



# Global Re-introduction Perspectives: 2010

Additional case-studies from around the globe  
Edited by Pritpal S. Soorae



IUCN/SSC Re-introduction Specialist Group (RSG)





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## Re-introduction of the saker falcon to Bulgaria, South-East Europe

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### Introduction

The breeding distribution of the saker falcon (*Falco cherrug*) extends across the Palearctic region from Central Europe in the west to the Amur Basin in the east and from approximately 55° N to 30° S. Within this range sakers exhibit clinal variation in plumage and body size, with two 'forms' generally recognized; *cherrug* and *milvipes*. In the west the population is fragmented, with breeding centers in the Pannonian Basin (Hungary, Slovakia, Austria, Czech Republic, Romania, Serbia and Croatia), the steppes adjoining the Black and Caspian Seas (Ukraine, Moldova, Russia and Kazakhstan) and in Asia Minor. The saker falcon was listed as globally Endangered (A2bcd + 3bcd) in the IUCN Red List on the basis of a rapid population decline, particularly in Central Asia, as a result of inadequately controlled capture for the falconry trade. Recently its status was updated to Vulnerable (A2bcd+3cd+4bcd) due to a new review of the breeding population numbers in Asia. In Bulgaria the species is listed as Critically Endangered in the National Red List, with several birds reported in the breeding season annually but the last recorded nesting attempt in the country was in 1998. The European Union holds <2% of the global saker population but it has a high conservation profile and in recent years has been the focus of three EU LIFE projects.

### Goals

- Goal 1: Establish a self-sustaining breeding population of saker falcons in Bulgaria.
- Goal 2: To use the re-introduction to promote wider conservation awareness, in order to protect other associated wildlife and habitats.



Historical photograph of saker falcons breeding in Bulgaria in the 1980's © T. Michev



Former saker falcon sites were surveyed to check for signs of occupation © D. Ragyov

- **Goal 3:** To increase the capacities of organization involved in nature conservation in Bulgaria via transfer of skills and the application of re-introduction techniques for other threatened species.

### Success Indicators

- **Indicator 1:** To obtain the first wild-breeding pair 3-4 years after initiation and to establish a population of 4-6 breeding pairs in five years.
- **Indicator 2:** The production of research papers and popular articles on the important habitats, prey species and threats faced by

saker falcons in the modern Bulgarian landscape.

- **Indicator 3:** Evidence of collaborative work in the re-introduction project between government agencies, conservation NGO's and hunting groups in Bulgaria and internationally.

### Project Summary

At the end of 2009 the project to re-introduce the saker falcon to Bulgaria has reached the stage of completing a feasibility study. The purpose of the feasibility study was to i) determine the current breeding status of the saker falcon in Bulgaria, ii) undertake a review of the historical status of the species in the country, iii) assess the factors that were responsible for the population decline, iv) to review potential release areas and select a suitable site for the re-introduction, v) review potential re-introduction strategies for their appropriateness to meet the goals of the project and vi) to develop population models to determine requirements of releases.

In the 19<sup>th</sup> century the saker was a common and widespread breeding species in Bulgaria. The major decline in the Bulgarian saker population occurred in the first half of the 20<sup>th</sup> century as a result of direct persecution. From the middle of the century this decline was exacerbated by large-scale habitat changes associated with agricultural intensification and the effects of organochlorine pesticides. By the 1970s it is estimated that only 30-50 pairs remained. Subsequently, this small population was affected by continuing persecution and the theft of chicks for falconry, mainly for export to Europe and the Middle East. The socio-economic collapse following the fall of the communist regime resulted in intensified levels of wildlife exploitation, with the saker being particularly affected. Chicks were probably taken from the last known breeding attempt in the country in 1998.

Following accession to the European Union, formal structures for the conservation of habitats and species in Bulgaria have improved markedly and the

threat of illegal exploitation has diminished. The feasibility study showed that suitable habitat for saker falcons still exists across Bulgaria and it identified a specific Protected Area in the Central Balkan Mountains that would serve as an ideal release area as it supports a wide range of prey (mammalian and avian), numerous nesting sites and has a high degree of environmental protection.



