

# BDS Guidelines for Reintroductions and Conservation Introductions

## INTRODUCTION

These policy guidelines have been drafted by the Dragonfly Conservation Group of the British Dragonfly Society. They are substantially based on the general guidelines drafted by the Reintroduction Specialist Group of the IUCN's Species Survival Commission to ensure that reintroductions achieve their intended conservation benefit, and do not cause adverse side-effects of greater impact.

These guidelines are intended to act as a guide for procedures useful to reintroduction programmes and do not represent an inflexible code of conduct. Each reintroduction or conservation introduction proposal should be rigorously reviewed on its individual merits. Reintroductions and new introductions involve some element of risk, so generally should not be attempted unless the risk of inaction is greater.

(<https://portals.iucn.org/library/sites/library/files/documents/2013-009.pdf>)

## CONTEXT

A number of reintroductions concerning Odonata have been proposed in recent years and it was felt necessary for the British Dragonfly Society to have a policy in place to guide these. Reintroductions should be both justifiable and likely to succeed. It is important that the conservation world can learn from each initiative, whether successful or not. By following these British Dragonfly Society Guidelines, reintroduction projects in the UK should comply with all the relevant sections of the IUCN Guidelines.

## 1. DEFINITION OF TERMS

**'Reintroduction'**: 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 ("Re-establishment" is a synonym, but implies that the reintroduction has been successful).

**'Translocation'**: deliberate and mediated movement of wild individuals or populations from one part of their range to another.

**'Reinforcement/Supplementation'**: addition of individuals to an existing population of conspecifics.

**'Conservation Introductions'**: 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, but conservation introductions should only be undertaken as a last resort when no opportunities for reintroduction into the original site or range exist and only when a significant contribution to the conservation of the species will result. 'Novel introduction' is an alternative term used in some circumstances.

## 2. AIMS AND OBJECTIVES OF REINTRODUCTION

### a. Aims:

- The principle aim of any reintroduction should be to establish a viable, free-ranging population in the wild of a species that has become nationally or locally extinct, or extirpated, in the wild. It should be reintroduced within the species' former natural habitat and range and should require minimal long-term management.

### b. Objectives:

- The objectives of a re-introduction may include: to enhance the long-term survival of a species; to re-establish a key species in an ecosystem; to maintain and/or restore natural biodiversity; to promote conservation awareness; to develop a knowledge base that will assist future projects of a similar nature; or a combination of these.

## 3. MULTIDISCIPLINARY APPROACH

- A reintroduction requires a multidisciplinary approach involving a team of persons and/or organisations drawn from a variety of backgrounds and with a full range of suitable expertise.

- Reintroductions involving Odonata should be referred to the Dragonfly Conservation Group of the British Dragonfly Society for consideration and advice. Project leaders should be responsible for coordination between the various persons and organisations. If possible and considered suitable, provision should be made for publicity and public education about the project.

## **4. PRE-PROJECT ACTIVITIES**

### **4a. BIOLOGICAL**

#### **(i) Feasibility study and background research**

- An assessment should be made of the taxonomic status of individuals to be reintroduced. They should preferably be of the same subspecies or race as those that were extirpated, unless adequate numbers are not available. An investigation of historical information about the loss and fate of individuals from the reintroduction area, as well as molecular genetic studies, should be undertaken in case of doubt as to individuals' taxonomic status. A study of genetic variation within and between populations of this and related taxa can also be helpful. Special care is needed when the population has long been extinct.
- Detailed field studies should be made of the status and biology of wild populations (if they exist) and detailed literature studies should be made to determine the species' critical needs. For Odonata, these studies would include descriptions of habitat preferences, intraspecific variation and adaptations to local ecological conditions, group composition, home range size, shelter and food requirements, foraging and feeding behaviour, predators and diseases. For migratory species, studies should include the potential migratory areas. A note should be made of any gaps in knowledge that may be relevant to the success of a reintroduction. Overall, a firm knowledge of the natural history of the species in question is crucial to the entire reintroduction scheme. Due consideration should be made to any future environmental variables that may affect long-term viability of populations, for example vegetational succession or climate change.
- The species, if any, that has filled the void created by the loss of the species concerned, should be determined; an understanding of the effect the reintroduced species will have on the ecosystem is important for ascertaining the success of the reintroduced population. The build-up of the released population should be modelled under various sets of conditions, in order to specify the optimal number and composition of individuals to be released per year and the numbers of years necessary to promote establishment of a viable population.

#### **(ii) Previous Reintroductions**

- Thorough research into previous reintroductions of the same or similar species and wide-ranging contacts with persons having relevant expertise should be conducted prior to and while developing reintroduction protocol.

#### **(iii) Choice of release site**

- The release site should be within the historic range of the species and there should be no reasonable possibility of natural recolonisation into the site. For an initial reinforcement there should be few remnant wild individuals. For a reintroduction, there should be no remnant population to prevent possible disease spread and introduction of alien genes. The reintroduction area should have assured, long-term protection (whether formal or otherwise).

