

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.)

2015. 10. 30	
Affiliation/Position	Primate Research Institute/Internship
Name	HE Tianmeng

1. Country/location of visit
Yakushima Island, Kagoshima Prefecture, Japan
2. Research project
Census of sika deer (<i>Cervus nippon yakushimae</i>) population by fecal pellet size and molecular analysis.
3. Date (departing from/returning to Japan)
2015. 10. 18 – 2015. 10. 24 (7 days)
4. Main host researcher and affiliation
Dr. Goro Hanya, Associate Professor at 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.
<p>From Oct. 18th to Oct. 24th, 2015, I participated the Yakushima field course hold by PWS. In the course, participators were divided into the plant team or the deer team. As a member of deer team, I joined the short study about census of sika deer (<i>Cervus nippon yakushimae</i>) population. During the course we collected fecal samples of deer for the molecular course. And explored the relationship between age/body size and fecal pellet size in Sika deer.</p> <p>On Oct 18th, we arrived at Yakushima and payed a brief visit at the potential study site we may work in latter. In the evening we had a short meeting to discuss the plan of field work.</p> <p>Form Oct. 19th to Oct. 21st, we conducted field work. On the afternoon of 19th, we separated into three groups to follow deer and wait them to defecation and measure their shoulder height by taking photos. Then we collected samples for DNA analysis by swabbing the feces’ surfaces and collected their fecal pellets to the plastic bags for later use. At night we measured the length of the longer axis and shorter axis of the fecal pellets by Vernier scales. We conducted similar work on 20th as well as 21st.</p> <p>While we worked in the field, searching for deer, each Group worked with an experience field researcher. So we also learned a lot of knowledge about Yakushima. My group worked with Prof. Hanya whose works were mainly about Japanese macaques (<i>Macaca fuscata</i>) on Yakushima Island. So during the field work he told us story about the plant that eaten by macaques as well as other animals. We also learned history about the long-term research conducted on Yakushima Island as well as the history of conservation activities on the island.</p> <p>While we were conducting field work, we also met some difficulties. First of all, It was difficult to find and following deer. Through some of the deer were not afraid of human, others, especially those deer stayed with young individuals, were very vigilant. Thus we had no chance to follow them. So we have fewer samples from juvenile than those from adults. Then as the number of deer on the island was quite large, new feces sometimes were mixed with old feces. It was hard to separate them. Such situation may finally lead to contamination and affect later measuring as well as the molecular experiments. Fortunately my group met chances to follow deer groups closely and collected samples easier than usual.</p> <p>During the field work, the relationship between Japanese macaques and deer was also an interesting topic. It was said that Yaku deer often stay close with the macaque groups who were foraging. We met such phenomena several times. Macaques and deer keep really close relationship. When macaques were foraging in trees, leaves often drop to ground. Those leaves provide important food for deer. The other group of our team also saw monkeys riding deer. That was a special behavior only found on Yakushima. The unique relationship between deer and macaques may be a good topic for future research.</p> <p>After the field, we collected 53 samples, including 12 from adult males, 34 from adult females and 7 from juveniles. On 22rd we sort and analyzing our data as well as preparing presentation. As an undergraduate I was not very experienced in data analyzing. Prof. Hanya kindly gave us a short lecture about statistic and taught us how to analyzing data by using R program. On the morning of 23nd, deer team and plant team present their brief results.</p> <p>We finished all the work on the morning of 23nd. So we use the afternoon and 24th explorer some famous place on Yakushima. Island. During the sightseeing, I got a brief sight about the environment of the island. The well protected</p>

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primary forest were especially attractive.

In conclusion, the Yakushima field course provided me a great opportunity to experience field work in Japan and a good chance to learn the knowledge about the amazing ecosystem on Yakushima Island. We collected enough samples for genome course as well as data about Yakushima deer population. Through the course, I learned about the methods of feces sampling and data analyzing. I also made friends with other participants from different countries, which provided me a great chance to practice my speaking English.

Now we are using the samples we collected in experiments for deer sex determination. And we will give presentation and writing a specific report to show our result.



Fig. 1. Feces sampling.



Fig. 2. Look for deer groups.



Fig. 3. An adult female sika deer..



Fig. 4. An adult male sika deer.



Fig. 5. Close relationship
between deer and macaques.

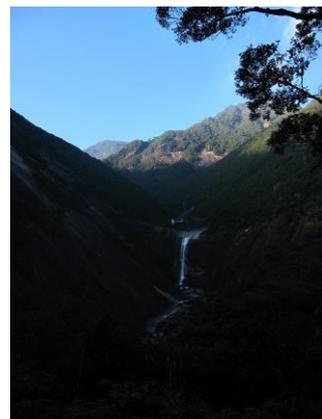


Fig. 6. Senpiro falls, a famous
scene on Yakushima Island.

6. Others

I would like to express my sincere gratitude to Prof. Hanya Goro, Prof. Yumoto, and Mr. Kuriara. Their patience guidance taught me in different areas. I also thanks PWS for supporting this field work.