



## Darwin Initiative Annual Report



Department  
for Environment  
Food & Rural Affairs

**Important note:** To be completed with reference to the Reporting Guidance Notes for Project Leaders:  
it is expected that this report will be about 10 pages in length, excluding annexes

**Submission Deadline: 30 April**

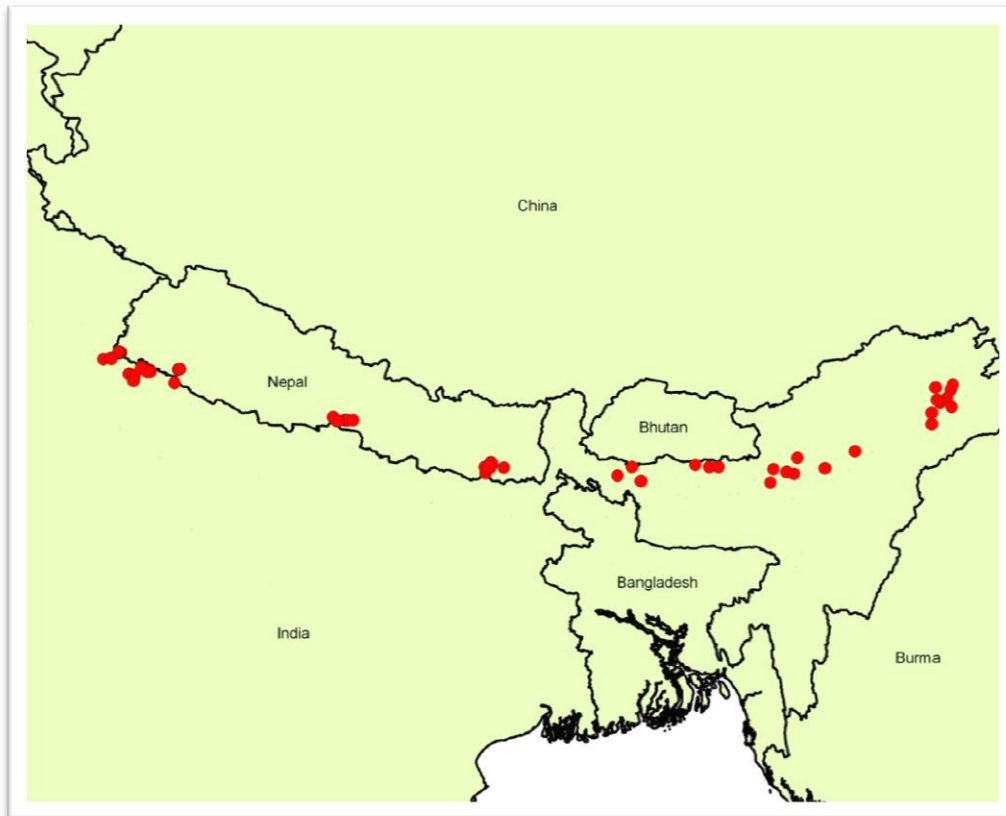
### Darwin Project Information

Project Reference	19-011
Project Title	Conserving the critically endangered Bengal Florican – a Terai flagship species
Host Country/ies	Indian and Nepal
Contract Holder Institution	Royal Society for the Protection of Birds (RSPB)
Partner institutions	Bird Conservation Nepal (BCN) and Bombay Natural History Society (BNHS India)
Darwin Grant Value	£290,417
Start/end dates of project	01/10/12 to 30/09/15
Reporting period (eg Apr 2013 – Mar 2014) and number (eg Annual Report 1, 2, 3)	Oct 2012 to Mar 2013 - Annual Report 1
Project Leader name	Ian Barber
Project website	
Report author(s) and date	Ian Barber – based on field reports from BNHS and BCN 05/05/13

### 1. Project Rationale

The decline of the Critically Endangered Bengal florican is inextricably linked to the loss of its Terai grassland habitat. By taking measures to ensure the survival of Bengal florican, through direct species protection and improved habitat management, the work will benefit an array of species unique to the Terai. Traditionally, conservation activities in the region have failed to incorporate the needs of lesser known species in the Terai, which include the Bengal florican, the hispid hare (EN), pygmy hog (CR) and bristled grassbird (VU). Grasslands globally are under threat, and are in retreat or decline in many areas due to their ease of conversion to agriculture, to unsustainable grazing practices, to the loss of natural browsers and to changes in atmospheric carbon, which promotes scrub encroachment. Grasslands are among the most threatened and least protected biomes on the planet.

The project location includes the low-lying grassland areas of the Terai in northern India and southern Nepal and the floodplain grasslands of the Brahmaputra river in North East India



**Fig 1** – The focal areas of the project, in southern Nepal and northern India, are indicated by the red circles.

## 2. Project Partnerships

The key relationships are with the two BirdLife Partners, the Bombay Natural History Society (BNHS India) in India and Bird Conservation Nepal (BCN) in Nepal. Both are well established nature conservation organisations and recognised leaders in the field of bird research in their respective countries.

The RSPB has long-standing partnerships with both organisations going back many years and they form part of our international programme of support to BirdLife Partners around the globe. This project evolved as a result of discussions with both partners and they were instrumental in developing the project proposal. Both organisations appointed existing staff members to work full-time as their Project Co-ordinators, (Mohit Kalra in India and Jyotendra Thakuri in Nepal) and both have worked with the RSPB Project Leader for several years.

## 3. Project Progress

### 3.1 Progress in carrying out project activities

#### **Output 1 - Knowledge of threats and distribution of Bengal florican in India and Nepal enhanced**

**Activity 1.1** - Recruit field staff in India and Nepal and identify capacity needs; train staff in Bengal florican survey and tracking techniques.

Both the in-country project partners, BCN and BNHS India, recruited experienced and capable Project Co-ordinators who have worked with RSPB before, Jyotendra Thakuri in Nepal and Mohit Kalra in India. A training programme to meet their needs has been developed. A workshop on census techniques for surveying Bengal floricans was undertaken at Chitwan National Park, Nepal and Puranpur, Uttar Pradesh, India. Each workshop was facilitated by Dr Paul Donald, Principal Conservation Scientist from the RSPB, and attended by project staff, individuals who will participate in the surveys and Government Officials from protected areas.

