CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

Organization Legal Name:	World Pheasant Association
Project Title:	Assessing the conservation status of Edwards' Pheasant
Date of Report:	
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CEPF Region: Indo-Burma

Strategic Direction: Strategic Direction 1 and specifically Investment Priority 1.5: Conduct research on 12 species for which there is a need for greatly improved information on their status and distribution.

Grant Amount: $20,000

Project Dates: March to September 2011

Implementation Partners for this Project (please explain the level of involvement for each partner):

BirdLife International in Indochina (BLI) provided assistance with local knowledge on study sites, logistics and local capacity, as well as carrying out fieldwork and data management. Quang Tri Center of Education and Consultancy on Agriculture and Rural Development (CECARD) was a suggested as a partner organisation by CEPF and assisted with transport to field sites, logistics and fieldwork as well as sharing funding. WPA Research Associates at King Mongkut's University of Technology Thonburi (KMUTT) provided technical advice on camera trap methodology and research logistics as well as leading a workshop on the use of camera traps in pheasant survey and monitoring. Provincial Forest Protection Departments in Quang Binh and Quang Tri provided accommodation in ranger stations and staff members as acted as guides and field assistants.

Conservation Impacts

Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.

Edwards's pheasant *Lophura edwardsi*, is one of the three globally threatened species identified for particular attention in the 2010 IndoBurma Call for Proposals. It is endemic to the forests of central Vietnam in the Indo-Burma Biodiversity Hotspot. Through this project we attempted to provide increased knowledge about the distribution of this species.

Please summarize the overall results/impact of your project against the expected results detailed in the approved proposal.

Through our project we wished to identify areas of existing suitable habitat for Edwards's pheasant, survey these areas and determine the presence or absence of the species in each. Through discussion with the project partners and a spatial analysis of available habitat (conducted by BLI) we identified several potential sites that may hold populations of Edwards's pheasant. The sites included (ordered by Province); Phong Dien Nature Reserve and Bach Ma National Park both in Thua Thien Hue Province; Dakrong Nature Reserve and Bac Huong Hoa Nature Reserve both in Quang Tri Province;

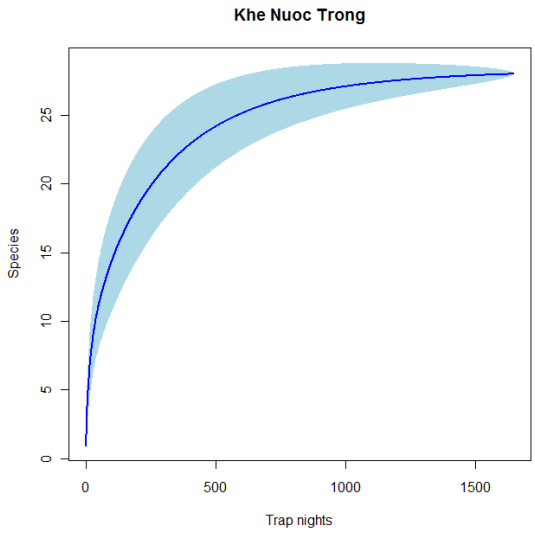
Ke Go Nature Reserve, Ha Tinh Province; Truong Son Forest Enterprise and Khe Nuoc Trong Watershed Protection Forest both in Quang Binh Province.

Due to logistical constraints we identified three sites from this list that were considered to have the highest probability of containing populations of Edwards's pheasant. These were Dakrong Nature Reserve, Truong Son Forest Enterprise and Khe Nuoc Trong Watershed Protection Forest. We used GIS maps of these sites to locate potentially suitable habitat within each site. Suitable habitat was assumed to be forest below an elevation of 400 m above sea level. After this analysis we visited each site to determine ease of access and to meet with local Forest Protection Department Rangers and village leaders, as well as registering with security forces (police and army). It was determined that Khe Nuoc Trong had two separate areas of lowland habitat which could be potentially important for Edwards's pheasant, but the distance between them and lack of access routes meant that this site would take longer to survey than expected. However, as the potential for this site to hold relatively undisturbed populations of Galliformes was high, we prioritised it for survey. Contrary to our original proposal, logistical constraints meant that we then surveyed only one other site, Dakrong Nature Reserve. Truong Son Forest Enterprise must be a priority for any future surveys.

