
10. The Important Birds of Poole Harbour: Population Changes Since 1998

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Details are given of the changes that have occurred since 1998 of the important birds of Poole Harbour. This 5 year survey included 10 breeding, a 'globally threatened' autumn passage migrant, and 20 international, national and harbour important wintering species. There are now over 40 breeding Little Egrets, the Black-headed Gull has been afforded 'Amber' status and concern is expressed for the survival of breeding Redshank in the harbour.

Peak Shelduck numbers have declined and it no longer qualifies for international status. Black-tailed Godwit numbers continue to rise and the Avocet is increasing rapidly: both populations are of international importance. Ten species are showing upward trends but seven are showing downward trends. Three species no longer occur in nationally important numbers. Only the numbers of the two small grebes and Oystercatcher appear to have changed little since the 1991/92–1997/98 period. The most significant declines have been noted with Pochard, Lapwing and Redshank.

Introduction

Poole Harbour has for more than four decades been acknowledged as an important national biological site by being afforded numerous statutory designations. Among these designations is the recognition of Poole Harbour as a wetland of international importance under the RAMSAR Convention and as a Special Protection Area (SPA), under the European Community Birds Directive, both ratified in 1999.

The report *Important Birds of Poole Harbour* (Pickess and Underhill-Day, 2002) gave the current status and historical data concerning the important breeding species up to 1998 and the passage and wintering waterfowl and waders to the winter of 1997/98. Five years have elapsed since that survey, so it is appropriate to review the status of the key breeding, passage and wintering species, and to record any changes that have occurred.

Breeding species

During the review period, there have been no national surveys involving the key harbour breeding species. Most of the breeding species in the report by Pickess and Underhill-Day (2002) were selected because they were included as 'Red' or 'Amber' species in Gibbons *et al.* (1996). Two additional species were added because the harbour held over

1% of the UK breeding population, although they were not listed as 'Red' or 'Amber'. The breeding status of waterfowl and wader species, where peak numbers on passage or during the winter are of international or national importance, is also included.

A revised assessment of the status of birds of conservation concern for the period 2002–07, not surprisingly includes all but one of the harbour's previously listed 'Red' or 'Amber' species (Gibbons *et al.*, 1996). In addition, the Black-headed Gull *Larus ridibundus*, which was already recognized as an important harbour breeding bird, is now 'Amber' listed (Gregory *et al.*, 2002).

During the period 1998–2002, there was little detailed knowledge of how the harbour's key species fared. Table 1 shows these key species, their changing national status, if any, other important breeding species in Poole Harbour and as a percentage of the UK population.

Table 1 Changes in the status of important Poole Harbour breeding species between 1996 and 2002

Species	Red list	Amber list	Harbour importance	2002 % UK population
	1996 : 2002	1996 : 2002	1996 : 2002	
Little Egret ¹		■ ■		Possibly >75%
Water Rail ²		■ ■		Unknown - <20 pairs
Redshank ⁴		■ ■		0.5%
Mediterranean Gull ¹		■ ■		2-4%
Black-headed Gull ²		■	■	>4%
Sandwich Tern ³		■ ■		>1.5%
Common Tern ⁵			■ ■	>1%
Cetti's Warbler ⁶		■	■	>5%
Bearded Tit ⁷		■ ■		>2%
Reed Bunting ⁸	■ ■			Possibly >100 pairs

Source: After Gibbons *et al.* (1996); Gregory *et al.* (2002)

¹ 5 year mean of 1–300 breeding pairs in UK.

² Moderate (25–49%) contraction of UK breeding range over last 25 years.

³ European listed SPEC2.

⁴ 'Amber' status because of winter numbers but harbour also supports the largest number of breeding birds in south-west England.

⁵ Harbour breeding population >1% of UK population.

⁶ No longer a rare breeder (>300 pairs).

⁷ >50% of UK breeding population in 10 or fewer sites.

⁸ Rapid (>50%) decline in UK breeding population over last 25 years.

Almost all of our current knowledge concerns the larger species which are easier to census. Undoubtedly, the highlight of the past 10 years has been the establishment by the Little Egret *Egretta garzetta*, on the Dorset Wildlife Trust's Brownsea Island nature reserve. Currently the breeding population has reached around 45 pairs, which represents over 75% of the UK breeding population. This colonization illustrates how rapidly changes can take place but not always in a positive way. Although the Grey Heron *Ardea cinerea* is not a threatened species, Brownsea Island once held one of the largest heronries in the UK, with up to 131 nests in 1971, but it declined to around 100 nests by the early 1980s (Prendergast and Boys, 1983). Numbers have continued to decline slowly and in 2003, there were only 35 nests (Chris Thain, pers. comm.).

