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The changing status of Cetti's Warblers in Cumbria and northern Britain

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Abstract

The Cetti's Warbler Cettia cetti is a relatively recent colonist in Britain, with breeding first confirmed in 1973. Since then, the species has gradually spread northwards. Northern England and southern Scotland are now at the frontier of the species' advance, with Cetti's Warbler first recorded in Cumbria in 2005 and first proven breeding in 2023. The Cumbrian population is now estimated at 18 territorial males. This paper presents the changing status of Cetti's Warbler in Cumbria and summarises the status of the species in neighbouring regions.



Introduction

A century ago, Cetti's Warblers *Cettia cetti* were restricted to southern Europe. In western Europe, the species occurred in Spain and Portugal but, in France, it was found only as far north as Provence and the Pyrenees Atlantique. By the 1970s, the species had extended its range northwards and was widespread in France and breeding in Belgium, and had also gained a foothold in the Netherlands and western Germany (Bonham & Robertson 1975). The first British record came during this period, from Hampshire in 1961 (Parkin & Knox 2010). It wasn't long before the first breeding record was confirmed, in Kent in 1973 (Holling *et al.* 2011). By the time of the first breeding bird atlas in Britain, covering 1968–72 (Sharrock 1976), Cetti's Warblers were found in six 10-km squares, all in southeast England. Less than two decades later, the second breeding bird atlas, covering 1988–91 (Gibbons *et al.* 1993), published an estimated 450 pairs in Britain, with the range extending as far north as Norfolk in the east and Shropshire in the west. Thereafter, the Rare Breeding Birds Panel reported a spectacular increase in breeding numbers, with 2,347 territories by 2009 (Holling *et al.* 2011), and birds breeding as far north as Lancashire & North Merseyside.

Although a decline was evident following the cold winters of 2009/10 and 2010/11, there were an estimated 3,450 singing males in Britain, all in England and Wales, in 2016, while the population increased by 187% between 2010 and 2020 (Woodward *et al.* 2020).

The colonisation of Cumbria

The first Cumbrian record of Cetti's Warbler came from the southernmost tip of the county at Walney Island, and involved a bird that frequented a small area of reedbed and scrub between 14th and 28th November 2005. The bird was caught and ringed in the observatory garden and shown to be a female. Further birds were found on Walney Island in October 2012 and in October 2014. However, it wasn't until April 2018 that the county's fourth record was found – at Meathop Moss. The fifth record came from Walney Island in July 2019, while the sixth and seventh Cumbrian records concerned two females trapped and ringed at Watchtree Nature Reserve in the north of the county on 14th October 2019 and 10th November 2019.

The first evidence of a significant influx into Cumbria was in spring 2020, when singing males were found at three sites on the Furness Peninsula in the south of the county – at Askam-in-Furness, Goldmire and Bardsea. That autumn, there were further records from Walney Island and Watchtree Nature Reserve, where two birds were ringed on 11th October, including another female.

In 2021, single birds were seen at nine sites across Cumbria, including three singing males on the Furness Peninsula, where birds were still in residence at the sites first occupied in 2020, while additional autumn birds were found at Mere Tarn and Westfield Point, Rampside, and further autumn range expansion was noted into the southeast at Foulshaw Moss and nearby Park End Moss, Brigsteer and to the north along the west coast at Siddick Pond.

Numbers continued to increase in 2022 with at least 19 birds at 16 locations. Birds remained within the Furness Peninsula, with Urswick Tarn, Ormsgill Reservoir, Cavendish Dock and Ulverston newly occupied locations. Elsewhere, territorial males were found at Thacka Beck, Penrith, in the east of the county and along the River Eden at Rickerby Park in Carlisle – the northernmost occupied site in the county to date.

In 2023, a further expansion took place, with a minimum of 32 birds detected across 19 sites, with Witherslack, Holker and Silecroft in the south, Applebyin-Westmorland in the east and Aspatria in the northwest holding birds for the first time; seven birds at Foulshaw Moss on 25th October is the highest single-site count to date.

Status and distribution

Although the species is skulking, secretive and could be overlooked, it is frequently vocal and the call and song draw attention to individuals, with the call being loud and distinctive and the explosive song of the male used throughout the year. By the end of 2023, a total of 392 individual records had been submitted to the Cumbria Bird Club Records Panel from 29 sites. Despite the first county record of Cetti's Warbler coming from 2005, it wasn't until 2021 that the species was removed from the Records Panel's list of mandatorily reviewed species, and its status was altered from vagrant to scarce in the county.

Away from Walney Island, where birds are assumed to be migrants and vagrants, the species has typically been found in or around wetland environments. The preferred habitat in Cumbria appears to be areas of willow *Salix* and bramble *Rubus fruticosus* agg. scrub encroaching on the edge of areas of reedbed. Although this habitat has a restricted distribution within Cumbria, further expansion is possible, with uncolonised territory in the heart of the county, such as the apparently suitable sites in Lakeland at the south end of Bassenthwaite and around Esthwaite.

The distribution within Cumbria shows a distinct coastal bias, with 27 of the 29 sites where birds have been recorded lying within 10 km of the maritime shore. The only two non-coastal sites lie in the east of the county, at Penrith and Appleby-in-Westmorland.

The nucleus of the growing population continues to be based in the south of the county, especially on the Furness Peninsula, where birds have been recorded at 16 sites, and around the Kent Estuary, where birds have been seen at five sites (fig. 2).

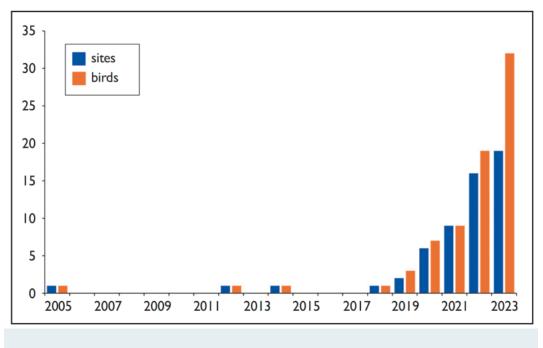


Fig. 1. Cetti's Warblers Cettia cetti in Cumbria – number of birds and sites, 2005–23.

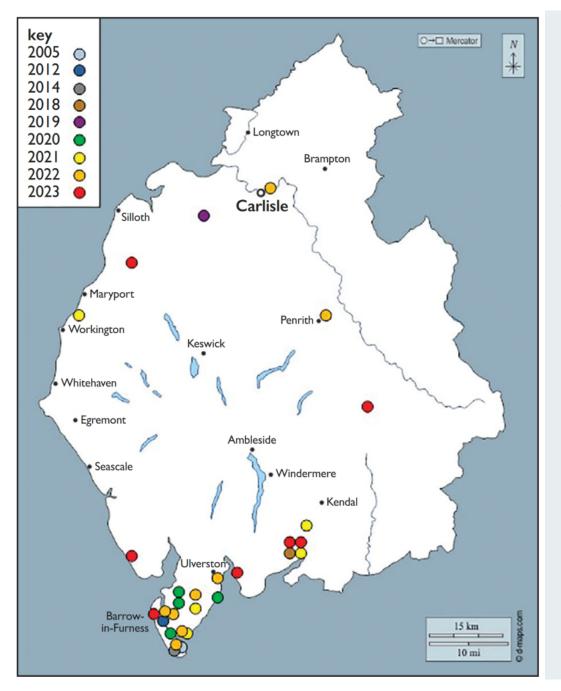


Fig. 2. Distribution of Cetti's Warblers in Cumbria, 2005–23, with colours representing year of first detection at each site.