#### **(iv) Evaluation of reintroduction site**

- Availability of suitable habitat: reintroductions should only take place where the habitat and landscape requirements of the species are satisfied, and likely to be sustained for the foreseeable future. The possibility of natural habitat change since extirpation must be considered. The area should have sufficient carrying capacity to sustain growth of the reintroduced population and support a viable (self-sustaining) population in the long run.
- Identification and elimination, or reduction to a sufficient level, of previous causes of decline: this could include disease; over-collection; pollution; competition with or predation by introduced species; habitat loss; adverse effects of earlier research or management programmes; adverse effects of domestic livestock (which may be seasonal). Where the release site has undergone substantial degradation caused by human activity, a habitat restoration programme should be initiated before the reintroduction is carried out.

#### **(v) Availability of suitable source populations**

- It is desirable that source animals come from wild populations. If there is a choice of wild populations to supply founder individuals for translocation, the source population should ideally be closely related genetically to the original native population and show similar ecological characteristics (morphology, physiology, behaviour, habitat preference) to the original sub-population.
- Removal of individuals for reintroduction must not endanger the wild source population (or captive source population). Sufficient individuals must be guaranteed to be available on a regular and predictable basis, meeting specifications of the project protocol.
- Individuals should only be removed from a wild population after the effects of translocation on the source population have been assessed. Furthermore, it should be guaranteed that these effects will not be significantly negative. It may be advisable to increase the source population prior to stock removal by increasing suitable habitat first at the donor site.

#### **4b. SOCIAL AND LEGAL REQUIREMENTS**

- Reintroductions are generally long-term projects that require the commitment of long-term financial and political support.
- An assessment of the attitudes of local people to the proposed project may be necessary to ensure long term protection of the reintroduced population, especially if the cause of species' decline was due to human factors (e.g. over-collection, loss or alteration of habitat).
- Where the security of the reintroduced population is at risk from human activities, measures should be taken to minimise these in the reintroduction area. If these measures are inadequate, the reintroduction should be abandoned or alternative release areas sought.
- Reintroduction must only take place with the full permission and involvement of all relevant government agencies, landowners and conservation organisations including the British Dragonfly Society. This includes compliance with both UK/national legislation and local regulations.

#### **5. PLANNING, PREPARATION AND RELEASE STAGES**

- Approval of relevant government agencies and land owners, and coordination with conservation organisations including the British Dragonfly Society.
- Construction of a multidisciplinary team with access to expert technical advice for all phases of the programme.
- Identification of short-term and long-term success indicators and prediction of programme duration, in context of agreed aims and objectives.
- Securing adequate funding for all programme phases.
- Design of pre-release and post-release monitoring programme so that each reintroduction is a carefully designed experiment, with the capability to test methodology with scientifically collected data. Monitoring the health and survival of both donor and recipient populations is important.
- Appropriate health and genetic screening of release population. Health screening of closely related species in the reintroduction area.
- Development of transport plans for delivery of release population to the site of reintroduction, with special emphasis on ways to minimize stress on the individuals during transport.
- Determination of release strategy (acclimatization of release population to release area; group composition, number, release patterns and techniques; timing).
- Development of conservation education for long-term support; professional training of project workers and others involved in the long-term programme; where possible, public relations through the mass media and in local community; involvement where possible of local people in the programme.
- The welfare of individuals for release is of paramount concern throughout all these stages.

#### **6. POST-RELEASE ACTIVITIES**

- Post-release monitoring is required of all populations.
- Demographic and ecological studies of released population should be undertaken.
- Decisions for revision, rescheduling, or discontinuation of programme where necessary.
- Habitat protection or restoration to continue where necessary.

- Continuing public relations activities, including education and mass media coverage where appropriate.
- Evaluation of cost-effectiveness and success of reintroduction techniques.
- Regular publications in scientific and popular literature.

## **7. CONSERVATION INTRODUCTIONS**

### **a. Aims:**

- The principle aim of any conservation introduction should be to establish a viable, free-ranging population in the wild of a species that has become nationally or locally extinct, or is threatened, in the wild. The species should be introduced as close as is reasonably possible to the species' former or current natural habitat and range and should require minimal long-term management.

### **b. Objectives:**

- The objectives of a conservation introduction may include: to enhance the long-term survival of a species; to establish a key species in an ecosystem; to maintain, increase and/or restore natural biodiversity; to promote conservation awareness; to develop a knowledge base that will assist future projects of a similar nature; or a combination of these.

### **c. Basic principles:**

- Conservation introductions may be considered where there is a perceived need to establish populations away from known future threats. These threats may be to the species directly or to their current breeding sites.
- All the above points covered in sections 4 to 6 concerning reintroductions should also be adhered to for conservation introductions where appropriate.