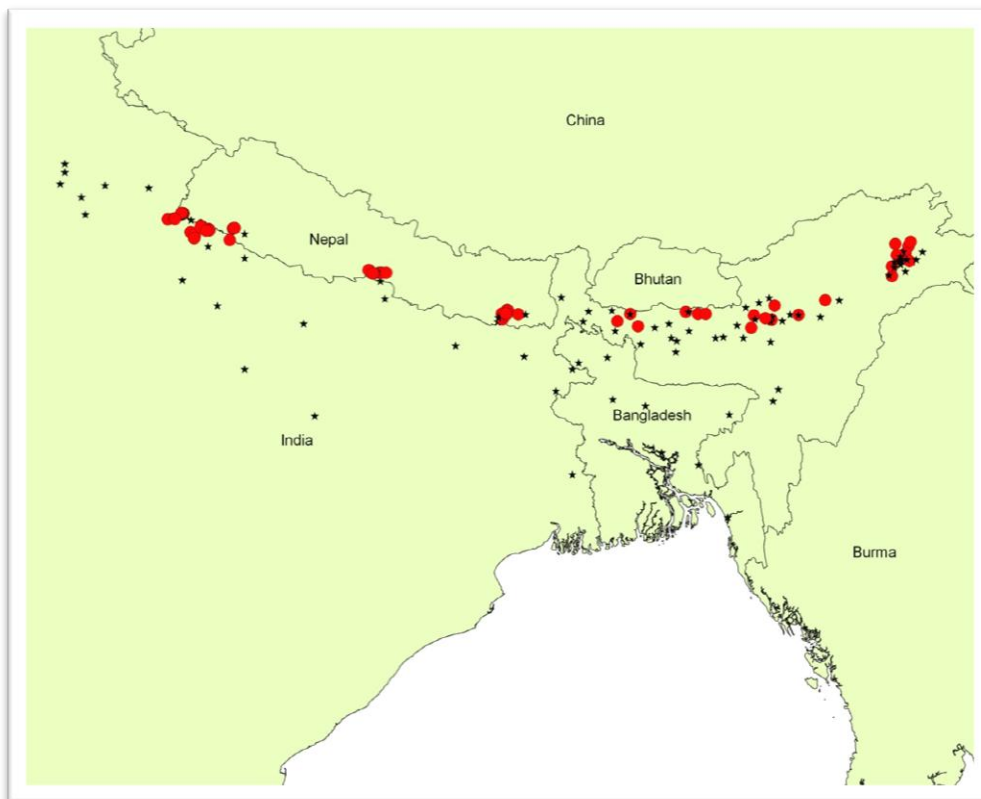
In India, Nikhil Sinde has been hired as a Field Researcher to assist Mohit in supervising the survey teams and he attended the workshop on census techniques.

The first attempt to tag the birds was undertaken in Koshi Tappu, Nepal where Jyotendra and Shambhu Ghimire from Himalayan Nature were trained in how to safely catch, handle and fix the satellite tags. This process will be undertaken next year in both India and Nepal.

The use of GIS modelling and satellite tracking techniques is an important part of the project and although Mohit is competent in these areas, Jyotendra needs training. Consequently, he will attend a suitable course once the survey season has finished in July. To facilitate the survey and research work we were able to obtain free copies of the ESRI ArcGIS software for both BirdLife partners which will be a valuable asset to them beyond this project.

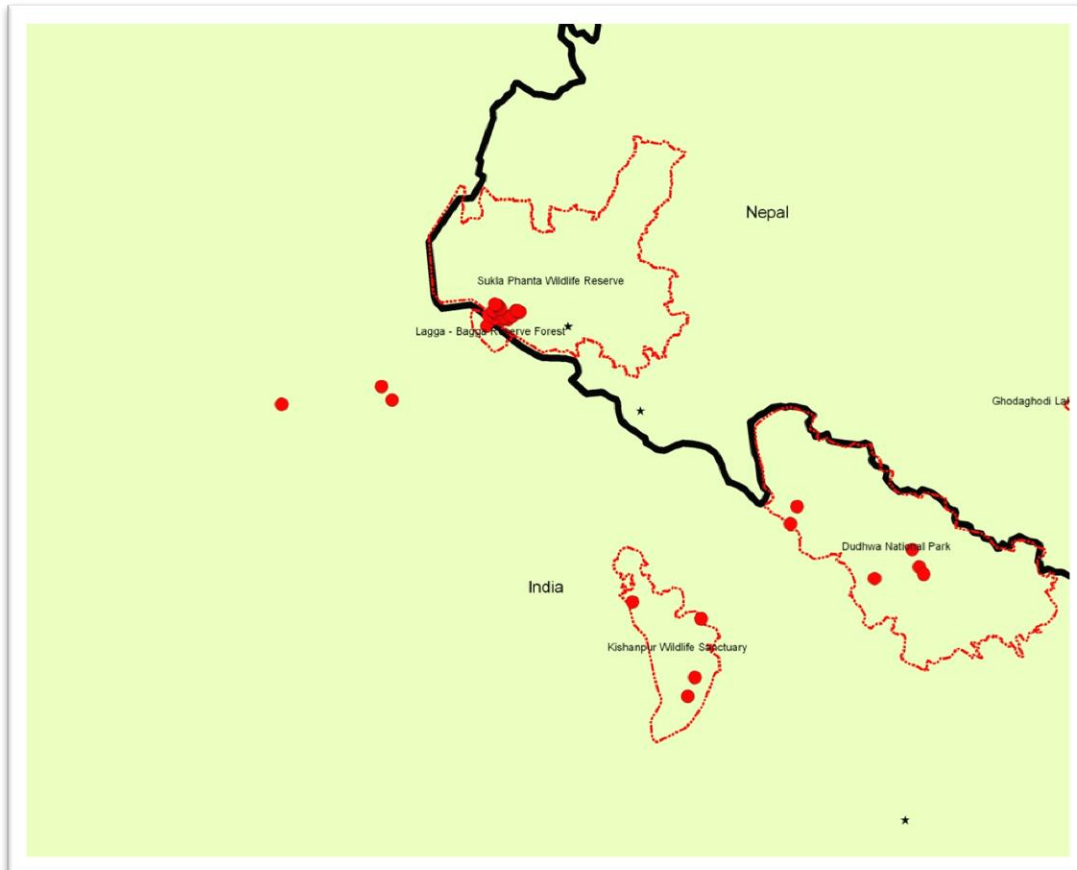
**Activity 1.2** - Collate and digitise all existing information on distribution on Bengal florican into a GIS. Download and analyse remote sensing environmental layers in the GIS. Develop list of sites to survey

A GIS geodatabase has been created containing a large number of layers likely to be of use to the project. This includes the digitised boundaries of all protected areas and Important Bird Areas within the species' range in India and Nepal, the location of rivers, inland water bodies and roads, administrative boundaries, altitude and land cover maps. In addition, recent and historical records of Bengal Florican in India and Nepal have been collected and georeferenced. All these layers are updated as new data come to light.



**Fig 2** – Project staff have collected all historical (stars) and recent (red circles) records of Bengal Florican to guide field surveys.

