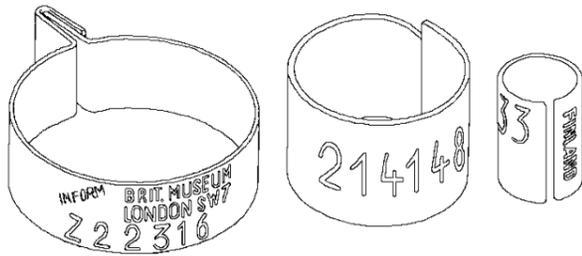


Wild birds have been ringed for just over a hundred years in many countries across the world. Currently, over 800,000 birds are ringed in Britain and Ireland each year, of which over 13,000 are subsequently found or recaptured away from where they were first caught. Many more are recaptured locally to where they were ringed.

Bird ringing in the UK is carried out by ringers licensed by the British Trust for Ornithology (BTO) on behalf of the statutory conservation agencies (Natural England, Scottish Natural Heritage, Countryside Council for Wales and Environment and Heritage Service Northern Ireland). It involves catching a wild bird and fitting a light silver-coloured metal ring of a correct size on its leg. The ring carries a unique number, by which the bird can be identified later if it is caught or found again, and a reference to the British Museum, London. This is used as a postal address for ring recoveries because it is internationally well known.



Why are birds ringed?

Bird ringing is a valuable scientific tool for the study of wild birds. Almost everything we know about bird migration, dispersal, survival and longevity, comes from the ringing (or other forms of marking) of wild birds and the subsequent recording of these individuals elsewhere by recapture, observation or finding them dead.

Ringing is a means of marking a bird so that it can be identified as an individual at a later date. This allows researchers to determine how far individuals travel and how long they live. Although many reports are of ringed birds found dead, ringers frequently catch birds that have already been ringed.

Bird ringing is used to monitor bird populations and their movements on a national scale, and to help many detailed studies answer specific questions about bird ecology and behaviour. It has provided a wealth of information critical to achieving conservation success. The following examples illustrate discoveries and conservation successes only made possible by bird ringing.

- Ringing studies of circl buntings in Devon showed that individuals rarely moved more than 2km between breeding territories and winter feeding areas. Subsequent conservation programmes for circl buntings have provided breeding season habitat and winter food resources close together within the UK range of this species. This has resulted in a substantial increase in the UK population.
- Our knowledge of the migration routes and destinations of our summer and winter migrant species comes largely from re-catching or finding British-ringed birds elsewhere. This may help determine the causes of population changes observed in the UK. Numbers of roseate terns were declining seriously in many colonies in the 1980s, but there was no obvious problem in the breeding grounds. Finding ringed birds helped researchers identify the wintering grounds off West Africa, where a local pastime of 'fishing' for terns was killing large numbers of roseate terns. Education programmes and other conservation work together with the Ghanaian bird conservation groups helped to reduce this needless mortality.
- Even where seasonal movements of birds are relatively well known, continued, regular ringing can help detect changes to these movement patterns. During the 1990s, blackcaps became a feature of the bird tables in the UK in winter. Ringing showed that these were mainly Continental migrants, attracted by the milder winters and reliable food in gardens.
- Continued regular ringing can detect changes in survival rates of adult or juvenile birds. Since these may drive population changes, effective monitoring of survival rates can help determine ultimate causes of population change, and any conservation

measures needed. Survival rates calculated from recapturing ringed birds have shown that the UK sedge warbler population is highly dependent on conditions on their wintering grounds in Africa. In years of drought in the Sahel region of West Africa, fewer birds survive the winter, leading to fewer birds returning to the UK to breed the next year.

- Ringing can also help monitor a bird species as it expands its range to new areas or habitats. For instance, peregrines have in recent years taken to nesting on tall buildings in cities, feeding on the ready supply of feral pigeons. Ringing the young of these city peregrines will help us understand the contribution this new habitat makes to the population as a whole, and whether their survival rate or the pollution loads they carry differ from their country cousins.

Particularly valuable to bird ecology and to conservation efforts are ringing projects that provide regular standardised data each year. The BTO runs, among others, the 'Constant Effort Site' scheme where regular, standardised ringing throughout the breeding season provides high quality data on annual changes in population size, survival rates, breeding success, length of breeding seasons and body condition for a range of songbirds.

How are birds ringed?

Birds are caught for ringing in a variety of ways. Most adult songbirds are caught by mist-nets, fine vertically-set nets positioned to catch birds flying through the area. Many other trapping methods are also used, specific to the birds being caught and the location of the study. Around 20% of the birds are ringed as young before they leave the nest. These are particularly valuable, as their origin and precise age at the time of ringing are known. Wild bird rings are known as split rings, which can be placed on adult birds and on chicks above a given age. The ring is placed on the bird's leg and closed with a special pair of pliers. While in the hand, valuable data can also be collected on age, sex, body size, weight, and body condition.



Other means of marking birds

Coloured rings are sometimes fitted onto a bird if a research or monitoring programme requires regular sightings of individual birds. With these rings, a bird can be identified as an individual undisturbed and from a distance. Swans or geese often support a colour ring with a letter/number combination engraved on it. Colour-marking individual birds has helped us to study breeding birds, and unravel issues like territory size and interactions with neighbouring birds.

