

## The Rufford Small Grants Foundation

### **Final Report**

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

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. 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. 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	Ryan Phillips
	Tracking the enigmatic Solitary Eagle (Buteogallus solitarius)
Project title	via
	satellite GPS transmitters in Belize
RSG reference	12856-1
Reporting period	30 January 2014- 31 July 2014
Amount of grant	\$8409
Your email address	belizeraptorresearch@gmail.com
Date of this report	17 June 2015



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

	Not	Partially	Fully	
Objective	achieved	achieved	achieved	Comments
Preservation of the		х		Currently working with Programme for
land at this solitary				Belize, a non-profit in Belize, to get back
eagle nest				taxes paid off, so they can keep this land
				and turn it into the first Solitary Eagle
				Reserve. Currently working with land
				acquisition groups to help pay off taxes.
Developing			х	From this project we have reached out
conservation				to the surrounding communities through
community and				educational talks. We visited over 10
heightening				schools and talked to over 500 children.
biodiversity				We hired a Belizean Project Coordinator
appreciation				and have given Belizean opportunities to
through education.				be part of the research and conservation
				efforts, as well as foreign students.
To radio-tag an	Х			The pair did not nest in 2013 when
adult or juvenile				suspected therefore we were not
solitary eagle				afforded an opportunity to radio-tag.
				The pair nested in 2014 and had single
				young, but in an area that was not
				accessible due to steep terrain. We will
				attempt to reach the area to trap the
				juvenile from this nest.
Obtain critical			Х	From 2013-2014, we monitored this
information on the				nest-site with over 500 observation
solitary eagle				hours. We learned about their nesting
				cycle, which is critical for a conservation
				action plan. We gained valuable
				information on habitat usage, prey,
				breeding biology, and behaviours.
Informing the			Х	We will be presenting a poster at the
scientific				2014 Raptor Research Foundation
community about				Conference in Texas on the Solitary
the Solitary Eagle				Eagle.

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

There were quite a few difficulties with this project, but they were not unforeseen. In regard to bird research, specifically neotropical raptor research, there are many challenges that a researcher faces when collecting data on a rare and elusive species, such as the solitary eagle. The main difficulty was the timing of the nesting season to radio-tag an adult or juvenile. We suspected this species nested every other year at best, which was the case, but the pair we were studying did not nest in 2013 when we expected them to. This was due to apparently the mate of the female dying. Therefore, this pair did not nest until 2014, of which they did not nest in the 2011 nest, but instead nested 1 km form this nest in 60% slope that was inaccessible. Therefore, we have been unable to radio-tag a



solitary eagle. We will continue to monitor this pair and search for other pairs, as one other nest site has been located. If the nest is in an accessible area, we will then attempt to trap an individual.

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

- 1) Locating the only known active nest of the species and describing the first information on the breeding biology of the species.
- 2) Educating the local community on raptor research and conservation and giving over 30 national and international people experience in research methods and monitoring this nest site.
- 3) Presenting a poster at the 2014 Raptor Research Foundation Conference on the nest-site characteristics and prey of the solitary eagle.

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

Many local guides and training biologists participated in this research effort and obtained critical field experience and learned about raptor research and conservation. Also, outreach was done at local schools to over 500 students inspiring the next generations of conservationists.

### 5. Are there any plans to continue this work?

Yes, we will continue to monitor this pair and search for other pairs in the Mountain Line Ridge region of Belize and attempt to radio-tag an individual. Our education outreach will continue throughout Belize to reach many communities to share with them raptors and conservation.

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

We have already shared our work by presenting a poster at the 2014 Raptor Research Foundation Conference in Corpus Christi, Texas. We are currently working on a manuscript on the nesting biology and prey of the solitary eagle. Once we radio-tag an individual we will have live maps showing movements of the individual to gain interest in our work and for the first time share the movements of this enigmatic neotropical forest eagle.

## 7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?

The RSG was used over the past 2 years, starting in 2013 and is still being used. A transmitter was purchased, so we are in the process of trying to tag an individual. We anticipated that we would have an individual radio-tagged by now, but due to the nesting site and lack of nesting in 2013 we have not had an opportunity to attempt trapping. We knew this was going to be a challenging endeavour and even more so if they did not nest where we expected them to.

# 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
GPS Transmitter	2,500	2,637	-137	Tax, and Shipping and handling was more than



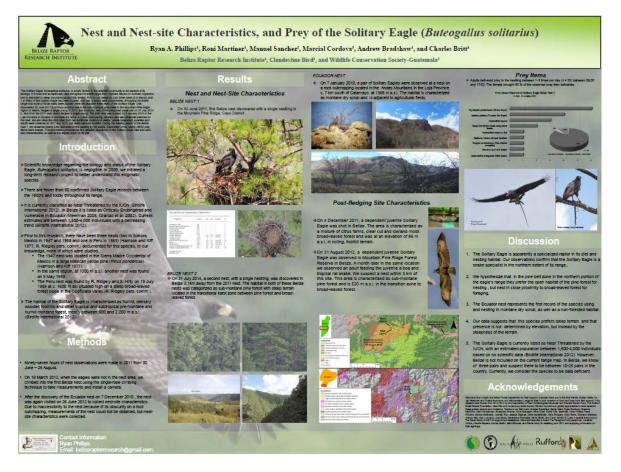
				anticipated
Transmitter data and refurbishment	2,919	517.73	2,401.27	We have not yet fitted a Solitary Eagle with a transmitter, so have not used the data monies yet.
TOTAL	5,419	3,154.73	2,264.27	

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

Locate an accessible nest of the solitary eagle, so that we can attempt to trap an individual.

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

Yes, we included the RSGF logo on our poster for the Raptor Research Foundation conference in Corpus Christi, Texas, USA in September 2014. We also displayed the logo and mentioned the support by RSGF in over 10 talks we gave to various groups on the Solitary Eagle Project.



### 11. Any other comments?

If we are unsuccessful in trapping a solitary eagle in the next 2 years, we would like to request to use the remaining money on radio-tagging a hook-billed kite, which would be a first time for the species. This would assist in understanding this unique migration that was discovered recently through Belize.