

THE GREAT WHITE EGRET ON THE AVALON MARSHES

Nesting and Colour Ringing Report for the 2022 Breeding Season

Alison Morgan

The breeding season got off to an early start again in 2022, with territorial activity observed from the end of February and nest building under way by the first week in March. Eggs were confirmed from the end of March, and hatching was recorded from mid April. The nests were monitored each week by drone.

Overall, 43 pairs nested on 7 sites across the Avalon Marshes, with 35 nests eventually producing an estimated 67 fledged young. 6 nests were visited by the ringing team, and 14 chicks were given colour rings.

SUMMARY FOR 2022

43 nests in 7 locations, of which 35 were successful and 8 unsuccessful

94 chicks hatched, 67 fledged

14 chicks colour ringed, 1 metal ringed only

KNOWN NESTS

The 43 nests were situated in the following locations:

- 24 nests on Site 1, NE Shapwick Heath
- 9 nests on Site 2, Shapwick Heath
- 3 nests on Site 3, RSPB Ham Wall
- 2 nests on Site 4, Ham Wall
- 2 nests on Site 5, SWT Westhay
- 2 nests on Site 6, adjacent to Ham Wall
- 1 nest on Site 6, adjacent to Ham Wall

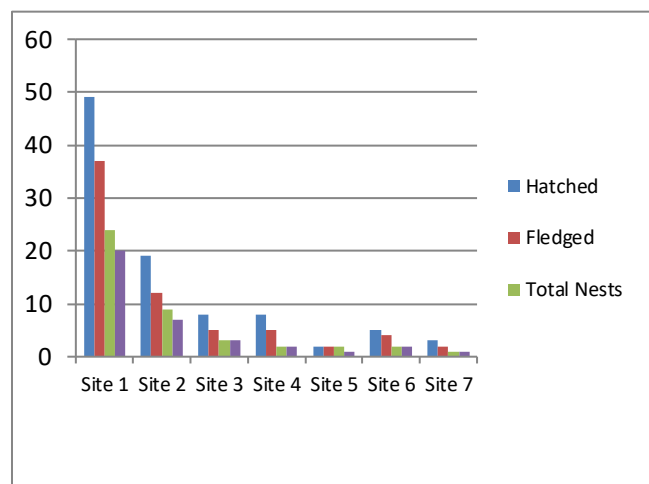


Fig 1 : Summary of nest outcomes on the Avalon Marshes in 2022

FAILED NESTS

Of these, the following 8 nests failed:

- 4 nests at Site 1 (1 with a single chick which died; 1 suspected predated after hatching; 1 abandoned with eggs, 1 abandoned with bird sitting but no confirmation of eggs)
- 2 nests at Site 2 (both before hatching, possible predation)
- 1 nest at Site 3 (infertile eggs, bird incubated for 49-56 days – usual incubation 25 days)
- 1 nest at Site 5 (abandoned before laying)

PRODUCTIVE NESTS

Most pairs laid 2 or 3 eggs, with just 6 pairs producing 4 eggs.¹ 1 or 2 chicks fledged from each nest, with 4 nests fledging 3 young and none fledging 4.² Overall productivity was 1.6 from all nests, and 1.9 from successful nests. This is line with the ten year average for the Avalon Marshes.

GWE chicks become very mobile in the weeks leading up to fledging, which begins from 6 weeks (42 days) after hatching but may not be complete until much later. The gradual nature of fledging means that it is difficult to make an accurate count of fledged birds. Chicks often return to the nest after having left it, or are seen standing near the nest or, in one case, on a nearby nest known to have been abandoned at an earlier stage. This year the last chick did not finally vacate the nest until some time between 83-89 days after hatching. Nests were more typically vacated by 65-70 days after hatching.

¹ Of the 6 nests with 4 eggs, 2 fledged 3 chicks, 3 fledged 2 chicks and 1 was assumed predated. Our mean clutch size of 2.7 eggs is smaller than the European average, where the most common clutch size is 4 (Voisin 1991).

² In this species third chicks are fed only after the first two are fully satisfied, so few survive.

This pre-fledging mobility means that we can only estimate the number of birds fledged. Chicks which were no longer present in the nest after reaching fledging age were assumed to have fledged, except where (in one case) a dead body was observed in the vicinity of the nest.

