

# Conservation of Ospreys in the UK



**Dr Tim Mackrill**

**Photos by John Wright**



# Ospreys in the UK – and literature



- Formerly widespread throughout the UK

- Frequent references in historical literature

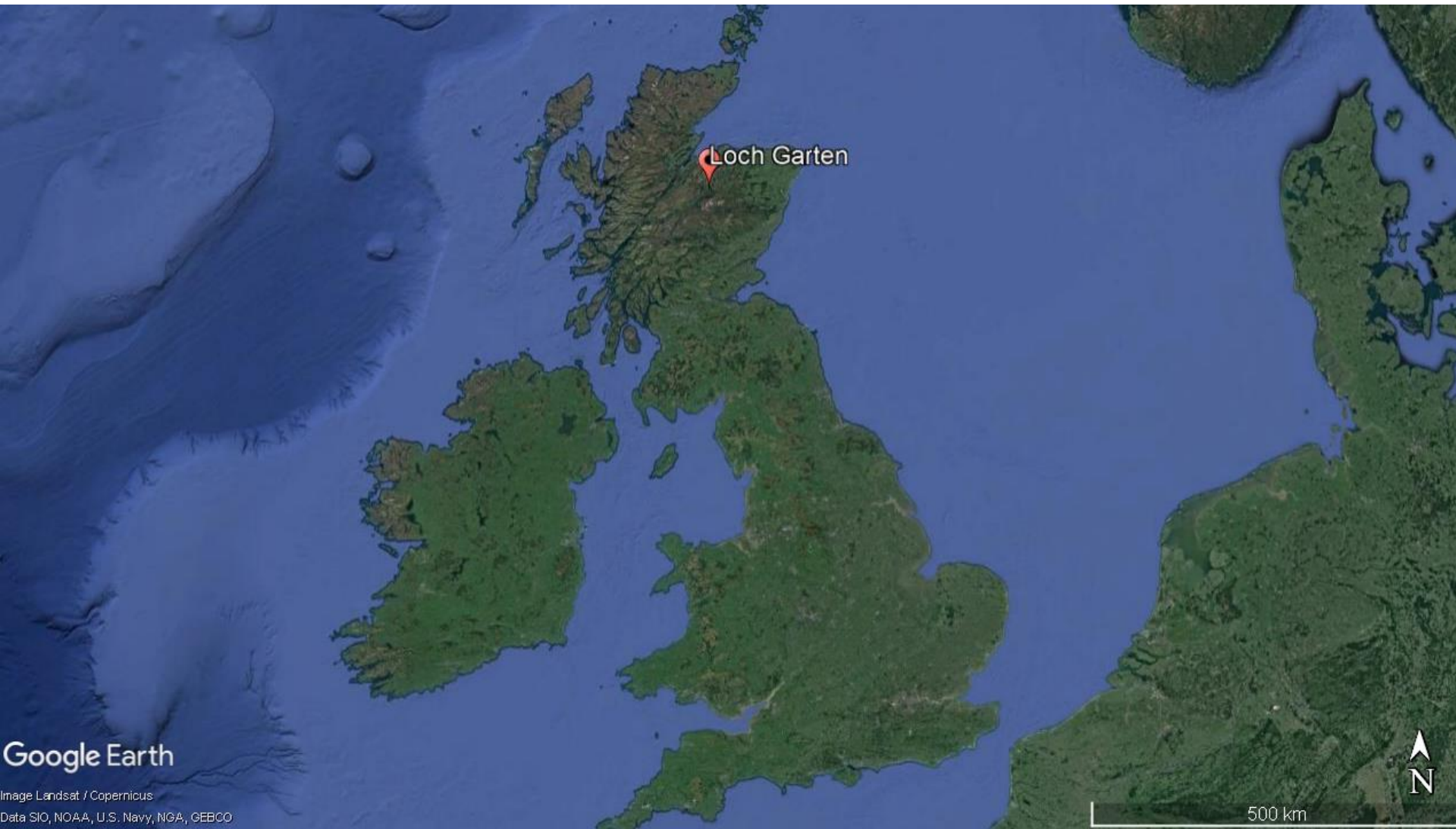
*"I think he'll be to Rome  
As is the osprey to the fish, who  
takes it  
By sovereignty of nature."* *The  
Tragedy of Coriolanus (Act 4, Scene  
7)*

- Decline caused by persecution. Last pair in England bred on Somerset levels in 1842.

# Ospreys in Scotland



- Ospreys returned to Scotland in the 1950s
- Population in Scotland has risen steadily since then - now 300+ breeding pairs
- Young first-time breeders prefer to take over an existing nest close to their own natal site
- Average expansion of Scottish population – 6 km per year – so very slow to colonise new areas
- Once established at a nest adult Ospreys show strong site fidelity and may live until they are 20+ years



Loch Garten

Google Earth

Image Landsat / Copernicus  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

