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

Kyoto, Japan

2. Research project

Yakushima Lab Science Course

3. Date (departing from/returning to Japan)

2019.11.25-2019.11.29

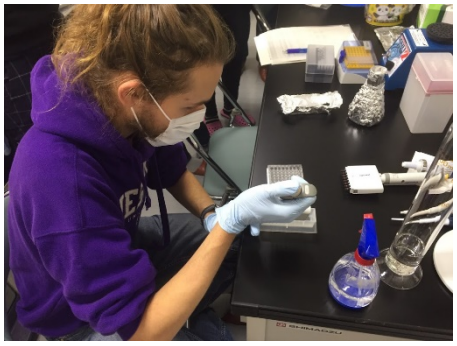
4. Main host researcher and affiliation

Dr. Kodzue Kinoshita

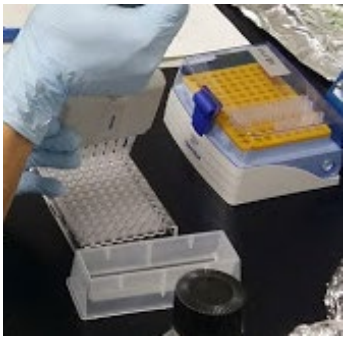
5. Progress and results of your research/activity (You can attach extra pages if needed)

Please insert one or more pictures (to be publicly released). Below each picture, please provide a brief description.

During this lab course we performed an enzyme immunoassay on deer fecal samples collected from Yakushima deer and then analyzed our results to make a poster presentation. I learned both the theory and applied methods to analyze concentrations of sex hormones P4 ad PgD, which can also be applied to samples of various other hormones. It was very valuable for me to learn how such samples are analyzed since I am studying the hormone oxytocin in my research, which is also typically analyzed with an enzyme immunoassay. I didn't have any previous experience with hormone analysis so I enjoyed getting experience using lab equipment and understanding how to assess the validity of samples, such as by comparing to the standard curve or checking for unusual CV values. After analyzing the samples we compared age-sex classes, the concentrations of P4 and PgD within the same samples, and how the concentrations of both changed depending on water content and time frozen. Interestingly we found almost no difference in concentrations of either hormone between adults and juveniles or males and females, suggesting some interesting peculiarities of Yakushima deer endocrine profiles. It is possible their diet or social evolution are responsible for the lack of differences, which will be interesting to hear about from future research. We found that both hormones quickly increase with time until freezing, but reach a stable point at around 26 hours, which mirrors the water content changes, suggesting that once fecal samples dry both hormones reach stable levels. We then compiled our results into a poster to present at the 11th International Seminar on Biodiversity and Evolution. The process was valuable for me in thinking about hormone studied and how I can relate it to my own research, practice lab skills while learning the process of hormone analysis, and quickly work with a team to build a scientific poster.



Adding antigen to immunoassay plate



Close up of assay plate

*Please have your mentor check your report before submitting it to [report@wildlife-science.org].

Submit to : report@wildlife-science.org 2014.05.27 version

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6. Others
Thank you very much to Professor Kodzue Kinoshita for leading our course and teaching us a great deal about hormone research and analysis.