

**Northern England Raptor Forum Annual
Conference**



November 2013

Speaker summary

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Ian Newton : Raptor Migration

Ian explained the general reasons for bird migration. Autumn migration to warmer climates is logical but why do birds move north again in spring? The answer lies with securing a greater breeding success. These same principles apply to raptor migration, with diet determining whether species migrate. Raptors living predominantly on cold-blooded prey migrate whereas those living on warm blooded (winter active) prey moved less far. Sixteen of the 22 raptor species in the UK winter north of the Sahara. Climate change is causing many raptors to stay in southern Europe or north Africa, rather than wintering south of the Sahara.

The flight method of raptors affects their migration route. Raptors which glide and soar, using less energy as they take advantage of thermals, need to be moving over land and during the day. Their routes are constrained and they generally fly at low altitudes - enabling them to be counted with binoculars. Two million birds enter Africa this way via well-known bottlenecks such as Gibraltar, Suez and the Bosphorus.

David Lack was a pioneer who realised that "angels" on early radar were in fact migrating birds. The Israelis bought old Russian radar systems to use for plotting movements and were able to prove for example that the entire world population (36000) of Lesser Spotted Eagles move through Israel.

Flapping raptors and other species select the most favourable winds. Speeds of migrating raptors were found to be significantly higher during the middle of the day when the sun was hottest.

Autumn migration is slower as there are fewer days of thermals and there is no urgency to breed.

The advent of solar-powered tags (at £3-3.5k per bird) has led to new understanding of bird movements. A Peregrine breeding in N Greenland moved to Argentina (13500 km) in just 35 days – 400km per day. It has also been found that Gyrfalcons winter on icebergs in the seas off Greenland, preying on gulls and ducks, and moving south as the winter progresses. Without tagging this would never have been known.

The most stressful time for raptors is when they first arrive on their breeding ground, as they normally arrive before small passerine prey. For Gyrfalcon, their success depends on the abundance of Ptarmigan as this is the only source of food in early spring when they return to land and snow is still lying.

David Jardine : A long-term Buzzard study

David described his study area in Argyll (10 miles by 3 miles) and its mixed habitats. During the period of the study there had been a 15% rise in sheep numbers but in recent years a steep decline. During the period 1988-2007 about 60 traditional Buzzard sites were identified.

Average productivity between 1990-2004 was 1.84 young per nest ; this is low compared with the Mull of Kintyre and mid-north Argyll, but these studies there had only run for 2 years. The main diet was rabbits making up $\frac{3}{4}$ of the diet biomass. Rats, mammals and birds made up the remainder. Bird items included Meadow Pipit, Starling, Snipe and Wheatear – these were especially important for the chicks, Song Thrush and Blackbird also featured. One Corncrake was also found, but the restoration of habitat for Corncrake and their subsequent increase shows that Buzzards are not a threat to them. Rabbit levels have declined markedly in last 4 years and two BBS squares in the study area demonstrated a long-term decline in Meadow Pipit (60% since 1995). Hen Harriers first bred 2005 and in 2012-13 there were 4 females. The absence of ground predators means that 4 young on average per nest are fledged. Kestrels were very common initially, although there are no voles. Changes in agriculture caused them to disappear for some years but they have now returned. Ravens increased to about 12 pairs until 2007 when control started coinciding with lower sheep stocking levels, better lamb protection and fewer rabbits.

There is a large variation in buzzard laying dates – the earliest recorded was 24th April and the latest 15th June, but most lay 23rd-29th May. If prey is plentiful and the spring is warm, breeding is earlier.

There has been a decline in Buzzard numbers and this may be due in part to the arrival of Golden Eagles in 2000, as they predate Buzzard young and may break up Buzzard density dependence. They also cause Buzzards to desert cliff territories.

The arrival of Hen Harriers and resurgence of Kestrels may be partly due to the decline of Buzzards which predated both these species. There is no change in numbers of small mammal prey, and it is not thought climate change has any impact.

Overall the study suggests complex interdependency between that various raptor species and the true picture won't emerge if just a single species is studied.

Barry O'Donoghue : The silver hawk: past, present and future status of the Hen Harrier in Ireland

Barry is an Assistant Principal Officer with the Irish Wildlife Service and has studied the Irish Hen Harrier population for many years, mainly in Kerry and central and southern Ireland.