One of the most difficult birds to census is the Water Rail *Rallus aquaticus* and until a concerted effort is made to undertake a breeding survey, its population size in the harbour remains unknown. Although it seems unlikely that the harbour population is of national significance, it is, nevertheless, an important member of the harbour's breeding bird community.

No recent surveys of breeding Redshank *Tringa totanus* have been undertaken but observations suggest a decline may be occurring, possibly due to habitat change and disturbance during nesting. This is due to the current high level of grazing pressure by the Sika Deer *Cervus nippon* on the saltings, and the possible disturbance to nesting birds, with potential trampling of nests and chicks. Herds of up to 100 animals have been seen roaming across areas such as Arne Bay (pers. obs.).

The Black-headed Gull, previously included among the harbour's most important breeding species because of its large population, has now been 'Amber' listed. Although the size of the colony on the *Spartina* islands in Holton Bay has not been estimated recently, there is no evidence to suggest a decline. Within the gull colony, Mediterranean Gulls *Larus melanocephalus* are still present, and their breeding population is probably between two and eight pairs. There has recently been an increase in sightings away from the nesting islands during the breeding season, which may suggest that the harbour population is slowly increasing.

The islands specially constructed by the Dorset Wildlife Trust to attract nesting terns on to their Brownsea Island lagoon had their best year ever in 2003, with 207 pairs of Common Tern *Sterna hirundo* and 194 pairs of Sandwich Tern *Sterna sandvicensis*. Sandwich Terns are fickle, however, for after many years of continuous breeding, for reasons unknown, they did not settle to nest in 2000 or 2001, but returned to nest again in 2002.

The Cetti's Warbler *Cettia cetti* was previously afforded 'Amber' status as a rare breeding bird but it has now been transferred to the 'Green' list due to its expanding population (Gregory *et al.*, 2002). Around Poole Harbour, it favours the wet fringes where the reed *Phragmites australis* is found, usually in association with scattered bushes of willow *Salix* sp. and patches of bramble *Rubus* sp. The harbour still supports over 5% of the

national population and it remains a key breeding species. Whilst the UK breeding population is currently expanding, the significance of the harbour's population will only be tested when the next severe winter occurs. Cetti's Warbler is vulnerable during a long period of severe weather, which can lead to local extinctions (Batten *et al.*, 1990). During such times the harbour, which usually experiences slightly milder conditions than the other main breeding areas in South East England and East Anglia, can provide conditions which allow higher survival rates during cold weather.

Often found in a similar habitat to the Cetti's Warbler, the Reed Bunting *Emberiza schoeniclus*, has suffered a drastic population decline over the past 25 years and is 'Red' listed. They are still thinly distributed around the southern and western fringes of the harbour but an estimated breeding population in excess of 100 pairs may be optimistic. There is a need to survey this species, the only 'Red' listed breeding species nesting in the harbour. Associated with the larger reedbeds on the western and north-western side of the harbour, a small population of Bearded Tit *Panurus biarmicus* is at the most 10 pairs. Although numbers are small, it represents over 2% of the UK breeding population.

A 'Red' listed autumn passage passerine

The Aquatic Warbler *Acrocephalus paludicola*, a globally threatened and 'Red' listed non-breeding migrant species, probably passes through the harbour annually each autumn, but its presence is usually only detected through mist netting for other species. During the 1990s, it was recorded regularly up to 1997, with a maximum of 17 in any one autumn at the Keyworth trapping site (Pickess and Underhill-Day, 2002). Subsequently, birds have been recorded (caught) in only one of the past 4 years, when in August 2000, three were trapped on 5th and one on 10th. The recent fall in the number of birds in Poole Harbour is consistent with other sites along the Dorset coast, where records of this species have also declined since 2000, their best year.

Passage and wintering

The low water WeBS counts have continued each month, September–March, in each of the 5 years 1998/98–2002/03. There has also been a revision of the national 1% thresholds for wintering waterbirds (Kershaw and Cranswick, 2003) and waders (Rehfishch *et al.*, 2003), and the 1% thresholds for international waterbirds (Delany and Scott, 2002).

