



The secret lives of wintering Blackcaps

Benjamin Van Doren from the Cornell Lab of Ornithology and BTO Senior Research Ecologist **Greg Conway** highlight the findings of their collaborative research on Blackcaps, supported by BTO ringers and surveyors.

The majority of European-breeding Blackcaps migrate south to winter around the Mediterranean, or further south in Africa. However, some wintering birds remain much further north than expected, most notably in Britain and Ireland. Blackcaps were scarce and infrequent winter visitors in Britain and Ireland until the mid-1900s, when winter sightings began to increase. Today, the greatest number of winterers are found in southern and central Britain and Ireland, but the species' winter range is expanding throughout the isles. This was seen very clearly in *Bird Atlas 2007–11*. Wintering Blackcaps are commonly found in gardens, where they feed on fruits and berries in early winter and on supplementary food (e.g. fat balls and sunflower hearts) once natural food sources dwindle.

The Blackcaps that spend the winter in Britain and Ireland might be expected to be individuals that breed

in those countries and simply do not migrate. However, ring recoveries and lab experiments have shown that at least some Blackcaps that winter in Britain and Ireland actually breed in central Europe (specifically, Austria and southern Germany) and migrate northwest for the winter. Evidently, warmer winters and an abundance of bird feeders was enough to allow these pioneering migrants to survive until spring. Indeed, previous BTO research used data from Garden BirdWatch to show that wintering Blackcaps are closely associated with garden bird feeders – and that this behaviour has only grown stronger in recent years.

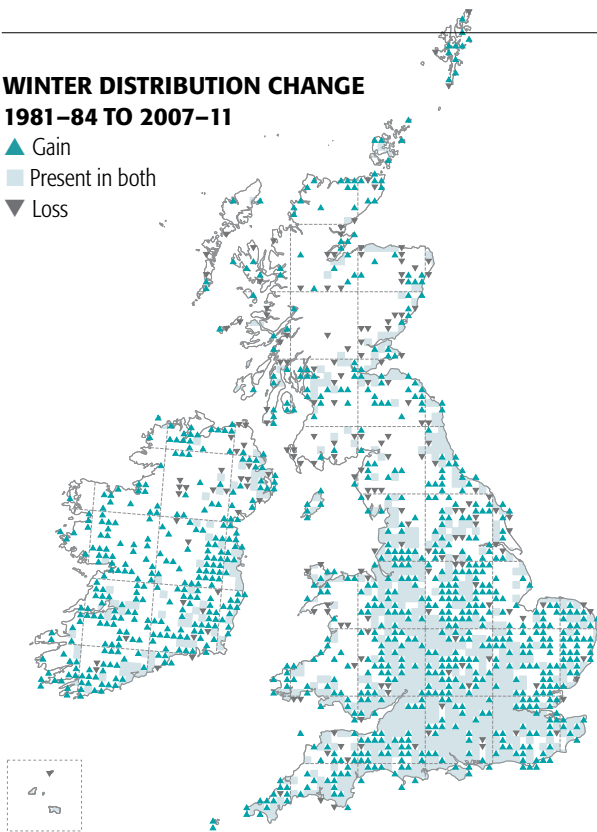
RESULTS FROM WINTER RESEARCH

We sought to learn more about the rapidly changing migrations of wintering Blackcaps. Where exactly do they come from? Why have they adopted an atypical migration route? And why are they so closely tied to garden bird feeders?

Beginning in 2016, we launched a project across Britain and Ireland to mark Blackcaps with colour rings and track their migrations with geolocators. Geolocators are tiny devices that record light levels and the time of solar noon – information that can be used to estimate a bird's geographic position. Upon recapture, the geocator data are downloaded and analysed, revealing the bird's journey and breeding sites. Over four winters, a network of dedicated ringers