A number of other means of marking and monitoring individual birds are used when birds need to be followed at or over greater distances. This usually involves only larger species. Wing tagging is used when it is not possible or feasible to see the colour of leg rings. A wing tag is made of durable flexible plastic. It is brightly coloured and carries a large number or letter, either by itself or in combination of the two. The tags are fitted, one on each wing, to the leading edge of the wing just inside the carpal joint. These tags can be read through binoculars or telescope over considerable distances, including when the bird is in flight, and allow easy identification and close monitoring of the movements of the birds without the need for the observer to get close to the birds again.

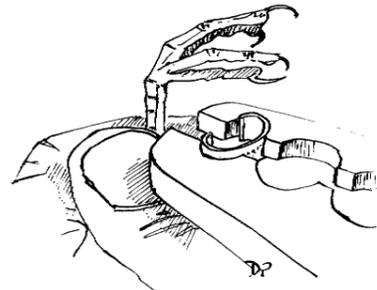
In a long-running programme to reintroduce red kites to England and Scotland, every released bird has been fitted with wing tags, so that the movements and fortunes of each bird could be

followed – vital information for the project. A proportion of the wild-reared chicks are also wing tagged each year to aid the monitoring. As the populations spread, the wing tagged individuals showed that most kites nest within the region where they were reared. Only a small number move a significant distance to find a mate, although juvenile birds can move considerable distances. If you see a tagged red kite anywhere in the UK, please report it to an RSPB office.

Modern technology has made the use of radio transmitters and even satellite tracking possible. With devices small enough to fit even to a bumblebee, it is now possible to radio track any British bird if the research work warrants it. Radio tracking is most useful in studying secretive birds, such as corncrakes and bitterns to find out their key habitat requirements - fundamental for the conservation of these rare birds. Satellite tracking is used extensively to follow the movements of albatrosses over the vastness of the Southern Ocean. This has revealed where the birds go in search of food, and where they come into contact with fishing vessels, often with fatal consequences. This has been a key discovery helping albatross conservation.

Does ringing affect the bird?

Ringing is a scientific research tool designed to provide information on whole populations of wild birds, not just those individuals that are ringed. Therefore, it is crucial that ringing (or any other marking technique) does not affect the behaviour or survival of the bird - if it did, the information it provided would be worthless.



When correctly carried out by properly trained and licensed ringers, ringing has no long-term effects on the birds ringed. The British ringing scheme demands very high standards of training, and bird welfare is paramount at all times. Rings are lightweight and are not a significant burden for birds to carry. Relative to a bird's weight, a typical metal ring is similar to a mobile phone on a human. Similarly, wing tags and radio transmitters are light and unobtrusive, and they and their fittings are designed not to affect the bird's flight or movement in any way.

Naturally, most birds, like other wild animals, will resist being caught and handled, with some being quite vocal during the process. It may be easy for an onlooker without detailed bird knowledge to assume that this apparent stress is harmful to the birds being ringed. Catching and handling techniques used by ringers are designed to minimise stress, and newly ringed birds return to normal behaviour soon after release. Similarly, when chicks are ringed when still in the nest, parents normally return to feed or brood the youngsters shortly after the ringers have left the vicinity of the nest.

The RSPB's view on bird ringing

The RSPB believes that bird ringing is an invaluable scientific tool, which can provide essential information for conservation purposes that cannot be obtained by other means. The RSPB supports ringing of wild birds when it is done in accordance with the Scientific Strategy of the Ringing Scheme of the BTO or its sister organisations overseas. We are satisfied that the stringent training and licensing of ringers by the BTO reduces any risk to the birds to a minimum.

More information

The UK ringing scheme, and all licensing issues connected with it, are administered by the BTO. For further information about bird ringing or the data obtained, contact the BTO at: The Ringing Unit, BTO, The Nunnery, Thetford, Norfolk IP24 2PU; Tel: 01842 750050; E-mail: ringing@bto.org, website: www.bto.org. If you have found a ringed bird, please report it directly to the BTO.

Other rings on birds

From time to time people come across birds with different types of rings. These tend to be 'closed rings', which are complete circles without a break in them. These rings are used to mark and identify captive birds. They are placed on young chicks as their legs are growing, but cannot be put on an adult bird. British birds raised in captivity must be fitted with an approved type of ring to show their captive bred origin. All racing pigeons wear rings, as do assorted exotic cage birds. There is no requirement to ring a bird of non-European origin, whether it belongs to a zoo or is a private pet. Some owners do ring these birds for their own records, but there is no central register for captive birds.

The RSPB

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Northern Ireland Headquarters, Belvoir Park Forest, Belfast BT8 7QT. Telephone 028 9049 1547

Scotland Headquarters, 25 Ravelston Terrace, Edinburgh EH4 3TP. Telephone 0131 311 6500

Wales Headquarters, Sutherland House, Castlebridge, Cowbridge Road East, Cardiff CF11 9AB. Telephone 029 2035 3000

www.rspb.org.uk

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The RSPB speaks out for birds and wildlife, tackling the problems that threaten our environment. Nature is amazing - help us keep it that way. We belong to BirdLife International, the global partnership of bird conservation organisations.

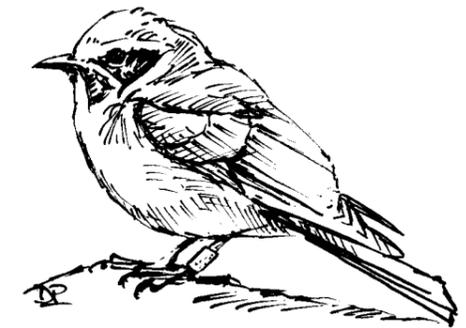
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INFORMATION Bird ringing



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