Duck nest monitoring project 2024 annual report

Overview

In collaboration with the Waterfowlers' Network, BASC is promoting the installation of duck nest tubes to improve the breeding success of ground-nesting waterfowl.

The project is continuously growing with nearly 500 nests deployed across the UK since 2021 (figure 1). As expected, mallard occupied most nests that were monitored. Occupancy and hatching rates were slightly lower than last year, with 41 per cent occupied and 87 per cent of those hatching successfully. Participant reports suggest stormy weather early in the breeding season may have impacted nest condition and use.

To help us assess the impact of these nests on mallard, we encourage anyone with a duck nest tube to report nest usage and hatching success (or failure) to us at the end of the breeding season (late August and September) via our online form here: https://www.waterfowlersnetwork.com/2219 .

Figure 1. The number of nests installed in each region of the UK between 2021 to 2024.

If you would like to participate in this project, contact your regional BASC team who can provide free materials and installation support. More details about the project can be found here: https://basc.org.uk/conservation-in-action/projects/duck-nest-monitoring-project/.

Why do we need artificial nest sites?

Mallard and other ground-nesting waterfowl are vulnerable to harsh weather, predation, and disturbance, which can lower hatching success. It is thought that declining mallard populations in the UK (Figure 2) may be linked to poor breeding success across the flyway.

Artificial nests offer protection from disturbances and are often readily accepted by mallard and occasionally other species, despite being notably different from their natural nests. Research in the United States and Canada has shown that artificial nests can improve nesting success by increasing brood size and improving hatching success (Chouinard et al., 2005; Mammenga et al., 2007).

Written by: Sophie Stafford

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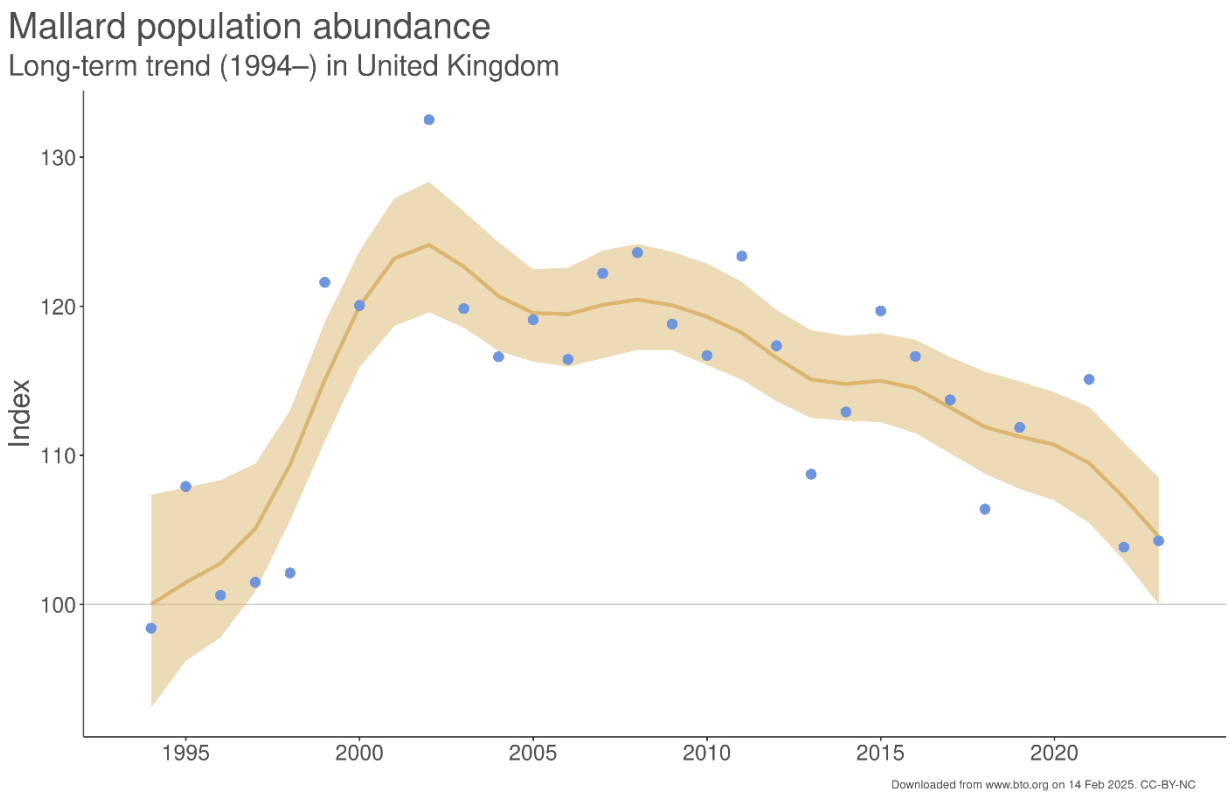

Figure 2. The smoothed trend line shows how the number of birds has changed through time. To make it easier to compare among species, this is expressed as an 'index', set to 100 in the first year. An easy way to interpret this is to say for every 100 birds that were present in the first year, the trend line shows how many were present in any subsequent year. The shaded area shows uncertainty around the trend line (based on 85 per cent confidence limits) and values for individual years are shown as dots. (BTO, 2024. Bird Trends 2023: trends in numbers, breeding success and survival for UK breeding birds. www.bto.org/birdtrends).

Although artificial nests have historically existed in Europe, their impact on breeding success was largely undocumented before this project began in 2021. One of the earliest UK experiments we know of was carried out by Leicestershire Wildfowlers Association, documented in WAGBI (Wildfowler's Association of Great Britain and Ireland) annual reports in the 1960s. This early work underscores the valuable role that the shooting community plays in conservation efforts.

Why mallard?

