

GLOBAL RE-INTRODUCTION PERSPECTIVES

Re-introduction case-studies from around the globe



**Edited by
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Cover photo: Clockwise starting from top-left:

- Formosan salmon stream, Taiwan
- Students in Madagascar with tree seedlings
- Virgin Islands boa

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Attempted re-introduction of cheer pheasant to the Margalla Hills National Park, Pakistan

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Introduction

The cheer pheasant (*Catreus wallichii*) was classified as Endangered in the first Red Data Book lists of threatened species, but data collected since combined with development of the IUCN Red List Criteria has resulted in a more robust Vulnerable listing. It is on Appendix I of CITES, and was abundant in captivity in Europe during 1980 - 1995; it is now rare in these collections. This species is native of open grasslands and scrub at 1,000 - 3,000 m along the Himalayan chain from NE Pakistan to the Kali-Gandaki valley in west-central Nepal. The re-introduction project undertaken by the World Pheasant Association (WPA) from 1978 to around 1990 was centered on the Margalla Hills National Park at the extreme NW limit of the native distribution. The last wild cheer pheasants in this area were believed to have been hunted in 1976. For a full review and references, see Garson *et al.*, 1992. *Biological Conservation* 59: 25 - 35.

Goals

- Goal 1: The establishment of self-sustaining population of cheer pheasant in the Margalla Hills National Park, Pakistan.
- Goal 2: A capability in the Capital Development Authority of Islamabad to manage this population and its habitat for conservation.



Cheer Pheasant (*Catreus wallichii*) male © Jean Howman

Success Indicators

- Indicator 1: The existence of a wild population of cheer pheasant producing sufficient offspring to survive in the long term in the Margalla Hills National Park, Pakistan.
- Indicator 2: Capacity within the Capital Development Authority of Islamabad to manage this population and its habitat in the Margalla Hills National Park, Pakistan.

Project Summary

Feasibility: The feasibility of this re-introduction project was assessed in 1977 by Sheldon Severinghaus for WPA. An accessible site for a soft-release pen (Dhok Jiwan) was

selected at only 700 m, below the known altitude range for the species, and the site was on the very edge of the geographical range. The habitat (and altitude), given what was then known about the species' biology, seemed suitable: a mix of grass, scrub and scattered tree cover. The Margalla Hills were given greater conservation status in 1978, when the area was upgraded from a Game Sanctuary to a National Park. This resulted in a marked reduction in grass cutting, grazing and browsing by domestic stock, which in the course of time allowed a dense scrub to develop close to the original release pen and more generally. A new release site (Jabri) on the main ridge at >1,000 m was established in 1983, and another (Gagra) at a higher and more remote location was used from 1988.



Typical cheer pheasant habitat

Implementation: This involved the transport of fertile eggs laid by birds in the aviaries of European WPA members to Islamabad, and thence the few kilometers to the incubation facilities and adjacent release pens. In each year some hundreds of eggs were sent to Pakistan, but avicultural problems such as excessive heat, incubator failure and disease outbreaks amongst the confined poults, resulted in few surviving to the point of release. This required the birds to fly out of their single large release pen, although they could return there via 'pop-holes' which only opened inwards in the fence. Evidence of a lack of anti-predator behavior in the released birds led to rearing procedures that minimized human contact and increased parent-rearing, at the expense of incubators and broodies, from 1986 onwards. In 1987, the entire population of several hundred chicks died a few weeks after hatching as a result of bacterial and parasitic infections. An attempt was made to soft release smaller groups of poults, simulating the covey (family group) in nature, from multiple pens at Gagra in 1988 - 1989.

Post-release monitoring: The first serious attempt at post-release monitoring in 1981 involved radiotagging ten poults (all of which were predated by foxes, jackals or civets). In 1984 - 1985 up to six birds survived (from 38) for over six months, with a similar result in 1985. Following the change in rearing conditions in 1986 there was evidence of better survival following release, and birds attempted to breed in both 1987 and 1989. There is no good evidence that any wild-bred chicks survived beyond three months. By this time, in the light of research on wild cheer pheasant in India and successional changes from grassland to dense scrub in the Margalla Hills, the amount of suitable habitat available amounted to no more than three territories at Gagra and none anywhere else in the National Park.

Birds

Major difficulties faced

- A lack of knowledge of the natural history of the species when the project was initiated.
- Severe logistic, climatic and veterinary difficulties in the chick rearing phase.
- A lack of equipment and expertise in most years for post-release monitoring.
- A progressive deterioration of the habitat from a managed seral grass and scrub to an impenetrable scrub forest. By the end of the project there was too little suitable habitat left for a re-introduction project to have any prospect of success.

Major lessons learned

- Research your species where it still occurs in the wild if details of its basic natural history are unknown.
- Simulate natural social organization in captive rearing conditions: minimize human contact and maximize the use of real parents to rear chicks in pens in the habitat into which they will be released.
- Provide sufficient training and equipment to allow all aspects of the project, including producing eggs from breeding stock and post-release monitoring, to proceed under local stewardship as soon as possible.
- Be aware of wider conservation and protected area management issues that may affect the viability of the project.

Success of project

Highly Successful	Successful	Partially Successful	Failure
			√

Reasons for success/failure/failure:

- Habitat became progressively less suitable to the point at which a successful project was impossible.
- Little evidence of prolonged survival of released birds.
- No reliable evidence of wild-bred chicks surviving to independence.

References

Garson, P.J., Young, L. & Kaul, R. (1992) Ecology and conservation of the Cheer pheasant *Catreus wallichii*. Studies in the wild and the progress of a re-introduction project. Biological Conservation 59: 25 - 35.