

**TUESDAY 8 DECEMBER 2015**

**ZSL SCIENCE AND CONSERVATION EVENT**

The Meeting Rooms, Zoological Society of London,  
Regent's Park, London NW1 4RY

## **AGENDA**

### **What is the future for beavers in Britain?**

**Chair: Rosie Woodroffe, ZSL**  
Zoological Society of London

---

**Receive the following communications:**

**Martin Gaywood, Scottish Natural Heritage**  
*Beavers in Scotland: twenty years in twenty minutes*

**Mark Elliott, Devon Beaver Project Lead, Devon Wildlife Trust**  
*Beavers in Devon - an introduction to the River Otter Beaver Trial and findings  
from the enclosed beaver project*

**Roisin Campbell-Palmer, Royal Zoological Society of Scotland**  
*Beaver restoration in Britain - the importance of founder selection*

## ABSTRACTS

### What is the future for beavers in Britain?

**Tuesday 8 December 2015**

The Meeting Rooms, The Zoological Society of London, Regent's Park, London NW1 4RY

#### **Beavers in Scotland: twenty years in twenty minutes**

*Martin Gaywood, Scottish Natural Heritage*

In June 2015, Scottish Natural Heritage (SNH) reported to the Scottish Government on the issues surrounding beavers in Scotland. This report ('Beavers in Scotland') will be used to inform a decision on the future of beavers in Scotland, including wild-living populations that currently occur in Argyll and Tayside.

The report included assessments of:

- Beaver interactions with the natural environment
- Beaver interactions with the human environment
- Legal and management issues
- A range of possible, future scenarios for beavers in Scotland

The work has been informed by a number of significant projects including a scientifically monitored trial reintroduction in Argyll, an examination of the implications of beaver presence on land use in the Tayside catchment, an examination of potential beaver interactions with salmonid fish, GIS-based studies of potential habitat availability and future population expansion, and an extensive review of beaver effects on biodiversity. If beaver populations expand and remain in Scotland, there will be a need to plan appropriate management at national and local levels in discussion with key stakeholders.

#### **Beavers in Devon - an introduction to the River Otter Beaver Trial and findings from the enclosed beaver project**

*Mark Elliott, Devon Wildlife Trust*

In March 2015, the Devon Wildlife Trust released 2 pairs of Eurasian beavers back into the river Otter in east Devon from where they had been captured by Defra a few weeks previously. This release was licenced by Natural England as part of a 5 year trial to study the impacts of this small population that had been living on the river since 2007.

The beavers hit the headlines when they were shown to be breeding in 2014, and at that time the government threatened to remove them, citing the risk of them carrying the tapeworm *Echinococcus multilocularis*. Following a campaign by local residents, animal rights activists and a legal challenge by Friends of the Earth, Devon Wildlife Trust was granted a licence to run the trial on the condition that the animals were shown to be healthy.

DWT has been studying the impacts of beavers since 2011, when a pair was introduced into a 3ha enclosure in west Devon. Over the past four years, the beavers have significantly manipulated their environment, now having created 13 ponds with a surface area in excess of 1000m<sup>2</sup>. The features have been mapped annually and changes in vegetation communities and structure have been monitored, supported by a series of 160 fixed photography points. Annual frogspawn counts have shown an increase from 10 clumps in 2011, to 521 clumps in spring 2015, and a survey of aquatic water beetles has shown numbers increase from 8 species in 2011 to 26 species in 2015. The hydrological and water quality impacts have been the subject of detailed research by the University of Exeter, and this has revealed very significant changes to the flood hydrograph and water quality indicators between the upstream and downstream monitoring stations.

### **Beaver restoration in Britain - the importance of founder selection**

*Roisin Campbell-Palmer, Royal Zoological Society of Scotland*

The Scottish Beaver Trial saw the successful delivery of the first project of its type in Britain, a trial reintroduction of Eurasian beavers into the wild after an absence of over 400 years. In 2008 the Scottish Government granted a licence to a partnership between the Royal Zoological Society of Scotland, the Scottish Wildlife Trust and the host, Forestry Commission Scotland. A complex independent scientific monitoring programme, coordinated by Scottish Natural Heritage, involving 13 partners investigating a wide range of impacts. Through SBT new animal-management techniques and study methods were tried and tested in the field, and the lessons learnt and research partnerships developed have led to advances in our understanding of this keystone species and how a reintroduction project of this nature can be built upon.

Beavers are now present within British landscapes both as part of licenced trials, or as unofficial wild-living populations. Should beavers remain and if we are serious about restoring this species, we need to consider the importance of founder composition. The health status of any founder population is a key consideration in any restoration programme. As part of the SBT a host of veterinary considerations had to be investigated given the lack of previously published data for beavers, and the more stringent UK animal importation laws. Additionally we shouldn't underestimate or dismiss the risk presented by beavers 'appearing' in our landscapes from unknown origins. To date, all beavers examined (>70 live trapped and dispatched individuals) have been free from significant disease and parasites, and in good body conditions.

Lessons learnt from other reintroductions demonstrate failures do occur, especially over the long-term, due to poor founder selection and lack of genetic diversity. Genetic screening of free-living beavers demonstrate that the majority of beavers present in Britain are of Bavarian origin. However, we know they have originated from a small number of animals and are therefore closely related. As an island, there will be no opportunity for natural inflow and mixing of new genetic material, so we should make a conscious effort to ensure any future British beaver has the optimal adaptability potential. The long-term viability of beaver restoration to Britain is not a done deal and still requires significant effort and collaboration, not only to ensure we have the best founder stock, but also to address social and political concerns relating to living with this species again.