500 km



# Osprey colonies in NE Scotland

F nests

G nests

DB nests

B nests

K nests

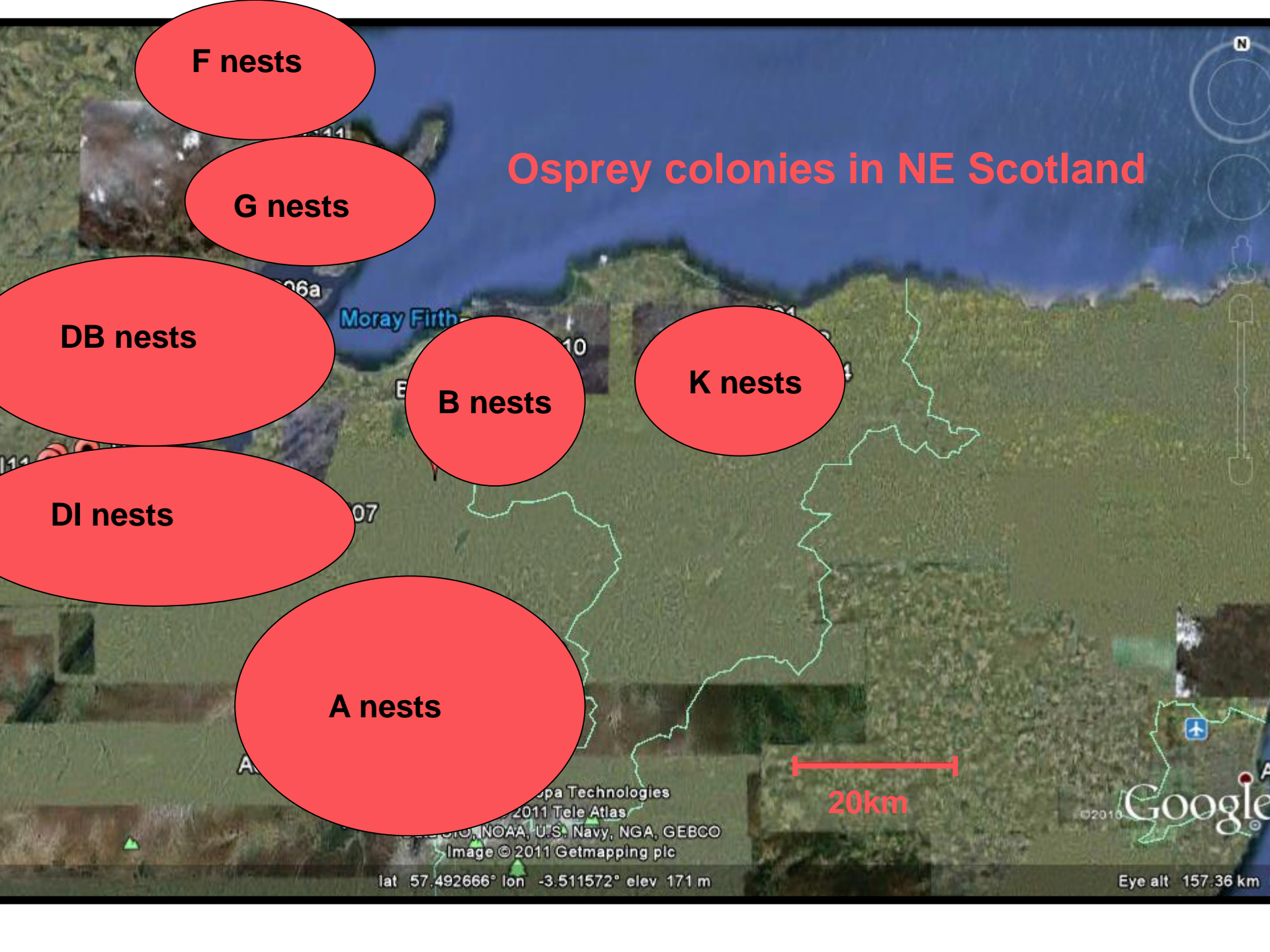
DI nests

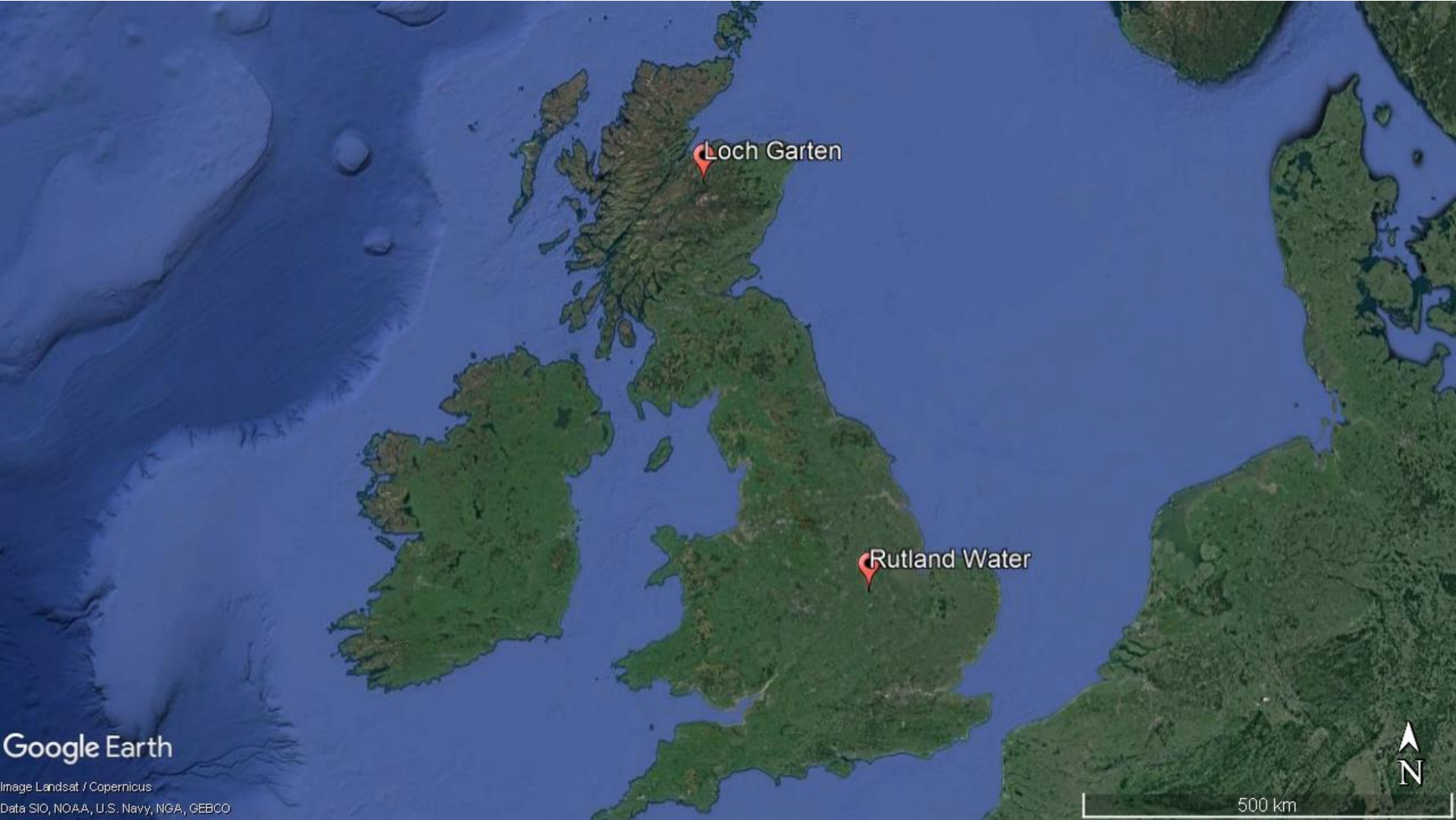
A nests

20km

lat 57.492666° lon -3.511572° elev 171 m

Eye alt 157.36 km





Loch Garten

Rutland Water

Google Earth

Image Landsat / Copernicus  
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

500 km



# Ospreys at Rutland Water



- Rutland Water constructed in 1970s
- Regularly seen on passage in 1980s
- Two birds summered in 1994
- Artificial nests erected





- After lengthy consultation, SNH granted a licence to move 64 Ospreys from NE Scotland to Rutland Water between 1996 and 2001



- Post-fledging period critical in the imprinting process
- Mortality among young Ospreys in their first year is very high - more than 70% birds may die in first year





- Juvenile ospreys migrate by vector summation – susceptible to wind drift
- 2500km of non-stop flying for 64 hours
- Wintered in Portugal





## T01 2000

•Sahara presents another clear hazard

•T01- juvenile released at Rutland Water in 2000.