We used established camera trapping methods to survey for populations of Edwards's pheasant in each site. As there is no ecological information on Edwards's pheasant we assumed that its home range size would be comparable to that of the closely related and a similar sized galliform, the Siamese fireback, *Lophura diardi*. We separated camera trap locations, therefore, by up to 500 m to ensure that we covered as many potential home ranges as possible. We also restricted locations to those <400 m above sea level in broadleaf evergreen forest and without extreme slopes. In order to detect a rare species adequately one needs a high number of camera-trap nights so we determined that for Edwards's Pheasant the minimum number would be 1,500 camera trap nights (using the method described in Tobler et al., 2008). For Khe Nuoc Trong we had a total of 1681 camera trap nights resulting in 36,364 photographs. For Dakrong we only had 424 camera trap nights resulting in 6,081 photographs. This low number of camera trap nights was due to limited available habitat in the reserve (lowland forest in Dakrong is characterised by extremely steep slopes), so results for this site must be considered preliminary.

Contrary to our expectations we did not record the presence of Edwards's pheasant in either site. We recorded 28 other animal species in Khe Nuoc Trong including humans and domestic animals (dogs and buffalo). We recorded 12 animal species in Dakrong including humans and domestic buffalo. Species accumulation curves reached an asymptote in each site suggesting that species sampling was exhaustive (Figure 1a & b).

a.



b.

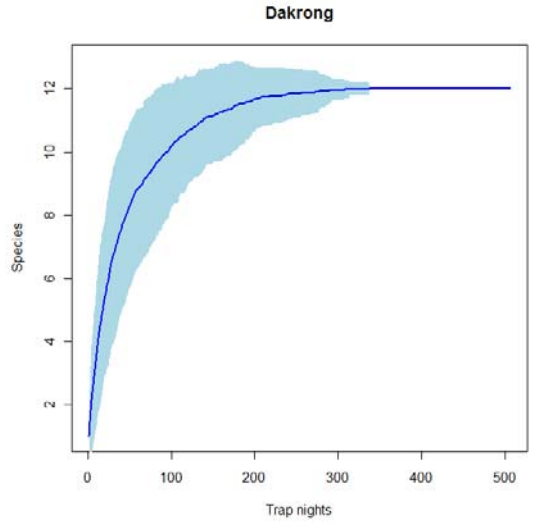


Figure 1. Randomised species accumulation curves for (a) Khe Nuoc Trong Watershed Protection Forest and (b) Dakrong Nature Reserve. The light blue shading indicates confidence intervals.

Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.

Short-term

Our project did not confirm the presence of the species in either site we surveyed. Given the number of camera trap nights (>1500) and species accumulation curves for Khe Nuoc Trong it is reasonable to conclude that the species is absent or at such extremely low abundance that it is undetectable in the site (given that the assumption about the species' preference for low elevation forest is correct). For Dakrong Nature Reserve the number of camera trap nights was a third of that needed to confirm the

presence of a rare species according to Tobler et al. (2008). The low species richness in Dakrong, the relatively few detections of galliform species, the sample accumulation curve reaching asymptote and high levels of human disturbance seen at the site all point to the species being extirpated from this site as well. However, we do not currently have enough information to be confident about this. Logistical and methodological time constraints meant that we could only sample two sites during the survey period and future surveys must prioritise Truong Son Forest Enterprise, Quang Binh. The other sites that need to be surveyed are Bach Ma National Park and Phong Dien Nature Reserve in Thua Thien Hue, Bac Huong Hoa Nature Reserve and Ke Go Nature Reserve in Ha Tinh Province.

