



Newsletter of the Re-introduction Specialist Group of IUCN's Species Survival Commission (SSC)

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Letter from the Chairman MARK STANLEY PRICE

Firstly, I would like to welcome all our new members to the new triennium and thank all members who have sent in their completed forms. We have, however, only received 122 replies from the 254 invitations sent out. **Please, all of you who have not returned your forms, do so as soon as possible. Unless RSG hears from you by April 1 1995, we will presume that you no longer wish to be a member, or to receive any more issues of RE-INTRODUCTION NEWS.**

This new triennium has brought a change of face to the RSG office. Sadly, Minoo Rahbar had to leave us to resume studies in the USA after 2½ successful years. In that time she helped RSG grow from less than 50 members to more than 250. Her hard work paid off when RSG was awarded the Chicago Zoological Society's 1993 Presidential Award for outstanding work in conservation, and a generous donation from the Geraldine R. Dodge Foundation. Annabel Fairclough takes over as editor of RE-INTRODUCTION

NEWS and Administrative Project Officer. RSG is presently interviewing for the post of Technical Project Officer. The successful candidate will be responsible for taking the group into new areas of technical activity.

RSG achievements in the past 6 months include the RSG draft guidelines for the disposal of confiscated animals being incorporated as a technical annex to a proposal from the Netherlands government on this subject at the 9th CITES Conference of the Parties, held in November 1994. They are still not finalised as an independent document, but this was an exciting role for RSG. Our sincere thanks go to Joshua Ginsberg of the RSG's Task Force for Confiscated Animals, who has done most of the thinking and writing on them. The guidelines for re-introductions are still with the IUCN Council and various individuals, but we hope are nearing adoption as IUCN policy. RSG's Task Force for Conservation Introductions is being established; this seems to be an area of growing interest.

In this issue we cover a variety of issues involving a wide range of species, countries and ecosystems. On page 2, for the benefit of all our new members, and to refresh the memories of our older members, we have included the RSG mission statement and objectives. It is important that members are not only aware of these, but understand and promote them. On page 3 is a review of 'Creative Conservation' which is a very exciting new book and the first of its kind in the field. Encouragingly, many of the authors are RSG members.

As well as the plant re-introductions already being instigated, it is encouraging to see many new projects being proposed. Our thanks go to Mike Maunder for his informative articles, and for his energy, enthusiasm and hard work as Chair of RSG's Plant Section. Longevity of some of the projects as documented in this issue, for example the Asian rhino and the Scottish Sea eagle, is a warning to all those proposing or initiating projects. Both are still on-going projects after 10 or so years, and even now the populations are fragile, dependent on only a few individuals. This is especially the case with the Sea eagle, as determined by modelling. This highlights the need for long term planning and financial backing for any proposed re-introduction project, but especially those involving species with a long life span and slow reproductive output which are, in other aspects, good candidates for re-introduction. These are often animals which are either solitary or found in pairs, or maybe small groups, and are generally at the top of the food chain. Other successful re-introductions of this type include the European bison (*Bison bonasus*) and the Mauritius kestrel (*Falco punctatus*).

The newsletter has a new section, Re-introduction Issues, for any issue that a member, or RE-INTRODUCTION NEWS reader, feels is important or particularly interesting and which should be brought to the attention of the RSG. Controversial issues always arise from re-introductions; this is an opportunity to raise them. This could be allowed to develop into a correspondence section.

Surveys of sites which could be utilised for re-introduction were identified by extensive survey work on the Puerto Rico Bank carried out by the conservation staff of the Toledo Zoological Gardens from 1985-1988. Principle components analysis was used to identify habitat patches matching those areas in which extant populations of boas were still abundant. Population surveys were carried out of potential predators and prey species. Concomitant with this effort, AZA institutions were breeding boas at their facilities that would be used later in the re-introduction. More than 100 Virgin Islands boa offspring were produced at the Toledo Zoo alone during this period. The captive-born snakes were offspring of stock captured from Cayo Diablo, a small bay close to Cayo Ratones.

Once the potential release sites were identified, it was necessary to eradicate the introduced black rats and house mice (*Mus musculus*) from the target islands. This was accomplished by three rounds of poisoning with anticoagulant rodenticides spaced six months apart. The entire cays were divided into 10 m x 10 m grids, and 8-10 blocks of poison were placed at the interstices of each grid, then replaced as they were consumed. Decline and eradication of the rodent population was monitored by trapping on 100 m transects, visual observation and placement of wooden chew sticks throughout the islands.

