



DEVELOPING BEST PRACTICE IN PREDATOR MANAGEMENT FOR COASTAL SEABIRD COLONIES

22nd & 23rd November 2017

Anglesey Arms Hotel, Mona Rd, Menai Bridge, Wales LL59 5EA

Lead facilitators: Graham White, David Morris and Leigh Lock (RSPB)

Programme

Background

Predation of terns around the coasts is one of the key factors impacting on breeding numbers and productivity of nationally and internationally important populations. In response, there is a need for best practice in predator management to continue to evolve and there are clear benefits to sharing emerging ideas between organisations to develop the most efficient and effective methods. Developing and disseminating best practice predator management is a key objective of the Roseate Tern LIFE Project, and provides an opportunity to host this workshop for all site managers dealing with this issue.

Aims of the workshop

- Update on best practice methods for predator management
- Discuss emerging issues and seek potential solutions

Day 1 – Mammalian predation and biosecurity

Drinks available from 12.00

Time	Agenda	Speaker
12.30	Welcome and introductions	Leigh Lock
12.45	Emerging thoughts on fox control	Graham White
13:15	Anti-predator fences – how and when do they work?	Graham White
13.45	Other mammals and how to deal with them (mink, otter, badger, stoats, etc) – traps, cameras	David Morris
14.30	<i>Coffee Break</i>	
15.00	Case studies: current issues and management followed by discussion 1) Cemlyn Bay 2) Ynys Feurig	Chris Wynne Kenneth Maurice
15.45	Best practice in design and maintenance of anti-predator fences	Graham White
16.15	Managing rodent predators on islands – eradications, control and biosecurity	Karen Varnham
16.45	Night vision equipment including a field demonstration on Cors Ddyga reserve (15 min drive from the venue)	David Morris
19.30	Meet for evening meal – Table Table: Parc Britannia, Gwynedd (next to Premier Inn)	



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Day 2 – Avian predation

Drinks available from 08:45

09:00	Gull management a strategic approach	Leigh Lock
09.15	Preliminary results of gull predation PhD study in the context of gull management on Coquet	Ibrahim Alfarwi
09.45	Avian predation and how to deal with it (general approaches including diversionary feeding)	Graham White
10.00	Case study: 1) Hodbarrow = managing terns and gulls? 2) Lady's Island Lake	Dave Blackledge Tony Murray
10.45	<i>Coffee Break</i>	
11.15	Aerolasers –update on current laser trial and next steps	Daniel Hayhow
12.00	Discussion: Summary of key issues and how we resolve them	Leigh Lock
13.00	<i>End</i>	



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Predator management workshop, Bangor, 22-23 November 2017

Key notes, questions and actions

Overall, forty site managers, researchers and wardens from ten organisations across Wales, England, Northern Ireland and the Republic of Ireland attended the two-day workshop focusing on tackling a range of predators.



Day 1

Fox control – Graham White

Foxes are by far the biggest predator of nests. This has been tested with nest cameras, which found 79% nocturnal nest predation (therefore mammal not avian). Chick predation has been tested using radio tracking. 37% unknown; raptors also a problem but fox still comes out high.

Aim is to reduce number of foxes in breeding season NOT reduce fox populations.

Where we were undertaking fox and crow control on reserves we see some positive results (e.g. lapwing study).

Question: How do we make sure we are also keeping an eye on the impact of predation on birds without a specific conservation project, where we do not necessarily know of the minimum viable productivity level? E.g. ringed plover, redshank. We often focus on lapwing/curlew.

The predation review produced by RSPB about 10 years ago is now in review – hopefully will be available in 2018.

Generally (with some exceptions) we do not shoot foxes after 1 April to avoid lactating females. If not done efficiently, this can mean the foxes move in just as the birds are breeding. If it is inside a fence, or impacting a particularly rare species, we can make exceptions on a case by case basis to shoot later than 1 April.



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For lapwing – there is not much difference in productivity between fenced areas and fox control, and it is comparable in cost. On many sites, productivity is still under 0.7 chicks per pair despite these measures.

Fencing – Graham White and David Morris

Fences are to deter foxes and/or badgers to increase productivity of breeding waders of lowland wet grassland and shorebirds.

Many issues, but overall, successful at excluding larger mammals and increasing wader productivity and populations – IF well maintained, monitored etc.

