



Chichester Harbour Wildlife & Ecology Report 2008-09

Report Highlights

The complete report by *Ed Rowsell*, the Conservancy's Conservation Officer is attached. Here are just a few of the highs and lows recorded in the report. To learn more about local wildlife see www.conservancy.co.uk or contact the Harbour Office on 01243 512301.



Brent Goose numbers peaked at 8,757 in February, quite a reduction on last years peak of 12,171.

The **Little Egret** population is continuing its upward trend with numbers peaking at 266.

Against a national picture of decline, **Dunlin** numbers continued an upward trend, with a huge **26,311** in November.



Curlew numbers appear stable with a winter average of 1,112.

Sanderling numbers showed a strong Autumn passage with 160 birds in October.

A **Spotted Redshank** that was captured and colour-ringed in Thorney Deepes in Autumn 2008, has resulted in a breeding season sighting in **Sweden**, followed by another sighting at Thorney in Autumn 2009.



Shelduck had the best breeding season in 5 years, with 10 broods totalling **70 young**.

6 young **Sandwich Terns** were fledged, the **first successful breeding** since 2002.

The decline of the **Southern Marsh Orchid** at Fishbourne Meadows has been reversed.



The nationally scarce **Spreading Hedge Parsley** has expanded its population.



The rare **Water Shrew** has been recorded at Eames Farm.

Five Solent **Harbour Seals** were tagged giving an indepth insight into the animals movements.



JANUARY 2010

WILDLIFE AND ECOLOGY REPORT CHICHESTER HARBOUR 2008-9

REPORT BY CONSERVATION OFFICER

1. Introduction

Covering the period between September 2008 and December 2009, this report constitutes a review of the current state of harbour wildlife. It includes the monitoring, research and management work carried out during the period in accordance with the AONB Management Plan, and work towards achieving biodiversity targets.

2. Birds

2.1 Wintering and migration

2.1.1 High tide Counts 2008/9

The weather for this season's counts gave us the full set of extremes, all of which gave their own challenges for counts. Including a sunny and hot September count, storm conditions in December and then the extreme cold in January.

Brent Geese numbers peaked at 8,757 in February, quite a reduction on last years peak of 12,171. However a consistent population was held throughout the mid winter period, leading to a winter average of 8,382. Productivity counts indicates that only 1% of the population were juvenile birds, which in part explains the decline in population.

On the whole the other wildfowl seem to have had a good year, with stable populations of Wigeon and Pintail. After long-term declines we have seen increasing trends in Teal and Shelduck numbers and a period of stability in Goldeneye. It is probably no co-incidence that the peak for most of these species occurred following the cold-snap in January, with extreme conditions pushing birds south and out of frozen freshwater habitats.

Conversely, following a recent increasing trend, Red-breasted Merganser numbers have dropped substantially from 211 to 156. This pattern is mirrored in Langstone Harbour, however, numbers have continued to increase in Portsmouth Harbour.

After seemingly stabilising last year Little Grebe numbers, peaked at 79 indicating a renewed growth in the population. As indicated by last years figures, the Little Egret population is continuing its upward trend with numbers peaking at 266.

Other interesting less common wildfowl species picked up in this years WeBS counts included Eider, Goosander and Great Northern and Red-throated Divers

Species	2008/09	2007/8
Little Grebe	79(nov) ↑	63 (jan)
Little Egret	266(oct) ↑	264 (sep)
Brent goose	8,757(feb) ↓	12,171 (jan)
Shelduck	560(jan) ↑	449 (
Wigeon	2435(jan) ↓	2735 (oct)
Teal	1,687(jan) ↑	1066 (jan)
Mallard	438 (nov) ↓	594 (sep)
Pintail	211(jan) ↑	184 (feb)
Goldeneye	25(jan) =	26 (feb)
Red-breasted Merganser	156(feb) ↓	211 (feb)

Table 1. Peak numbers of wildfowl 2008-9 compared with 2007-08

With an autumn peak of 444 in October, Black-tailed Godwit numbers were similar to last year. The winter average was considerably higher than last year, but this figure is heavily influenced by an exceptional 613 birds in January. Bar-tailed Godwit numbers built up earlier in the season with an Autumn peak of 407 birds. Numbers built up through the winter with a peak of 802 in February and a winter average of 476, which is well down on last year's 902; however this was probably influenced by the weather conditions on the December and January counts.

After a late arrival with only 1,613 birds in October, and against a national picture of decline, Dunlin numbers continued an upward trend, with a huge 26,311 in November. Numbers then returned to more typical values with a winter average of 10,721; considerably lower than last years 17,003.

Golden Plover numbers appeared quite stable in the autumn, but there were slightly reduced winter average of 644 (703 in 07/08) and spring numbers down to just 5 birds. Lapwing numbers show a slight reduction in Autumn numbers with a peak of 421 (622 in 07/08) and a much reduced winter average of 1,032 (1,589 in 07/08). Both of these species are very mobile and will use fields inland from the coast and are therefore problematic to count accurately. Grey Plover numbers appear to have stabilised with peak numbers similar to last year, with 1416 birds in November and a winter average of 840.

The Autumn passage of Greenshank was slightly better than last year with a peak of 82 in August (77 last year). Again, more birds seemed to over-winter giving a winter average of 20.33 (16.67 last year).

Knot counts after some stability last year returned to the unpredictable norm with a much reduced peak of 1,035 in November (2,709 last year), and a winter average of 600 (1,687 last year).

Winter Oystercatcher numbers remain stable, with a winter average of 1,258. Autumn numbers were much improved with an exceptional peak of nearly 3,000 in September. Redshank numbers were much reduced with a peak count of 1,467 in October, as opposed to 2,403 last year, winter numbers remained stable.

