

Assessing the current status of the Sumatran striped rabbit (*Nesolagus netscheri*) in Sumatra, Indonesia



**Faculty Development Grant Proposal by Jennifer McCarthy, Ph.D.
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Requested Funding: \$7,000 in Summer Salary

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Project Description:

The Sumatran striped rabbit (*Nesolagus netscheri*) is a rare lagomorph species that is found only in several isolated areas on the island of Sumatra in Indonesia. The species was first described scientifically in the late 1800's but was only infrequently recorded in vague and sometimes unreliable sightings until the late 20th century. The first photographic evidence of the species was finally obtained in 1997 by Flora and Fauna International and since that time there have been relatively few additional confirmed reports. Owing to the paucity of overall records for the species, there is almost no reliable ecological information for the Sumatran striped rabbit, making it difficult to implement any conservation or protection strategies. Most records of the species come from the western portion of the island of Sumatra, specifically along the Barisan Mountain Range. However, their exact distribution remains unknown. The majority of records of the species have also originated in highly forested areas, though the exact habitat specificity of the species also remains unknown. Finally, because of the small number of records for the species, there has been no viable density estimate for the Sumatran striped rabbit, and no calculation of the overall remaining population. Over one hundred years after its discovery, the Sumatran striped rabbit remains one of the least known and presumably one of the rarest of the lagomorph species.

In 2013, I was asked to join the International Union for the Conservation of Nature (IUCN) Lagomorph Specialist Group as a Sumatran striped rabbit expert since I had conducted my dissertation work in Indonesia and had focused on the Sumatran striped rabbit for a small part of that research. I was subsequently asked to Co-Chair the IUCN Striped Rabbit Working Group (SRWG) in order to help develop global research and conservation priorities for both the Sumatran and Annamite striped rabbits. In January of 2019, we received a grant to organize the first IUCN Striped Rabbit Working Group meeting in Bogor, Indonesia, bringing together scientists from across Southeast Asia to begin the process of developing a conservation plan for the Sumatran and Annamite striped rabbits. The meeting resulted the formation of a network of scientists across Sumatra that are gathering information on the Sumatran striped rabbit, as well as the identification of research priorities. However, coordination, analysis and publication of the data continues to be difficult. In addition, over the past four years the IUCN has received evidence that the Sumatran striped rabbit is increasingly being targeted in the illegal trade of wildlife in Indonesia. The species first appeared in underground trade groups in 2018, and each year more and more reports of the species being illegally offered for sale as pets have appeared. The SRWG have thus developed two main priorities: to work with our network of scientists in Sumatra to analyze and write up the available data on the Sumatran striped rabbit; and to develop and submit a larger grant focused specifically on trying to address the issue of illegal trade of Sumatran striped rabbits before they are hunted into extinction. With this Faculty Development Grant, I would focus specifically on addressing these two priorities.

Project Goals and Objectives:

The goal of this project is to update the known ecological information for the Sumatran striped rabbit and to update the global conservation plan for the species. This will be accomplished through achieving two objectives:

1. To analyze and publish the data that we have collected on the Sumatran striped rabbit.
2. To identify and submit a larger grant focused specifically on addressing the illegal trade of the Sumatran striped rabbit.

Timeframe for the Project:

I have already begun gathering data, but having dedicated time to analyze and write during the summer would allow me to have both the publication and grant proposal submission-ready by the end of July. I plan work on this project from May through July.

Enhancement of Teaching and Research at Lincoln:

I plan to integrate the research from this project directly into the courses that I teach in order to encourage active learning. For example, I developed a case study on endangered species for my *Environmental Science* course where I give students some data on the Sumatran striped rabbit and ask them what additional information they would need in order to develop a conservation plan to keep the species from going extinct. I plan to update that exercise with the data from this proposed research. I will also utilize the real data from this research in upper-level Biology classes such *Conservation Biology* and *Ecology* which will help students to learn how to analyze and critically examine data.

In regard to the enhancement of research, this project is international in scope and would be conducted with collaborators from around the world. I plan to publish the resulting manuscript in an international journal, and the data generated would be disseminated through the IUCN as well. This not only moves forward my own research, but Lincoln University would be mentioned also be connected to important international research in wildlife ecology. In addition, this project would result in the submission of a larger grant in collaboration with international partners that would bring additional research to Lincoln.

Measurement of Project Outcome:

The success of this project will be measured by:

1. The submission of a manuscript to a peer-reviewed journal of international scope, as well as by official recommendations to the IUCN Lagomorph Specialist Group. The manuscript will update the ecological knowledge on the Sumatran striped rabbit and aid in the formation of a conservation plan for the species.
2. The identification, preparation and submission of a larger grant focused on addressing the illegal trade of Sumatran striped rabbits.

Sharing of the Project Outcome:

The project outcome will be shared outside Lincoln through the publication of a peer-reviewed manuscript and through official recommendations to the IUCN Lagomorph Specialist Group. Within Lincoln University, it will be shared during the Faculty Research Conference.

Budget:

Item	Cost
Summer Salary May-June	\$3,500
Summer Salary June-July	\$3,500
Total	\$7,000

Budget Justification: