**Craigentinny Allotments Wildlife News 4 (November 2021 to January 2022)**

As last year, these last three months have been relatively quiet on our site wildlife front. At least one Fox has been around, even after the sad loss of the injured one in December (it seems from what I have discovered that at least half of all young foxes in cities do not survive their first winter, with accidents, road and otherwise, being the main cause of death – so, sadly, it will not have been alone). At least one Grey Squirrel has regularly been seen, and Woodmice have certainly continued to dig up and eat bulbs on our plot, and it’s probably them that have been eating beans in Norma’s shed!. The one new mammal for our list since we started the survey in 2020 has been a Badger sighted at the bottom end of the site in the third week of January – though badgers were quite regular visitors until a few years ago. Another possible sighting, and certainly worth looking ut for, was a Stoat or Weasel under a shed on one plot in early November

The usual winter birds have also been seen, usually in small numbers but some on most days: at least one and possibly two Robins, at least one Dunnock, Blackbirds, Woodpigeons, Magpies, Blue, Great, Long-tailed and (once) Coal Tits, Carrion Crows, very occasionally Goldfinches, House Sparrows, occasionally a small flock of Starlings. Also, flying across the site or feeding on the golf course at high tide, on one or two days there have been geese (most likely Pink-footed), sometimes Oystercatchers (often a big flock), one or two Herring Gulls and, once, a big flock of Black-headed Gulls (smaller, mainly white with a black dot behind the eye, and a new bird for our site sightings list). Also, right at the end of October, just after the last Wildlife News, our first Kestrel was seen hovering over the site.

But the noticeable thing to me has been the relatively limited number of birds that we have seen on any one of our visits, in spite of the site being relatively free most days of much human activity. So, I asked myself, what does our wildlife do in the cold, dark winter months?

The challenges to our wildlife in the depths of winter are obvious: not dying from the cold, getting enough food, and avoiding predators in a situation where they are likely to have to feed for longer and, with no leaves on trees and less vegetation on the ground, and they are therefore more exposed to view.

Hibernation

One way of avoiding all these challenges might be to hibernate. This involves animals going into some kind of torpor which dramatically slows down their pulse rates and bodily functions and allows them to survive without additional food and with a much lower body temperature than normal. To do this, they need to find a secure and preferably wind-free location where temperatures will not fall much below zero, and they also need to have laid down substantial amounts of body fat off which their reduced metabolism can allow them to survive. Sadly, this means that if a truly hibernating animal is woken up in the middle of winter, it may well not survive, because it will have used up too much of its fat store.

In fact, other than bats (usually moving far into caves or the roofs of buildings, or sometimes in holes in deep holes in big trees), in Scotland hedgehogs are the only mammals that truly hibernate. Tucked up in a well-insulated nest, their temperatures seem to be able to drop quite safely to about 5 degrees, compared with a normal of about 35, and their body metabolisms can fall to below five per cent of normal.

It seems that a few other Scottish mammals (in the context of our site these include our Grey Squirrels and Badgers) do have the capacity to slow their bodily functions for short periods of time in the coldest depth of winter, but this is nothing like true hibernation, and rarely lasts more than a few days. After this they have to wake up and return to searching for food (in the case of grey squirrels often in food caches laid down in the autumn which they have shown in experiments to have an amazing memory to be able to relocate).

As to other species that we get on our site, Frogs and Toads, like most other cold-blooded animals, are able to survive low temperatures as long as they do not fall below freezing. They can reduce their food requirements dramatically by going into a ‘hibernation-like’ kind of torpor, with much lower metabolic rates. Toads mainly do this deep in thick above ground vegetation (which may include compost heaps, which, incidentally, are also popular with hedgehogs), or in holes in the ground. Many frogs also do this, but, in addition, can spend winter months buried among fallen leaves at the bottom of deeper ponds where freezing is less of a risk - in most years at least.

What all this suggests is that there may be big benefits for frogs and toads (as well as hedgehogs which we don’t normally have on our site), if we can resist the temptation in the middle winter to tidy any really overgrown and unkept parts of our plots, and also if we take care when and how we run down our compost heap over the winter.

With one exception (a species called the Common Poorwill – a. small, mainly ground-dwelling, night-time insect eater found in California and New Mexico), birds do not hibernate. This is not possible for them because they have high rates of metabolism and indeed they only put on large amounts of body fat in advance of long-distance migration. Most of the time, even in winter, a lot of extra fat is a disadvantage because heavier birds have less of the speed and agility which they need to have the best chance of escaping from predators.

Migration

Most species of bird have one major advantage over any other warm-blooded animals (other than bats): they can fly. And many of them do, some over quite remarkable distances, on migration This enables them to escape from seasonal shortages of their normal food supply, and also from the coldest winter weather in the areas where they breed.

Of the species which we have seen on or over our site, Swallows and Swifts feed almost entirely on flying insects of which there are few in Scotland in the winter. Most Scottish Swallows go each year as far as South Africa and Namibia, though a few now winter in Spain and maybe, very recently, even in south-west England. Swifts fly to Africa south of the Sahara, never touching land from the time they leave their nests here in one summer until the return the following year (they even sleep on the wing!).