We also wished to assess potential pressures on the species, such as hunting and disturbance due to collection of forest products by local communities. Traversing the forest was difficult and we could only provide a descriptive assessment of threats although we attempted to determine the density of anthropogenic threats by walking transects away from human paths where possible. The density of evidence of human use in Dakrong (including recent logging activity, rubbish piles, camp fires, domestic buffalo tracks and dung) was 0.212 per hectare. We found little evidence of ground-dwelling animals in the forest, 0.030 per hectare (we only found Muntjac tracks and Civet dung). In Khe Nuoc Trong the density of recent human use was 0.15 per hectare. The density of tracks and signs of ground dwelling animals was 0.20 per hectare. The tracks and signs included muntjac (*Muntiacus* species), civets (*Viverra zibetha, Paradoxurus hermaphroditus* and *Paguma larvata*), wild boar (*Sus scrofa*), macaques (*Macaca* species) and pheasants (Phasianinae).

Long-term

Our first long-term objective was to develop a survey and monitoring protocol that is repeatable. We used the experience of our project partners (KMUTT) to develop a sustainable sampling procedure to determine the presence or absence of Edwards's pheasant. This method is transferable to a variety of other species which share the secretive characteristics of Edwards's pheasant and are difficult to detect using established survey techniques. We trained 16 senior rangers of the Quang Tri Forest Protection Department and four BLI field staff in the use of camera traps for surveys of pheasants and other difficult to detect species. This training will allow the Quang Tri Forest Protection Department to develop monitoring surveys. Fieldwork in Dakrong Nature Reserve was carried out by BLI staff independently suggesting that the fieldwork protocol is sufficiently repeatable to be used in different lowland forest sites across the region.

Our second long term objective was for this project to feed into a revision of the IUCN Red List status of the species and for direct conservation action to be carried out by BLI's Vietnam Programme. Currently any action on these two objectives would be premature until we have surveyed all the sites identified as potential habitat for the species. The lack of confirmed records at two sites thought most likely to contain Edwards's pheasant may, however, be worth considering during the next red List assessment. These surveys need to be carried out urgently in order to ensure that conservation action (if needed) is carried out with utmost urgency.

Were there any unexpected impacts (positive or negative)?

No.

Lessons Learned

Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.

Project Design Process: (aspects of the project design that contributed to its success/shortcomings)

We did not have topographical data for each site meaning that areas under the assumed elevation threshold were often steep and potentially unsuitable for pheasant. In future surveys we need to source higher quality data including topographical layers (if they exist) to ensure that site selection can be carried out using GIS techniques.

Funding limitations and partnership with CECARD both meant that we were only supported logistically in two provinces (Quang Binh and Quang Tri) so could not visit all sites on the list of potential habitat for Edwards's pheasant.

Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)

The delayed arrival of the camera traps meant that two sites could be surveyed (only one sufficiently), but this should not be a constraint in future surveys. The projection of maps of Khe Nuoc Trong Watershed Protection forest in a format used only in Vietnam (and not on Vietnamese GPS units) meant that GPS navigation on the ground was difficult so that positioning the camera traps in to the predetermined sites was impossible. In addition, the lack of logistical support meant that we only had 5 days to set cameras in the forest (instead of the 10 that we had planned for). This meant that we were unable to penetrate the site sufficiently and cameras were set over a smaller area than that proposed. In addition, the lack of topographical information made site selection and moving through the forest with our equipment difficult.

By using a greater number of camera traps we would increase the number of sites that can be surveyed per year as the survey time per site would be reduced and BirdLife Vietnam purchased a further 40 camera traps to help in future surveys. The sourcing of better and more robust remote sensing/GIS maps and pre-surveys would allow more detailed planning and allow camera trap locations to be found faster and set in the correct pattern. Funding levels need to match the scope of the survey to allow logistical support for surveys. The terrain and nature of the camera trapping methods means that logistical assistance is needed to move equipment.

