

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. 06. 04

Affiliation/Position	Amazonian National Institute of Research - INPA
Name	Gisele de Castro Maciel Valdevino

1. Country/location of visit

Yakushima Island, Japan

2. Research project

Yakushima Field Science Course: Comparative study on the digestibility of Japanese Macaque (*Macaca fuscata*) based on the altitudinal gradient.

3. Date (departing from/returning to Japan)

2016. 05. 21 – 2016. 06. 27 (07 days)

4. Main host researcher and affiliation

Prof. Goro Hanya, Professor at Primate Research Institute, Kyoto University
 Prof. Kazunari Ushida, Professor, Kyoto Prefectural University
 Dr. Akiko Sawada, Primate Research Institute, 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.

During the Yakushima Field Course I was assigned under monkey team to a comparative study on the digestibility of Japanese Macaque (*Macaca fuscata*) based on the altitudinal gradient. Monkey team was divided in two groups; At first, one group collected feces samples from lowland and another group collected feces samples from highland. Members of each team were switched and everyone could observe changes in altitudinal gradient of Yakushima island and despite the difficulties of collecting samples on rainy days, we collected a total of 26 feces samples.



Figure 1. Observing Japanese macaques in lowland

Lab protocols were conducted to prepare samples for digestibility analyses. Three parameters were used in digestibility analyses; pH, gas production and change in substrate volumes. Samples were mixed, weighed, carbon-dioxide added, incubated, centrifuged, filtered, dried and finally we had a final weight.

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Figure 2. Sample collection

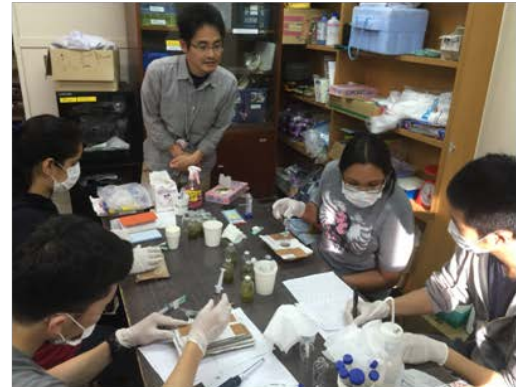


Figure 3. Fecal sample processing in lab

The digestibility (pH and gas production) in highland individuals was comparatively higher than the lowland individuals. We used two different substrates (leaves and cellulose) for enhancing the bacterial activities. Patterns in terms of pH and gas production were observed and also bacterial activities were high when the leaves were used as the substrate than the cellulose.

As a personal observation, in this course I could learn about the digestibility and how this process can give us information about physiology and ecology of wild species allowing us to know which microbiological changes that species have to adapt to a particular environment.

It was very interesting to see some speciation process in Yakushima Island, as a biologist I am very interested in speciation process and I had the chance to be in a amazing island with so many specialized species in flora and fauna.

The proximity with colleagues that work with different areas of Biology was good because we shared our knowledge and all learned from the experience of others.



Figure 4. Funny moment in lab

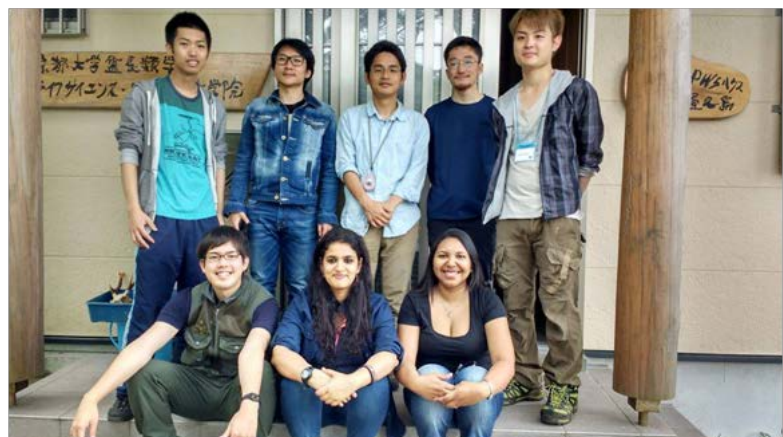


Figure 5. Monkey team

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6. Others

I would like to thank Kyoto University for giving me the opportunity to come to Japan and have this experience in Yakushima Island. I would also like to thank Prof. Goro Hanya, Prof. Kazunari Ushida and Akiko Sawada for training us during the course and for sharing your knowledge with us.

To my friends of "monkey" team: Sanjeeta, Liu, Otsuka, Kota, Mabuchi and Akito - thank you for all the good moments in Yakushima Island. My sincere thanks to Prof. Shiro Kohshima, Kei Matsushima, Kotoyo Ichiyama and other WRC members for giving us this wonderful opportunity.