•Flew 7500km in just over a month



- First translocated birds returned in 1999 and first pair bred successfully in 2001
- 146 Ospreys have now fledged from nests in the Rutland Water



Year	Breeding pairs	Artificial nests used	Fledged young	Young birds returning in future years	Translocated birds breeding	Rutland-fledged birds breeding	Scottish or unringed birds breeding
2001	1	0	1	0	1 ♂		1 ♀
2002	1	0	0	0	1 ♂		1 ♀
2003	2	0	5	0	2 ♂ & 2 ♀		
2004	1	0	2	2	1 ♂ & 1 ♀		
2005	1	0	3	2	1 ♂ & 1 ♀		
2006	1	0	3	1	1 ♂ & 1 ♀		
2007	2	1	5	0	2 ♂ & 1 ♀	1 ♀	
2008	3	2	3	1	3 ♂ & 1 ♀	1 ♀	1 ♀
2009	4	3	9	4	4 ♂	2 ♀	2 ♀
2010	5	4	12	6	3 ♂	2 ♂ & 2 ♀	3 ♀
2011	5	4	10	3	3 ♂	2 ♂ & 2 ♀	3 ♀
2012	4	3	9	3	3 ♂	1 ♂ & 2 ♀	2 ♀
2013	5	4	14	4	1 ♂	4 ♂ & 2 ♀	3 ♀
2014	6	5	11	1	1 ♂	5 ♂ & 3 ♀	3 ♀
2015	8	7	15	4+	1 ♂	7 ♂ & 5 ♀	3 ♀
2016	8	7	15	4		8 ♂ & 6 ♀	2 ♀
2017	8	6	15	?		8 ♂ & 5 ♀	3 ♀
2018	9	6	14	?		9 ♂ & 6 ♀	3 ♀
TOTAL			146	35 (30%)			

- 03(97) – was one of the first Scottish chicks to be translocated to Rutland
- He returned for the first time in 1999 for the first time and raised 32 chicks at ‘Site B’ between 2001 and 2015



- One of 03's offspring, 33(11), has bred at the nature reserve for the past four summers





[www.ospreys.org.uk/webcam](http://www.ospreys.org.uk/webcam)







- 25,000 people visit the Lyndon Visitor Centre each summer with another 1000 coming on Osprey Cruises on the Rutland Belle
- Ospreys are increasingly important for the local economy
- General air of excitement when Ospreys return each spring, but...



# Resolving conflicts – River Gwash Trout Farm

- Working trout farm with sites at Ryhall and Horn Mill
- Increasing number of visits by Ospreys
- Loss of fish to predation an increasing problem
- Solutions?
- Netting?
- Or something different?





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 Wildaboutimages  
Professional Video & Photography





 Wildaboutimages  
Professional Video & Photography





- The new hide at Horn Mill Trout Farm can accommodate up to six people, each paying £75 per session





- The story was featured on the One Show on BBC1
- The income generated by the Osprey photography has offset all losses to predation and other factors
- It is now an integral part of the business





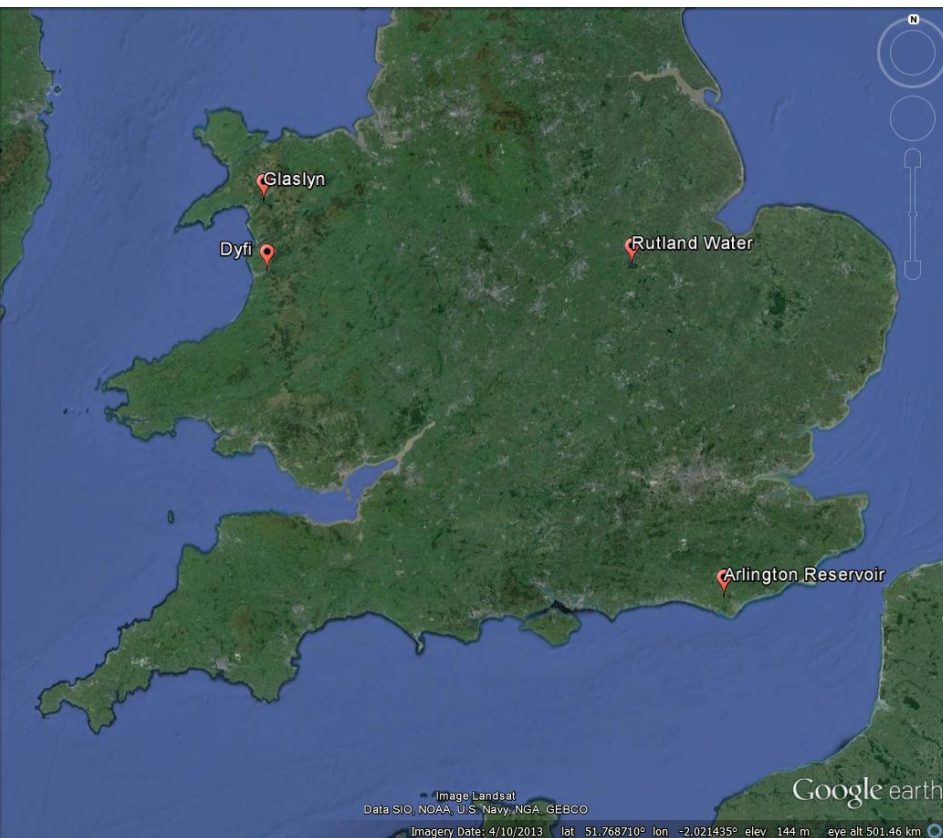
Lake Placid,  
Florida

Rutland Waer birds have been key  
to the re-colonisation of Wales





Year	No. breeding pairs	No. Rutland birds breeding	No. fledged young
2004	2	2 tr.♂	1
2005	1	1 tr.♂	2
2006	1	1 tr.♂	2
2007	1	1 tr.♂	2
2008	1	1 tr.♂	3
2009	1	1 tr.♂	3
2010	1	1 tr.♂	3
2011	2	1 tr.♂ & 1 w-f.♀	6
2012	3	1 tr.♂ & 1 w-f.♀	5
2013	3	1 tr.♂ & 1 w-f.♀	6
2014	4	1 tr.♂ & 1 w-f.♀	10
2015	4	1 w-f.♀	11
2016	4	1 w-f.♀	9
2017	4	1 w-f.♀	10
2018	5	2 w-f.♀	10

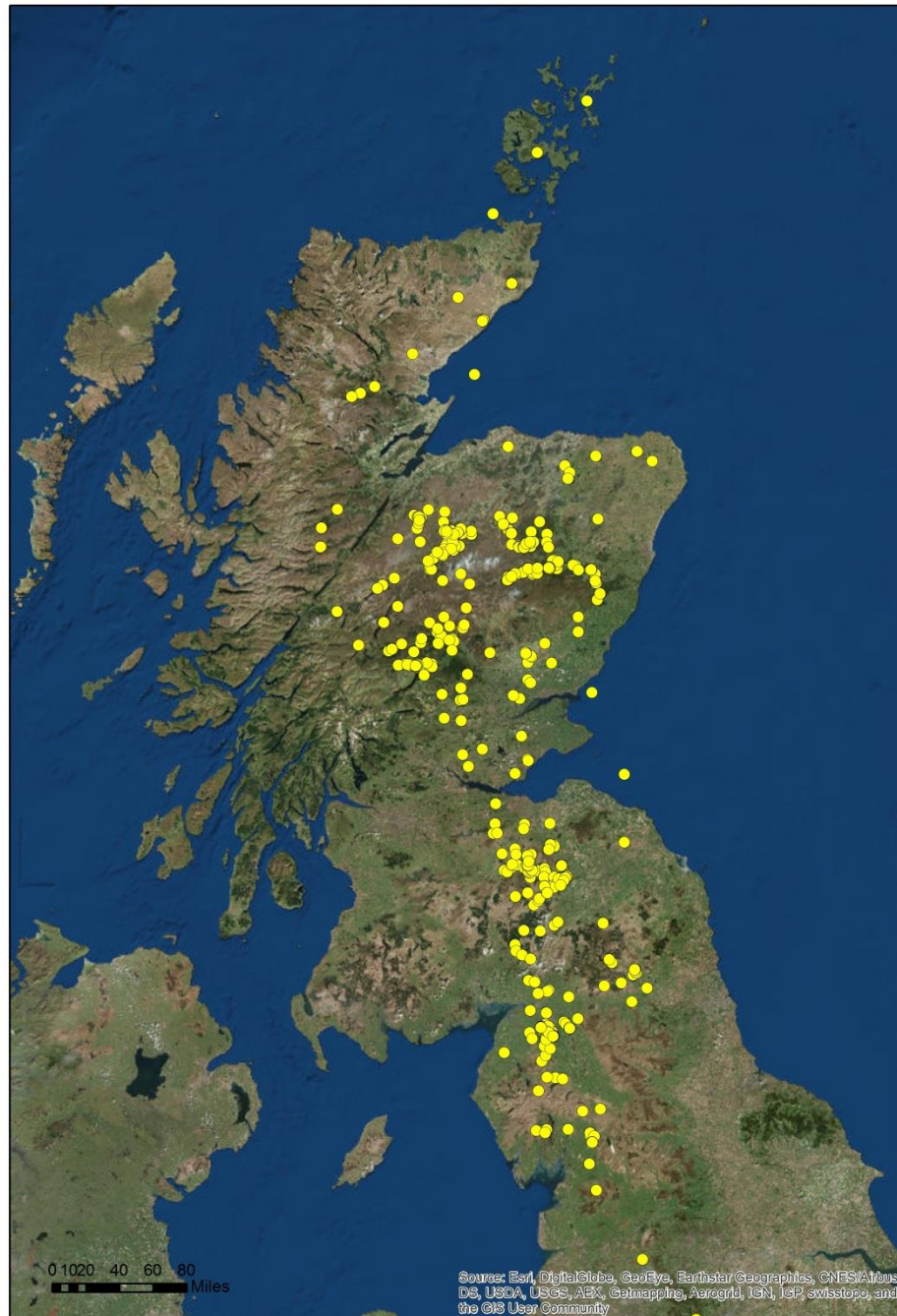


- Colour-ringing studies have shown Rutland birds move between Rutland and Wales on a daily basis
- As a result, provision of artificial nests is crucial

