

Darwin Initiative: Half Year Report

(due 31 October 2008)

Project Ref. No.	162/15/017
Project Title	Implementing a Recovery Plan for the Critically Endangered Pygmy Hog in Assam.
Country(ies)	India
UK Organisation	Durrell Wildlife Conservation Trust
Collaborator(s)	1. The Forest Department (FD), Ministry of Environment and Forests, Government of Assam. 2. IUCN – SSC Pigs Peccaries and Hippos Specialist Group (PPHSG) 3. Pygmy Hog Conservation Programme Research & Breeding Centre (PHCPRBC), Basistha, Assam
Project Leader	Prof. John E. Fa
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Report No. (HYR 1/2/3/4)	HYR 3
Project website	None at present

1. Outline progress over the last 6 months (April – September) against the agreed baseline timetable for the project (if your project has started less than 6 months ago, please report on the period since start up).

Progress in carrying out project activities

The main highlight of this period was release of captive bred pygmy hogs in the wild. In May 2008, 16 captive bred pygmy hogs were successfully released in a 'vacant', but now well protected, grassland in Assam, potentially creating a second wild population of this critically endangered species. In addition, some crucial aspects of the programme, particularly the outreach activities likely to have positive impact upon the security and management of the existing and reintroduced pygmy hog populations, were also strengthened.

Pygmy hog surveys

Surveys intended to determine both the most suitable release sites and affirm the absence of any existing pygmy hogs were carried out again in the grasslands of the release site in Sonai Rupai Wildlife Sanctuary prior to their reintroduction. Similar surveys were also carried out in Orang Wildlife Sanctuary to assess the grasslands there as a potential additional release site. No evidence of any existing pygmy hog populations were found in either of these sanctuaries, despite the continued availability of seemingly suitable habitat and the fact that both areas lie within the recent known or assumed distribution range of this species. However, various degradative factors (e.g. high-levels of anthropogenic disturbances), which have now been brought under more rigid control, are thought likely to account for their prior extirpation from these areas. Conversely, the continuing survival of small populations of these animals was found in all three ranges of Manas National Park, despite there being as yet no significant improvement in habitat quality in the grasslands of Bansbari Range, though tall grasslands in both Bhuyanpara and Panbari Ranges had evidently recovered to some extent from illegal livestock grazing and thatch collection following enhanced community participation in habitat protection.

Conservation breeding and captive population management

Altogether 17 (9♂♂ 8♀♀) babies were born in five litters at our Basistha conservation breeding

facility under a planned breeding effort. The breeding plan is intended to ensure that only unrelated or distantly related animal are bred and optimal genetic heterozygosity is maintained in captivity. By the end September the captive population stood at 66 (32♂♂34 ♀♀), of which sixty animals were held at Basistha and six at Potasali holding facility. These were in addition to sixteen hogs shifted to Potasali pre-release enclosures and finally released in Sonai Rupai in May.

Extensive repairs are being carried out in the Potasali pre-release enclosures after the rainy season. The simulated grassland habitat is being deweeded and prepared for hogs. The Basistha breeding centre and Potasali holding facility too were maintained in good condition for the captive hogs.

Preparations for release

At Potasali, the 16 (7♂ 9♀) hogs in three groups were prepared for independent survival in the wild in the three large 'pre-release' enclosures densely planted with tall grass to simulate their natural habitat. The pre-release routine allowed them to become used to the conditions they will face in the wild and minimises contact they have with humans.

Marking and health screening: All animals targeted for release were marked for identification using microchip transponders as well through hair clipping. They were also subjected to regular health screening. Blood samples, rectal and nasal swabs were sent for investigation to veterinary college but no abnormality was found.

Behavioural studies: The behaviour of hogs was recorded under a scientific study after they were shifted from the breeding centre to the pre-release enclosures. It was highly encouraging to see that these hogs started showing naturalistic behaviour within a few weeks at the pre-release facility.

Radio telemetry: Six adult hogs, two from each group of hogs targeted for release, were fitted with radio-harnesses specially designed for the species about a month before the planned release. Although the radio transmitters worked well, the harness began to cause serious injuries to the hogs within three weeks as the hogs moved rapidly through very thick vegetation and coarse grass. The harnesses were removed and alternate methods were devised to monitor the hogs in the wild.

Habitat restoration and management at the release site: The staff and authorities at the two short-listed sites – Sonai Rupai Wildlife Sanctuary and Nameri National Park – were advised to initiate scientific management and restoration of grassland habitat. After signs of improvement at Sonai Rupai, it was decided to carry out the release this year in the Gelgeli grasslands of the sanctuary.

