

Introduction to Reintroduction ... with a special emphasis on Captive Breeding

CBSG Annual Meeting Keynote address by Dr. Fred Launay, Chair, IUCN SSC RSG

Reintroduction Specialist Group was founded in 1988. It's current organizational structure consists of a Chairman, Vice-Chair, Program Officer and various Regional and Taxon Section Chairs.

The RSG has over 300 members worldwide, an additional 200 subscribers on its mailing list and over 150 subscribers on its e-mail server site worldwide.

RSG activities are to :

- Review and comment on the technical aspects of re-introduction projects.
- Encourage governmental and non-governmental organizations to conduct viable re-introduction projects according to IUCN policy guidelines.
- Prepare and disseminate: newsletters, CD-ROM's, guidelines and policy statements.
- Maintain a viable international network to enable RSG to carry out its Mission.

RSG Products include :

- Policy Guidelines:
- IUCN Position Statement 1987.
- Re-introduction Guidelines (approved 1995 & printed 1998).
- Placement of Confiscated Animals (Approved 2000 & printed 2002).
- Taxon specific guidelines:
 - Primates (finalized 2002).
 - African Elephants (2003) in conjunction with the IUCN/SSC African Elephant Specialist Group.
 - Galliformes in conjunction with the World Pheasant Association (on-going).
- RSG newsletter, Re-introduction NEWS, a total of 23 issues since 1990.
- Re-introduction Practitioners Directory produced and distributed in 1998.
- RSG CD-ROM which contains all the groups newsletters
- RSG & SSC guidelines, policies and reports.
- RSG & SSC Strategic Plans and RSG Bibliography
- Database.
- Website <www.iucnsscrsg.org> launched in August 2003 and has recorded over 3,154 hits.

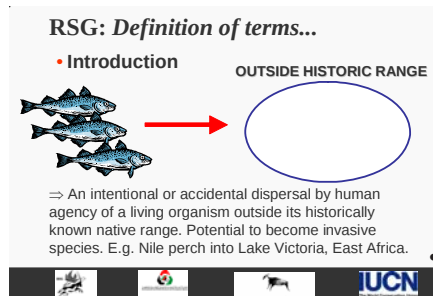
"Re-introduction programs"

RSG terms...

- Introduction (IUCN, 1987)
- Re-introduction (IUCN, 1995)
- Re-enforcement / Supplementation (IUCN, 1995)
- Conservation Introduction (IUCN, 1995)
- Substitution (Seddon & Soorae, 1999)
- (Translocation: the movement of animals from one part of their range to another)

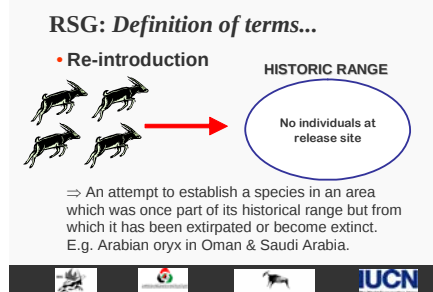
RSG Definition of terms...

- **Introduction** -- outside historic range
"an intentional or accidental dispersal by a human agency of a living organism outside its historically known native range.
Potential to become invasive species.
E.g. Nile perch-Lake Victoria, E Africa.



Re-introduction -- Historic Range -- No individuals at release site

"An attempt to establish a species in an area which was once part of its historical range but from which it has been extirpated or become extinct."
E.g. Arabian oryx in Oman & Saudi



• Re-enforcement / Supplementation -- Historic range

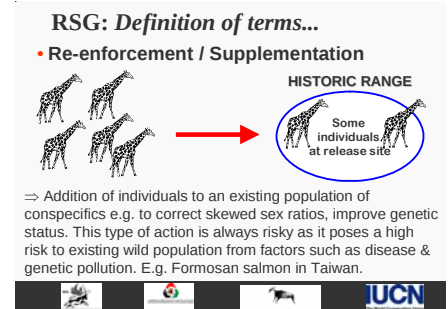
Some individuals at release site

Addition of individuals to an existing population of conspecifics e.g.

- to correct skewed sex ratios,

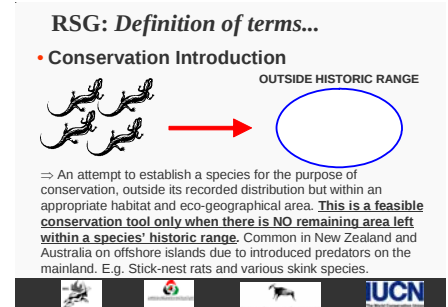
> improve genetic status.

This type of action is always risky as it poses a high risk to existing wild population from factors such as disease & genetic pollution. E.g. Formosan salmon in Taiwan.



