

2025年 4 月 23日

YYYY/MM/DD

Fellowship ID : BR240401

独立行政法人日本学術振興会理事長 殿

To: President, Japan Society for the Promotion of Science

研究活動報告書

Research Report

1. 受入研究者/ Host researcher

受入研究機関・部局・職
Name of Host Institution, Department and Title Hokkaido University, Institute of Low Temperature Science, Assistant Professor

受入研究者氏名
Host Researcher's Name Ohdachi, Satoshi D.

2. 外国人招へい研究者/ Fellow

所属研究機関・部局・職
Name of Institution, Department and Title Middlebury College, Dept of Biology/Environmental Studies, Assistant Professor

外国人招へい研究者氏名
Fellow's Name Mychajliw, Alexis M.

3. 採用期間/ Fellowship Period

2025年 01 月 006 日 ~ 2025年 02 月 005 日

4. 研究課題/ Research Theme

Ecology and conservation of Japanese mammals

5. 研究活動報告/ Research Report

(1) 研究活動の概要・成果/ Summary of Research Results

During my time in Japan, I worked on several research projects in collaboration with my Japanese colleagues. As my visit was only a month in length, I was not able to start and complete entire research projects, but instead I focused on making progress on existing collaborations and using in-person meetings and institutional visits to develop new projects for future research. These projects spanned several different mammal species and regions in Japan.

1: I continued working on a dataset of Hokkaido red fox stable isotopes and morphological characteristics as they relate to the environmental history of Hokkaido and changes in urbanization. The goal of this research has been to understand Some of this data was generated when I was a JSPS postdoctoral fellow and I used the BRIDGE fellowship as an opportunity to focus on the dataset and apply new methodological/statistical analyses towards a publication.

2: In my new position as a deputy chair of the International Union for the Conservation of Nature (IUCN) SSC Small Mammal Specialist Group, I was able to engage with Japanese small mammal specialists to begin the process of re-assessing several endemic species for the IUCN Red List. It was very productive to have in-person meetings to discuss these revisions, particularly to learn about several mole and shrew species for which very little data is available outside

(注) 採用期間終了後3ヶ月以内に提出

※ (Note) Submit the form within 3 months after the expiration of fellowship.

※ 様式1に記載された情報を元に確認しますので、部局名等の名称含め、内容に誤りが無いか必ずご確認ください。

of Japanese literature. I also had the opportunity to witness advances in small mammal science in Hokkaido by assisting in shrew field surveys with Dr. Satoshi Ohdachi and visiting captive breeding sites for shrews such as at Maruyama Zoo. At the National Museum of Nature & Science collections in Tsukuba, I was able to look at available museum specimens relating to several key small mammal species, such as the Okinawa Spiny Rat, which could be used to support future conservation research. I will continue corresponding with my colleagues as we revise the Red List assessments over this year.

3: I began a new collaboration with Dr. Yuri Kimura of the National Museum of Nature & Science, focused on the rediscovery and study of a Japanese “tar pit” location, Tsukinoki (Akita). This is a very exciting collaboration because it means I can connect my Japanese colleagues to resources at the La Brea Tar Pits & Museum of Los Angeles, USA, as part of the BREAS program (Bridging Research & Education at Asphaltic Sites). I first confirmed that a specimen at the National Museum collections is indeed from a true asphaltic fossil deposit. I used JSPS funds to travel to the last known location of mammalian fossils derived from these asphalt seeps with Dr. Kimura. We visited a small oil company museum and drove to the potential fossil site. We also visited the Akita University’s Mineral Industry Museum, where we examined several mammal fossils. There are very few publications about this fossil location and nothing is summarized about it in the English literature. I will work with Dr. Kimura, her students, and the La Brea Tar Pits Museum (US) to publish this work and hopefully inspire further research on these fossils.

(2) 主な研究発表 (雑誌論文、学会、集会、知的財産権等) / Main Research Publications

There are no new research publications immediately available, as it was a one-month fellowship and only a few months have passed since I returned from Japan. There will be several products relating to the 3 different research areas I focused on while in Japan earlier this year. I am waiting for my collaborator to produce a series of maps to be used in a geospatial analysis to complete the Hokkaido red fox paper, which I will attempt to submit to a higher impact journal such as Proceedings of the Royal Society. I will be working throughout the year on the IUCN Red List assessments, which have a deadline later this year, and this reassessment process could lead to a short summary paper about the status of Japanese small mammals could be prepared for a venue such as the Journal of Mammalogy. Lastly, I will work with Dr. Kimura to eventually submit a manuscript about the Japanese tar pit for the journal Quaternary Science Reviews, so there is a general reference on the topic available in the literature. I plan to write a blog for the IUCN SSC Small Mammal Specialist group website about shrew captive breeding research by Dr. Ohdachi and a blog for the Natural History Museum of Los Angeles County about the Japanese tar pit. I also will submit a Stories from Japan blog for the JSPS Alumni Association.

(3) その他/ Remarks

During my visit, I also delivered two seminars, one at the Hokkaido University and another at the National Museum of Nature & Science (Tsukuba location). I used the fellowship as an opportunity to visit a number of museums, such as the Ibaraki Museum, that I would like to work with in the future. This fellowship was exceptionally helpful for me in strengthening my relationship with Japanese collaborators. There are several active projects I am working on now towards publication and potentially a research grant focused on the topics of my fellowship. I also enjoyed the opportunity to interact with Japanese students and share my experiences as a foreign researcher with them. I began formally learning Japanese prior to my fellowship by auditing language classes at my college, and I am now going to continue learning Japanese to better support future collaborations. I am sharing my experience as a JSPS fellow with students studying Japanese at Middlebury College this month (April 2025) in a special seminar.

I have always found my experiences in Japan to be deeply inspiring for my research program as an early career researcher. My recent time in Hokkaido further inspired me to work with colleagues to submit a course proposal about human-wildlife conflict and geography in Hokkaido to the Conflict Transformation Global Courses fund at Middlebury College. I plan to continue working in Japan throughout my career.

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