RINGING

This year we were able to colour ring 14 birds from 6 nests: 4 on Ham Wall, 1 on Shapwick Heath, and 1 on Westhay. All the nests met the criteria of being accessible by kayak, and at locations which could be visited without risking premature dispersal from other nests. Chicks are ringed at between 2 and 3 weeks old, and ringing visits are made in early morning, when the adults are most likely to be off the nest feeding. Where still present, they return soon after the visit.

- Site 4 Nest 2 : 3 chicks ringed – ABC, ABF, ABJ
- Site 3 Nest 1 : 3 chicks ringed, of which 2 colour ringed – ABP, ABT
- Site 2 Nest 5 : 2 chicks ringed – ABN, ABN
- Site 4 Nest 1 : 3 chicks ringed– ABW, ABX, ACA
- Site 5 : 1 chick ringed – ABU
- Site 3 Nest 2 : 3 chicks ringed – ABV, ACC, ACF



ABW, photo Alison Morgan

All birds ringed were sexed by DNA analysis from feather samples: 10 males and 5 females.

DISPERSAL AND RESIGHTING

Of the 2022 colour ringed chicks, all except ABX and ACC (both the smallest of a brood of three) are known to have fledged. All the fledged chicks except ABF have been resighted:

ABC, ABF and ABJ, ringed at Ham Wall, on 26.4.22

- ABC (m) was reported from Sandbach Flashes SSSI, Cheshire, between 10th July and 6th September
- ABF (m) fledged but has not been resighted
- ABJ (f) was reported from Covehithe Broad, Suffolk on 10th July and from Stiffkey Fen, Norfolk, on 30th July – particularly remarkable as she was the smallest of a brood of 3, weighing only 415g at ringing compared with her siblings at 640g & 615g.



ABJ at Covehithe, photo Tim Oakes

ABM and ABN, ringed at Shapwick Heath on 29.4.22

- ABM (f) was reported from Buckton, E Yorks, on 4th July; from RSPB Blacktoft Sands, E Yorks, between 12th & 15th July; from Alkborough Flats, Lincs on 17th July; from Winterton, Lincs on 28th July; and from RSPB Old Moor, S Yorks on 27th October.
- ABN (m) was reported from RSPB Brading Marshes, Isle of Wight on 11th July and from St Helens Bridge, also IOW, on 19th July



ABM at Blacktoft Sands, photo Andy Hunt

ABP and ABT, ringed at Ham Wall, on 29.4.22; a third chick was given a metal ring only

- ABP (m) has been reported extensively from a variety of locations: Calder Wetlands, W Yorks between 1st and 5th July; YWT Ripon City Wetlands, Flasks Lake Nosterfield & YWT Staveley in N Yorks between 24th July and 14th August; Seafeld Ponds Dunbar, Lothian on 18th August; NWT Druridge Pools, Northumberland on 19th August (the next day); RSPB Ynys Hir, Ceredigion, on 13th September; and two sites back in N Yorks between 23rd and 26th September.



ABP at Dunbar, photo James Boyle

- ABT (f) was reported from Troops Pit Ancaster, Lincs on 22nd August; Grimley, Worcs, on 26th July and Westwood Pool Droitwich, Worcs, between 9th and 31st October.

ABU, ringed at Westhay on 7.5.22; a second more mobile chick was not ringed

- ABU (m) was reported from North Somercotes, Lincs on 17th July; from Nosterfield, N Yorks on 4th August (where he was photographed alongside ABP on 4th August); from LWT Boultham Mere, Lincs on 1st September; and from Stanford Reservoir on the Leics/Northants border on 28th September

ABW, ABX and ACA, ringed at Ham Wall, on 29.4.22

- ABW (m) was reported from RSPB Old Moor, Barnsley between 20th & 27th July, and from YWT Sprotborough Flash, Doncaster, Yorks between 4th October and 21st November
- ABX (m) died in the nest at 5 weeks
- ACA (f) was reported widely from locations across the South West: Brixham Harbour, Devon, between 10th & 20th July; Clennon Valley Lakes, Paignton, Devon, on 25th & 26th July; Bude, Cornwall, on 6th August; Paignton Zoo on 11th August; Bude from 27th August to 2nd September; Slapton Ley, Devon on 15th September; two locations in Paignton between 16th & 23rd September; Tottiford Reservoir, Devon on 14th October and the Exe Estuary on 20th November. In December she relocated to Hampshire, where she was seen on 13th and 17th at Keyhaven NR, Lymington.