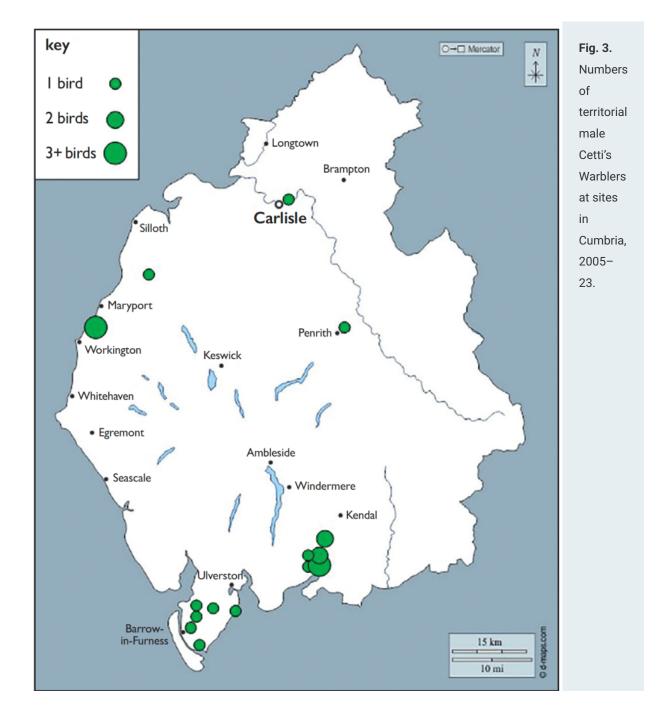
Breeding population

In Cumbria, around 21 territorial males have been recorded at 15 sites since 2020 and long-term residence at many sites suggests that breeding attempts have occurred. The species will breed during its second calendar-year and is double-brooded, meaning that the population can grow quickly once a population is established. However, evidence of confirmed breeding is hard to obtain owing to the birds' secretive habits. Males are polygamous, breeding with up to three females, and so populations are usually based on the number of territorial males rather than the number of 'pairs'.

The first records of males holding apparent breeding territories in Cumbria concerned three singing birds on the Furness Peninsula in 2020, a situation

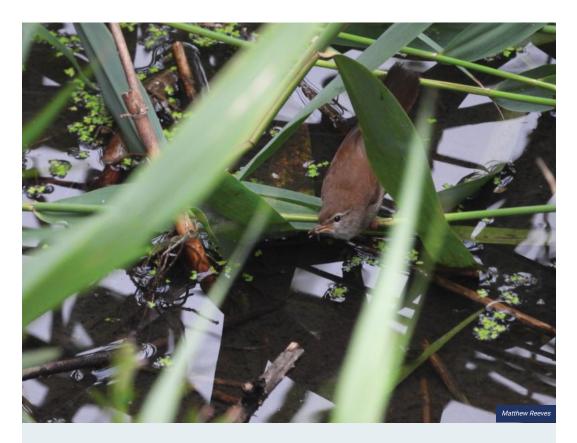
that was repeated in 2021. A surge in records in 2022 saw ten territorial males at nine sites, including two singing males at Siddick Pond – the first time a single site had held more than one territory in Cumbria.

In 2023, 18 territorial males were recorded at 11 sites, including six males across two nearby sites at Foulshaw Moss, which currently holds the bulk of the Cumbrian population (fig. 3). The year also provided the first confirmed evidence of breeding from two locations: at Cavendish Dock on 9th May 2023, when an agitated bird was observed carrying nesting material (plate 223); and at Siddick Pond on 13th July 2023, when two agitated birds were seen carrying food (plate 224).





223. Adult Cetti's Warbler *Cettia cetti* with nesting material at Cavendish Dock, Cumbria, May 2023 – the first proven breeding record in Cumbria.



224. Adult Cetti's Warbler carrying food at Siddick Pond, Cumbria, July 2023 – the second proven breeding record in Cumbria.

Pattern of occurrence

Once adult Cetti's Warblers have settled at a breeding location, they generally stay close to their territories throughout the winter, while young birds disperse in all directions (Wernham *et al.* 2002). Female Cetti's Warblers disperse greater distances than males and, as available habitat fills up in a given area, juveniles in search of new breeding territories must disperse progressively further (Paradis *et al.* 1998; Robinson *et al.* 2007).

An analysis of the 392 individual records submitted to Cumbria Bird Club up to the end of 2023 suggests that a minimum of 54 individuals was involved. While birds have been recorded in all months – and are now present yearround at several locations – they appear to occupy new sites mainly during the late autumn, in line with the expected pattern of post-juvenile dispersal. A second peak in sightings occurred during the spring, when males are in full song, perhaps reflecting undetected birds that had arrived in the previous autumn (fig. 4).

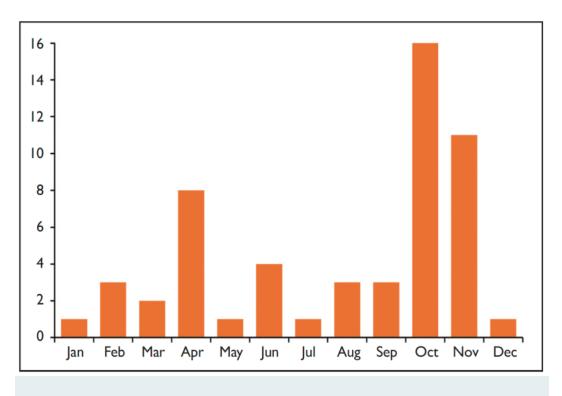


Fig. 4. Months during which new Cetti's Warblers were first noted in Cumbria, 2005-23.