**WINTER DISTRIBUTION CHANGE
1981–84 TO 2007–11**

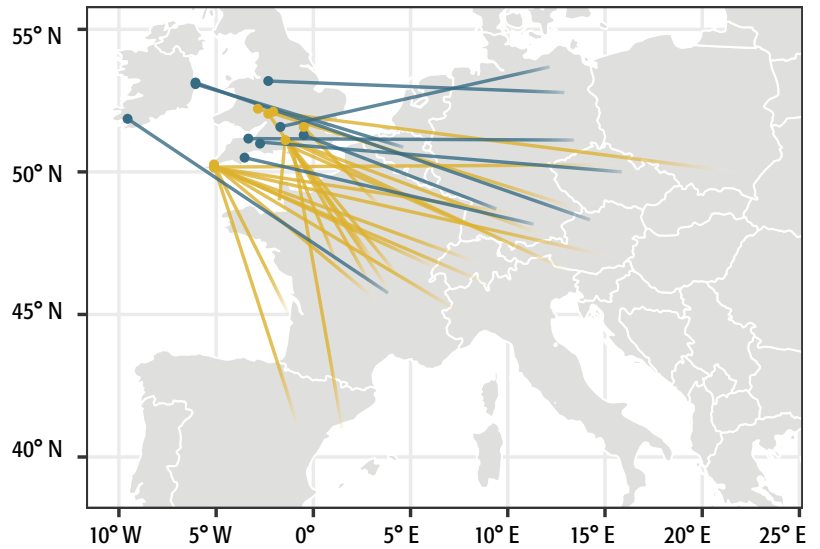
- ▲ Gain
- Present in both
- ▼ Loss



ORIGINS OF BRITISH & IRISH WINTERING BLACKCAPS

Blackcaps wintering in Britain and Ireland breed in a 2,000 km swathe of continental Europe, from northern Spain to eastern Poland.

- Geolocator data
- Ringing data



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marked over 600 wintering Blackcaps, generating thousands of sightings from Garden BirdWatchers, and we tracked 30 birds with geolocators. The project owes its success to this close partnership between research scientists, BTO ringers, Garden BirdWatchers and the public.

Data from geolocators showed two surprising results: first, no tracked birds spent the entire year in Britain – they all bred in continental Europe. Second, wintering birds did not originate only from a restricted area within central Europe, but rather from a wide swathe of the continent from Spain to Poland. The individuals that bred in southern Europe were remarkable because their breeding areas were very close to suitable Mediterranean wintering habitat. Yet, instead of wintering in Iberia, they flew hundreds of kilometres north to Cornwall and Hampshire.

Wintering Blackcaps typically appear in gardens starting in November. However, this is not the whole story – the geolocators revealed arrivals in Britain many weeks earlier, mostly between late September and mid-October. Why aren't they seen until much later? Wintering Blackcaps may initially feed on natural food sources, such as fruit and berries, and only appear at bird feeders once these food sources are gone. In spring, the picture changes: tracked Blackcaps were observed in gardens up until a few days before they departed on migration. Garden

food resources likely play a key role in fuelling the journey back to the breeding area.

Around 40% of the adult Blackcaps we tracked that wintered in Britain and Ireland returned to the same site in subsequent years, but only 24% of first-year birds did so. Both figures are much higher than estimates from Mediterranean wintering sites, where typically only 0–5% of Blackcaps return in subsequent years. Evidently, garden bird feeders keep Blackcaps coming back, year after year. Adults that frequented gardens had rounder wingtips – a trait often associated with more sedentary lifestyles – and were generally lean, likely because reliable garden food supplies enabled them to survive without carrying large fat loads. Leaner birds are more agile – a critical advantage during encounters with predators. Weather was an important factor influencing when Blackcaps visited gardens. They were more likely to be seen in cold, wet conditions, which may make it difficult to find natural food sources and increase energy demands.

Credits

We are grateful to the large number of ringers, homeowners and public contributors to this project over the years. Special thanks to Robbie Phillips, Glynne Evans, Graham Roberts, Miriam Liedvogel and Ben Sheldon for key scientific contributions.



▲ A female Blackcap with her newly removed geolocator.

FUTURE PROSPECTS?

As winter temperatures continue to warm and bird feeding grows more popular, Britain and Ireland will only become more hospitable for wintering Blackcaps. Yet much is still unknown about what drives the atypical migratory behaviour of these birds. Are Blackcaps' migratory directions programmed into their very DNA, as some research suggests? Research is ongoing – stay tuned. ■

Find out more

www.bto.org/humans-blackcaps
www.bto.org/blackcap-migration
www.bto.org/blackcap-garden-feeding
 Please report colour ring sightings to:
blackcap@bto.org

RINGED MALE BLACKCAP: BENJAMIN VAN DOREN, TAGGED FEMALE BLACKCAP: ROBBIE PHILLIPS