Hen Harriers used to do well in Ireland, nesting in heather, rank scrub and young forestry and hunting in farmland where stocking levels were low and there were plenty of rushy areas, bushes, gorse and moorland. But in recent years, many farmers have sold land for forestry and left the land. The results of these economic changes have been profound. Forestry is only useful to harriers for a few years when just planted. Whilst there is no or little persecution (no Red Grouse and few Pheasants) the forestry industry is rapidly destroying their habitat and the survival rate of young is unsustainable.

Satellite tracking and wing tags have shown that birds move throughout Ireland, and to Scotland and the Isle of Man and it is important to consider all these areas as one when formulating management plans for this species. Other work done in Eire includes dedicated roost watches, (now more than 9 years of data), studying numbers, behaviours, trends and origins of roosting birds to enable their better protection. Nine young birds have been fitted with satellite tags but none have lived more than 100 days; first winter survival rates are critical and at present cannot sustain the population.

Biodiversity needs highlighting and given more importance. Wind turbines may also cause harriers to be destroyed as their presence may block development – there are several SPAs in Ireland where Hen Harrier is an important species.

Without suitable habitat being preserved no amount of species recovery projects will suffice.

Mark Avery: Fighting for birds

Mark spoke extempore, without slides, and encouraged audience participation.

He felt that it was important at this point in time to contact MPs about the extinction of Hen Harriers in England, as election manifestos are currently being written. This question has featured in Labour thinking and it is important to reinforce it in politicians' minds as something which is important to a lot of electors. Four letters to an MP on the same subject triggers a response, apparently. It is also important to sign John Armitage's e-petition about regulation of gamekeepers. Overall, the message was not to be afraid of engagement with the political process.

Mark suggested a press-friendly protest on August 12th 2014 with perhaps a silent walk on public roads in an estate carrying 300 white crosses (300 being the number of pairs of Hen Harriers estimated by the EU to be able to be carried by existing habitat in England).

There was a lively discussion stimulated by Mark's obvious passion for this great problem.

Staffan Roos: Where have all the Kestrels gone?

Staffan works as a senior RSPB scientist in Scotland.

The BBS 1994-2012 shows a 30% decline and in Scotland the decline is 57%. Possible factors for this decline are habitat change, food availability, rodenticides, climate change and predation by increasing raptors such as Goshawk, Raven and Buzzard. Barn Owls may compete for food. At this stage in the study these were all hypotheses that needed to be tested through further research.

Habitat change includes agricultural intensification, loss of setaside, afforestation, overgrazing, land abandonment and a decline in barley growing. For example, in SW Scotland Kestrels originally benefitted from first generation spruce plantations but such acreage is now greatly reduced. Barley winter stubble fields have been given over to winter wheat and oil-seed rape.

Food is 70% voles but there is no national monitoring system for voles in the UK, so fluctuations are not fully known, Poor vole years affect reproduction and it is thought that the sizes of the period peaks in vole populations are now much reduced compared with earlier decades.. Some birds (Meadow Pipit, Starling and Starling) are also taken.

The advent of SGARs (second-generation anticoagulant rodenticides) make rodents appear in the daytime so they are more likely to be caught by Kestrels and the poison passed into the bird. CEH report an increase in dead Kestrels showing evidence of SGARs, from 43% in 1997 to over 80% now. This may prove to be a very significant factor

Wetter springs due to climate change lead to less efficient foraging and starvation of chicks. Intra-guild predation by larger raptors (Goshawk, Peregrine, Buzzard and Raven) also predate Kestrels.

However, there are certainly regional variations in the various factors listed above.

Nigel Middleton: Wing-tagging of Marsh Harriers in Norfolk

Nigel is employed by the Hawk & Owl Trust and most of his work is at their Sculthorpe Moor reserve.

Nigel became interested in Marsh Harriers when, as a 12 yr old, he found a Marsh Harrier nest. He worked with the late Roger Clarke studying roosts, and has introduced nest cameras at Sculthorpe. This had to be done very carefully as the birds do not always accept them. One female, "Mrs H" has been studied by generations of Leicester University students and Nigel revealed a lot of interesting information about her life, feeding ecology and breeding.

The roosts in the Norfolk area can be as many as 50-70 birds, and studies have focused on dispersal from the natal site, whether birds migrate or overwinter, and whether they return to the natal site. Wing tags have been used to facilitate these studies as much cheaper than satellite tracking, and there were very few recoveries from ordinary ringing. In 2013, birds have moved as far as Portugal, and as far north as Aberdeen. There are few or no sightings Nov to Feb of Sculthorpe-bred young birds, suggesting most birds bred in England migrate to the continent and perhaps those roosting during the UK winter are from Scandinavia. He ended with a plea to report sightings on the HOT website.