

A bird in the hand



**Ringling birds
for conservation**

Although many of you reading this article will already be aware of bird ringing, and possibly even seen it first hand, there are probably some questions that you'd like answering. So, what is modern bird ringing all about and how can you contribute? For those that don't know, bird ringing involves the fitting of a lightweight, individually-numbered ring around a bird's leg. Subsequent reports of these ringed birds can tell us a great deal about the survival and movements of wild bird populations. Using this information, together with that from other BTO schemes, we can begin to understand and explain changes in bird populations.

The bird in the hand

Fitting the ring is only part of the story. The old adage that a bird in the hand is worth two in the bush is indeed true! Close examination of a bird's plumage often allows ringers to ascertain the age and sex of the bird; information that is vital in detailed survival studies. Other measurements, such as weight, amount of fat and stage of moult, are taken to give an idea of body condition which can help us understand how birds prepare for migration and the degree to which they refuel en route. Getting the bird into the hand in the first place is one of the most challenging aspects of bird ringing and often requires much patience and ingenuity.

Birds are caught for ringing in a variety of ways. Some (about 20% of those ringed each year) are ringed as chicks in the nest; this is valuable because their precise age and origin are known. The method used most frequently to catch birds once they have left the nest is the mist-net. This is a fine net erected between two poles, designed to catch birds in flight. The birds fly into the net and drop into 'pockets' formed as the net hangs from a series of 'shelf' strings. This method is very effective but birds can only be removed safely from mist-nets by experienced ringers who have received special training.

Learning to ring

The skills necessary to become a bird ringer can only be learnt by practice under the close supervision of experienced ringers. Essential skills include the safe and efficient trapping and handling of birds, identification, sexing, ageing, measuring and record keeping. For this reason, ringers undertake a period of training of at least one or two years, during which they are only allowed to ring birds under supervision. As they learn more skills they progress through a series of permits, with independent assessments at each stage. In this way, the BTO Ringing Scheme maintains very high standards of bird welfare and data collection. A BTO ringing permit is a legal requirement to catch birds and is, in many ways, similar to a driving licence although it has to be renewed annually.

Ringing facts and figures

Ringing in Britain and Ireland began in 1909 since when some 32 million birds have been ringed. Of these 32 million birds, over 600,000 have been reported back to us.

Rings are made of very light metal alloys, with the smallest only weighing 0.04g. Different types of rings are used for different bird species, so that the ring used is geared to the size of the bird to which it is being fitted, the shape of its leg and the environment in which it lives. For example, birds that live on rocky shores are fitted with rings made of a stronger alloy to reduce the effects of abrasion on the all-important lettering.

Each ring carries a unique number that identifies the bird, together with the contact address for the ringing scheme that issued the ring. There are other ringing schemes elsewhere in Europe, usually one per country, though a few countries have more than one scheme. The BTO operates the Ringing Scheme that covers Britain and Ireland. The most commonly used address on a BTO ring is that of the Natural History Museum in London (abbreviated in different ways depending on the size of the ring) because this is a more familiar address than that of the BTO.



Clockwise from top left: A Blue Tit in a mist net the 'pockets' that run horizontally along the net (Mark Grantham); a colour-ringed Mediterranean Gull in the field (Dawn Balmer); a dead juvenile Blackbird after collision with motor vehicles (Mark Grantham); the oldest known wild bird in Britain & Ireland (Steve Starmer).



Does ringing affect the birds?

The simple answer is 'no'. It is absolutely essential that birds are not affected unduly by the fitting and wearing of a ring; if they were, ringing would not tell us how normal birds behaved. Many different studies have shown that birds ringed during the breeding season quickly return to incubating eggs or feeding chicks once they are released, and long distance migrants continue to travel thousands of miles between breeding and wintering grounds. Birds will not be affected as long as ringing is carried out by skilled ringers with the utmost consideration for the birds' welfare. It is not surprising that ringing has little effect on birds because, relative to the bird's weight, a ring is similar to us carrying a mobile phone.

What does ringing tell us about birds?

The amount of information that has been generated through bird ringing is really quite staggering. Ringing has enabled us to find out where our summer migrants go at the end of the breeding season and the routes that they use to get there. We know, for example, that while a few of 'our' Robins move south to winter in Spain, most remain here, to be joined by winter immigrants from breeding populations further north and east (see map). We also know that the Swifts which breed in many of our towns travel south through France and Spain in the autumn, crossing into Africa and continuing further south beyond the Equator (see map). Understanding where birds spend the winter, and the migration routes they follow, helps us to ensure they are protected at all stages of their annual cycle. Our own shores are important for waders and wildfowl in winter and we know from ringing returns that many individuals return to the same sites year after year. Knowing which birds are using these sites, and how they relate to breeding or wintering populations elsewhere, can help us determine the potential impacts of planned development or sea level change in coastal areas.