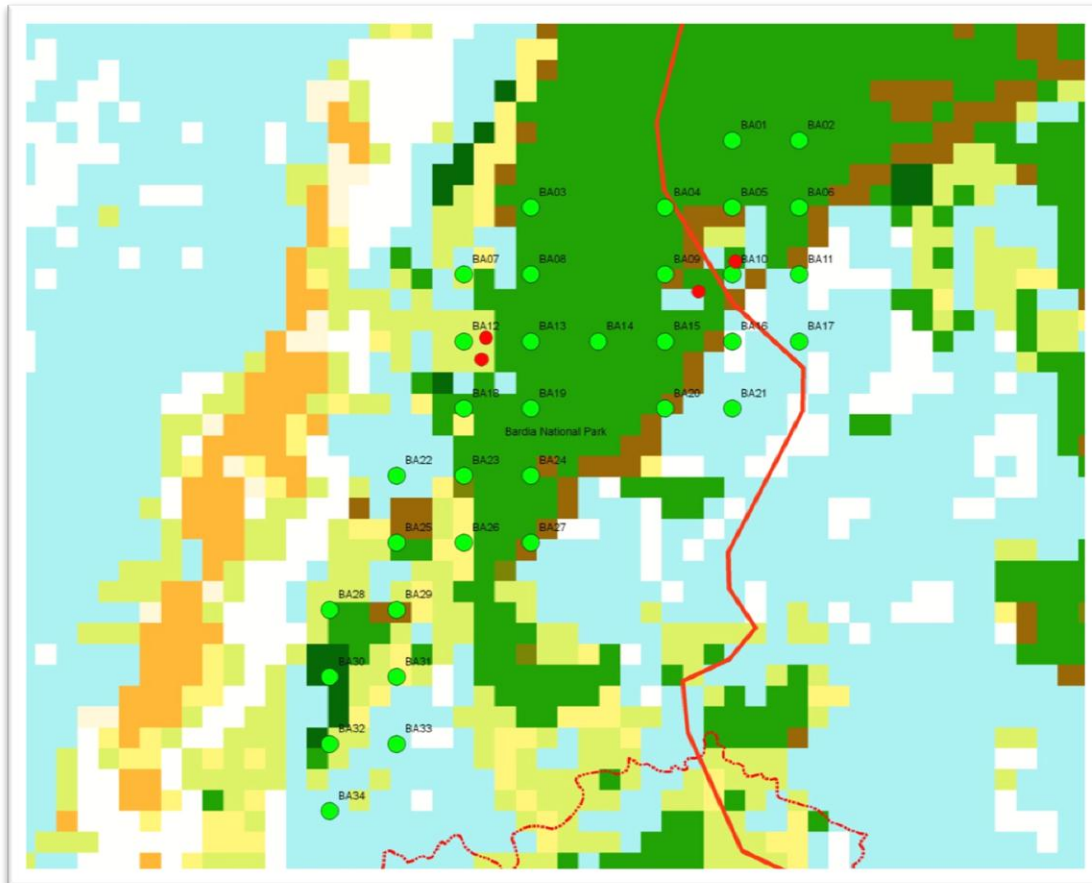
Analyses of the geodatabase confirm that most of the recent records of the species in both countries are from protected areas (Fig. 3), which therefore form the basis of the national surveys. Within Nepal, four national parks have been identified for survey: Sukla Phanta, Bardia, Chitwan and Koshi Tappu. In India, sites are split between Uttar Pradesh (Lagga Bagga, Pilhibit, Dudhwa, Kishanpur, Katerniaghat) in the west and Assam (Manas, Kaziranga, Orang, D'Ering, Dibang and others) in the east.



**Fig 3** - The majority of recent sightings, as here in western Nepal and Uttar Pradesh, are from national parks, offering both opportunities and challenges to undertaking surveys

The field surveys will be based on visits to a grid of survey points centred on cells of the SPOT-VGT platform, a satellite system that records NDVI (a measure of land cover) at regular intervals. Thus, birds located from a particular survey point can be unambiguously assigned to an NDVI cell, allowing accurate modelling of the species' distribution. The points selected were based on the distribution of previous records and local knowledge of the distribution of apparently suitable habitat (Fig.4).

Coordinates of selected points were provided to field teams on a pre-loaded GPS and in map form to allow field teams to orient themselves in the field.



**Fig 4** - A geodatabase produced for the project, together with local knowledge available at the planning workshops, aided survey design. At each site, survey points (green circles) were selected on the basis of recent records (red circles), roads (red lines) and an underlying habitat map

**Activity 1.3** - Undertake Bengal florican population survey in at least 3 areas in India and at least 4 areas survey in Nepal, using standardised and repeatable survey methods.

Although recent studies have been undertaken on the sub-species in Cambodia the habitat and survey conditions were likely to be different from those in the sub-continent. In order to assess any differences the Project Leader took the opportunity to visit some of the grassland areas in Uttar Pradesh, India in late October. In addition, Charlotte Packman was in the region working on the species in Cambodia so the Project Leader arranged to meet her in Nepal in early November to look at some of the grasslands in western Nepal. Charlotte has worked on this species for the past 5 years and was to be given the contract to catch and tag the birds on this project. We were accompanied by Jyotendra the Project Co-ordinator from Nepal on a 4 day visit to Suklaphanta Wildlife Reserve and Bardia National Park in South west Nepal.

The visits helped gain an understanding of the grasslands in both India and Nepal and Charlotte's assessment was that the site conditions are noticeably different in the Indian sub-continent where the grassland areas are smaller and there are subtle differences in management practices. In addition, there is the added danger of encountering wild animals such as tigers, rhino and elephants during field work. Consequently, a different survey technique has been adapted and so separate workshops were held in Nepal and India to develop a suitable census technique and recording form.

Dr Paul Donald, the RSPB Research Supervisor, facilitated workshops in Chitwan National Park, Nepal (3<sup>rd</sup>-5<sup>th</sup> March) and Puranpur, Uttar Pradesh, India (9<sup>th</sup>-10<sup>th</sup> March) with key people who know the bird and the grassland habitats well. He was joined at the workshop in India by Ian Barber the Project Leader. In Nepal, the 3-day workshop was attended by 12 participants representing all 4 of the key areas where we would be surveying while in India 18 people from the northern State of Uttar Pradesh were present although no one from the North East region was able to attend. In both workshops, Government officials from key protected areas attended.

The main survey technique (as described in section 3.1 page 6) was developed in Nepal and then refined at the workshop in India. Both workshops included field visits to local grasslands trial the technique. The survey areas were also identified based on previous records and local knowledge of the participants and grid points generated to enable uploading into GPS units to facilitate the location of sites during the survey (see section 3.1 page 6 and Fig 4). A recording form was developed enabling information to be recorded about location and weather conditions, habitat details, grazing and management activities. As the grasslands to be surveyed are in areas where vultures are seen we included a small section to record any sightings. This will be useful for the work we are engaged in on *Gyps* vultures in the region. The recording form is included in Annex 4.

Survey work started in late March in Nepal but in India, due to government bureaucracy and local politics delaying official permissions to undertake work in protected areas, surveys did not get underway until April.

**Activity 1.4** - Undertake satellite tracking studies. Quantify habitat condition in places used by Bengal florican and unused control sites, catch birds and attach radio satellite tags.

After visiting the grasslands in Nepal and taking into account the situation with permissions in India, the decision was taken to focus the attempts to catch and tag birds in Nepal for the first year. Depending on the level of success and if resources allow, another attempt at catching would be made in the second year. The effectiveness of the whole project depends on tagging and tracking birds and to maximise our chances it was decided to focus efforts on Koshi Tappu Wildlife Sanctuary, in eastern Nepal. In 2011, Bengal floricans were rediscovered here after an absence of almost a decade and a survey in 2012 indicated up to 47 birds were present, representing about 50% of the total population in Nepal. In addition, there are no tigers, rhinos or elephants in the Sanctuary, and the only dangerous animal likely to be encountered would be wild buffalo.

Much of January and February was spent preparing for the fieldwork including purchasing mistnets and arranging flights, travel, accommodation, vehicle hire etc. On 26<sup>th</sup> March Charlotte Packman for the UEA and Markus Handschuh from Frankfurt University joined Jyotendra Thakuri (BCN), Shambu Ghimire (Himalayan Nature) and Hem Sagar Baral (Himalayan Nature) at Koshi Tappu for two weeks of fieldwork. Initial tasks included searching for birds and training Jyotendra and Shambhu in setting the mistnets, handling birds and attaching the satellite tags. The latter was achieved by practicing on live chickens

During the first 5 days very few birds were seen (5 males, 3 females) and the two attempts at catching failed. As the arrival of the birds on their breeding grounds is largely determined by the timing of grassland management activities, particularly burning, and the emergence of fresh grass shoots and insects the team were beginning to wonder if they had arrived too early. However, on the 6<sup>th</sup> day, coincidentally April Fool's Day, they successfully caught and tagged a male bird which was the first ever for the Indian subcontinent. The next day they caught another male although as it appeared to be stressed they were unable to take any biometric measurements.

