

GWCT/BTO Annual Breeding Woodcock Survey 2022

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The survey

The GWCT/BTO Breeding Woodcock Survey (BWS), which began in 2003, introduced a national scheme of dusk 'roding counts' to assess the woodcock's status as a breeding bird in Britain. The survey was repeated in 2013 and is set to be repeated again in 2023. These big national counts provide the most reliable estimates of population change because they are based on a very large random sample of sites, but they only measure change on a ten-year basis. Annual woodcock surveys are conducted at a subsample of sites to provide a measure of shorter-term change. This provides a broader context to the ten-yearly surveys, which is particularly important because roding count results can show a high-degree of annual variation.

The sample squares covered

The annual counts typically cover around 150 sites per year (compared to around 800 sites per year in the 2003 and 2013 BWSs). However, between 2003 and 2013 only 15-55 sites were covered, compared to post 2013 when many more sites were covered: 62-217 (Table 1); the post 2013 data providing a more robust measure of population change. These are mostly the continuation of sites first visited in the 2003 or 2013 survey, but some are additional 'self-selected' squares. We know the sample has some biases, as observers are understandably more likely to repeatedly visit their chosen site if woodcock are present, but it still provides a very useful indication of change among these more favourable occupied sites.

In 2022, survey coverage was good; data were submitted for 190 sites (Table 1). Outside of the 2003/2013 BWSs, this was only surpassed by 2018 (217 sites) and 2021 (215 sites). Sites do not need to be surveyed every single year but do need to be visited in more than one year to provide a useful indication of change. This is why not every site can be included in the analysis straightaway. But as more and more sites receive their first repeat visit, the sample size for previous years increased too. The 2022 sample included visits to several sites that had previously only been visited once and this repetition has therefore boosted our samples for previous years.

Table 1. Summary of survey squares covered between 2003 and 2022 and those included in the annual monitoring analysis.

Data	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
submitted	898	55	34	23	26	26	25	25	23	15
included	654	51	32	22	26	26	25	25	23	15
Data	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
submitted	934	159	62	158	164	217	164	126	215	190
included	663	152	62	147	164	205	164	122	207	184

The results for 2003 to 2022

Annual count data suggest a decline in the size of Britain's breeding woodcock population occurred between 2019 and 2020. While we initially wondered whether this was symptomatic of the disruption caused by the COVID pandemic, the 2021 index seemed to point towards a genuine increase in abundance. However the 2022 index remains similar to 2021, indicating the numbers have remained stable. The 2022 index remains below the relatively stable levels observed between 2013 and 2019, indicating a slight overall decline since 2013.

For much of the country, 2022 offered a spring and summer with particularly low rainfall. We have some evidence, based on the activity of tagged woodcock, that extended periods of dry weather inhibit roding activity. This might be because males struggle to find food in drier years, and therefore have less energy to expend on costly displays.

As always, this raises questions regarding next year's roding counts, particularly as 2023 will see the third iteration of the national 'Breeding Woodcock Survey'. Low spring/summer rainfall in 2022 might have affected productivity this breeding season if it limits the abundance of the chick's invertebrate food. Any effect on chick survival in 2022 would not be clear in the roding count data until next year, when it might manifest as lower adult counts in 2023.

Figure 1. Annual change in the number of woodcock registrations since 2003. The number of registrations is given as an index (blue line) relative to the first survey year (i.e. mean in 2003 = 1). The 95% confidence intervals are shown by the grey lines .