ACA at Brixham, photo Robin Morrison



ACF at Flamborough Head photo Andrew Allport

ABV, ACC and ACF, ringed at Ham Wall on 7 & 12.5.22

- ABV (m) was reported from Grafham Water, Cambs between 18th August & 7th September, from Paxton Pits, Cambs on 25th September, and from RSPB Exminster marshes, Devon on 10th October
- ACC (m), the smallest of the brood, failed to fledge
- ACF (f) was reported from Flamborough Head, E Yorks, on 4th July.

Other sightings

In 2022 we received the following reports for birds colour ringed in previous years:

- **AAF** (m), ringed on Ham Wall in 2016, was photographed on Ham Wall on 29th June – this bird was also seen in 2017, 2018, 2020 and 2021. It has been consistently reported wintering in Somerset since fledging, and is known to have nested or attempted nesting on the Avalon Marshes.
- **AAM**, ringed on Ham Wall in 2018, was photographed on Ham Wall on 31st August – and may have bred here (see below).
- **AAR** (m), ringed on Shapwick Heath in 2021, has been reported at intervals since fledging, with sightings this year coming in from Newtown, Powys in January; GWT Coombe Hill & WWT Slimbridge, Gloucs between April and June; Clumber Park, Notts in October and November; and back at Landinam, Powys in December.
- **AAP** (m), nestmate to AAR and ringed on Shapwick Heath in 2018, was reported from Llangorse Lake, Powys, in April and Holme Pierrepont, Notts in September.
- **AAT** (f), ringed on Ham Wall in 2021 and seen last year at RSPB Conwy, was reported between April and August this year from RSPB Saltholme on Teeside, along with AAU – see below.
- **AAU** (m), nestmate to AAT, spent last year visiting locations in Lancs, Yorks, Lincs and Notts. He was reported from RSPB Fairburn Ings in January, RSPB Old Moor in February (both in Yorks), but then made a surprise reappearance at Ham Wall between 18-22 April. He then headed back north and was seen at RSPB Saltholme between 3-20 May – where he was photographed alongside his sibling AAT. Had AAT also returned to Ham Wall, and the two birds then travelled north together? On 13&14 June AAU was again reported from Fairburn Ings, but by 15th was back at Saltholme. On 22nd June he was seen at RSPB Middleton Lakes, Staffs, before returning to Fairburn Ings where he was reported between 28th June and 22nd August.



AAU returns to Ham Wall, photo Tom Gale

OBSERVATIONS

Juvenile Great Egrets become increasingly mobile from about 6 weeks, but may not finally leave the nest until as late as 12 weeks. The reported sightings suggest that they may fly long distances within a short time of fledging – the mean age of final fledging seems to be between 9 and 10 weeks, and all the birds resighted so far this year have reached their first reported location at between 10 and 14 weeks old.

Birds from the same nest do not necessarily fledge at the same time or travel together, and may indeed go in opposite directions – this year siblings went to Cheshire and Suffolk (ABC & ABJ), Yorkshire and the Isle of Wight (ABM & ABN), Yorkshire and Worcestershire (ABP & ABT), Yorkshire and Devon (ABW & ACA). But they may also travel in groups of juveniles from different nests – ABM & ACF were reported within a few miles of one another on 4th July after a party of 4 birds ‘flew in off the sea’ at Bempton, and ABP & ABU (ringed a week apart on Ham Wall and Westhay) were photographed together at Flasks Lake, N Yorks, on 4th August.

One of the big questions remains: when these dispersed birds reach breeding age (2 years), will they return to the Avalon Marshes, or will they pioneer new colonies elsewhere? Of the 2016 birds, AAC and AAF are thought to have nested here – but they have never been reported from outside the county. We were delighted by the unexpected reappearance of our champion wanderer AAU, ringed in 2021, at Ham Wall this April – but within a couple of weeks he had relocated 400 km to RSPB Saltholme, Teeside, alongside sibling AAT who had spent the previous year in Powys. More significantly a 2018 bird, AAM, which had been reported from Titchfield Haven in Hampshire a month after fledging but had returned to Somerset by September of that year, was photographed this August at Ham Wall. At 3 years old this bird is now at breeding age. Few Great Egrets are present on Ham Wall in August, so it seems likely that it had indeed bred here – which would make it the first bird to return to nest in Somerset having previously been reported from another part of the country.

Young Somerset egrets continue to cover huge distances. AAU (2021) is our most widely travelled bird to date – he has covered a minimum 2,284 km since fledging. Of this year’s birds, ABP has travelled the furthest, covering 1,280 km and providing the first resighting record from Scotland – at Seafeld Ponds near Dunbar, Lothian.