One issue they discovered during the fieldwork was that the birds in the subcontinent are significantly larger than the sub-species in Cambodia. As a result, the mistnet mesh size was too small to tangle the birds properly, with most birds getting their necks tangled not their wings, and the birds are more feisty and difficult to handle. The tangling contributed to the failed catching attempts

**Activity 1.5** - Download satellite data and measure distribution, population, movements and habitat requirements Bengal florican. Produce map of areas of existing and potential Bengal florican habitat.

Activity will start in second year.

**Activity 1.6** - Research findings published in relevant reports/journals disseminated to key stakeholders.

Activity will be undertaken in third year towards end of project



### **3.2 Progress towards project outputs**

As it is very early stages in the project and the initial survey and research work is all that has been started it is too soon to report on progress towards project outputs.

### **3.3 Progress towards the project Purpose/Outcome**

The main assumption to achieve the purpose is that “State and National governments remain supportive of grassland conservation management.” This still remains true and there are increasing signs that Bengal floricans and other Critically Endangered wildlife will be taken more seriously in future, in India at least. This was illustrated by a recent Indian Supreme Court ruling that directed the Ministry of Environment and Forests to “*take urgent steps for the preservation of the Great Indian Bustard and Bengal Florican*” among others. The judgment calls for something that policymakers have neglected, what the ruling calls the ‘species best interest standard’. Placing the persistence of species at its heart, the judgment calls for directives based on an ‘eco-centric approach’ and not a human or anthropocentric approach. (*Centre for Environmental Law WWF-1 v. Union of India and others, Supreme Court, 2013*)

There is no reason to believe that the indicator which states that the “needs of Bengal florican incorporated into management of four protected areas in India and Nepal” is adequate.

It is too early yet to say if the purpose of the project to “develop, demonstrate and advocate conservation measures for Bengal florican in India and Nepal” will be achieved by the end of the project as the focus so far has been on survey and research work which will lead on to developing and promoting the conservation measures.

### **3.4 Goal/ Impact: achievement of positive impact on biodiversity and poverty alleviation**

With just 6 months of the project complete and the emphasis on survey and research work it is too soon to say what contribution the project is making towards the Goal.

## **4. Project support to the Conventions (CBD, CMS and/or CITES)**

It is anticipated that by the end of the project the outcomes will have contributed to several of the Aichi Targets. With the focus of the first 6 months being on survey and research the most relevant to date has been Aichi Biodiversity Target 19 – knowledge relating to biodiversity are improved, widely shared and transferred, and applied.

It is anticipated the results of the research will give the Governments of India and Nepal improved knowledge of the population and distribution of Bengal floricans. In addition, the habitat requirements will be better understood which will enable them to develop practical actions.

Although working closely with Government officials at various levels there has not been any direct contact with host country convention focal points.

## **5. Monitoring, evaluation and lessons**

As no attempt has been made before to satellite tag and monitor Bengal floricans in the Indian sub-continent before, several lessons have been learnt already. Firstly, the issue of obtaining relevant permissions to survey and handle Critically Endangered species in both India and Nepal is complicated and bureaucratic. It is becoming increasingly difficult to have foreign nationals leading on projects which involve handling of sensitive species. This is particularly true of India given the bureaucracy that exists within the Government structure as permission has to be granted from both the Central and State levels. Consequently, we decided to focus catching in Nepal in the first year as permission there was finally granted in February this year. We will review the situation towards the end of 2013 and decided on a course of action for the next breeding season.

The other main lessons learnt was from the actual catching itself as the conditions in India and Nepal are different to those in Cambodia. There were relatively few birds around during the period set aside for catching and they were more widely dispersed so maybe the team were there just a bit too early, although those males that were seen seemed to be in full breeding plumage. Consequently, we will deploy a local team to locate birds in advance of the catching team arriving so less time is spent in looking for the birds and the team can attempt to catch birds straight away.

The sub-continental birds are also bigger than those in Cambodia and as a result the mesh size on the mistnets was too small as the birds generally did not get tangled by their wings but more often by their necks. This is not good for the health of the birds so we will invest in different nets for next season.

## **6. Actions taken in response to previous reviews (if applicable)**

Not applicable

## **7. Other comments on progress not covered elsewhere**

The main difficulties faced are discussed in Section 5 and we will reassess our approach to the survey and catching timings and methods next year.

## **8. Sustainability**

At the onset of the project it was decided to produce a pin badge of the bird with a backing card giving some simple information about the species (see Annex 4). The badge has been given to different levels of Government officials and community people and is proving to be very popular and a useful way of publicising the project.

The Darwin Initiative programme is relatively well known within both countries as various projects have been undertaken in each, some in collaboration with RSPB and BirdLife International. At the time of the application in 2011 BNHS had applied for Ministry of Environment and Forest (MoEF) funding for similar work and that formed part of our co-funding. Finally in March, the MoEF confirmed by letter that they will support the proposal and requested bank account details from BNHS although they have not received any funds to date. The approval and support of Central Government should make the issue of getting permissions to survey and catch birds easier. However, for the sake of diplomacy, the prominence of the Darwin project may have to be played down in India and some aspects of the project will come under the guise of the MoEF funded project.

## **9. Darwin Identity**

Press coverage in both countries has been good with the Indian press reporting on the initial visit by the Project Leader to the grasslands in Uttar Pradesh in October and the Nepal press covering the catching and tagging fieldwork (See Annex 4). In both cases the Darwin Initiative funding was highlighted.

In addition, the Project Leader has started a blog on the "RSPB Community" website: <http://www.rspb.org.uk/community/ourwork/b/biodiversity/archive/2013/05/01/bengal-florican-tag-teamed-and-a-first-for-the-indian-subcontinent.aspx>

As mentioned in Section 8, it may be more diplomatic in India to label this project as part of the MoEF programme on Bengal florican. In Nepal it will remain as a stand along project.



## 10. Project Expenditure

Table 1 project expenditure during the reporting period (1 April 2012 – 31 March 2013)

Project spend since last annual report	2012/13 Grant (£)	2012/13 Total actual Darwin Costs (£)	Variance %	Comments (please explain significant variances)
Staff costs (see below)			+1	
Consultancy costs				
Overhead Costs			+2	
Travel and subsistence			+5	
Operating Costs			-3	
Capital items (see below)			-2	
Others (see below)			0	
<b>TOTAL</b>			<b>0</b>	

**NB:** All budget changes were discussed and approved by Darwin on 01/03/2013.

## 11. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the Darwin Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here)

The outstanding achievement so far has been the first ever successful attempt at catching and tagging of Bengal florican in the Indian sub-continent. Most tagging and tracking of birds in the region have been done on waterbirds and geese as far as we are aware and this is the first attempt on land birds of this size.

