

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.)

	2019. 11, 23
Affiliation/Position	Primate Research Institute/D1
Name	Vanessa Nadine Gris

1. Country/location of visit
Yakushima, Japan
2. Research project
Yakushima Field Science Course
3. Date (departing from/returning to Japan)
2019. 11. 16 – 2019. 11. 23
4. Main host researcher and affiliation
Professors Andrew MACINTOSH (PRI, Kyoto University), Yoshimi AGETSUMA, Hideki SUGIURA, Takafumi SUZUMURA (WRC, Kyoto University)
5. Progress and results of your research/activity (You can attach extra pages if needed)
<p>Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.</p> <p>From 16 to 23 of November I joined the Yakushima Science Field Course. We had the option to join the Deer Group or the Parasite Group. I was part of the Parasite group and our goal was to investigate environmental parasites infecting mammals in Yakushima. Yakushima is an island located in southern Japan, in Kagoshima prefecture. A variety of mammals, birds and reptiles live in the island, including a subspecies of Japanese sika deer, the Yaku sika deer (<i>Cervus nippon yakushimae</i>) and a subspecies of Japanese monkey (<i>Macaca fuscata yakui</i>). Consequently, a large amount of micro and macro organisms can parasitize these animals and be part of the interactions among animals, humans and environment. Our aim was to look for possible parasites in soil and feces of Yakushima monkeys and Yaku shika deers. Also, we wanted to see if environmental factors such as tree coverage (% of picture covered by foliage/tree), terrain slope (inclination in degrees), elevation (meters), distance to river and field site would influence the richness of parasites. We collected samples of soil from predetermined trails in Hanayama and Kawahara areas and off grid spots that seemed interesting and could provide a different parasite population from possible micro climates (for example near the riverbed, or a sport covered with different vegetation). Soil was collected at every 100 m and dug out approx. 10 cm in depth using spades. We then took pictures of tree coverage and marked the sample spot on GPS. We also collected fresh monkey feces and took deer feces collected from the other group. In the lab, the samples were processed and flotation technique (with sugar) was used for observation in the microscope. Tree coverage, slope (most inclined surface presented more richness of parasites) and the interaction between slope and elevation (a joint increase in slope and elevations exerted effect) were significant ($p < 0.05$). Elevation had a marginally significant effect ($p < 0.10$). A variety of parasite species was found in soil and feces: Nematoda eggs and larva, Annelida, Arthropoda, insect eggs, Trichuris, Strongyle, etc. All the data and pictures were presented on the last day under the title “Environmental assessment of parasites infecting mammals in Yakushima”.</p> <p>Other than the specific field and laboratory research we were working on, we had the opportunity to visit some beautiful places in Yakushima such as the Lighthouse, Ohko Waterfall and the Shiratani Unsuikyo park where we saw huge cedars over 1000 years old.</p>

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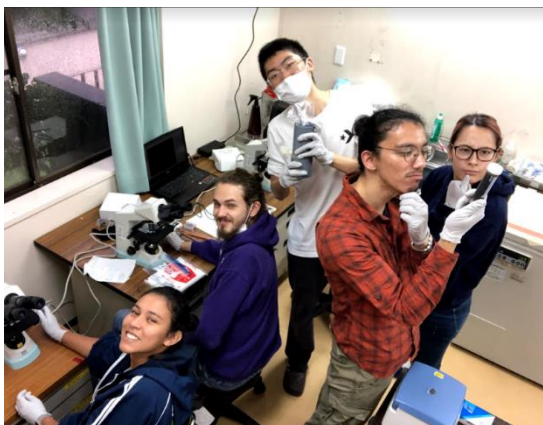
Landscape of Yakushima



Collection of monkey fresh feces on the road



Group of Yakushima monkeys on the road



Search for parasites in soil and feces



Preparation of samples



Nematode found in soil



Trichuris found in macaque feces

6. Others

I would like to thank PWS for organizing and supporting this trip. Also, my thank you to Prof Sugiura for general organization of the course, Prof Andrew Macintosh for mentoring the research and our TA Zhihong Xu. Lastly, to my friends and colleagues who attended the course and made this a very fun and fruitful week.