

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	Aimee E. Kessler
Project title	The Great Bustard in Mongolia: From Conservation Biology to Land-Use Planning
RSG reference	20.10.07
Reporting period	Final Report
Amount of grant	£4657
Your email address	Mimi.Kessler@ASU.edu
Date of this report	October 26, 2008

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
Population Counts and Interviews with Local People in Territories of Northern Mongolia		X		We surveyed previously unstudied populations of Great Bustard in Northern Mongolia. We carried out population counts and interviews with local people regarding poaching and reports of bustard breeding. We covered four important new territories, but of course, much territory remains to be surveyed in this vast area.
Determine causes of mortality for some of the bustards which had transmitters attached last year			X	Poaching and predation were determined to be the causes of mortality of these two birds. This is part of an ongoing study of causes of mortality for this species, whose numbers are declining worldwide.
Capture and attach satellite transmitters to seven additional bustards			X	Now a total of eight bustards (our total number of transmitters) are harnessed with satellite transmitters and we are receiving information about their habitat use patterns and migration routes.
Monitor breeding populations	X			Due to a problem related to a newly passed Mongolian law on permitting (see #2 below), our field work had a late start and we missed much of the breeding period.
Collection of feathers for population genetic analysis		X		We collected almost 2000 feathers this year from Northern Mongolia. Additional feathers must be collected from neighbouring territories, and the laboratory portion of this research will be completed over the next two years.
Carry out nest monitoring		X		We carried out monitoring on nests in one county, but wish to carry out surveys on a larger scale.
Communicate relevant findings to local NGO partners and government representatives			X	We are in close contact with NGOs working on watershed and steppe management issues, for which the Great Bustard is an important flagship species. We have determined three new locations to be listed as Important Bird Areas with the government. We have also submitted reports on our work to relevant scientists and individuals at the Mongolian Academy of Sciences and the Ministry of Nature and the Environment.
Carry out educational programmes for local schoolchildren		X		We taught classes on the Great Bustard, migration, and bird identification to groups of schoolchildren in two counties in Northern Mongolia. We plan to teach at a regional summer camp next year

				(unfortunately, it was cancelled this year due to a contagious disease outbreak).
Engage local people in research activities			X	Local people frequently join us in the field and in research activities, learning about the Great Bustard and promoting transparency in our research process.
Provide work and training opportunities for young, local biologists			X	This year, four young Mongolians trained with our research team. Two were undergraduates who are now preparing a presentation on their summer field work for their university. One was a recent university graduate who is exploring future job opportunities before applying to graduate school.
Support the master's research of a young, local biologist			X	Our project is supporting the field research and tuition of B. Dashnyam, Dashnyam has worked on our project for two years, and will continue to work as an assistant while carrying out his master's research on Great Bustard diet and habitat requirements.
Begin habitat analysis		X		Dashnyam has begun a 3-year programme of habitat analysis, including insect and plant collection.

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

Our largest problem this year was the sudden passing of a new, poorly written regulation on wild animal tagging a week before our field activities were planned to begin. It took five weeks before local authorities had clarified the new procedure for processing permits for animal tagging. Thus, our field work was delayed a significant period of time during the critical bustard breeding display season. The P.I. persistently pursued the issue and finally received the team's permit on the first day any such permit was issued to any group in Mongolia. Since our field work was consequently carried out during the sub-optimal post-display season, we had fewer opportunities to capture bustards in the spring/summer and had to work in fall as well.

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

This year our most important outcomes were:

- 1) The attachment of satellite transmitters to seven additional bustards. These transmitters will provide information about the habitat use and migration patterns of these birds for up to seven years to come. Should the birds die prematurely, follow-up research will provide information on causes of mortality.
- 2) Collection of feathers for population genetic analyses. The team now has approximately 4000 feathers from eight counties in Mongolia to use in microsatellite analysis. These laboratory analyses will yield important information on population fragmentation and structure.
- 3) Continued community involvement and educational programs (described below, in #4).

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

Our team has involved the local community in our research at every level, from programmes for schoolchildren, to the engagement of local residents in research activities, to educational and training opportunities for young biologists. Our programmes for schoolchildren are extremely popular and our van is always packed to capacity when we take the children on field trips for bird identification practice or bustard observations. At one point, a local middle school student even hid in the back of our van when the team set out to capture Great Bustards (on a school night!), in hopes of an opportunity to see this elusive species at closer range.