Release and monitoring in the wild

The hogs prepared for independent survival in the wild at the pre-release facility were taken to Sonai Rupai in May 2008. Under the soft release procedure, they were initially kept in release enclosures that were protected from wild elephants and predators using solar powered electric fence and were kept under round-the-clock vigil from a hide on a tree. The three groups of hogs were allowed to integrate and get familiarised for a few days before being given the option to escape to the wild after about two weeks.

The hogs were monitored using indirect signs of activity such as forage marks, footprints, droppings and nests. They were also trained to return to the release enclosure by using some delicacies as bait. Two groups kept returning to the baiting station with reducing frequency for about a month and individuals were identified through body markings during observations from the hide. Presence of active or older nests and foraging marks along with footprints helped in determining the dispersal of the hogs in the grassland.

Of the 16 released hogs, 2 (1♂1♀) died and another male, who associated with the dead female, did not rejoin any group after her death, and remains in the vicinity of the Gelgeli camp. The remaining hogs formed three groups and have established home ranges within a kilometre from the release enclosure. While the nearest group moved only about 100 m southwards other two moved to an area 300 to 700 m in north-westerly direction from the release enclosure. Although it became increasingly

difficult to track the hogs as the grass became tall and dense and monsoon rains cut off the access to the monitoring camp, periodic surveys have shown continued survival of these three groups. In September, two of the groups shifted their home ranges slightly towards north within the same general area. It is possible that these two groups shifted their home ranges partly to avoid intensive activity of wild elephant herds in that area.

Training and capacity building

Follow-up training of frontline protection staff of Sonai Rupai Wildlife Sanctuary, Nameri National Park and Barnadi Wildlife Sanctuary continues using some trainers and monitors identified during the Darwin training course conducted in collaboration with Zoological Society of London. Some of the trained staff are being used in survey and monitoring exercises in Sonai Rupai and Orang. The school teachers and some NGO members trained by us are also being assisted by us in their conservation education efforts around Manas National Park. Unfortunately, with floods cutting off roads, access to most areas around Manas was limited from June to September affecting the extension activities.

The construction of the Manas training centre at Bansbari too has also been delayed due to restricted road access, but it should be completed by end of this year.

M.Sc. Students: Two M.Sc. students completed small projects after receiving training and guidance from programme personnel. One of them, from the Wildlife Conservation Society M.Sc. Wildlife course (based at National Centre for Biological Sciences, Bangalore) carried out the behavioural study on the hogs when they were shifted from captivity to semi wild habitat of the pre-release enclosures. The second student from the Imperial College, London, carried out an assessment of fire occurrences in Manas between 2000 and 2008, a study that will help in preparing a better management plan for the pygmy hog grasslands.

Meeting in Jersey: A meeting was held in Jersey in end June 2008 to review and to prepare an action plan for the project activities. Besides the project personnel (John Fa and Goutam Narayan) the meeting was attended by some senior Durrell staff (including Quentin Bloxam, Stephan Funk and Andrew Terry).

Community Conservation Initiatives

The community conservation initiatives in the fringe villages of Manas National Park continue to strengthen the entry level activities started earlier. Human animal conflict mitigation, popularization of alternative livelihood options and improvement of Park-people relations are being used for effective conservation of the pygmy hog grasslands in Manas. The villagers are being encouraged to form Self Help Groups (SHGs) to address economic and conflict issues. Training and counselling of the SHG members were carried out in three model villages selected in the three ranges of the Park and these included:

- Training programmes for pickle and jam making and marketing at Barengabari (Bansbari) and Thajoguri (Bhuyanpara). The training was done on the lines of similar efforts of the Project at Potasali, Nameri.
- Training in the account keeping / registration of SHGs was carried out in all three ranges. Regular monthly contributions by the members and procedure for securing bank loans were also discussed.
- A special meeting for mitigating human elephant conflict was organised in Sourang (Panbari) by PHCP as a part of project's community initiatives. Rechargeable spotlights developed by project partner EcoSystems-India were distributed in Panbari.
- SHGs in all three ranges are being helped in cultivation of a very hot variety of local chilly (*bhut jolokia*). Besides benefiting economically by selling the sapling and fruit of the plant, the chilly is also being used effectively as chilly-smear rope barrier and chilly smoke device against wild elephants under Darwin Initiative sponsored Assam Haathi Project of Chester Zoo and EcoSystems-India.
- The all women SHG of Thajoguri, that was trained and counselled by the Project, has begun to

