He caught two different species of bats, *Murina ussuriensis* and *Rhinolophus ferrumequinum*.

On the second day, we followed E troop of Japanese macaques in the forest. They are well-habituated to researchers, so we observed a couple of hours although we were in a large group. In the afternoon, they ate syconia of Oitabi (*Ficus pumila*). Oitabi is a liana of wild figs (*genus Ficus*) and produces a maximum size of syconia ("fruits") in this island. The syconia of Oitabi were abundant along the roadside of Seibu-rindou, so it was easy to observe. Prof. Yumoto, Prof. Hanya and Dr. Sawada said it is very rare that this amount of syconia of Oitabi was available in Seibu-rindo. After the feeding of monkeys, we picked up syconia that they dropped. In the evening, we discussed and were divided into two groups: Monkey group and Oitabi group. Monkey group was to follow Japanese macaques and to collect fecal samples. Oitabi group was to observe animals who come to the liana of Oitabi along the Seibu-rindou. I decided to belong to the Oitabi group.

[Itinerary]
19/10/2014
Walking along the Seibu-rindou
Bat research
20/10/2014
Following Japanese macaque
21/10/2014
Observation at Oitabi
22/10/2014
Observation at Oitabi
23/10/2014
Presentation
24/10/2014
Shiratani-Unsuikyou

On the third and fourth day, we observed animals under a Sendan (*Melia azedarach*) tree where the liana of Oitabi wounded around. Japanese macaques, Japanese white-eyes (*Zosterops japonicus*), Brown-eared Bulbul (*Hypsipetes amauroides*), Jungle Crows (*Corvus macrothymchos*) and Brown flycatcher (*Muscicapa dauurica*) came to the tree. Syconia of Oitabi were only eaten by Japanese macaques and by Japanese white-eye.

On the final day, we prepared and gave a presentation to Yakushima members in English.

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Genome Course

Genome Course proceeded at PRI. I had never experienced any genome experiments so far, so I felt a sort of nervous at first. But I realized that many of us were also beginners, so I learned from ground zero. In this time, Oitabi group used swab samples and cut out of syconia samples. Samples concerned us because Dr. Kishida and Dr. Sawada had suggested us that it might be difficult to obtain good results from saliva samples. However, we succeeded to amplify DNA of Japanese macaque and deer from the bait marks on syconia. I realized the usefulness of the complicated IT procedures to match DNA sequences obtained from our samples with DNA data bank (Genbank provided by NCBI).

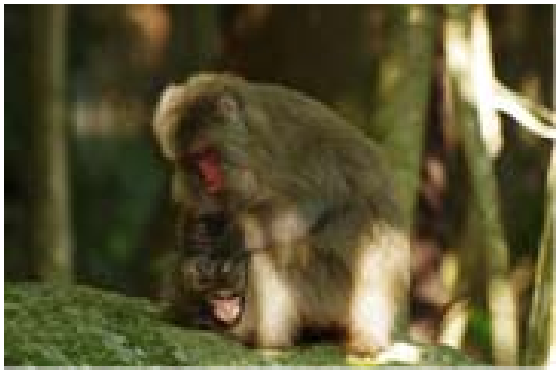
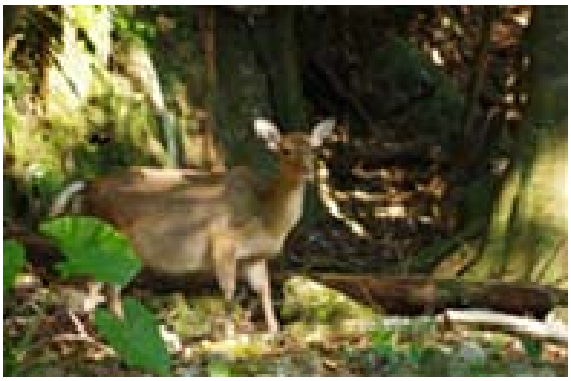

Figure1-2 Mather and infant of Japanese macaque, Deer


Figure3-4 Bat research by Prof. David A. Hill


Figure5-6 Japanese macaque is eating a syconia of Oitabi

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Figure7-8 Syconia of Oitabi samples, The syconia was ate by Japanese white-eyes

Figure11-12 Genome Course

6. Others

I would like to express my appreciation to the PWS program and Prof. Tetsuro Matsuzawa for the opportunity to study at Yakushima and Genom course.