## Annex 1: Report of progress and achievements against Logical Framework for Financial Year 2012-2013

Project summary	Measurable Indicators	Progress and Achievements April 2012 - March 2013	Actions required/planned for next period
<b>Goal/Impact</b> Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources		None so far	
<b>Purpose/Outcome</b> Develop, demonstrate and advocate conservation measures for Bengal florican in India and Nepal.	Needs of Bengal florican incorporated into management of four protected areas in India and Nepal	It is very early in the project and the initial survey and research work is all that has been started hence it is too soon to report on progress towards project purpose/outcome.	Tracking of satellite-tagged birds and habitat information will provide vital information to developing conservation measures to help conserve and expand key Bengal florican areas.
<b>Output 1.</b> Knowledge of threats and distribution of Bengal florican in India and Nepal enhanced.	1a. Population size in sub-continent estimated and key sub-populations identified by Sept 2014. 1b. Habitat requirements of Bengal florican (both breeding and non breeding) identified by Mar 2015. 1c. Maps of remaining and potential Bengal florican habitat in India and Nepal published by Sept 2015.	1 <sup>st</sup> year surveys have started to identify location and habitat occupied by observed birds which will enable a model to be developed pinpointing addition sites to be surveyed in 2 <sup>nd</sup> year. The results of the two surveys will determine the distribution of the species and facilitate the calculation of a population estimate.  Indicators appropriate	
Activity 1.1 Recruit field staff in India and Nepal and identify capacity		In-country Project Co-ordinators employed from start of project and additional staff employed to assist with survey work as required.  Further staff will be employed for advocacy work once tracking of birds yields some data	
Activity 1.2 Collate and digitise all existing information on distribution on Bengal florican into a GIS. Download and analyse remote sensing environmental layers in the GIS. Develop list of sites to survey.		Database established and populated with historical records. Layers downloaded and survey sites for Y1 chosen. Results from Y1 surveys will be added and sites for Y2 surveys will be refined.	
Activity 1.3. Undertake Bengal florican population survey in at least 3 areas in India and at least 4 areas in Nepal, using standardised and repeatable survey methods.		Workshops held in Nepal and India to develop census techniques. Surveys underway in Nepal by March 13 but slightly delayed in India but expected to be underway in April.	
Activity 1.4 Undertake satellite tracking studies. Quantify habitat condition		Tag team spent 2 weeks in field and caught and satellite tagged two birds on 1 <sup>st</sup>	

Project summary	Measurable Indicators	Progress and Achievements April 2012 - March 2013	Actions required/planned for next period
in places used by Bengal florican and unused control sites, catch birds and attach radio satellite tags		and 2 <sup>nd</sup> April. No attempt made to fit radio tags. Habitat surveys of areas used by birds will be undertaken in Y2.	
Activity 1.5 Download satellite data and measure distribution, population, movements and habitat requirements Bengal florican. Produce map of areas of existing and potential Bengal florican habitat.		Data will be downloaded on a weekly basis and analysed.	
Activity 1.6 Research findings published in relevant reports/journals disseminated to key stakeholders.		To be done towards end of project summarising research data and results	

## Annex 2 Project's full current logframe

Project summary	Measurable Indicators	Means of verification	Important Assumptions
<p>Goal: Effective contribution in support of the implementation of the objectives of the Convention on Biological Diversity (CBD), the Convention on Trade in Endangered Species (CITES), and the Convention on the Conservation of Migratory Species (CMS), as well as related targets set by countries rich in biodiversity but constrained in resources.</p>			
<p>Sub-Goal: Extinction threat to Bengal florican is significantly reduced.</p>	<p>Five years after end of project (EOP) Bengal florican is downgraded from Critically Endangered to a lower category of threat.</p>	<ul style="list-style-type: none"> <li>- IUCN publications.</li> <li>- Peer reviewed publications.</li> </ul>	
<p>Purpose Develop, demonstrate and advocate conservation measures for Bengal florican in India and Nepal.</p>	<p>Needs of Bengal florican incorporated into management of four protected areas in India and Nepal.</p>	<ul style="list-style-type: none"> <li>- National park management plans</li> <li>- Community grassland management plans</li> </ul>	<p>State and National governments remain supportive of Grassland conservation management.</p>
<p>Outputs (add or delete rows as necessary) 1. Knowledge of threats and distribution of Bengal florican in India and Nepal enhanced.</p>	<p>1a. Population size in sub-continent estimated and key sub-populations identified by Sept 2014. 1b. Habitat requirements of Bengal florican (both breeding and non breeding) identified by Mar 2015. 1c. Maps of remaining and potential Bengal florican habitat in India and Nepal published by Sept 2015.</p>	<ul style="list-style-type: none"> <li>- Population monitoring reports</li> <li>- IUCN bustard group reports</li> <li>- Peer reviewed publications</li> </ul>	<p>Research methods produce significant results.</p>
<p>2. Management techniques to produce suitable Bengal florican habitat in and around Protected Areas developed and trialled.</p>	<p>2a. Three restoration management trials developed and are being utilised by Bengal floricans by Sept 2015 2b. Local farmers and pastoralists from two communities involved in habitat management trials by Sept 2015.</p>	<ul style="list-style-type: none"> <li>- Habitat management trial reports.</li> <li>- Records of Bengal Floricans on restoration trial areas</li> <li>- Media reports</li> </ul>	<p>Management techniques for Bengal florican and spatial extent to which they should be applied are compatible with requirements of other key species.</p>

<p>3. Local communities, Senior Protected Area decision makers, relevant conservation organisations and local Bengal florican Conservation Groups are aware of management techniques for Bengal florican.</p>	<p>3a. Three local Bengal florican support groups established by Sept 2014.</p> <p>3b. Three visits to demonstration trials made by Key decision makers from National Park management authorities by Sept 2015.</p> <p>3c. Grassland management strategy developed and adopted by four protected areas by EOP.</p> <p>3d. Key decision makers endorse species recovery plans</p>	<ul style="list-style-type: none"> <li>- Project progress reports</li> <li>- Grassland habitat management guidelines</li> <li>- Endorsed species recovery plans</li> </ul>	<p>Traditional grazing regimes are shown to benefit Bengal florican habitat. Advocacy and awareness raising is successful in encouraging positive land management for Bengal florican. Participation of key stakeholders is secured.</p>
<p>4. Capacity for Bengal florican Conservation Programme in India and Nepal built, sustainability and legacy of project outputs secured.</p>	<p>4a. National Scientists and Park Authority staff are monitoring Bengal florican using consistent replicable protocols by Sept 2014 and seeking funding from government for Bengal florican conservation programmes by Sept 2015</p> <p>4b. Three local conservation groups monitoring and protecting floricans, by Sept 2014 and seeking funding to continue work beyond the end of the project by Sept 2015.</p> <p>4c. Nepalese National Species Recovery Plan for Bengal florican published and launched by Sept 2014.</p> <p>4d. Indian National Species Recovery Plan for Bengal florican reviewed and amended by Sept 2014.</p> <p>4e. Indian and Nepalese authorities are implementing action points from National Species Recovery plans within 1yr of EOP.</p>	<ul style="list-style-type: none"> <li>- Park Authority florican monitoring reports</li> <li>- Park Authority funding applications</li> <li>- Local conservation group reports</li> <li>- Funding applications to support Local conservation groups</li> <li>- Bengal florican National Species Recovery Plans</li> <li>- Media reports of Recovery Plan launch.</li> </ul>	<p>Project partnerships remain strong throughout the duration of the project.</p>