Just eight birds have so far been ringed in Cumbria, none of them generating any recoveries. Of these eight, seven were female, reflecting the expected pattern of females dispersing over greater distances – and thus colonising new areas ahead of males.

Summary of records in Cumbria

After the first county record in 2005, only six further reports were received until 2020, when seven birds were found at six locations. By the end of 2023, a minimum of 54 birds had been recorded at 29 locations, including Carlisle in the north and Appleby-in-Westmorland in the east, though records continued to show a distinctly coastal bias. It is thought that adults are largely sedentary, so it seems likely that this increase is a combination of local colonisation by locally dispersing young birds and longer-distance colonisation from populations in north Lancashire. Additionally, milder winter temperatures compared to historical averages are aiding survival of Cetti's Warblers in Cumbria throughout the winter.

Colonisation in neighbouring regions

The steady colonisation of Cumbria by Cetti's Warblers has been mirrored in neighbouring counties. The first birds are now beginning to encroach into southern Scotland, perhaps being of Cumbrian origin.

Lancashire & North Merseyside

Lancashire & North Merseyside's first Cetti's Warbler was recorded at Marton Mere, Blackpool, on 17th October 1990, where it remained until 24th March 1991. Birds were again found wintering at this locality in 1994/95 and 1995/96 and at Leighton Moss, just south of the Cumbrian border, between 28th October 1995 and 8th March 1996 and again on 27th October 1996. Although Marton Mere held additional wintering birds in 1998, 1999 and 2000, there were no further records at either location up to 2008 (White *et al.* 2008).

The area's first confirmed breeding attempt occurred in 2010, at Marton Mere (White 2011), and breeding was confirmed two years later at Leighton Moss.

There was a dramatic increase in sightings after 2012, and by 2021 little suitable habitat remained unoccupied in the county (White 2022). The population in north Lancashire is still centred around Marton Mere and Leighton Moss; by 2021, the population at Leighton Moss had increased to 12 pairs, with three pairs at the adjacent Silverdale Moss. In 2023, seven pairs were at nearby Middleton.

Co. Durham

Like Cumbria, Co. Durham recorded its first bird, a female, in November 2005, at Dorman's Pool in the extreme south of the county. It was not until 2009 that more birds were reported, five autumn birds all at southeast coastal sites. In 2010, one was singing as far north as Gateshead and the first confirmed breeding was at Teesside, where a brood of five chicks fledged. The following year saw several birds but no new sites; however, in 2012, a male sang from bramble scrub near Hartlepool and was later seen carrying

food and a male was discovered near Sunderland on 9th September. Unusually, there were no reports from 2013 and 2014.

In 2015, birds were reported from five sites, all of which had previous records of Cetti's Warblers and all in the south of the county. From 2016 until 2019, low numbers were reported from these southern sites; additional, in 2019, one bird was found at Gateshead. No new sites were occupies for several years, although the number of singing males increased at some occupied sites. In 2022, there was a westwards expansion to Low Barns NR and two separate birds were recorded in the north, close to Seaham. In total, 70 records of Cetti's Warblers were submitted from the county in 2022, though it's likely some were duplicates of the same bird.

In 2023, the number of reports of birds, 72, was similar. That year, breeding was confirmed at Dorman's Pool (two broods) and Saltholme (two broods), while a total of nine territorial males were at Haverton Hole throughout the autumn and winter.

Of the 24 reported of birds received in 2023, 12 were from the breeding season, between April and July, with breeding once again confirmed at Dorman's Pool. Birds (mostly singing males) were found at several new locations, including Ouston Spring Lake, Long Drag Pools, Lamesley Pastures, Middleton and Herrington. Up until the end of 2023, Cetti's Warblers have been reported from 18 different locations in Co. Durham, with evidence of breeding from four of these sites (P. Bell pers com).