Among our other small birds, small warblers, like the Chiffchaffs and Blackcaps which have been seen or heard several times on our site in the last couple of years, are also primarily insect-eaters, and have in the past all gone south to the Mediterranean or further. A few Chiffchaffs do now winter, mainly in southern Britain, but the big change is that, even in Scotland, anyone with a bird-feeder on our site or in their garden may expect to see Blackcaps in winter from time to time. But these are not the same birds as are here in the summer – instead an increasing number of Blackcaps from southern Germany now come to Britain in the winter, and this group has now started to evolve to benefit from this, by developing shorter wings, because they have less far to fly, and fatter beaks, for dealing with peanuts and sunflower seed – an extraordinary example of evolution in action!

Also, until quite recently it seems that most female and some male Goldfinches left Scotland each autumn, many going as far south as Spain. However, garden bird feeding has encouraged many more to stay here in the winter, and has, indeed, encouraged a large increase (possibly a doubling) in numbers of Goldfinches breeding in Scotland in the last few years. And this is why we do now see a few on our site even in the middle of winter

The other summer-breeding migrant that we see from, or occasionally on, our site is the Lesser Black-backed Gull. They, like Herring Gulls, nest on rooftops, mainly in the city (as a good substitute for clifftops which were their more traditional summer bases). But, unlike Herring Gulls, Lesser Black-backed Gulls winter in the Mediterranean or increasingly in southern England, though many return as early as February to claim the best nest-sites.

However, not all migration is out of Scotland in the winter. There have been several reports from our site over the past couple of months of geese flying past, some of them probably Pink-footed Geese from Iceland, which roost in huge numbers, notably in Aberlady Bay. But the biggest migrant influx that we get every year actually on our site is of Blackbirds. I noted in the last Wildlife News that Blackbirds were late coming this year, but that there had been a large influx reported from the Isle of May the day before I sent it out. And, indeed, on the very next day, a flock of Blackbirds arrived on our site and started to devour the remnant apples lying on the ground. These migrant Blackbirds have always struck me as slightly odd, because they almost all every year seem to be males (black not brown) and to be first year birds (adults have yellow beaks). If I am right, this is just another example of a pattern which is quite common in some other species, of females migrating further south than males, and adults trying to survive without migration (or only going very short distances) so as to hold onto the best territories for the Spring.

Finding food, keeping safe, and keeping warm

These migrant Blackbirds are typical of many other species in winter because they live here in flocks (resident males try vigorously, but seldom fully successfully in winter, to defend territories). There is a lot of writing about why birds flock in winter and there seem to be three main reasons.

First, by watching where others go in the mornings as they wake up from their overnight sleep, birds, particularly young ones, are able to follow older others who give signs of flying more confidently to good feeding spots that they have discovered the day before (or may even have remembered from previous years).

Second, being in a group means individual birds can spend less time watching out for danger. Indeed, there seems to be quite a lot of evidence that birds in mixed flocks of different kinds of tits and finches and other small birds (as we certainly sometimes get on our site) can recognise alarm calls made by species other than their own. There is quite good evidence that knowledge of a range of alarm calls of other species that are common in an area is inherited – and there is even a suggestion that this may explain why occasional off-course vagrant visitors to our shores, even if they join mixed flocks of native species, seem particularly likely to be picked off by sparrow hawks and other predators – they don’t know what the alarm calls mean!.

Third, being with a group of others can be extremely useful on cold nights. Long-tailed tits (which have been seen in numbers up to about a dozen on our site earlier in the winter) are famous for sitting in a tight close-packed line on a branch at night, all fluffed out and thus minimising heat loss. And wrens and several species of tits have frequently been observed elsewhere, crowding into nest boxes on cold winter nights (12-14 wrens quite commonly and one report of 40!). So, it’s worth keeping an eye out for this in the various boxes that are around on our site.

But not all birds flock

I’ve already noted male Blackbirds, but the most notable exception is the Robin. As has been very obvious on our site over the past two years, our Robins are very independent individuals, even in winter. Indeed, Robins are unusual among British birds in that males and females both maintain their own separate territories over the winter months, and each vigorously defends its area against all others. Robins are almost the only British bird that sings in defense of its territory in every month of the year, and they will vigorously defend it against any other. Indeed, on a nice warm winter’s day (a long time ago!) I once set up a tape recorder of a Robin singing in the middle of a garden lawn, and put a ball of red wool on a stick beside it – and the local Robin duly came down, sang vigorously at the tape, and then started to attack the wool – at which point I quickly intervened, because of the risk of actually scaring the Robin away.

So, by defending its territory, which they know well, Robins try to minimise competition for food – and, as many of us have seen on our plots this winter, they also cultivate relationships with us which can help them to find food amongst our diggings, and can help to keep predators away.

Finally

I hope this slightly different Wildlife News has been interesting to at least some of you, at a time when, as I noted at the beginning, there is much less activity than usual on our site. As ever, comments and suggestions and corrections of errors or alternative ideas, and, of course, additional sightings are always welcome

Best wishes to you all

Mike