## Annex 3 Standard Measures

**Table 1 Project Standard Output Measures**

Code No.	Description	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Total to date	Number planned for reporting period	Total planned during the project
Established codes								
4A	Number of undergraduate students to receive training	2				2	2	3
4B	Number of training weeks to be provided	1				1	1	10
4C	Number of postgraduate students to receive training	2				2	2	2
4D	Number of training weeks to be provided	3				3	3	10
6A	Number of people to receive other forms of education/training (which does not fall into categories 1-5 above)	30 <sup>1</sup>				30	0	10
6B	Number of training weeks to be provided	1 <sup>1</sup>				1	0	4
8	Number of weeks to be spent by UK project staff on project work in the host country	9				9	5	8
15A	Number of national press releases in host country(ies)	4				4	2	4
15B	Number of local press releases in host country(ies)	2				2	2	6
18C	Number of local TV programmes/features in host country(ies)	1				1	1	2
23	Value of resources raised from other sources (ie in addition to Darwin funding) for project work	~£30k <sup>2</sup>				~£30k		
New -Project specific measures								

<sup>1</sup> – Census Technique training workshops, 3-days in Nepal and 2-days in India

<sup>2</sup> – RSPB/BirdLife facilitated free copies of ESRI ArcGIS software for both BNHS and BCN at an estimated saving of ~£15k per partner.

**Table 2 Publications**

Type (eg journals, manual, CDs)	Detail (title, author, year)	Publishers (name, city)	Available from (eg contact address, website)	Cost £
None				



**Annex 4 Onwards – supplementary material**

**Bengal Florican project publicity**

Local newspaper articles in India relating to the visit to grasslands in Uttar Pradesh in Oc 2012:

*Amarujala 28/10/2012*

देश | विदेश

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## तराई में बढ़ेगा बंगाल फ्लोरिकन चिड़िया का कुनबा

**● सिटी रिपोर्टर**

**पीलीभीत।** केंद्र सरकार की पहल पर धने जंगलों वाले तराई में बंगाल फ्लोरिकन के कुनबे को बढ़ाने के प्रयास शुरू हो गए हैं। इंग्लैंड की संस्था रॉयल सोसाइटी फॉर प्रोटेक्शन ऑफ बर्ड्स (आरएसपीबी) की एक टीम इसी सिलसिले में यहां पहुंच गई है। वह जंगलों का जायजा लेकर इस चिड़िया के अस्तित्व के लिए जरूरी काम लैंड देखेगी।

शनिवार को पर्यावरण प्रेमी टीएच खान के आवास पर इंग्लैंड से आए

**● इंग्लैंड की संस्था आरएसपीबी का तीन साला प्रोजेक्ट, भारत-नेपाल में है करीब पांच सौ चिड़ियां**

आइरन बारबर ने बताया कि संस्था की तरफ से बंगाल फ्लोरिकन के संरक्षण का यह प्रोजेक्ट भारत और नेपाल में चलाया जाएगा। इन दोनों देशों में करीब पांच सौ फ्लोरिकन चिड़ियां होने का अनुमान है। यूके की एक संस्था इस पर करीब 1.60 लाख



बनाया गया है, जिसमें खोरी की तराई नेचर कंजर्वेशन सोसाइटी के अध्यक्ष और वनस्पति विज्ञानी डॉ. बीपी सिंह, रिसर्च वर्कर पुष्पेंद्र कुमार को भी शामिल किया गया है।

वनस्पति विज्ञानी ने बताया कि यह चिड़िया घास के मैदानों में ही रहती है। चूंकि पीलीभीत के जंगलों में घास के मैदान बहुतायत में हैं। इसलिए यह सर्वे यहां भी किया जा रहा है। ऐसे मैदानों को बढ़ाने पर वन अधिकारियों से चर्चा भी की जाएगी। यहां पर्यावरण प्रेमी टीएच खान को भी जिम्मेदारी दी गई है।

बंगाल फ्लोरिकन चिड़िया।

पौंड खर्च करेगी। संस्था का मुख्य उद्देश्य लगातार कम हो रही इस विलुप्त जाति की चिड़िया को अफिक से अधिक संरक्षण देना है। मैदान पर ही सर्वाधिक पाई जाती है। सर्वे के लिए तीन सदस्यीय दल



वित्तुप्राय बंगाल फ्लोरिकन के संरक्षण की कवायद शुरू हो गई है। इसी के तहत शनिवार को पीलीभीत पहुंचे इंग्लैंड के एरन बारबर। इंग्लैंड की संस्था इस पक्षी के संरक्षण के लिए काम कर रही है।

*Hindustan 28/10/12*

पीलीभीत/आसपास

पीलीभीत प्र

## ‘बंगाल फ्लोरिकन पक्षी का होगा संरक्षण’

**पीलीभीत | हिन्दुस्तान संवाद**

दि रॉयल सोसाइटी फॉर दि प्रोटेक्शन ऑफ बर्ड्स के इंटरनेशनल ऑफिसर एशियाई. बारबर ने कहा है कि दुनिया में बंगाल फ्लोरिकन पक्षी विलुप्त श्रेणी में पहुंच गए हैं, जिनका संरक्षण किया जाएगा। इन पक्षियों को पूरी दुनिया में सिर्फ एक हजार संख्या बची है। इसे संरक्षित करने की जरूरत है।

बारबर शनिवार को सेव इन्चार्जमेंट वेल्फेयर सोसाइटी कार्यालय पर बातचीत कर रहे थे। उन्होंने कहा कि बंगाल फ्लोरिकन पक्षी दुनिया के तीन बेरों भारत, नेपाल थ कंबोडिया में पाया जाता है। कंबोडिया में 500 तथा शेष दोनों देशों में पाए जाते हैं। ये पक्षी मुख्यतः ग्रासलैंड में पाया जाता है। आज खेती-किसानी में पेस्टीसाइड के इस्तेमाल से

बंगाल फ्लोरिकन पर संकट मंडरा रहा है। ऐसे में हम सभी को जागरूक होकर संरक्षित करने के लिए आगे आना होगा। उन्होंने कहा कि जंगल पर दबाव अधिक होने की वजह से ग्रासलैंड समाप्त हो रहे हैं, जिससे उसका देन बसेरा समाप्त हो रहा है।

उस स्थान पर वन महकमे द्वारा प्लान्टेशन कराया जा रहा है, जो सही नहीं है। बोले-बंगाल फ्लोरिकन पक्षी को बचाने के लिए आरएसपीबी संस्था कार्य कर रही है। भारत में बीएनएचएस और तराई नेचर कंजर्वेशन सोसाइटी मिलकर इस पक्षी को बचाने के लिए तीन साल तक कार्य करेगी। पहले चरण में पक्षी के रहने के स्थान को चिन्हित करना है। राज्य वन्यजीव बोर्ड के सदस्य डा.बीपी सिंह ने कहा कि तीन साल के प्रोजेक्ट में बंगाल फ्लोरिकन को संरक्षित करने की

दिशा में कार्य किए जाएंगे। भारत सरकार की परमीशन के बाद बंगाल फ्लोरिकन पक्षी में रेडियो कालरिंग ट्रांसमीटर लगाए जाएंगे, जिससे उसकी लोकेशन के बारे में पता चल सकेगा। असम प्रदेश से लेकर उत्तराखंड तक कार्य किया जाएगा, जिसमें इंडो-नेपाल सीमा भी शामिल है। इस मौके पर टीएच खान, विलाल खां, डीरीलाल गुप्ता आदि मौजूद थे।