Other lessons learned relevant to conservation community:

In our experience the building of partnerships with organizations has occurred organically leading to long-term successful collaboration. In this project at the request of CEPF we joined in partnership with CECARD. Although this greatly enhanced the funds available for the survey work and offered significant comlpementarity of expertise, it has taken time to understand what each partner t expected from the other. This constrained the project. Now that WPA and CECARD have worked together however, we can begin to develop and cement a stronger relationship.

The lesson would be that other conservation projects may be more successful if partnerships build organically.

ADDITIONAL FUNDING

Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.

Donor	Type of Funding*	Amount	Notes

BirdLife International Indochina	A	$5400	40 camera traps
BirdLife International Indochina	A	$9000	BirdLife's senior national ornithologist's (Le Trong Trai) time in assisting and co-ordinating data collection
CECARD	A	$20000	CEPF funded project sharing funding and methodology

***Additional funding should be reported using the following categories:**

A *Project co-financing (Other donors contribute to the direct costs of this CEPF project)*

B *Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)*

C *Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)*

Sustainability/Replicability

Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.

Summarize any unplanned sustainability or replicability achieved.

The sustainability of the project has been ensured by the continued commitment of WPA and BLI to determining the status of Edwards's pheasant. We have developed a robust survey methodology that will allow us to determine the presence or absence of the species in lowland forest sites. We are continuing to source funding streams to continue the development of this project. Obviously the outcome of the surveys will determine the future of the Galliformes conservation in Vietnam. If the species is found it will need urgent conservation action, if the species is not found and therefore assumed extinct, Galliformes conservation in Vietnam will need to be supported further to ensure that other species are not extirpated from the country's forest.

Safeguard Policy Assessment

Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.

Not applicable

Performance Tracking Report Addendum

CEPF Global Targets

(Enter Grant Term)

Provide a numerical amount and brief description of the results achieved by your grant. Please respond to only those questions that are relevant to your project.

Project Results	**Is this question relevant?**	**If yes, provide your numerical response for results achieved during the annual period.**	**Provide your numerical response for project from inception of CEPF support to date.**	**Describe the principal results achieved from July 1, 2010 to June 30, 2011. (Attach annexes if necessary)**
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	No			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	No			
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	No			
5. If your project promotes the sustainable use of	No			

natural resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1below.				

If you answered yes to question 5, please complete the following table.

Table 1. Socioeconomic Benefits to Target Communities

Please complete this table if your project provided concrete socioeconomic benefits to local communities. List the name of each community in column one. In the subsequent columns under Community Characteristics and Nature of Socioeconomic Benefit, place an X in all relevant boxes. In the bottom row, provide the totals of the Xs for each column.

Name of Community	**Community Characteristics**								**Nature of Socioeconomic Benefit**													
	Small landowners	Subsistence economy	Indigenous/ ethnic peoples	Pastoralists/nomadic peoples	Recent migrants	Urban communities	Communities falling below the poverty rate	Other	**Increased Income due to:**				security due to the adoption of sustainable fishing, hunting or	More secure access to water resources	or other natural resource due to titling, reduction of	natural disasters (fires, landslides,	More secure sources of energy	public services, such as education, health,	traditional knowledge for environmental	decision-making due to strengthened civil society and	Other
									sustainable natural resource management	Ecotourism revenues	Park management	Payment for environmental services									

Total																						
If you marked “Other”, please provide detail on the nature of the Community Characteristic and Socioeconomic Benefit:																						

Additional Comments/Recommendations

WPA continues to be committed to determining the status of Edwards's pheasant in central Vietnam and is continuing to work closely with BirdLife Vietnam to identify potential funding opportunities to allow the expansion of survey effort.

Information Sharing and CEPF Policy

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, www.cepf.net, and publicized in our newsletter and other communications.

Please include your full contact details below:

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