

The Rufford Foundation

Final Report

Congratulations on the completion of your project that was supported by The Rufford Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. The Final Report must be sent in **word format** and not PDF format or any other format. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. Please note that the information may be edited for clarity. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to jane@rufford.org.

Thank you for your help.

Josh Cole, Grants Director

Grant Recipient Details	
Your name	Thura Soe Min Htike
Project title	Habitat associations and population status of the globally endangered Giant Nuthatch in Myanmar
RSG reference	26118-1
Reporting period	1 year
Amount of grant	£4999
Your email address	thurasoeminhtike@gmail.com
Date of this report	September 2019

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
To collate the most recent records of Giant Nuthatch <i>Sitta magna</i> within the past 10 years in Myanmar and assess their reliability				We combined all published historical records from scientific papers including bird watching reports from known or possible habitat areas of the giant nuthatch in Myanmar. We also searched for information about recent observations of giant nuthatch in Myanmar through informal conversations with local bird guides. We selected two historical sites and two new potential sites to assess the presence/absence of the giant nuthatch, and we have confirmed detection in one site, Mt Ashae Myin Anauk Myin (AMAM) area.
To assess the probability of detection and habitat associated with detection of the giant nuthatch at two potential sites with recent observations (<6 years) by local bird watchers within Myanmar and third site with significant potential				Forty-six locations have been surveyed for five times at each site in the AMAM area. Vegetation sampling has also been conducted to observe microsite selection. Our data showed that the abundance of the giant nuthatch was higher at points with larger diameter trees.
To estimate the abundance of the Giant Nuthatch in the areas where the species is detected				We estimated 37 individuals (95% CI: 34 - 40) in 283 ha of the AMAM area.
To understand the foraging behaviour of the Giant Nuthatch				One month of foraging observations indicated that the giant nuthatch prefers large trees. They spent most of their time on tree trunks and large branches rather than the small branches and twigs. More surveys on foraging will be needed to know the seasonal differences in foraging behaviour and how this compares to

			other species, particularly other resident nuthatch species.
To assess the amount and distribution of remaining forest habitat in the Shan State that is at least potentially suitable for the giant nuthatch			The result from GIS image classification showed that the total forested area roughly suitable for the giant nuthatch is large (~ 16,344 km ²) covering about 10% of the total area of Shan State. But, more detailed analysis with higher resolution imagery is needed as this value is probably an overestimate.

2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).

- 1) It took about 1 month to find the bird in the focal sites, we conducted initial surveys covering four possible habitat areas in Taunggyi District, but found it in only one site.
- 2) The outreach/education talks had many unforeseen problems including lack of electricity for a projector and the local people having very limited time to listen to our talks. The team in cooperation with Forest Department planned the schedules and made sure in advance regarding the availability of a usable venue and schedules of participants.
- 3) We frequently had to alter our work schedules when dates of our fieldwork (of our local team) conflicted with the timing of local cultural festivals.

3. Briefly describe the three most important outcomes of your project.

- 1) We have rediscovered the giant nuthatch in Myanmar. Although the population is small, and there is very little data to compare with, the site we discovered is almost certainly globally significant for the species. Mt. Ashae Myin Anauk Myin (AMAM) might become a hotspot for the conservation of the giant nuthatch in Myanmar and also a new possible location for local ecotourism business and bird watching tours.
- 2) We have produced an education-awareness video and also published a conservation awareness article in the Myanmar language in the journal of Forest Mirror a monthly publication of the Myanmar Forest Department.
- 3) Our research will be published in an international peer-reviewed academic journal, and the project outcomes were already presented in the Young Conservation Scientists Conference (YCS 2019) that was held in Suranaree University of Technology, Thailand from 24-25 June 2019.

4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).

- 1) Five local people participated in our field surveys and received some additional income as assistants.