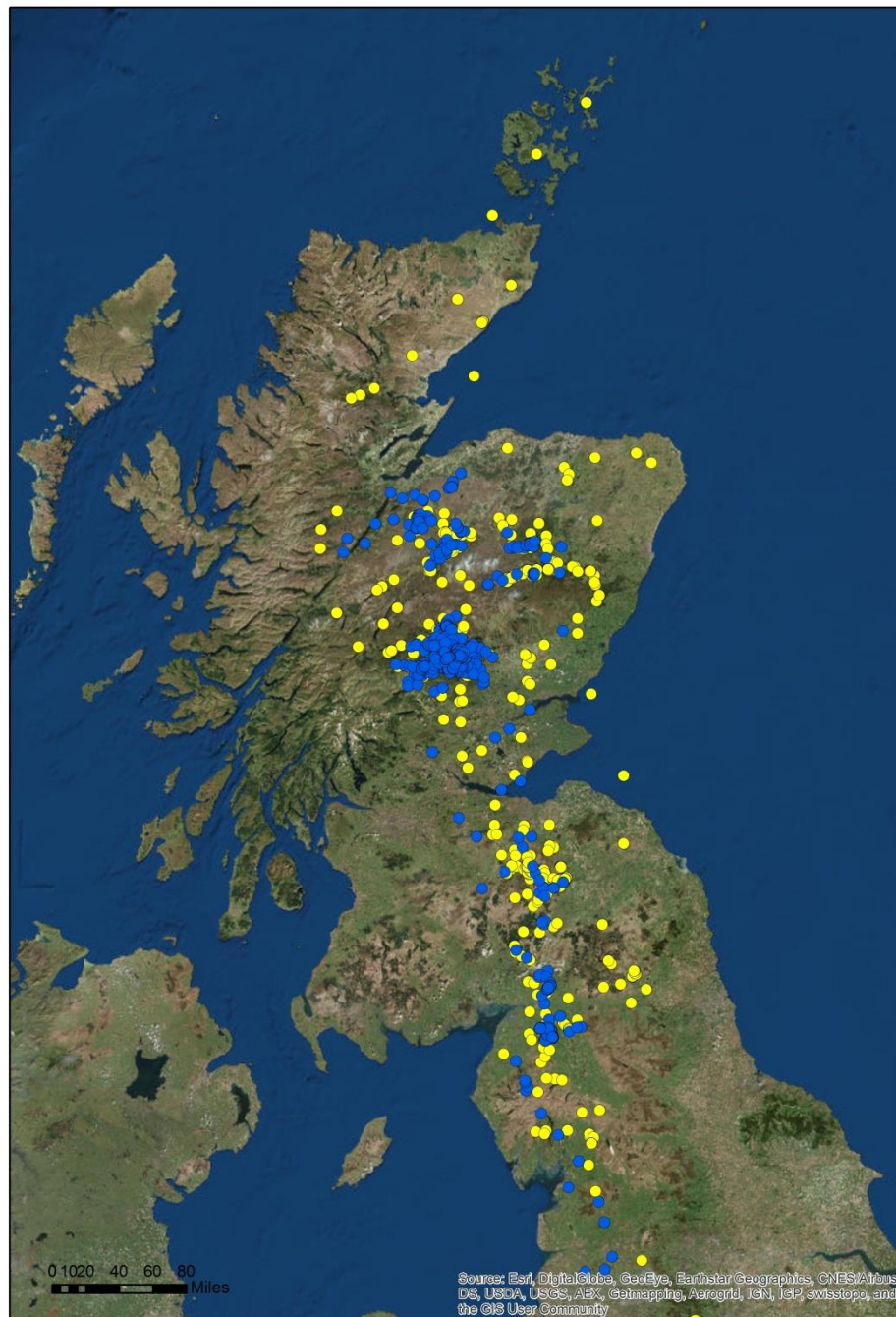
- Artificial nests have been used with great success in other parts of the UK and Europe
- Young males prefer to take over an established nest than build their own from scratch – and wander over a very large area in search of a nest...



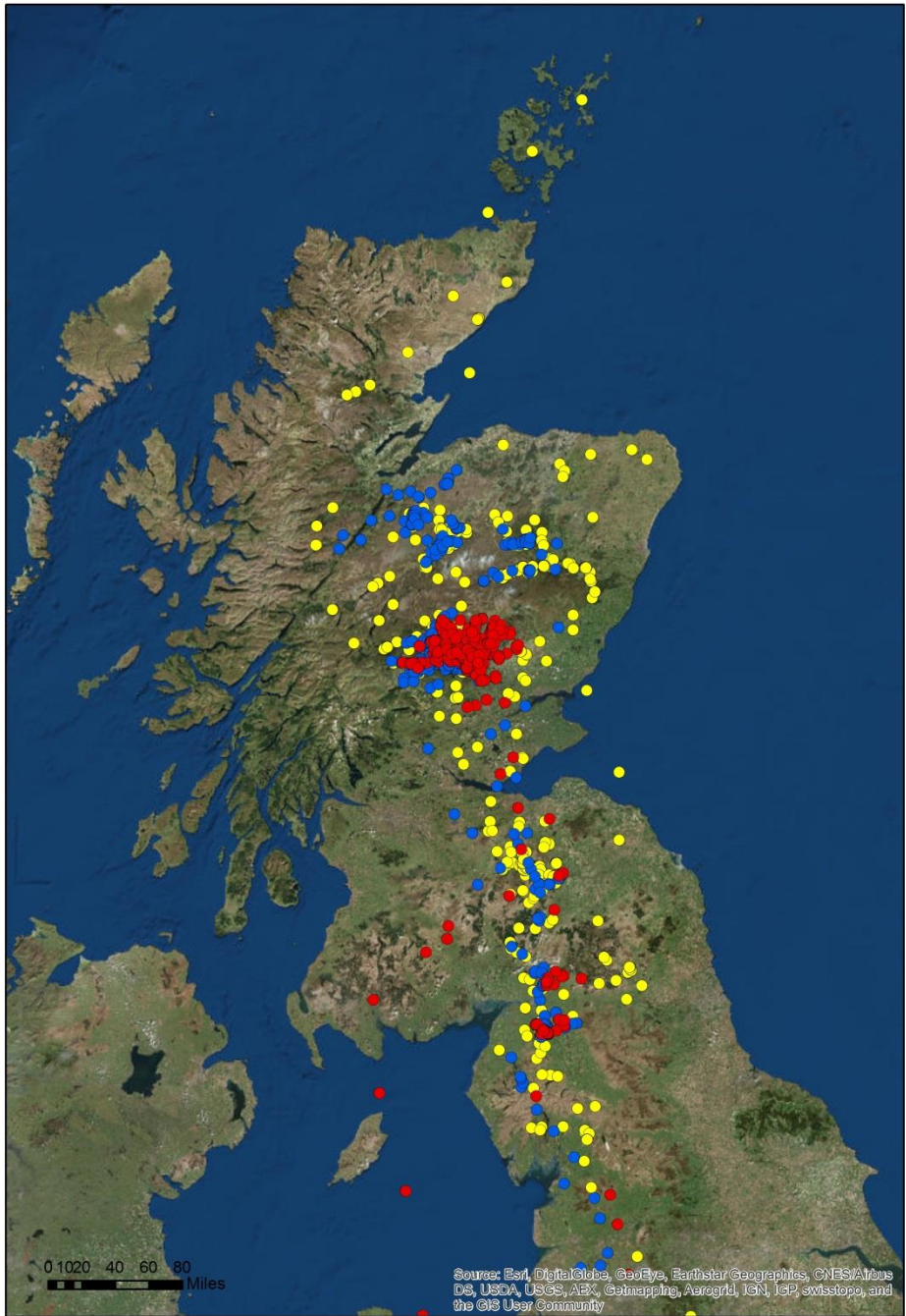
2011 (yellow)