**Saker falcons from neighboring breeding populations (e.g. Ukraine) could be used for translocation to Bulgaria © D. Ragyov**

The feasibility study will be used in stakeholder consultations in 2010 in order to obtain the necessary permits for the re-introduction from the Bulgarian Ministry of Environment and Water. Consultation will take the form of meetings and workshops with stakeholders and a wider, national and international public consultation through an internet forum. In tandem, a DNA study of museum specimens from the former Bulgarian population and adjacent western populations from the Pannonian Basin and the Black-Caspian Sea steppes will be undertaken, the aim of which is to determine the genetic similarity of extant western saker populations with the extinct Bulgarian population. The timetable, depending on the outcome of consultations, is to move towards the implementation phase in 2011. Implementation will involve the annual release, by hacking, of 20 captive bred and/or translocated young falcons at a single site in the Central Balkan Mountains for a period of five years. Our population modeling (i.e. an age and sex-structured stochastic model using a range of survival and breeding parameters) indicates that this release strategy results in the establishment of a viable population and, therefore, a successful re-introduction. Survival of released birds would be carefully monitored using satellite tracking and patagial tags in order to determine if the actual levels of survival are similar to those used in the population model; this will enable us to adapt the release program as necessary during the implementation phase.

### Major difficulties faced

- A major difficulty has been obtaining co-operation from certain conservation NGO's. There are a number of reasons for this: Firstly, because the feasibility study was funded by a Middle Eastern country and the project is perceived as being biased towards the interests of falconry, when thefts for falconry has been one of the main reasons for the extinction of the saker in Bulgaria. Secondly, the socio-economic situation in former communist states in Eastern Europe has lead to a proliferation of small NGO's that compete with one another for conservation funds. Consequently, Bulgarian NGOs are often wary

of co-operation and are very defensive of their own data and their specific areas of interest.

- The information on the past status of the saker in Bulgaria was scanty and information on the current status contradictory. Consequently, we had to conduct our own surveys in order to determine the true status of the species in the country. The paucity of information has meant that it is difficult to assign specific causes to population decline.
- Identifying captive breeding stock has proved problematic as the number of European birds held in captivity is relatively small and they are scattered across several countries in Europe. In addition, captive stock with a documented pedigree still need to be genetically screened to ensure that there is no hybrid ancestry and that they are genetically similar to the former Bulgarian population. Appropriate genetic population markers still need to be developed.
- There is a degree of opposition towards re-introduction as a conservation management option. Re-introduction is not listed a conservation strategy in the European Union Single species Action Plan for the saker falcon. An EU LIFE project using artificial nests to encourage sakers from the population in the Pannonian Basin to colonize Bulgaria has been initiated. This 'assisted' natural recolonization is a novel and untested management technique that can run in tandem with a re-introduction program.

## Major lessons learned

- The degree to which a re-introduction proposal would be regarded as controversial was something of a surprise. The roots for this controversy range from concerns for the genetic integrity of the regional saker populations, perceptions relating to the 'naturalness' of populations to opposition based on perceived motives behind the project. We have learned that it is necessary to be open about all aspects of the development of the project and to ensure that the rationale for the re-introduction is under-pinned by sound scientific evidence.
- Despite repeated rebuttals it is worth continuing to include opposition NGO's in discussions relating to the re-introduction as changes in circumstances and staffing can result in a complete shift of attitudes over time.

## Success of project

Highly Successful	Successful	Partially Successful	Failure
		√	

### Reason(s) for success/failure:

- The project is still at an early stage (feasibility completed, consultation initiated).
- The saker falcon is something of an iconic species for conservationists in central and eastern Europe and re-introduction is perceived as a controversial conservation management strategy. Consequently, a robust feasibility study is required together with wide consultation before any project can be implemented.