**महोफ व लग्गाभग्गा में दिखा ये पक्षी**

लुप्तप्राय बंगाल फ्लोरिकन पक्षी को मौजूदगी जिले के महोफ और लग्गा भग्गा क्षेत्र में पाई गई है। इब्नू इब्नूएफ के तराई आर्कलैंड के हेड डा.हरीश गुलेरिया, तत्कालीन डीएफओ वीके सिंह समेत कई वन अफसर बंगाल फ्लोरिकन के दर्शन कर चुके हैं।



[http://ekantipur.com/kantipur/news/news-detail.php?news\\_id=292551](http://ekantipur.com/kantipur/news/news-detail.php?news_id=292551)

[http://www.myrepublica.com/portal/index.php?action=news\\_details&news\\_id=52135](http://www.myrepublica.com/portal/index.php?action=news_details&news_id=52135)

## खरमुजुरको घाँटीमा 'स्याटलाइट चिप्स'

पिताम्बर सिग्देल

**काठमाडौं, २५ चैत :** बेलायत र जर्मनीबाट आएका पन्छीविद्दय डा. चार्लोट प्याकम र डा. मार्कोसले १२ दिनसम्म कोसीटप्पु वन्यजन्तु आरक्षमा दर्जनीपटक फन्को मारे। १२ वटा खरमुजुर समाल आएका यी विज्ञले चार नेपाली पन्छीविज्ञको सहयोग पनि लिए। विश्वमै दुर्लभ यो पन्छीको बासस्थान र गतिविधि अनुसन्धान गर्न आएको विदेशी टोलीले बल्लतल्ल दुईवटा खरमुजुर समातेर चित बुझाएको छ। ती खरमुजुरमा बेलायतबाटै ल्याएको 'स्याटलाइट चिप्स' बाँधेर टोली आइतबार काठमाडौं फर्कियो।

साढे चार किलोका दुई भाले खरमुजुर पखेटा र घाँटीमा बाँधिएको चिप्स बोकेर अहिले कोसी किनारमा घुमिरहेका छन्। पोथी समाल नसकेपछि विज्ञहरू भालैमै चिप्स झुन्ड्याएर फर्किएका हुन्। 'फेरि अर्कोपटक मिलाएर समाच्छौं', टोलीका सदस्य पन्छीविद् ज्योतेन्द्र ठकुरीले भने।



तस्विर सौजन्य: ज्योतेन्द्र ठकुरी

नेपाल, भारत र कम्बोडियामा मात्रै पाइने यो चराको गतिविधि हेर्न बेलायतमा टोली नै खटिएको छ। पखेटामा झुन्ड्याइएको स्याटलाइट चिप्सले खरमुजुरको गतिविधि संकेत गरिरहेको छ। पन्छीको गतिविधि र व्यवहार अनुगमन चरा अनुसन्धानमा ख्याति कमाएको बेलायतको आरएसपीभी (रोयल सोसाइटी फर प्रोटेक्सन अफ बर्ड) ले गरिरहेको छ। सरकारी सहयोगमा सञ्चालित यो संस्थाले नेपाली खरमुजुरको नियमित अध्ययन गर्नेछ। 'बेलायतबाटै विशेषज्ञको टोलीले विस्तृत अध्ययन गर्छ', कोसीटप्पु पुगेका नेपाली चराविज्ञ डा. हेमसागर बरालले भने।

यसअघि खरमुजुरबारे भएका सबै अध्ययन यसको संख्यामा मात्र केन्द्रित थिए। 'यसपटकचाहिँ बासस्थान र गतिविधि जान्न खोजिएको हो', ठकुरीले भने। नेपालमा करिब एक सयवटा खरमुजुर भएको अनुमान छ। खरमुजुर कोसीटप्पु वन्यजन्तु आरक्ष, चितवन राष्ट्रिय निकुञ्ज, बर्दिया राष्ट्रिय निकुञ्ज तथा शुक्लाफाँटा वन्यजन्तु आरक्षमा मात्रै पाइन्छ। राष्ट्रिय निकुञ्ज तथा वन्यजन्तु संरक्षण एनले संरक्षित पन्छीको सूचीमा राखेका नीवटामध्ये खरमुजुर पनि एक हो। सन् १९८२ को एक अध्ययनमा नेपालमा खरमुजुरको संख्या ४० जोडी थियो। सन् २००७ मा भएको अर्को अध्ययनले यो संख्या घटेर ३० जोडीमा पुगेको तथ्य सार्वजनिक गरेको थियो। नेपालमा यो अति संकटापन्न चराको सूचीमा सूचीकृत छ।

नेपालमा पाइने खरमुजुर भारत र कम्बोडियामा पाइनेभन्दा केही ठूला छन्। समुद्र सतहदेखि तीन सय मिटरसम्मको उचाइमा पाइने यो चरा सिरु र काँसको मिश्रित घाँसेमैदानमा बस्छ। 'बच्चा कोरले समयमा यो चरा तराईमा देखिए पनि मनसुन र जाडोयाममा भने कहाँ जान्छ थाह छैन', ठकुरीले भने। भाले खरमुजुर तुलनात्मक रूपमा बढी सक्रिय हुन्छ। पोथीले खरमुजुरले एकपटकमा दुईदेखि तीनवटा अण्डा पाउँछ।

नागरिक पत्रिका १३ वैशाख २०१३ २६ तारिख

## खरमयुरमा स्याटलाइट जोडिँदै

चितवन, चैत १२ (नागरिक)- संकटापन्न पन्छी खरमयुरमा स्याटलाइट जडान गर्न मंगलबार संरक्षणकर्मीहरू कोशीटप्पु पुग्दैछन्। चराविज्ञ हेमसागर बराल, सार्लोट प्याकम्यान, मार्कोस, ज्योतेन्द्र ठकुरी, शम्भु धिमिरेको टोलीले आरक्षमा खरमयुर खोज्नेछ। उनीहरूसँगै वन मन्त्रालय र निकुञ्ज विभागका प्रतिनिधि पनि त्यसतर्फ जाँदैछन्। पहिलो चरणमा दुइवटा खरमयुरमा स्याटलाइट जडान गरिने ठकुरीले बताए। विदेशी संरक्षणकर्मीले ल्याएको अत्यधुनिक प्रविधीको स्याटलाइटबाट खरमयुरका गतिविधि नियाल्ने उनले बताए।

'अब हिउँद र मनसुनको सुरुमा नेपालका खरमयुर देखिन छाड्छन्,' ठकुरीले भने 'त्यस अर्वाधमा कहाँ जाँदा रहेछन् भन्ने स्याटलाइटबाट अध्ययन गर्छौं। खरमयुर बच्चा कोरले बेला नेपाली भू-भागमा देखिए पनि त्यसपछि आउने हिउँद र वर्षातमा नेपालबाट प्रायः हराउँछन्। दुई दिन फिल्ट्रि अनुगमनपछि एक हप्ता खरमयुर खोज्ने, पक्रने र स्याटलाइट जडान गर्ने गर्छौं,' चराविद्