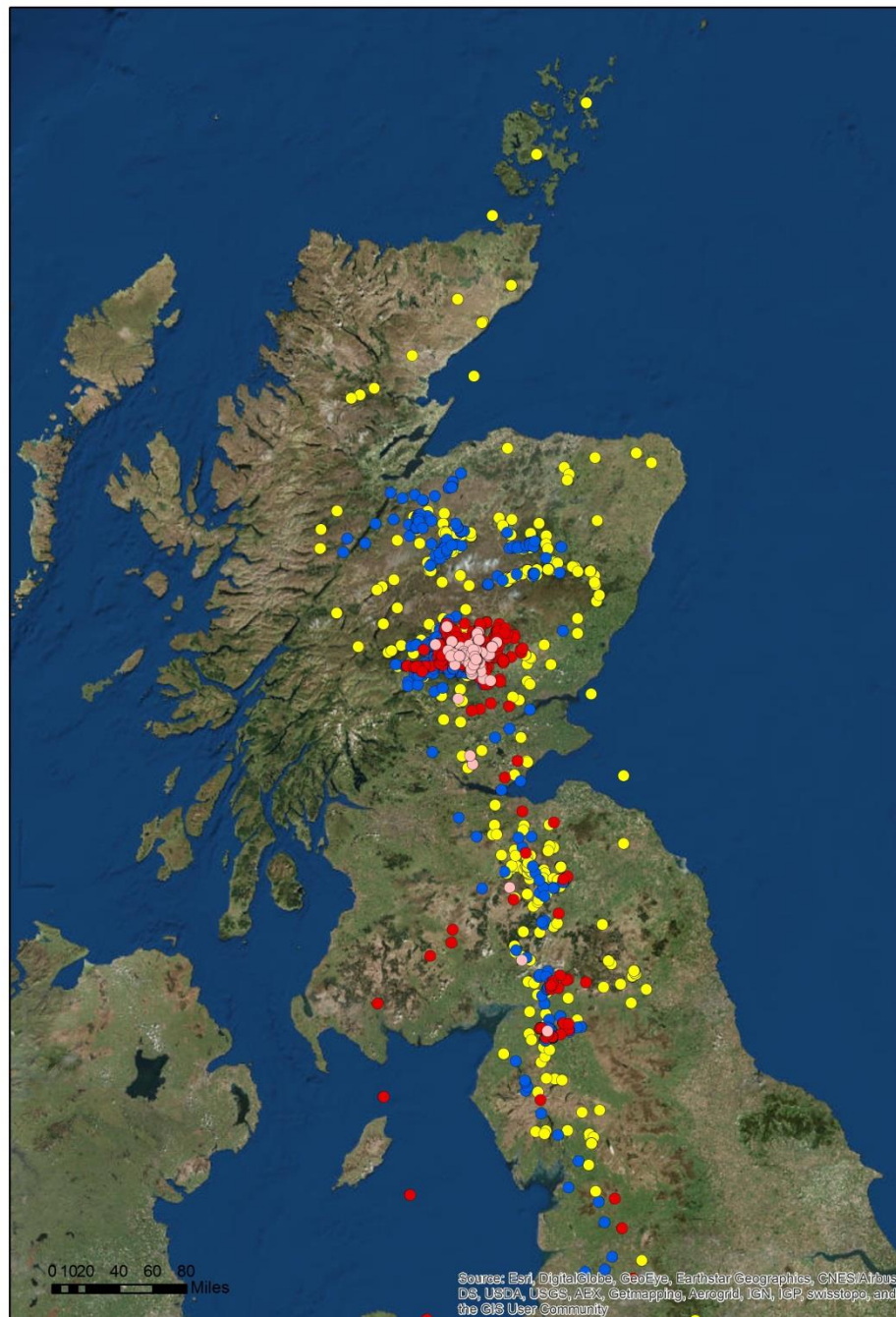
2011 (yellow) and  
2012 (blue)



2011 (yellow), 2012 (blue) and 2013 (red)



**2011 (yellow), 2012 (blue), 2013 (red) and 2014 (pink)**



- Even with artificial nests, osprey re-colonisation is a slow process.
- Most young males eventually settle close to their natal site

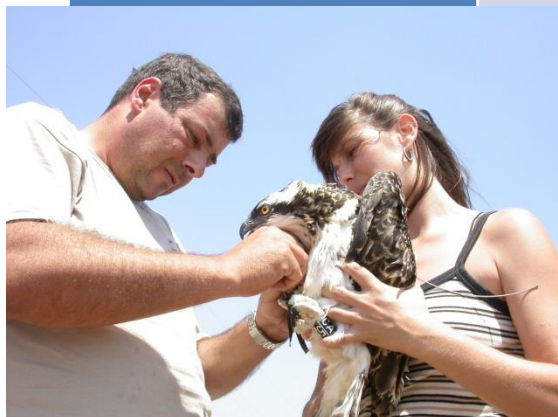


Bird ID	Sex	Distance from natal to first breeding site (km)
5N(04)	F	5.36
30(05)	F	19.44
03(08)	F	220.01
00(09)	F	17.98
12(10)	F	216.4
24(10)	F	213.18
25(10)	F	15.08
3J(12)	F	2.54
5F(12)	F	239.8
	<b>Mean</b>	<b>105.5</b>
5R(04)	M	5.36
AW(06)	M	14.27
01(09)	M	7.55
03(09)	M	6.72
06(09)	M	12.92
11(10)	M	8.38
28(10)	M	3.82
32(11)	M	33.76
33(11)	M	5.36
51(11)	M	17.36
	<b>Mean</b>	<b>11.55</b>