During 1991/92–1997/98, 21 species met the criteria for inclusion by Pickess and Underhill-Day (2002), as they occurred in the harbour in internationally important numbers (2 species), nationally important numbers (16 species) or their peak population represented over 5% of the harbour's total peak wintering population of waterbirds and waders (3 species).

With the exception of the Grey Plover *Pluvialis equatarola*, which no longer meets any of the criteria for inclusion, the remaining 20 species still meet at least one of the criteria for inclusion, although the status of several has changed (Table 2). The indication of

population trends in the harbour for each species has been calculated by using the annual peak counts for the 11 winters 1991/92–2001/02. The same data set has been used, in text, to calculate the 11 year mean for each of the harbour's wintering waterbirds and waders of importance.

Currently at peak, two species, both of which are increasing in numbers, occur in internationally important numbers in the harbour, the Avocet *Recurvirostra avosetta* and Black-tailed Godwit *Limosa limosa islandica*. Although the 1% threshold has not changed for Shelduck *Tadorna tadorna*, a decline in the number of this species means that it no longer qualifies for international status.

The most significant change since the winter of 1997/98 has been the Avocet, as not only have its numbers increased to reach international importance but during 2001/02 a peak count of 1862 was also recorded, the largest gathering ever at one site in the UK. Until the end of the 1970s, this was a rare winter visitor to the harbour and its rapid rise during the 1990s to the current time can only be described as meteoric. Two pairs attempted to breed in 1999 on the lagoon of Brownsea Island nature reserve and, although the eggs hatched, the young chicks soon disappeared: the cause of their demise is unknown.

The wintering Black-tailed Godwit population of the harbour has been of international importance for many years. Over time, at peak, the population has slowly but steadily increased and during this review period, it has peaked at around or just over the 2000 mark, and the 11 year mean is 1668. A record count of 2115 in 2002 represented over 14% of the UK wintering population and 6% of the East Atlantic Flyway/north-west European population of this species (Rehfishch *et al.*, 2003).

The peak winter Shelduck populations during the six winter periods 1991/92–1996/97 produced a mean of 3175, the 1% international threshold being 3000 birds. From 1997/98, the population has dropped by over 30% at peak and the harbour no longer holds internationally important numbers, even though the 11 year mean is 3052. What has caused this rapid drop is unclear but it is not just a Poole Harbour phenomenon, as the UK winter population overall has also been falling (Pollitt *et al.*, 2003).

Always difficult to census are the Slavonian Grebe *Podiceps auritus* and Black-necked Grebe *P. nigricollis*. The recent records of Black-necked Grebe suggest that at its maximum it is failing to reach double figures, whereas the Slavonian Grebe is faring better, with a peak of 15 birds. At peak populations, both grebes are over 1% of the UK population.

Only 7 of the 14 nationally or harbour important species show upward trends. There is no surprise in the rising fortunes of the Cormorant *Phalacrocorax carbo* in the harbour. Despite >75% rise in the 1% national threshold to 230, the harbour now holds nearly 2% of UK winter population, and the 11 year mean is 388. The recent breeding colonist, the Little Egret, has an increasing wintering population in the harbour and reached a peak of

Table 2 Changes in the status of key wintering species and their trends over the period 1991/92–2001/02 (11 years) in Poole Harbour

Species	1991/92– 1997/98	1998/89– 2002/03	Current trends
Slavonian Grebe	NI	NI	Population very small – probably stable
Black-necked Grebe	NI	NI	Population very small – probably stable
Cormorant	NI	NI	Increasing
Little Egret	NI	NI	Increasing and 'Amber' listed as a breeding species
Dark-breasted Brent Goose	NI	NI	Declining
Shelduck	IN	NI	Declining
Wigeon	H	H	Slowly declining and below 1% threshold
Teal	NI	NI	Increasing but now below 1% threshold
Pintail	NI	NI	Increasing
Shoveler	NI	H	Declining and now below 1% threshold
Pochard	NI	H	Declining and now below 1% threshold
Goldeneye	NI	H	Slowly increasing but now below 1% threshold
Red-breasted Merganser	NI	NI	Increasing
Oystercatcher	H	H	Stable
Avocet	NI	IN	Increasing
Lapwing	H	H	Rapid decline and below 1% threshold
Dunlin	NI	NI	Increasing
Black-tailed Godwit	IN	IN	Increasing
Curlew	NI	NI	Decreasing
Redshank	NI	H	Declining and now below 1% threshold

IN = International Importance

NI = National Importance

H = Harbour Importance

197 during the winter of 2001/02, with the 11 year mean of 65.