It can also help us explain changes in the numbers of birds returning here to breed. For example, analyses of ringing data have shown that a great deal of the variation in the numbers of Sedge Warblers breeding in this country can be explained by the pattern of rainfall in the Sahel region of West Africa. In years when there is little or no rainfall within this region, many of the Sedge Warblers that winter in the Sahel will die and fewer return to breed in Britain & Ireland.

Ringing does not just tell us where birds go, but also how populations are doing. It is particularly useful when combined with Nest Records type data to identify why populations are changing. For example, Reed Buntings and Linnets have both declined, but for Reed Buntings changes in survival predominate, while for Linnets productivity has declined. Very different measures will be needed to reverse the declines; information which has been fed into the design of agri-environment schemes.



(Mark Grantham); a mist net in operation, note net (Dawn Balmer); ringing a Greenfinch (Mark Grantham); a useful means of identifying individuals in a seabird – many young birds are killed through collisions with buildings (this Manx Shearwater, ring number EJ14240, was captured in 2003, at which time it was the oldest bird ever recorded in the field).



Maps taken from the BTO book *Time to Fly* available direct from BTO.

What don't we know? (yet)

Despite the ringing of more than 32 million birds over the 95 years of the scheme, there is still a lot to learn about migration patterns! For example, over 140,000 Garden Warblers have been ringed in Britain and Ireland, but to date we have only received 15 reports of these birds from their wintering grounds south of the Sahara. Amazingly, 13 of these reports have been from one upland area just northwest of Accra in Ghana. A similar pattern from other European ringing schemes seems to suggest that a large proportion of European Garden Warblers may be wintering in a very restricted area but it would be great to have some more information.

The scheme is also well placed to monitor any future changes in bird populations due to climate change, whether this be through habitat change, changes in survival or migration patterns. We'd also like to have more detail about the routes taken by many of our migrants. Part of the problem is that many of these birds migrate through areas where there are few people and this means that the chances of being sent a report of a ringed bird from such areas is greatly reduced. Fortunately, the introduction of colour rings and various other markers, are providing more information, not least because we do not have to wait until a bird is found dead or caught by another ringer to get information on where it has gone. Instead, we can rely on the many thousands of birdwatchers to report on the birds that they see carrying unique combinations of colour rings. Satellite transmitters are also proving increasingly valuable but can only be used on large birds at the moment.

How can you contribute?

One of the most important contributions you can make to the Ringing Scheme is to keep an eye out for ringed birds. Over the last few decades, the reporting rate of ringed birds has been dropping and this can make analyses of trends more difficult. So, if you find a dead bird just have a quick look and see if it's ringed. If so, please report it to us (see below), and keep the ring if possible (they open up quite easily with small pliers). Even better, why not publicise ringing locally? An article in a local magazine or newsletter would be great, and we could even help you to write this. If you're interested in actually training to ring, an information sheet can be found on our website detailing the training process and how to find a ringing trainer (www.bto.org/ringing/ringinfo/become-a-ringer.htm).

You can report a bird ring to us in several ways. If you have Internet access, you can use our online reporting form (at www.ring.ac) to speed up the process. This has also just been launched Europe-wide, so you can even report a ring in Russian! If you don't have access to the Internet, then you can either write or phone us with the details (01842-750050 or Ringing Unit, BTO, The Nunnery, Thetford, Norfolk, IP24 2PU).

Mark Grantham

Mark has been ringing for over 20 years and has been with the BTO Ringing Unit since 2001. A coastal ringer at heart, Mark is now the ringer in charge at the Gibraltar Point Bird Observatory in Lincolnshire.



Reporting a ringed bird

A form for all this information is available at www.ring.ac

The ring

Write down the ring number and, if the bird is dead, please enclose the ring taped to your letter. The ring will be returned to you if you wish to keep it. If it is not a BTO ring (address starting BTO or British Museum), please give the address shown on the ring as well.

Where & When

Give the location of where the bird was found, including the name of the nearest town or village and a grid reference if possible. Give the date on which the bird was found.

The circumstances

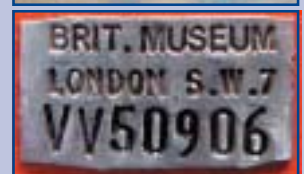
Say if the bird was found alive or dead. If dead, please give the cause of death if known; e.g. was it hit by a car, brought in by a cat or found oiled on a beach? Also note if the bird was freshly dead or decomposed, etc. If the bird is alive, please say what happened to it; e.g. found stunned after hitting a window and released later in the day once it had recovered.

The bird

Write down the species of bird, if you know. Don't worry if you don't know.

Your details

Don't forget to give your name and address so that you can be sent the information about when and where the bird had been ringed. Details will normally be sent within a month but there may be delays at busy times of year. If you send a report of a ringed bird by email, please include your postal address.



From top: colour rings (BTO); a metal bird ring showing the contact address used (BTO); a dead Guillemot (Mark Grantham).