

Scotland's
MOORLAND FORUM



UNDERSTANDING PREDATION Project Overview



**UNIVERSITY OF
STIRLING**

Gill Ainsworth (University of Aberdeen), **John Calladine** (BTO Scotland), **Blaise Martay** (BTO Scotland), **Kirsty Park** (University of Stirling), **Steve Redpath** (University of Aberdeen), **Chris Wernham** (BTO Scotland), **Mark Wilson** (BTO Scotland) & **Juliette Young** (CEH Edinburgh)

Background

<p>Project Characteristics</p>	<ul style="list-style-type: none"> • Review science on predator-prey relationships in Scotland. • Gather knowledge held by stakeholders. • Identify common ground and differences. • Identify opportunities for collaborative action.
<p>Three Main Areas of Investigation</p>	<ul style="list-style-type: none"> • How are populations changing? • Why are populations changing? • How effective are different management options?
<p>Why collaborate?</p>	<p>This is a contentious area – the views of different interest groups diverge about how the countryside should be managed.</p> <p>The overarching aim of the project was to compare the science with the views of other interest groups, then identify the shared problems and possible actions.</p> <p>Different interest groups rely on different forms of knowledge:</p> <ul style="list-style-type: none"> • Some people rely initially on local knowledge: they believe that their first-hand experience and personal observations provide them with unbiased & reliable understanding. • Some people rely initially on scientific knowledge: they value what they consider to be unbiased, peer-reviewed, independent and robust studies. • Many who favoured one form of knowledge mistrusted the other form of knowledge; they perceived it as biased, subjective or partial.
<p>The Six Species</p>	<p>Knowledge comparisons focused on six wild bird species, and all are considered to be showing significant population declines.</p>

**Black
Grouse**



**Eurasian
Curlew**



**Golden
Plover**



**Grey
Partridge**



Lapwing



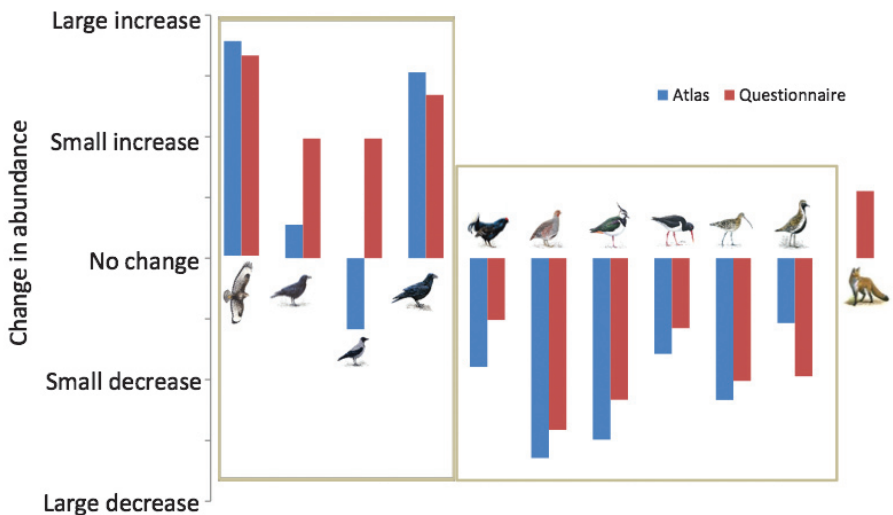
Oystercatcher



The Project Focused on Six Species

Common Ground

The problem	There is broad consensus from scientific literature and local knowledge that the populations of all six species are declining
Causes of Decline	<ul style="list-style-type: none"> • Predation and habitat / land use change are identified as important factors. • Crow and Red Fox are more significant predators than Buzzard and Raven. • There is no single cause of decline - factors often interact.
Effectiveness of management options	<ul style="list-style-type: none"> • Amongst local knowledge users, there is much experience of predator control and habitat management. • Lethal predator control and habitat management are both effective, at least some of the time. • Non-lethal predator management is poorly understood.
Scope of collaboration:	<ul style="list-style-type: none"> • There is a shared goal amongst all stakeholders <i>“to establish and maintain balanced and healthy populations of all wild birds in Scotland, and their predators”</i>. • There is enthusiasm for collaboration across a wide base of different interest groups.

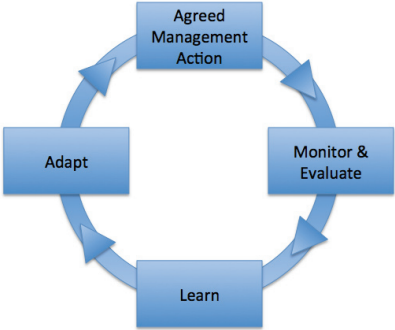


Comparison between Ecological Survey Data (Blue) and Stakeholder Knowledge (Red)

Areas of Divergence

<p>Population Changes</p>	<p>There was broad consensus about population changes, but local knowledge suggested that crow populations had increased more than suggested by survey data.</p> <p>This is probably related, at least in part, to differences in geographical scale of surveys and a lack of survey data on changes in numbers of non-breeding birds outside the breeding season.</p>
<p>Decline of populations</p>	<ul style="list-style-type: none"> • The importance of a range of other predators, highlighted by local knowledge users, is not evident in existing scientific literature: <ul style="list-style-type: none"> ◦ Buzzard, Raven, Stoat, Weasel, Mink, Badger, Pine Marten, Gulls & Sparrowhawk. • Local knowledge users expressed concern about the impact of recreational disturbance, but there is limited scientific literature to address this issue. • Users of local knowledge consider predation to be the more important driving factor, whilst those relying on scientific knowledge consider the more important factor to be habitat / land-use change.
<p>Achieving the shared goal</p>	<ul style="list-style-type: none"> • Local knowledge users believe that the most effective management tool is lethal predator control. • Users of scientific knowledge believe that the shared goal can be achieved through habitat management.

Next Steps

<p>How can we move forward?</p> <p>Adopt a fully collaborative, adaptive management approach for a follow-on project:</p> <ul style="list-style-type: none"> • Full collaboration between all stakeholders from scoping and design to completion. • Adaptive Management to facilitate rapid action – see diagram. 	
<p>Seminar Battleby - 3rd May</p>	<p>This final seminar will consider:</p> <ul style="list-style-type: none"> • Options for future collaborative action, • Existing or new projects to maintain momentum and deliver agreed objectives, and • Associated funding requirements.

For more information:

Understanding Predation webpage: <http://goo.gl/1hdYqv> Understanding Predation blog: <http://goo.gl/pKWa5k>
 Contact the Moorland Forum's Administrator, Anne Stoddart Tel 01387 723201 info@moorlandforum.org.uk