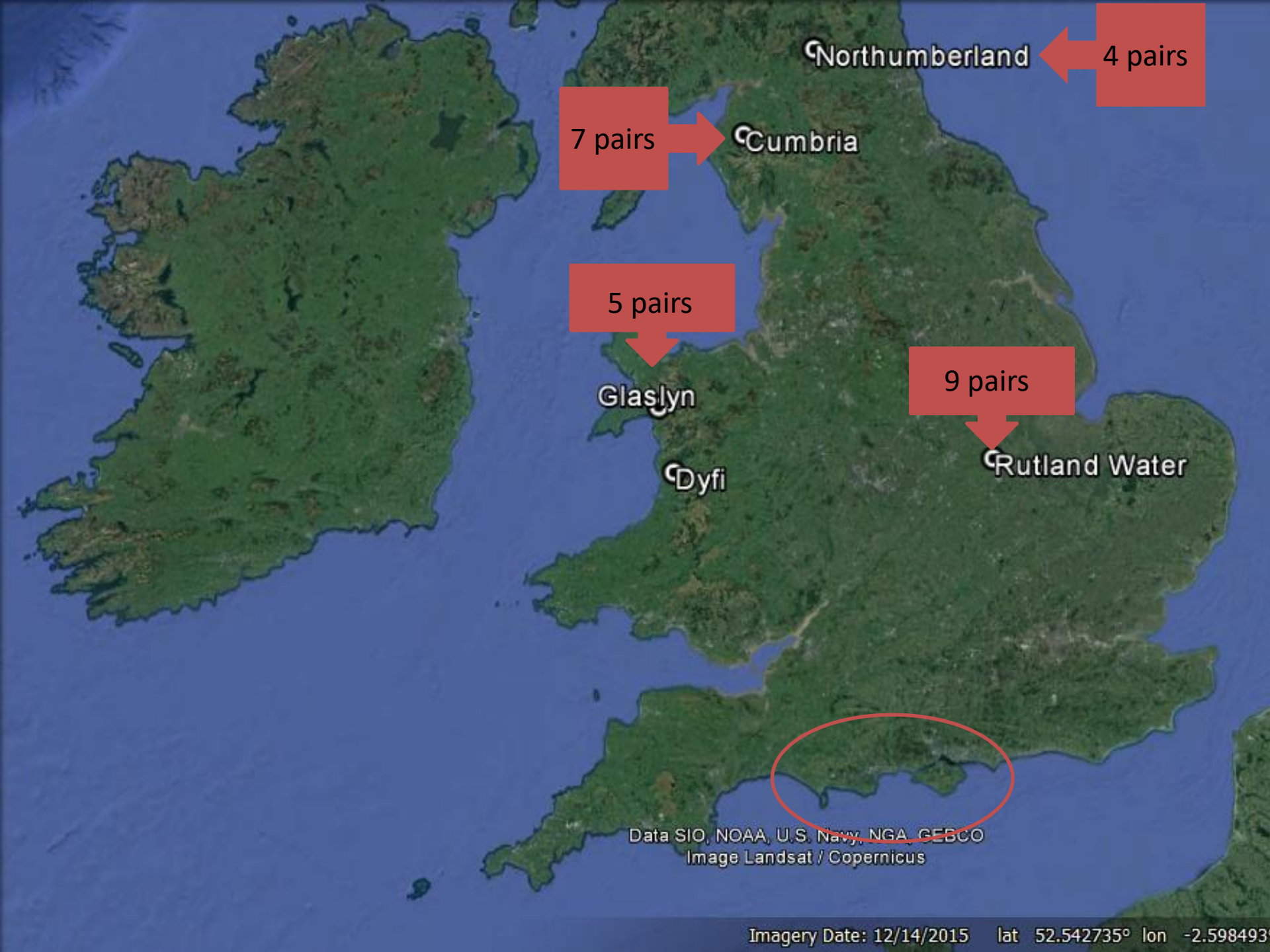


Location	Years	Total no. of birds released	Donor population	Breeding pairs to date
Spain - Andalusia	2003-2012	164	Scotland, Finland and Germany	20
Italy – Maremma Regional Park	2006-2010	32	Corsica	3
Portugal - Alqueva reservoir	2011 -2015	56	Finland and Sweden	2
Spain – Urdaibai, Basque Country	2012 - 2017	48	Scotland	2
Switzerland - Canton of Fribourg	2015 -	Ongoing	Scotland (2015 only), Germany and Norway	Two male birds have returned so far



