

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, 29
Affiliation/Position	Wildlife Research Center/M1
Name	James Brooks

1. Country/location of visit
Yakushima, Kagoshima, Japan
2. Research project
Yakushima Field Science Course
3. Date (departing from/returning to Japan)
2019.11.16-2019.11.22
4. Main host researcher and affiliation
Dr. Hideki Sugiura
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.
<p>During this field course, I was able to see monkeys and deer almost every day, hike through beautiful forests in Yakushima, and learn basics about research in parasitology. I was on the parasite team, where we collected feces from monkeys and deer, as well as soil along several transects from both Hanyama and Kawahara field sites. We took these back to the lab, where we filtered and took subsamples, centrifuged to isolate the compounds of interest, and floated parasites and other microfauna to a cover slip using a saturated sugar solution. We then examined the slips under a microscope, and counted the number of species of arthropods, nematodes, and annelids. The soil sampling proved more effective than we had expected, and we were able to find a diversity of microfauna and their eggs, including known parasitic nematodes, demonstrating the efficacy of our method despite having only a short time to analyze so many samples. In our analysis, we looked at sampling site, elevation, slope of the gradient, tree cover, and distance to river as predictors of microfauna diversity, and found that slope had a positive correlation with diversity. This was unexpected as we had previously thought nutrients would flow into stable, flat areas, but may have been due to the dynamism associated with higher slopes. After our analysis, we did a short presentation to the other team, and heard about their work following deer and collecting samples. The final day, we visited Shiratani, where despite the rain we could walk through beautiful moss forests and see cedars thousands of years old. We even saw monkeys during our hike, who walked parallel to us further downhill for a duration of the trail. The monkey and deer behaviour throughout my time in the forest was extremely interesting, with extreme tolerance between species and complex social dynamics in each. We saw a coalition of males form against a much larger male who was attempting to copulate with the females, groups of deer feeding and traveling together without any aggression, and monkeys who were completely comfortable sleeping and spending time on the road, in complete contrast to those at Sasagamine. From discussions with researchers both the deer and monkeys seem to have unique social dynamics at Yakushima, with the monkeys displaying high within group tolerance but harsh outgroup aggression, and the deer being smaller, extremely comfortable with human presence, and living at high densities compared to mainland deer. Through this field course I enjoyed spending more time in the forest, learning about the interesting behaviour and ecologies of the island’s deer and monkeys, and learning much about parasitology methods and background, a field in which I previously had almost no experience.</p>

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Monkeys relaxing on the road



Sika deer calmly watching humans



View of ocean from coast



Arthropod found in soil under microscope

**Please have your mentor check your report before submitting it to [\[report@wildlife-science.org\]](mailto:report@wildlife-science.org).*

6. Others

Thank you to Professor Andrew MacIntosh for running the parasite team, the Agestsumas for hosting us and teaching us about local wildlife, and Professor Sugiura for helping organize and teaching us about the monkeys.