Prior to the actual release, snakes deemed suitable for re-introduction were assembled at the Toledo Zoological Gardens for a 30-day quarantine period, which included faecal sampling for parasites and a diet change from mice to the crested anole (*Anole cristatellus*), which is the most commonly utilised prey item of the Virgin Islands boa in the wild. Snakes were then tested for hunting ability in a 2 m x 2 m x 1.5 m enclosure in which the live anoles, provided for food, could escape if a strike attempt by a snake was unsuccessful.

Three cohorts of boas were ultimately used for the release: completely naive neonates, sub-adults from 500 - 600 mm snout length (SVL), and reproductively mature adults, SVL > 700 m. Sub-adult and adult boas were implanted with passive integrated transponders for identification and neonates were identified by photographs of dorsal body patterns. The snakes were released at night in a patch of littoral forest composed primarily of *Pisonia subcordata*, but later dispersed to all heavily-vegetated areas of the island. Data on survivorship from each of these age classes are being collected. However, to date there is no significant difference in survival between age classes. Minimum survival estimates for the first year exceed 54%; the actual survival is probably much higher and will improve as data collection continues. Quarterly monitoring will continue through 1994 and semi-annual monitoring will continue at least through 1995.

The re-introduced snakes, four of which have been monitored by radiotelemetry, show foraging behaviour identical to that of wild snakes. Most of the recaptured neonate and sub-adult animals have doubled or tripled their body masses in the first year and produced five offspring.

A second release on Cayo Ratones was scheduled for November 1994; other releases will be made from time to time to improve the genetic diversity of the re-introduced population. Re-introduction of boas to a site in the U.S. Virgin Islands is scheduled for 1996. These activities have been funded by the USFWS, the AZA Conservation Endowment Fund, the Institute of Museum Services Conservation Project Support Program and the Toledo Zoological Society (TZS).

Contributed by Peter J. Tolson, TZS, USA.

RE-INTRODUCTION UP-DATES

Ten Years (1984-1994) of the Asian Rhino Re-introduction Programme in Dudhwa National Park, India

The main aim of the rhino re-introduction programme was to re-introduce and re-establish a rhino population at a selected location within its former range, ie. Dudhwa National Park. The last rhino in Uttar Pradesh was shot in 1878 in the Pilibhit district which adjoins the Park (see RE-INTRODUCTION NEWS 3).

The existing rhino population is now well established with strong bonding developed between individuals. However, the re-introduction programme has not been without its share of setbacks. Three adult cows, one adult male and four calves have died due to various reasons over the past ten years. On the whole, however, the outcome of this programme has shown positive results with successful breeding in the re-introduced population.

The present rhino population comprises 13 animals, with one adult bull, four adult cows and eight calves born in Dudhwa. The latest recruitment was a calf born in October 1994. In January 1994, a calf born of a second generation rhino female unfortunately died due to a lung infection.

Over the past years the lone adult bull has become increasingly aggressive and intolerant of any other adult rhinos. This resulted in the death, between 1991 and 1993, of two adult cows and a young male. The bull has since been moved into a separate enclosure within the re-introduction area.

Problems:

1. In the existing rhino population there is only one male. It has mated with all the adult females, including a second generation female.

2. To check inbreeding and to retain genetic vigour, a fresh stock of rhinos is needed. Also, the current population is too small to absorb the impacts of natural random events.

Solutions:

1. Establishment of a separate rhino population in Bhadhi Tal area in Dudhwa National Park. Bhadhi Tal is prime rhino habitat and could support a separate rhino population.

The area has two big water bodies with extensive grassland and woodland, covering an area of approximately 40 km².

2. Translocation of a fresh stock of rhinos to the proposed site, Bhadhi Tal, and at the current site. Depending upon availability, Bhadhi Tal needs fresh batches of rhinos from outside, and at least two or three females from the current site need to be shifted to this area. A fresh stock of at least two males and four females needs to be re-introduced at the current site to maintain genetic vigour. In the future, however, as the rhino populations increase, there may be a possibility of linking the two areas with a corridor.