© Urdaibai Bird Center

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Northumberland

4 pairs

7 pairs

Cumbria

5 pairs

Glaslyn

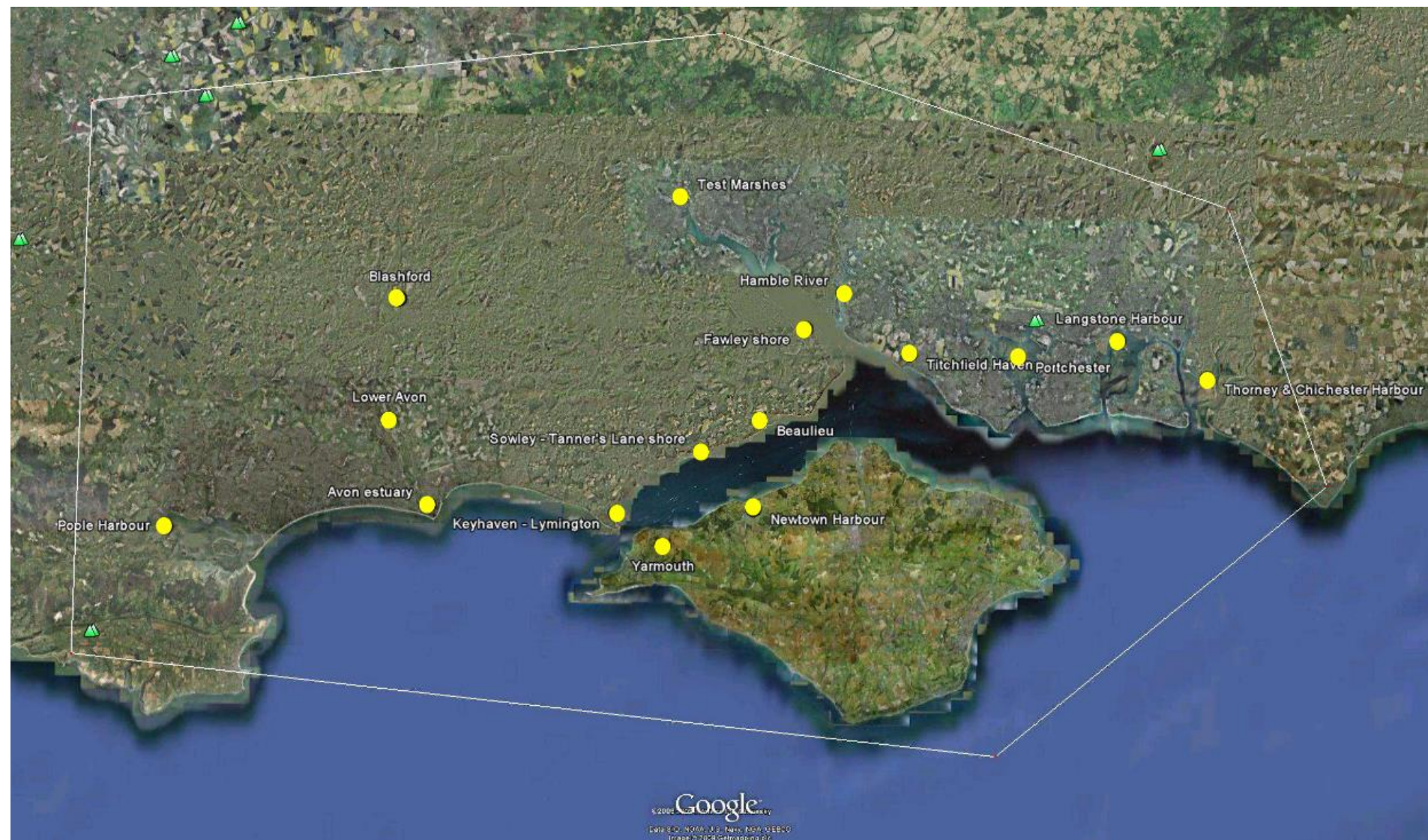
Dyfi

9 pairs

Rutland Water



Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image Landsat / Copernicus



- Up to 50 artificial nests erected at sites around Dorset and Hampshire in recent years...



- ...including 13 around Poole Harbour

- Europe's second largest natural harbour
- Estuary of several rivers, including the Froome
- Approximately 36 km<sup>2</sup>
- Average depth 46 cm
- Perfect for Ospreys – but no male birds who regard it as home!



# Translocation – the process















5

6

5

12























- Female CJ7 first seen on 8<sup>th</sup> August 2017, and remained until early September
- Returned again in spring 2018



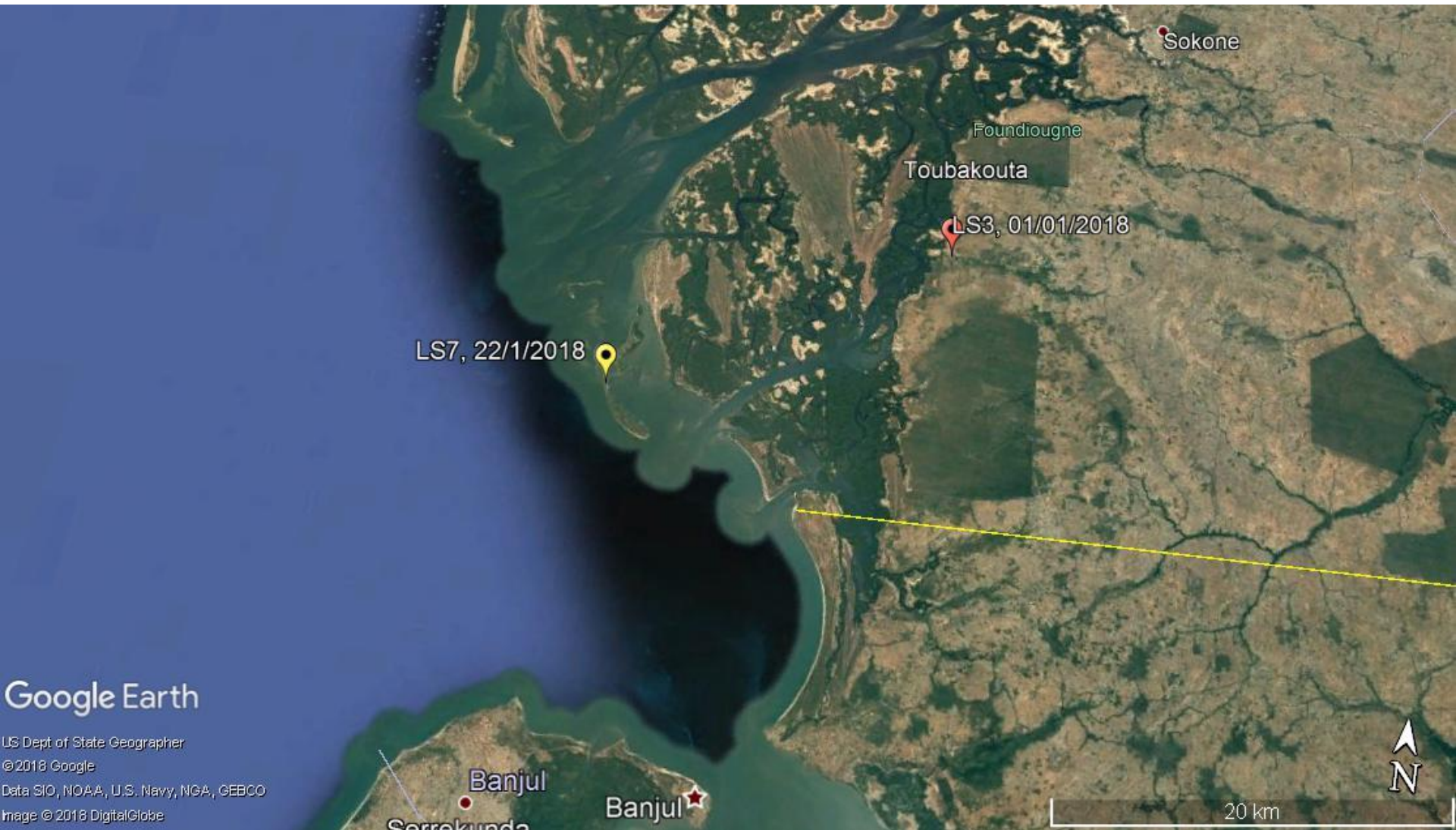


- LS7 seen at Sine-Saloum Delta on 22/1/18





- LS3 photographed at Sine-Saloum Delta on 1/1/18



Sokone

Foundiougne

Toubakouta

LS3, 01/01/2018

LS7, 22/1/2018

Banjul

Banjul

Serekunda

20 km



Google Earth

US Dept of State Geographer  
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Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
Image © 2018 DigitalGlobe







- Total of 22 juveniles translocated so far
- First birds could be back in spring 2019

# Thank you for listening!



[www.ospreys.org.uk](http://www.ospreys.org.uk)

[www.roydennis.org](http://www.roydennis.org)

[www.osprey1f.org](http://www.osprey1f.org)

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