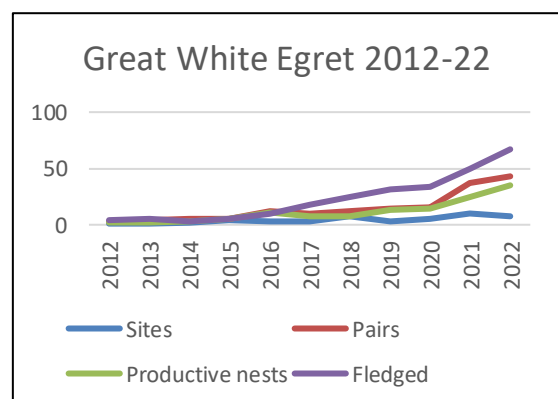
Finally, all the birds except one have been reported from freshwater locations – the exception being ACA, which spent ten days on the breakwater at Brixham Harbour before ranging widely around the South West.

It is significant that many of these locations are on managed nature reserves. Other sightings have come from reservoirs, marshes, rivers, estuaries and inland lakes or pools.³

A TEN YEAR PERSPECTIVE

This year we were able to publish a paper in the May issue of *British Birds*: ‘Great White Egrets in England: tipping the balance’.⁴ This looked at the gradual establishment of this species as a breeding bird in the UK over the last ten years, provided an analysis of the targeted conservation action which had paved the way for its success, and made recommendations to support further colonisation in other locations.

The 2022 breeding season has confirmed the ongoing pattern of steady expansion, with the first large colony established on Shapwick Heath and record numbers of nests and chicks fledged from the three reserves. Birds in breeding colours were also present this year on the RSPB’s Greylake and West Sedgemoor reserves, but are not thought to have nested.



³ Birds have now been reported from 37 reserves/sites managed for wildlife, 9 reservoirs and 20 other locations.

⁴ Alison Morgan, Alison Blaney, Andrew Bloomfield, Leigh Lock and Graham White / May 2022 – vol. 115, issue 5, pp 261–274

Over the last decade we have learned a huge amount about the ecology, breeding requirements and behaviour of this species. Much of this information has come from the use of drone technology to monitor the nests, which are often invisible from the ground, and from the ringing programme, which has been running since 2016. We now have 5 years of data from the ringing (we did not ring in 2019/20). Overall we have ringed 34 chicks, of which 29 have been given both metal and colour rings, and 5 metal rings only. 26 of these 29 chicks fledged, and 24 have been subsequently resighted outside the Avalon Marshes – across England, in Wales and, for the first time this year, in Scotland. We have now received 236 reports from 110 observers across the country, many of them supported by photographs. 111 sightings were submitted in 2022 alone.

Our colour ringed egrets have now been reported from 25 of England's 46 counties, plus 2 in Wales and 1 in Scotland. Given that the 25 ringed and fledged birds represent just 10% of the total number produced here since breeding began in 2012, we may assume that these records represent only 10% of the Somerset birds dispersed across the country.⁵ Bearing in mind that breeding remains very limited elsewhere in the country and that inward migration by ringed continental birds has not been documented on any significant scale, it seems likely that the huge expansion of Great White Egrets across the UK is due largely to the success of the colonies here on the Avalon Marshes. We have no national quantification of the non-breeding population, but given that individual Somerset birds have been reported from up to 16 distinct locations in as many as 10 counties within a year of fledging,⁶ it may be that many reported sightings are of the same birds moving from site to site.



Map of GWE sightings by English county 2016-22 (bird size denotes number of sites)

LOOKING AHEAD

The Avalon Marshes colonies of Great White Egrets will continue to be monitored next year. But as the colonies become larger and more dense it is becoming increasingly difficult to maintain a detailed record for each individual nest, particularly once chicks become mobile. We hope to continue the ringing programme too, but this obviously depends not just on the continued involvement of staff and volunteers, but on the situation with regards to avian influenza.

THANKS TO:

Wardens: Ali Blaney (RSPB Ham Wall), Phil Thorpe (NE Shapwick Heath), Mark Blake (SWT Westhay) & the reserve staff

Drone Team: Alan Ashman & Andrew Kirby

Ringing Team: Alison Morgan & Rich Hearn, with Roger Lucken, Bob Medland, Amy King

All those who have sent in colour ringing sightings from around the country and given permission to use the photographs included here.

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A ringed Great White Egret on Ham Wall September 2022, photo by Mike Pearce

⁵ Approximately 252 birds have fledged from Somerset between 2012-2022 inclusive.

⁶ AAU.