Conservation Introduction -- Outside historic range

An attempt to establish a species for the purpose of conservation, outside its recorded distribution but within an appropriate habitat and eco-geographical area. This is a feasible conservation tool only when there is NO remaining area left within a species' historic range. Common in New Zealand and Australia on offshore islands due to introduced predators on the mainland. E.g. Stick-nest rats and various skink species.



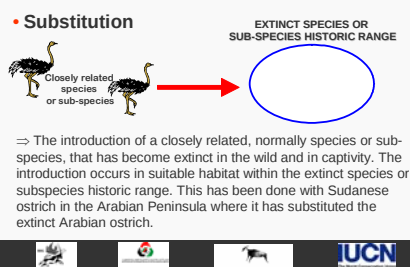
Substitution -- Extinct Species or Sub-species Historic Range -- Closely related species or sub-species

• The introduction of a closely related, normally species or sub-species, that has become extinct in the wild and in captivity.

• The introduction occurs in suitable habitat within the extinct species or subspecies historic range. This has been done with Sudanese ostrich in the Arabian Peninsula where it has substituted the extinct Arabian ostrich.

Aim of a re-introduction...
The principle aim of a re-introduction should be to establish a viable, free-ranging population in the wild.

RSG: Definition of terms...



Main stages of a re-introduction project:

- Feasibility stage
- Implementations stage
- Post-release monitoring stage
- Dissemination of lessons learnt stage, whether successful or unsuccessful, as every attempt is an important result.

Feasibility Stage... This stage involves the gathering of data on habitat suitability, biological issues involving the species and on socio-political and economic concerns. If the project proves feasible it should proceed further. If there are concerns, then these should be addressed before proceeding further.

Choice of a re-introduction site

Re-introduction - historic range of species and there should be no remnant population to:

- prevent disease spread,
- social disruption, and
- introduction of alien genes.

Habitat ...

• Choice of a re-introduction site: Re-introduction - historic range of species and there should be no remnant population to:

- prevent disease spread,
- social disruption, and,
- introduction of alien genes.

• Re-enforcement - few remnant wild individuals.

Habitat...

• Evaluation of re-introduction site:

> Re-introduction should only take place where habitat and landscape

requirements of the species are satisfied and changes since extirpation have been considered.

> The area should have a sufficient carrying capacity to support a viable, self-sustaining population.

> The original cause of decline must be identified and eliminated or reduced to a sufficient level.

Habitat ...

- Habitat Restoration

> If the release site has undergone a substantial degradation then a habitat restoration must be carried out before a re-introduction can proceed.

Species...

- Feasibility Study & Background Research
- Taxonomic and genetic status must be evaluated.
- Detailed studies on the status and biology of wild populations must be undertaken.
- Effect of species to be re-introduced, or one that has filled the void must be evaluated.
- Modeling and a PHVA to guide long-term population management is essential.

Species...

- Stock for Re-introduction
- Wild stock is preferred but if from a captive source it must have been managed demographically and genetically.
- Re-introductions should not be carried out merely because of the availability of surplus stocks.
- Stock destined for a re-introduction must meet all necessary health requirements.
- A captive-bred stocks probability of survival must approximate that of a wild counterpart.

Socio-economic & Political...

- Financial and Political Support
- Re-introductions are long-term, expensive projects that require long-term financial and political support.
- Socio-economic studies should be conducted to assess impacts, costs and benefits to local communities.
- If human activities pose a risk then adequate measures should be undertaken, if inadequate, then

alternative release area should be sought and the attempt abandoned.

Socio-economic & Political...

- Policies & Migratory Species
- Country re-introduction policies should be assessed e.g. existing provincial, national and international policies.
- Full permission and involvement of all relevant government agencies. Re-introductions can occur in border areas, or where species can expand into states, provinces, or other territories.

Implementation stage

- Approval of relevant government agencies, land owners, NGO's (both local and international) and of a multidisciplinary team established to oversee the project.
- Identify both short- and long-term indicators.
- Secure funding for all phases of project.
- Project to be done as a carefully designed scientific experiment.
- Ensure all veterinary protocols are in place.
- Welfare of animals should be of high concern during all stages of the project.

Post-release monitoring stage

- This is the most important stage because without post-release monitoring the success indicators cannot be evaluated.
- Done by monitoring all or a sample using direct (e.g. tags, telemetry) or indirect (e.g. spoor, informants, calls, etc.).
- Long-term studies on adaptation, ecology and behaviors should be undertaken.
- Mortalities should be thoroughly investigated.

Dissemination of lessons learnt stage

Lessons learnt Stage...

- Results of projects, whether successful or not, should be published in scientific and popular literature.
- Future proposed projects should learn from past successes and failures to help develop their own strategies.
- A cost-benefit analysis should be carried out of the project.
- Public relation activities and dissemination of information through the mass media.