Contributed by Dr. S. P. Sinha and V. B. Sawakar, Wildlife Institute of India, Chandrabani, India

Andean Condor Re-introduction Continues in Colombia and Venezuela

On 9 September 1994, five captive-raised juvenile Andean condors (*Vultur gryphus*) arrived in Bogota, Colombia as part of the ongoing programme to re-establish this endangered species to its historical range in Colombia and Venezuela. These five birds (2 males and 3 females), reared at the San Francisco Zoo and the San Diego Wild Animal Park, will be held at the release facility in the Chingaza National Park for a two month quarantine period, after which they will be transhipped to Venezuela for release in the Mifafi Valley in the Sierra La Culata National Park. This shipment brings the total of captive-reared Andean Condors that have been re-introduced into northern South America over the past six years to 39, 29 birds to Colombia and ten to Venezuela. Of the 39 birds released, 34 survive, with hopes that the first fledglings released in 1989 will reproduce in 1995. The programme in Colombia is coordinated by RenaSer in cooperation with the newly formed Colombian Ministry of the Environment and, in Venezuela, by the Environmental Project of the Banco Andino in cooperation with the National Park Service.

Contributed by Alan Lieberman, The Peregrine Fund, Hawai'i.

Hawaii Bird Brief

The Big Island Endangered Hawaiian Conservation Program of the Peregrine Fund, in collaboration with the U.S. Fish and Wildlife Service, had an exciting and productive year working with two endemic Hawaiian species. The critically endangered Hawaiian crow, or alala (*Corvus hawaiiensis*), numbering no more than 11 confirmed birds in the wild, had a good year with five chicks being artificially incubated and reared from eggs taken from wild nests. Together with the chicks raised in 1994 at the Hawaii State Facility at Olinda, the total 1994 production between the two operations was nine chicks. Seven of these chicks are now at the Peregrine Fund's release facility at 5,100 feet in the South Kona (Hawaii Isle) Forest. The young birds will spend

several months in the 1.5 acre release aviary, learning to forage on native foods. When competent to fend for themselves, they will be 'soft-released' into the surrounding forest to join the five young birds released in 1993. In 1995, a second captive flock will be established with the Peregrine Fund's newly constructed captive propagation facility which is presently in the development stage. It is expected that the facility will be operational by mid-1995.

In anticipation of incubating and hand-rearing the 19 endangered Hawaiian forest bird species, the Peregrine Fund staff raised five amakihi (*Hemignathus virens*) which is a nectivorous-insectivorous member of the endemic Hawaiian honeycreeper sub-family of Drepanidinae. This experience will greatly assist staff when faced with the challenging task of artificially incubating, hand-rearing and propagating similar species of these small, highly specialised passerines. These five chicks have been transferred to an aviary at the Panaewa Rainforest Zoo outside of Hilo, Hawaii. Observations are being made on their captive behaviour, to include particular behaviour that can give us insight into how best to release back to the wild members of this sub-family.

Very little is known about the captive husbandry of the Drepanidinae honeycreepers - what little data there is being provided in the last few years by the AZA Hawaiian Forest Bird Cooperators, in cooperation with the U.S. Fish and Wildlife Service - Pacific Islands Office, who have been diligently working with the Amakihi, Omao, Apapane and I'iwi.

Contributed by Cyndi Kuehler, Alan Lieberman and Peter Harrity, The Peregrine Fund, Hawai'i.

RE-INTRODUCTION ISSUES

The RSG look forward to hearing your views on any re-introduction issue you feel is of particular interest and/or importance to the RSG and other readers.

The Proposed Re-introduction of the Beaver to Britain

By the 1920's the European beaver survived only in Norway, parts of Western Russia and Poland, along a stretch of the middle Elbe in Germany and in Camargue delta of the Petit Rhone in southern France. Since then it has been successfully re-introduced to Sweden, Finland, Switzerland, Austria and Belgium, and the populations in Russia, France and Germany have been reinforced. It is these successes that have provided encouragement for a recently proposed attempt to re-introduce the beaver to Britain.

Because the beaver is an erstwhile native species, and because the mammalian fauna in Britain is meagre compared to that of continental Europe, it is suggested that to bring back the beaver would augment our impoverished fauna without introducing an exotic species. But conditions here, both geographically and in terms of human population, have