Local residents are encouraged to join us in our research activities, and many have done so. Local people have participated in population counts, nest monitoring, habitat analysis (insect and plant collection), feather collection, and interpretation of transmitted data. This encourages interest in the Great Bustard and promotes understanding of our research methods.

Our permanent staff is entirely local, with the exception of the P.I. We support the local community by purchasing services and goods locally and also hiring additional help as needed from the local community.

Our team is also promoting capacity building in the local community by hiring and training young biologists. We trained two undergraduates this spring and summer, who are now preparing presentations on their field research at their universities. During the fall, we hired a recent ecology graduate who is exploring job opportunities before applying to a master's programme. Finally, our team supports the research and tuition of a local master's student. This student, who has worked with the team for two years, is carrying out master's research related to the Great Bustard with the team while continuing to work as a field assistant. Further, by encouraging young members of the community to participate in research activities with us, we are providing exposure to biology as a career to members of the rural community. I am aware of two young people who now plan to apply to the biology programs, as a result of exposure to our work.

5. Are there any plans to continue this work?

Yes, this work will be continued for one to two more years. In terms of field work during this time, our master's student's research on bustard habitat, our nesting monitoring, and the monitoring of bustards with transmitters will continue. Undocumented bustard populations will be investigated in a neighbouring province and feathers from adjacent areas will be collected for population analysis. Related population surveys and feather collection in Kazakhstan are also scheduled for 2009. As usual, the team will continue to engage local schoolchildren and residents in this research. During the winter, laboratory analyses of collected feathers and spatial analysis of bustard habitat use will be undertaken.

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

Our preliminary results have already been shared with three local NGOs and with relevant scientists and individuals at the Biology Division of the Mongolian Academy of Sciences and the Mongolian Ministry of Nature and the Environment. It has thus far been too early in the research process to publish our findings, but the first two publications are in preparation for early 2009, with more to

come. We have also shared our research on local radio broadcasts, newsletters, and through a variety of internet blogs.

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

The RSG funds were used from April 7 to July 28 and August 28 to October 21, 2008. Our time in the field was longer than anticipated due to the problems described above, in #2.

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
Local Team Member Salaries	£1702.75 (Rufford) £771.75 (NSEP Fellowship)	£3416.48	£941.98 over budget	According to the World Bank October Quarterly Report, Mongolia had 31% year on year inflation, the highest in a decade and the highest in East Asia. Salaries consequently rose so that these rural team members were able to continue to feed their families.
Transport to and from Field Site (Domestic only)	£396.9 (Rufford)	£1116.84	£719.94 over budget	Two trips to our field site were necessary due to the bureaucratic delays (see #2).
Field Site and Ulaanbaatar Lodging	£171.5 (Rufford) £294 (NSEP Fellowship)	£697.16	£231.66 over budget	Rent rose due to extreme inflation.
Food Costs for Crew in Field	£536.55 (Rufford) £198.45 (NSEP Fellowship)	£765.06	£30.06 over budget	
Petrol for Field Work and Educational Program Driving	£771.75 (Rufford) £404.25 (NSEP Fellowship)	£1165.47	£10.53 under budget	
A. Kessler International Travel, Visa Fees	£1078 (Rufford)	£3171.75	£2093.75 over budget	Two trips to Mongolia were necessary because of the bureaucratic delays (see #2).
TOTAL	£4657.45 (Rufford) £1668.45 (NSEP Fellowship) £6325.90 Total	£10332.76	£4006.86 over budget	Due to inflation and to the extra travel expenses incurred due to bureaucratic delays (see #2).

Exchange Rate: 1 Togrog = 1150 USD (rate ranged from 1164-1145). 1 USD = £0.614

Note: For clarity, the chart above is based on the budget included in my original Rufford proposal. Later, small sums were received from the Cleveland Zoo and the P.I.'s graduate school, which helped to allay the costs of

our extended field season and additional equipment costs. The P.I. has also used her private funds to pay for some overages.

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

The most important field work has been accomplished and we now must follow up on what we have achieved. We must continue to monitor the tagged bustards, both in terms of reproductive behaviour (which will influence their habitat use) and in the case of any mortality. We must analyze received data concerning habitat use and carry out laboratory genetic analyses. It would be wise for us to cull more dropped feather samples from Kazakhstan to expand our genetic analyses and our master's student must complete his research project. The community is anxious for us to continue our educational programmes, especially for schoolchildren, and we hope to be able to teach at the regional Eco Club summer camp next year.

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?

RSGF received acknowledgement in public presentations on our project. We will continue to acknowledge RSGF's contribution in publications and presentations to come.