Question: If fencing leads to more birds – what happens to the birds once carrying capacity is reached within the fence? One model is to have the fencing to create a hotspot, and then predator control across the rest of the site. Across the landscape we are testing having these fenced hotspots, then switching sites on and off (e.g. drying out) so the birds move regularly. We need to know how far apart these sites need to be to be the same population. This could solve the issue of fencing attracting avian predators – although we also do not know how far predators would move. Makes it more natural – birds moving to avoid predators. Also can work on habitat modifications to make it less likely for ground predators to move with the birds.

There is a manual available from Reserves Ecology, which details everything you need to know about fencing.

For otter – would need thicker mesh but unlikely to need to be as tall as for fox.

Also important to manage vegetation – e.g. using herbicide – and protect posts, locate the fence away from banks, trees etc. Need to ensure any livestock do not destroy it – can put live wire inside as well as outside.

Cemlyn Bay – Chris Wynne

This is the most accessible tern colony on Anglesey and is a designated site: SPA/SAC/SSSI. SPA and SAC features are contradictory which is a challenge. This is the biggest sandwich tern colony in Wales and numbers have been going up every year for the last few years.

Last big dip in 2007 was mainly due to geese – disturbance rather than predation.

Otter presence and use has increased at Cemlyn over last few years. Now they are eating chicks (probably gull chicks but disturbing terns too much) so need to work out what to do about it. Concern about putting a fence in the lagoon for disturbance of SAC features. Also thinking about whether the presence of wardens on their “bridge” between the holt and tern island would deter them. Also worried about the impact of new nuclear power station, which may move other predators from up the coast to Cemlyn, plus impact of disturbance of the construction.



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Ynys Feurig – Ian Hawkins

Same SPA as Cemlyn – making up the other two tern colonies. 1% of UK population of Arctic and common terns found here. Occasional breeding roseate tern (used to be a regular colony).

Problems are foxes (especially determined individuals) and increasingly crows. Larson trapping in 2017 worked well. Predation was leading to tern disturbance and then their defence mechanism not being so good lead to even more predation. Taking out resident animals (that have knowledge) is important. Presence of wardens is normally enough to scare foxes.

Rodents on islands: Biosecurity – Karen Varnham

Question: How important is it for seasonal wardens to be trained? Best to have at least two at each site trained so that someone is ready to act if needed – but ideally everyone. It is only £50 and we never know when we will need to act. The more people that are trained the more people can deal with an incursion. The training lasts forever.

General question

How linked in with mammalogists are we so that we can learn about their behaviour and act accordingly in terms of predator management? For rats, we are quite reliant on NZ scientists. We are also working on a project looking at vole cycles in terms of impact on kestrels. But generally something that may need further thought.

Day 2

Gulls – Leigh Lock

Often when mammals are successfully managed, it leads to an increase in avian predation. Need to manage conflict between impact of large gulls on terns and waders, and the fact that they are conservation priorities themselves.



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South Walney – was Europe's biggest gull colony. It was 45,000 pairs now 5,000. Predator fencing has helped for fox predation, but the colony has split in two and the smaller colony has problem with magpie predation.

Often where there were these large colonies, there were landfill sites (human activities). So unlikely to be sustainable, as once they have gone, there would not be enough food to support them. So likely to be smaller colonies now. Would be good to map these large colonies against landfill. (Chris Thaxter from BTO is looking at this). Need to understand what they are feeding on in the absence of landfill.

PhD on effect of large gulls on roseate terns on Coquet: Ibrahim Alfarwi

This study has shown how clever gulls are – very hard to catch. Can we use this to our advantage to be able to trick them that something is *about* to happen to scare or deter them.



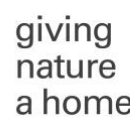
Measures for dealing with avian predation – Graham White

Crows – some places they are an issue and so we use Larson traps. But generally evidence shows that crows are not, so RSPB doesn't do this very often.

Birds of prey – trialling lasers or diversionary feeding. Difficult to get good evidence that they are having a serious impact. We think that the effect of birds of prey varies between years – sometimes if conditions are right (with little other food), it does, but often it is just observational with no real evidence.

Study of red kites at Otmoor – diversionary feeding trial was successful. However, at Nene Washes we know red kites took godwit chicks and diversionary feeding did not work here. It can work well but finding birds and their nests is difficult, providing the right food is difficult, and it is costly in terms of food and time.