Of note is a male, which has been ringed on as a juvenile on 20th June 2009 at Rye Meads, Hertfordshire, and was controlled at Saltholme on 19th May 2010 – a movement of 325 km (Robinson *et al.* 2023). It was still present in June 2011 and provides evidence that at least some northern colonisers are from the species' core British population in the south, rather than expanding populations in the Midlands and the north of England. Long-distance movements within Britain are, however, rare, with just five recoveries of over 300 km, the longest being from Leighton Moss to Farlington Marsh, Hampshire, a distance of 390 km (Robinson *et al.* 2023).

Northumberland

The first record for Northumberland was discovered in November 2010, at East Chevington. Almost a year later, a bird was found at Newton Pool in October 2011. A series of blank years followed, until three birds were found in autumn 2017 – at East Chevington, Druridge Pools and Big Waters. In 2018, breeding was proven at East Chevington and birds were found for the first time at Gosforth Park and on Holy Island. Birds were recorded from a further three new sites in 2019.

In 2020 and 2021, birds were found at just one new site and the spread of the

species in Northumberland continues to be slow. One further site was occupied in 2022 and, by the end of 2023, the species was recorded at 14 sites in the county. East Chevington continued to be the only site with proof of breeding. As is the case in Co. Durham, many records of Cetti's Warbler in Northumberland concern birds caught for ringing, particularly at coastal sites, and evidence for breeding has thus far come from the ringing of females with active brood patches or recently fledged juveniles (T. Dean pers. comm.).

Scotland

Cetti's Warbler is still considered a rare bird in Scotland. The first Scottish record involved a bird found at Leith, Edinburgh, Lothian, on 4th October 1993, at a time when the species had only just reached Lancashire & North Merseyside in England. Remarkably, the bird, which was found freshly dead, had been ringed on 24th August 1993 at Tardinghen, Pas-de-Calais, France, 650 km farther south. It remains one of just 11 foreign ringing recoveries of Cetti's Warbler in Britain, and is still the longest recorded movement (Forrester *et al.* 2007; Robinson *et al.* 2023). There were no further records in Scotland until singles were recorded on Barra, Outer Hebrides, on 12th October 2014, and at an undisclosed site in 2016 (McGowan & McInerny 2016; McGowan & McInerny 2018).

In 2021, one bird was found at Kinneil, Forth, on 13th November, another at Kilconquhar Loch, Fife, from 10th to 11th December (McInerny & McGowan 2023) and a third at Rosyth, Fife, from 3rd to 12th December.

Despite bordering Cumbria and being the southernmost area of Scotland, Dumfries & Galloway did not receive its first confirmed record until 2022, at Wigtown Wetlands on 16th and 17th March. This was followed by singing males at RSPB Mersehead between 13th April and 7th June 2022, and at both Caerlaverock WWT and nearby Caerlaverock NNR in November (P. Collin pers. comm.). Elsewhere in Scotland, a bird was at Stevenston, Ayrshire, from 2nd December 2022 to 7th February 2023.

In 2023, singles were at Linlithgow Loch, Lothian, from 26th February to 11th March; on the River Tweed at Bemersyde Moss, Borders, from 11th February to 5th March; and again at Mersehead RSPB, Caerlaverock WWT and Caerlaverock NNR in Dumfries & Galloway. However, however, came from the North Solway Ringing Group, who, between 7th April and 18th June, trapped and ringed three adult birds at a different site in Dumfries & Galloway: one male and two females. Both females had brood patches, indicative of incubating eggs or brooding chicks – the first evidence of breeding in Scotland (G. & A. Chambers pers. comm.).

Looking forward

In continental Europe, breeding Cetti's Warblers have expanded their range no

farther north than the northern Netherlands, their intolerance of cold winter temperatures presumably preventing them from extending their range into Germany. These pioneering populations in northern England and southern Scotland are therefore the most northerly breeding Cetti's Warblers in the world (Keller *et al.* 2020).

The species is likely to continue to spread, both in Britain and in continental Europe, as it benefits from the effects of climate change, particularly warmer, ice-free winters. Climate models, based on a predicted 3°C rise in average global temperature by the end of this century, predict that Cetti's Warbler will spread as far north as southern Sweden (Huntley *et al.* 2007).

Any continued spread and increase in the size of the population in Cumbria and northern Britain will likely depend upon winter survival rates. The predicted increase in winter temperatures resulting from climate change, combined with the generally mild winter climate on the west coast of Britain thanks to the influence of the Gulf Stream, suggests that the future for the Cetti's Warbler in Cumbria is good.

Acknowledgments

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