Artificial nests can support several species, but mallards are one of few dabbling ducks breeding in high numbers across the UK. However, their breeding population has declined since the early 2000s. As one of Europe's most popular quarry species, it is crucial that the shooting sector maintain healthy populations, acting as custodians of the species and their habitats. By supporting good productivity* and juvenile recruitment**, we can help sustain mallard populations for future generations and ensure that harvest remains sustainable.

**The number of ducklings per breeding pair that reach fledgling stage.*
***The number of juveniles surviving to adulthood.*

2024 breeding season results

Nest deployment
In 2024, 66 nest tubes were distributed across the UK by our regional officers, bringing 30 new participants into the project (Figure 3).

Reporting rates
Just over a quarter of participants submitted monitoring data this year, suppling valuable information on nest placement, use and hatching success. However, this is substantially lower than previous reporting rates (for example in 2022 we had a 57 per cent reporting rate).

Whilst providing nest tubes alone is still positive for breeding wildfowl, it is only through submitting information on their use (or lack thereof) that allows us to understand the benefits they provide and enable continued provision of these nests for free.

We encourage anyone who has not reported nest usage in the previous breeding seasons (even if it was not used) to complete the form here: https://www.waterfowlersnetwork.com/2219 .

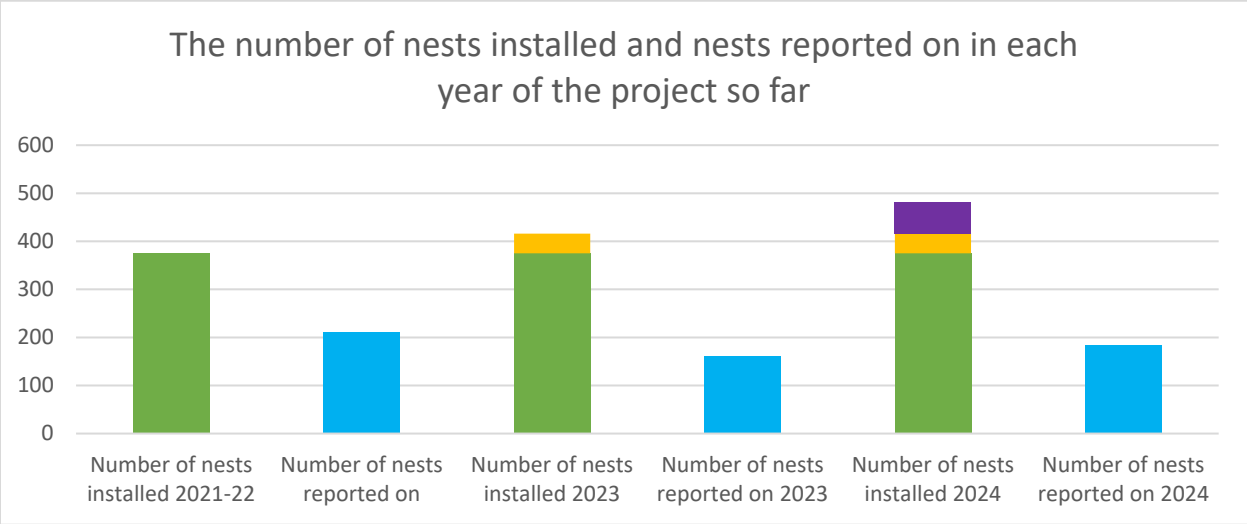

Figure 4. The number of nests that have been installed by BASC regional officers over the last three years (2022 green, 2023 yellow, 2024 purple) alongside the number of nests we received data on through the online monitoring form for each corresponding year (blue).

Occupancy & success rates
We received data on 183 nests from 37 participants (Figure 4), most of whom were active shooters (n=35). Notably, 43 per cent of respondents had placed nests on behalf of a club or organisation, demonstrating the shooting community's role in conservation.

Mallards occupied 74 nests (40 per cent of all nests), with 88 per cent of those hatching successfully. Ten nests were used by other species, including common moorhen, wagtail, and tufted duck.

Flyway collaboration

The Duck Nest Monitoring Project is carried out in partnership with several hunting organisations across Europe which form the Waterfowlers' Network. Together, we are providing and collecting data on artificial nests to understand the impact they have, if any, on mallard breeding success, as well as the effects of factors such as site predator management and location.

Since 2021, nearly 5,500 nests have been installed and monitored across 778 locations across Europe. The data provided by active participants has shown that:

1. **Occupancy** of artificial nests is influenced by the type of nest (tube or basket), whether ducks have previously bred at the site, how long the nest has been at the site, and if ground predators have been controlled.
2. **Hatching success** of occupied artificial nests is also influenced by nest type as well as whether avian predators have been controlled at the site.

In short, artificial nesting structures, coupled with long-term site management, including predator control, can benefit breeding ducks. These effects may not be seen in the first year, but persistence and patience are key. A full report of these findings will be released later in 2025.

By increasing the number of nests installed and data returned we aim to better understand the broader benefits of artificial nest sites on waterfowl productivity, and how to best manage the surrounding habitat for them.

Prize draw

In 2024, BASC held its first prize draw for participants who submitted their nest data at the end of the breeding season. Mr. Gooch of Ipswich won the prize – a SpyPoint trail camera - and said:

"I was delighted to win the trail camera and have found the results from using it fascinating...getting the images sent direct to my mobile phone remotely has made life so easy! I plan to set it up for watching my duck nest tube in the spring."

To ensure you are eligible for this year's prize draw, you must monitor your nests and submit data here: https://www.waterfowlersnetwork.com/2219, at the end of the breeding season (late August and September). More details on this coming soon!

For any queries on nest use reporting or if you would like help acquiring a nest tube for your site, contact us: monitoring@basc.org.uk

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