Dee Estuary: Kestrels – so hard to find nests because they come from so far away. Laser had no impact on these or on the buzzards. Kestrels were the most significant predator for lapwing in 2017 here, but not so much in 2016. One possibility would be to put up kestrel boxes so that they would know where the nest is so can diversionary feed close by.



Peregrine – takes the odd adult, but then can cause a problem if it eats it on the island so the colony is disturbed.

Can you use distress calls as a way to deter birds of prey like on air fields? Works on some species but have to combine it with something else e.g. trigger blow up “man” to scare them. Can control these measures with a mobile phone.

Hodbarrow – David Blackledge

Sandwich tern/BHG colony, and little terns. Nearby prison used a harris hawk to get rid of their large gulls (LBB) – which came to Hodbarrow and reduced the tern numbers. Then foxes came in and everything disappeared for a couple of years. Then little terns came back, predator fencing was put in, and now Sandwich terns and BHG are back. Would be a good dynamic system if there were a number of similar sites for the birds to move between.

However in 2016 very small numbers of large gulls (LBB and GBB) can make a big difference to disturbance and productivity. Started lasering which worked for non-breeding gulls but once they were breeding they didn't respond.

Culling didn't happen in 2016 because the licence granted by NE did not cover mitigation, and at the time RSPB were objecting to the same thing at Bowland so politically it wasn't possible.



Lady's Island Lake – Tony Murray

Rat is the biggest problem, but seldom see or catch them. Mustelids also can kill adult roseates and Sandwich terns but not sure if they are resident or visiting from mainland for the day.

Short eared owl and peregrine also present. Impact of BHG on edges of tern colonies is huge, so licences are sought to remove some nests. Large gull raids are common but no large gulls nesting on Lady's Island. Oystercatcher are a problem because they stop the roseates from nesting as they are prospecting. They also roll the eggs out of the boxes.



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Next step is to develop a way to adjust/control the water level of the lake so that it is really deep at certain times of year – not just tidal. Also vulnerable to sea level rise.



General issue in terms of SPA conflict – should we look at managing a suite of species, not individual ones that can cause conflict with each other.

Laser hazing – Daniel Hayhow

Size of the dot is important – pen lasers do not work. Need to think carefully about where to use them for safety reasons.

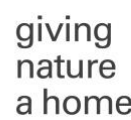
If any sites want to take part in Q1 (stop birds breeding) let Daniel know.

Gulls and corvids are intelligent, and it is possible that over the longer term, they will habituate and so we should restrict the use of the lasers, or add in something else to keep them scared.

Question: how secret should/do we keep this to avoid local action groups wanting to use it for urban “problem” gulls? Need an agreed comms response for this project.

Difficult to do for raptors (as they are not on ground) but need to test this more. Have to be careful if there is another (non-target) species there e.g. in a dense colony.

Some evidence on what strength/spec of laser works best so should consider this if buying more.





Wrap up discussion

Mediterranean gulls. Numbers are increasing so need to decide how we deal with these as they are an issue at some sites. Would need to deal with them in the same evidence based way as other species – particularly if on a designated site.

Public relations in regards to predator control. Not had to justify to the public what we are doing and why yet, but need to make sure we have the clear evidence base. Becoming more proactive in terms of talking about it (rather than only reactive) e.g. on reserves to visitors. Could there be lessons learnt from our invasive species eradications community engagement work.

There is no silver bullet! At this workshop we were presented with a whole suite of options, that all include processes and protocols. Could there be something produced as part of the LIFE project that would pull all of this together along with what people need to do for practitioners Will always have to be a working document as we gather new evidence.

Question: How do we capture stuff we have and what we do at our sites so that we can share beyond individual sites and individual organisations. Some suggestions: Dropbox; Facebook (e.g. Irish sea terns); Mailing list from this workshop; Conservation Evidence website.

In summary:

Evidence: Is there a predation issue, what is the predator and what is the response. Need this to get licences and explain to the public why we are doing it.

Planning: need to think how it relates to other land management activities and how it relates to wider landscape. Need the most practical and efficient way of dealing with the problem. So big scale down to detail.

Vigilance: can't just put up a fence and think job done. Need a biosecurity mindset and keep monitoring up. Be prepared for the worst to happen.