चितवन राष्ट्रिय निकुञ्जमा खरमयुर।

तस्विर: चितवन निकुञ्ज

बरालले, 'खरमयुर पक्रन सजिलो छैन।' खरमयुर कालो सेतो छिर्बिरे रंगको र घाँसेकै रंगसँग मिल्दोजुल्दो हुन्छ। सिरु अथवा खरको भाडीमा बस्न रुचाउने खरमयुरको संख्या, बासस्थान र गतिविधि पत्ता लगाइने बरालले बताए। 'खरमयुर समातेर र त्यसमा स्याटलाइट ट्रान्समिटर जोडेपछि ल्याब रुमको कम्प्युटरमा सजिलै त्यसले पठाएका तथ्यांक हेरेर अध्ययन गर्न सकिने विज्ञहरूले बताए। आरक्षमा खरमयुरका एक दर्जनभन्दा बढी जोडी भएको अनुमान छ। अर्को वर्ष शुक्लाफाँटा आरक्ष, चितवन निकुञ्ज, बर्दिया निकुञ्जमा स्याटलाइटबाट अध्ययन गरिनेछ।

अध्ययनअनुसार २०३८ सालमा नेपालमा ५६ देखि ८२ खरमयुर थिए। सन् २००७ को अध्ययनले ५६ प्रतिशत खरमयुर घटेको देखाएको थियो। नेपाल पछि संरक्षण संघ, हिमाली प्रकृति र युकेको आइएसपिभीको सहकार्यमा खर

**Pin-badge details**



<p><b>Help us save the Bengal Florican by protecting grasslands</b></p>	 <p>Photo: Ramki Sreenivasan - Conservation India</p> <p><b>Bengal Florican</b> <i>Houbaropsis bengalensis</i></p>
	

**Front of backing card**

The Bengal Florican is Critically Endangered due to very small, isolated and rapidly declining populations. It inhabits lowland dry or seasonally flooded grasslands from Uttar Pradesh, India, through the terai of Nepal, to Assam and Arunachal Pradesh. The females are rarely seen, but the mostly black male has white wings which are visible during its spectacular breeding display (March to May). The main threats to the species survival are loss of grasslands to agriculture, overgrazing, inappropriate cutting and burning, and increasing development.

<p><b>Bird Conservation Nepal</b> PO Box 12465, Kathmandu, Nepal Tel: + 977 1 4417805/4420213 E-mail: bcn@mail.com.np Website: www.birdlifeneal.org</p>	<p><b>Bombay Natural History Society</b> Hornbill House Shaheed Bhagat Singh Road Mumbai 400 001, India Tel: + 91 22 2282 1811 E-mail: info@bnhs.org Website: www.bnhs.org</p>
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**Back of backing card**

**Survey Recording Form Developed at Workshops in Nepal and India.**

**Darwin Initiative - Bengal Florican Survey 2013-2014**

**Visit details**

<b>Observers</b>		<b>Date</b>	<b>Park</b>	
<b>GPS</b> N: E:	<b>Point code</b>	<b>Wind</b> None/Mild/Moderate/Strong	<b>Cloud cover</b> -----/8	<b>Air clarity</b> Mist/Haze/ Clear
<b>Time start</b>		<b>Time end</b>	<b>Visit number</b> 1            2            3	

**Point information**

<b>Visibility (m)</b>		<b>Within 100m (Y/N)</b>	
<b>N</b>	<b>S</b>	<b>Grass cutting</b>	<b>Recent fire</b>
<b>NE</b>	<b>SW</b>	<b>People</b>	<b>Flooding</b>
<b>E</b>	<b>W</b>	<b>Vehicles</b>	<b>Other (e.g. raptors)</b>
<b>SE</b>	<b>NW</b>	<b>Grazing</b>	

**Bengal Floricans seen**

<b>Bird #</b>	<b>Sex (M/F)</b>	<b>Activity when first seen<sup>1</sup></b>	<b>All activities seen<sup>1</sup></b>	<b>Distance from point (m)</b>	<b>Bearing (degrees from N)</b>	<b>Heard calling? (Y/N)</b>
1						
2						
3						
4						
5						

<sup>1</sup> Display flight (D), Walking (W), Flying (F), Feeding (E), Other (O)

**Habitat information**

<b>% Grassland within 50m</b> 0-20            60-80 20-40            80-100 40-60	<b>% Grass height in 50m</b> 0-10cm..... 100-200cm..... 10-50cm ..... >200cm..... 50-100cm .....	<b>Tall trees (&gt;5m) in 50m</b> 0            25-50 1-10        50-100 10-25      >100
<b>Dominant grass species</b>	<b>Florican visibility on ground</b>  Invisible when lands Head only Head and back Legs	<b>Small trees (1-5m) in 50m</b> 0            25-50 1-10        50-100 10-25      >100
		<b>Shrubs in 50m</b> 0            25-50 1-10        50-100 10-25      >100
<b>Dominant herb species</b>	<b>Habitat notes</b>	

Grazing animals (wild, feral and domestic)			
Species	Number within 200m		
<b>Other notable or indicator species recorded (especially Globally Threatened Species)</b>			
<b>Incidental Bengal Florican sightings (not during 20-min counts)</b>			
<b>Date</b>	<b>Time</b>	<b>Activity</b>	<b>Seen while walking between survey points?</b> Yes/No
<b>GPS</b> N: E:	<b>Sex/age</b>	<b>Habitat notes</b>	<b>Flushed while walking between points?</b> Yes/No
<b>Notes</b>			

**Vulture road transects** (Please complete only once for each day)

	YES/NO
I did not look for vultures on my way <u>to</u> the study site today	
I looked for vultures on my way <u>to</u> the study site but did not see any	
I looked for vultures on my way <u>to</u> the study site and recorded the number seen on the transect form	
I did not look for vultures on my way <u>from</u> the study site today	
I looked for vultures on my way <u>from</u> the study site but did not see any	
I looked for vultures on my way <u>from</u> the study site and recorded the number seen on the transect form	



**Photographs from project activities.**



**Photo 1** - Dr VP Singh giving an interview to a local TV station after our visit to grasslands in Uttar Pradesh, India (Oct 12)



**Photo 2** - Assessing the grassland habitats in Suklaphanta WR, Nepal (Nov 12)



**Photo 3** - Participants at the Census Technique workshop in Puranpur, Uttar Pradesh, India (Mar 13)





**Photo 4** – Practicing applying the satellite tags to live chickens (Mar 13)



**Photo 5** – After sighting a bird, the mistnets are set and then the bird slowly carolled into the net using the vehicle (Mar 13)



**Photo 6** – The first Bengal florican ever caught and tagged in the Indian Sub-continent (Apr 13)

## Checklist for submission

	Check
<b>Is the report less than 10MB?</b> If so, please email to <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> putting the project number in the Subject line.	Yes
<b>Is your report more than 10MB?</b> If so, please discuss with <a href="mailto:Darwin-Projects@ltsi.co.uk">Darwin-Projects@ltsi.co.uk</a> about the best way to deliver the report, putting the project number in the Subject line.	No
<b>Have you included means of verification?</b> You need not submit every project document, but the main outputs and a selection of the others would strengthen the report.	Yes
<b>Do you have hard copies of material you want to submit with the report?</b> If so, please make this clear in the covering email and ensure all material is marked with the project number.	No
Have you involved your partners in preparation of the report and named the main contributors	Yes
Have you completed the Project Expenditure table fully?	Yes
Do not include claim forms or other communications with this report.	