- 2) I discussed with this local team about the importance of biodiversity conservation and impacts of their daily behaviour on their environment. They also realised that they gain benefits directly and indirectly from biodiversity.
- 3) One local field assistant participated for the whole period of fieldwork and became familiar with bird watching; it was possible that he had sufficient knowledge to become a local bird guide for the AMAM area.

5. Are there any plans to continue this work?

- 1) We plan to assess the current threats that are faced in Mt Ashae Myin Anauk Myin, the only one known site of giant nuthatch in Myanmar.
- 2) We plan to do a GIS analysis by using the high-resolution satellite imagery to develop a map of potential habitat of the giant nuthatch in Myanmar.
- 3) We would like to apply for a 2nd Rufford Small Grant to continue the survey about the foraging and food resource selection of the giant nuthatch.

6. How do you plan to share the results of your work with others?

Our research will be published in an international peer-reviewed academic journal, and general information about our results has already been distributed through our conservation video clip and published article in the Forest Mirror journal.

7. Timescale: Over what period was The Rufford Foundation grant used? How does this compare to the anticipated or actual length of the project?

We used the Rufford small grant from the beginning of our fieldwork until the end, in terms of time period from November 2018 to April 2019. This grant covered all costs of our fieldwork including outreach activities. We could finish our survey on time followed our expected schedule.

8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Transportation from Bangkok, Thailand to Kalaw, Myanmar	£260	£130	- £130	Only one round-trip was used instead of two rounds.
Transportation from Yangon to Kalaw and Ywar Ngan	£60	£60		
Travel from Kalaw and Ywar Ngan to the three	£162	£320	+£158	The rental fees for transportation were higher than

study areas				we anticipated.
Field equipment	£177	£241	+£64	The actual costs were more than we expected. We had to buy two power-banks and extra batteries that were not included in the anticipated supply list.
Subsistence Payment	£1535	£1115	- £420	Rate of subsistence costs were lower than we anticipated.
Food	£2105	£2467	+£362	More costs were incurred when we needed three to four local field assistants for some working days.
Education awareness	£700	£666	+£34	Awareness T-shirts were made in Taunggyi and cost less than the expected.
Total	£4999	£4999		Exchange rate (30 May 2018) 1 GBP = 1880.7 MMK (Myanmar Kyat)

9. Looking ahead, what do you feel are the important next steps?

Since Mt Ashae Myin Anauk Myin is the only known site for the giant nuthatch in Myanmar, more research on their ecology and the threats to them are needed to sustain their current small population. Although the extent of the pressures of current human activities in this area isn't known, land use changes, pine resin extraction and firewood collection might lead to the disappearance of the remaining habitat. Assessing threats and developing proper conservation plan will be helpful for the sustainability of the giant nuthatch.

10. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did The Rufford Foundation receive any publicity during the course of your work?

We put The Rufford Foundation logo on the backdrop of our presentation during the series of educative talks and at the YCS conference 2019. We also used it in our awareness video clip and also acknowledged Rufford in the publication of an awareness article in the Myanmar Forest Department journal. We printed the logo on awareness raising t-shirts. The Rufford Foundation will also be acknowledged in every publication from this study.

11. Please provide a full list of all the members of your team and briefly what was their role in the project.

Thura Soe Min Hlike – The main researcher of the project, conducted all fieldwork and outreach activities. He is responsible for the data analysis and also for publications.

Tin Ko Oo – He was field guide for the initial surveys, provided information about the topography and bird occurrence, and also helped with the data collection.

Lamin Ko Ko – He was a field assistant and helped with data collection.

Lunn Maung – He was the local field assistant, managed logistics and helped with data collection.

George A. Gale, Philip D. Round, Tommaso Savini and Naruemon Tantipitsanuh – thesis advisory committee, helped conceptualized the study, oversaw work progress on and off the field and is helping with the preparation of the manuscript.

12. Any other comments?

This project would not have been possible without the funding support of the Rufford Foundation.