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Attendees	Organisation	Role/Site
Adrian Hibbert	Denbighshire County Council	Gronant
Alasdair Grubb	RSPB	Warden, Dee Estuary
Alex Banks	Natural England	Senior Environmental Specialist – Marine Ornithology
Chantal Macleod-Nolan	RSPB	Roseate Tern Project Assistant
Chris Wynne	North Wales Wildlife Trust	Conservation Officer West, Cemlyn
Daniel Hayhow	RSPB	Conservation Scientist
Daniel Pic	RSPB	Roseate Tern Project Manager
Dave Blackledge	RSPB	Site Manager - Cumbria Coast Reserves
Dave Mercer	Natural England	Senior Reserves Manager -Ribble estuary
David Morris	RSPB	Senior Reserves Ecologist
David Thorpe	Natural Resources Wales	Biodiversity Specialist
Gareth Fisher	RSPB	Reserves Ecologist for Wales
Gareth Tate	RSPB	Ribbles Reseve Warden
Graham White	RSPB	Senior Wetlands Ecologist
Gwynfor Owen	National Trust	Ranger, Cemlyn
Hannah Birtles	Natural England	Lead advisor covering Dee and Ribble estuary
Hugh Thurgate	National Trust	Head Ranger at Strangford Lough, NI
Ian Hawkins	RSPB	Site Manager, Cors Ddyga
Ian Sims	RSPB	Warden, Morfa Dinlle & Skerries
Ibrahim Alfarwi	University of Newcastle	PhD on gulls and terns of Coquet Island
Jenny Storr	RSPB	Assistant Warden, Lake Vrynwy
Karen Varnham	RSPB	Island Restoration Officer
Kathryn Doughty	Natural England	Solway & Cumbria - Land Management & Conservation Lead Adviser
Kenneth Maurice	RSPB	Assistant Warden, Ynys Feurig
Kevin Kane	RSPB	Assistant Warden, Portmore Lough
Laura Smith	RSPB	Portmore Lough Warden
Leigh Lock	RSPB	Senior Species Recovery Officer
Matthew Murphy	Natural Resources Wales	Senior Ornithologist (Marine/terrestrial)
Matthew Tickner	RSPB	Reserves Ecologist, Larne Lough
Mhairi Maclauchlan	RSPB	Warden - Cumbria Coast Reserves
Patrick Lindley	Natural Resources Wales	Marine Ornithology
Pete Jones	Cumbria Wildlife Trust	Reserve Officer
Phin Dillon Downey	Natural England	Morecambe Bay SSSI RO
Sally Ellis	Natural Resources Wales	Conservation Officer - Sites
Sarah Dalrymple	Cumbria Wildlife Trust	Warden - South Walney
Steph Morren	RSPB	Senior Species Recovery Officer
Stephen Newton	BirdWatch Ireland	Senior Seabird Conservation Officer
Tony Baker	RSPB	Ribble Sites Manager
Tony Murray	National Parks and Wildlife Service	Lady's Island Lake
Will Fox	RSPB	Assistant Warden (Ribbles Reserve)



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DEVELOPING BEST PRACTICE IN PREDATOR
MANAGEMENT FOR COASTAL SEABIRDS 22/23.11.2019

DANIEL PIEC	
STEPHANIE MORREN	S. Morren
DANIEL HAYHOW	
ALEX BANUS	
Patrick LINDSEY	
ADRIAN HIBBERT	
GARETH FISHER	Gareth Fisher
Laura Smith	Laura Smith
Kevin Kane	
HUGH THURCASTLE	Hugh Thurcastle
DAVE BLACKBROOKE	D. Blackbrooke
TONY BAKER	Tony Baker
Gareth Tate	
PETE JONES	
SARAH DALRYMPLE	
TONY MURRAY	
SALLY ELLIS	
KEVIN MORRIS	
JENNIFER STORR	
MATTHEW TINKARD	
IAN SIMS	
MATTHEW MURPHY	
DAVID MORRIS	
MARIE MACLAUCHLAN	
Will Fox	
Alister Grubb	
DAVE THORIE	
KATE DONAHY	
PIN DILLON-DOWNET	
HANNAH BIRTLES	
Dave Meier	
IAN HAWKINS	
Leif Lohle	
IBRAHIM ALFARWI	
Charles Macleod N&S	
Gwynor Owen	
_____ Karen Vanham	



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