Numbers of Teal *Anas crecca* are slowly increasing in the harbour but the increase of the 1% threshold to 1920, now places the Teal below the qualifying figure. The 11 year mean is 1487. Similarly, there has been a slow but steady increase in the numbers of Pintail *Anas acuta*, with the 1% national threshold now at 279 and the 11 year mean of 294. The trend for Goldeneye *Bucephala clangula* suggests a slow rise but with the 1% threshold

increasing to 249, only in 2 of the past 11 years would this new qualifying level have been reached: the 11 year mean is 217. Furthermore, the population had by 2001/02 declined to near its 1991/92 peak of only 122. The harbour is the most important estuary in England for wintering Red-breasted Merganser *Mergus serrator*, and numbers are slowly moving upwards. At the 1% national threshold of 100 and the 11 year mean of 391, the harbour holds around 4% of UK wintering population.

The only wader to show an upward trend is the Dunlin *Calidris alpina* and even with the 1% national threshold being raised by 6% to 5600, the 11 year mean at 6134 is well above the qualifying number.

The only species whose numbers are stable is the Oystercatcher *Haematopus ostrageous* which, despite an 11% drop in the 1% national threshold to 3200, remains only a harbour important species with an 11 year mean of 1580.

Of the species in decline, only the Dark-breasted Brent Goose *Branta bernicula* and Curlew *Numenius arquata* numbers remain above the 1% threshold. Three species, Shoveler *Anas clypeata*, Pochard *Aythya ferina* and Redshank, were all previously above the 1% national threshold, but no longer qualify and are relegated to harbour important status. The Wigeon *Anas penelope* and Lapwing *Vanellus vanillas*, both previously with populations of harbour importance, have declined.

During the 1990s, peak numbers of Dark-breasted Brent Goose have varied but the trend has been one of slow decline, although numbers have always been well above the 1% national threshold (1000) and the 11 year mean of 1409. The winter of 2001/02 saw a drastic decline with a peak count of only 578. The reason for this poor showing is unclear. The 1% national threshold for Curlew has been revised upwards by 25% and is now 1500, whilst the harbour 11 year mean is 1687. Although the trend for this species in the harbour is slowly downward, the annual peaks remain around or well above the new 1% threshold level.

The Shoveler has never been an abundant bird in the harbour and populations have been given to large fluctuations. Despite reaching the new 1% national threshold of 150 in 6 of the last 11 years, it nevertheless only has an 11 year mean of 114. The new 1% national threshold of 595 for Pochard has risen sharply, whilst the numbers in the harbour in recent winters have declined rapidly. The 11 year mean of 602 is only due to three exceptionally large counts before 1998/99. Unless numbers visiting the harbour increase again, it is likely to be downgraded to harbour important. A real cause for concern is the Redshank, where the trend has been steadily downward and during the winters of 2000/01–2001/02, the population peaked at just below 800. The rapid drop in wintering birds has reduced the 11 year mean to 1171, and is now below the 1% national threshold, recently raised from 1100 to 1200.

Two 1991/92–1997/98 harbour important species have shown downward trends. Winter numbers of Wigeon have always fluctuated but the recent trend has been downward and

the 11 year mean is 1006. Lapwing numbers have rapidly declined from peaks of >8000–10,000 in the early 1990s to just over 600 during the winter of 2001/02: the 11 year mean is 4045.

Discussion

The distribution and status of the breeding species in Poole Harbour appear to show little change during the past 5 years. Because of the nationally declining breeding population of the Black-headed Gull, this species is now 'Amber' listed. It would be valuable to establish around the harbour the breeding status of the Water Rail and more importantly, our only 'Red' listed species, the Reed Bunting. The need to census the Redshank is more urgent to discover if the large herds of Sika Deer are having a serious impact upon breeding success.

What is actually happening with the harbour's wintering populations is not clear. Could one of the reasons for these recent changes be the series of milder winters that have taken place in the UK and north-west Europe? It is unlikely to be quite this simple because some species are showing downward trends, whilst a smaller number are steadily increasing. Should these trends continue, is the importance status of several species in the harbour likely to change?

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