Curlew numbers appear to be stable with a winter average of 1,112, the Autumn peak was slightly reduced at 1,481 (1,760 in 07/08). Turnstone numbers remained high with a winter average of 265 surpassing last years high 217.

Ringed Plover numbers showed some improvement with an autumn peak of 132 in October, compared to 109 last year and a peak count of 395 in November. However, the winter average and spring passage has continued on a downward trend in numbers. Sanderling numbers again showed a strong Autumn passage with 160 birds in October (106 in 07/08), and a similar winter peak of 242. This is a promising trend in the recent run and may indicate a period of stability and possibly growth in Sanderling numbers.

Species	Autumn 08/09	Autumn 07/08	Nov–Mar 08/09	Nov–Mar 07/08
Oystercatcher	2986	890	868	1516
Ringed Plover	132	109	395	233
Golden Plover	610	500	1090	1572
Grey Plover	766	723	1416	1604
Lapwing	421	622	1563	1872
Knot	49	24	1035	2709
Sanderling	160	102	242	245
Dunlin	1613	7757	26311	18759
Black-tailed Godwit	444	518	613	775
Bar-tailed Godwit	407	79	802	1228
Curlew	1481	1760	1456	1450
Redshank	1467	2403	1810	1567
Greenshank	82	77	25	34
Turnstone	155	242	330	334

Table 2: Peak numbers of waders 2008-9 compared with 07/08

2.2 Ringing studies

Colour ringing studies led by Farlington Ringing Group continue to give us valuable information on Black-tailed Godwit and Greenshank. A large number of ringed birds have been recorded with many local and UK sightings and records from France, the Netherlands and Spain. No catch attempts have been made for these species this year within Chichester Harbour, however, ringing work has continued in Iceland over the summer for Black-tailed Godwits.

Quite amazingly a single Spotted Redshank that was captured and colour-ringed in Thorney Deeps last autumn, has resulted in a breeding season sighting in Sweden followed by the recording of its return to Thorney Deeps this Autumn.

Attempts to learn more about the duck species wintering in the harbour have commenced. A small catch of Wigeon and Teal was made at Eames Farm, with further work planned for this winter.

An international study has commenced looking at Sanderling and the reasons for their decline. The Conservancy is working in collaboration with Farlington Ringing Group to contribute to the study. To date one (unsuccessful) attempt has been made to capture Sanderling and equip them with colour rings.

Other interesting sightings of ringed birds include a sighting of a Montague's Harrier by the Conservancy's Eames Farm and North West Deeps Warden. The bird had been ringed as a chick in the Netherlands 2 years ago. Also one of the Scottish Ospreys satellite-tagged by the Highland Wildlife Foundation passed through the harbour, roosting overnight in Thorney deeps but incredibly was not spotted by any observers.

2.3 Bird Atlas

A national Bird Atlas project is underway, with the objective of mapping the distribution of breeding and overwintering birds. Organised by the British Trust for Ornithology, over a 3 year period every tetrad (4km square) in the UK and Ireland, will be surveyed by local ornithologists. Progress has been rapid for Chichester Harbour with the entire harbour area due to be completed by the end of the second year.

2.4 Breeding Birds

Good weather got this years breeding season off to a much better start than the preceding two years. Conditions deteriorated in the latter part of the season which may have affected chick survival rates for some species.

2.4.1 Breeding waterfowl and waders

Shelduck had the best breeding season in 5 years with 10 broods totalling 70 young. However, these were well spread around the harbour rather than the traditional hotspots of Fishbourne Channel and Thorney Deeps.

Breeding success in waders appeared much improved in comparison to the 07/08 breeding season. A total of 6 Oystercatchers and 17 Redshank were recorded as holding breeding territories this season, however, records of breeding Lapwing numbers have declined from 13 to just 7 pairs. Evidence for successful breeding was recorded for Redshank, with a recently fledged chick at Stakes Island; Ringed Plover (two fledged young on Thorney Island) and Oystercatcher, with two well grown chicks sighted on Stakes Island.

2.4.2 Breeding seabirds

It was an improved but somewhat frustrating year for breeding seabirds. The improved spring weather stimulated breeding activity in the colonies on Stakes Islands. Nesting was recorded for three tern species with 30 Sandwich Tern nests hatching 12 young of which a minimum of 6 successfully fledged, the first successful breeding of this species since 2002. 18 Common Tern nests were recorded resulting in 9 fledged birds. Six Little Tern nests resulted in 11 chicks, however, they all succumbed to unknown factors (e.g. predation, weather). The outlook for this species in the Solent is increasingly bleak; Langstone Harbour recorded only 5 fledged young from 45 nests.

2.4.3 Other species

The cold snap in January rang alarm bells for the Cetti's Warbler population, with the risk that the cold weather would kill off this recent colonist to the British Isles. It was, therefore, with relief that 12 pairs were noted in their previous territories, mostly occurring in the Eames Farm area, which is only a slight reduction from last year's. Three pairs of Turtle Doves were noted, 2 on Eames Farm and a further pair at West Chidham.

3. Habitats

3.1 Botanical Monitoring

As predicted, the return of grazing to Fishbourne meadows has reversed the decline of flowering Southern Marsh Orchids (*Dactylorhiza praetermissa*) (500 up from 363 last year). Intensive management by the Friends of Chichester Harbour volunteers clearing pernicious weeds such as Hemlock Water Dropwort (*Oenanthe crocata*), is also resulting in a marked reduction of these invasive species.

It was also a good year for other species of orchid with 1,125 Pyramidal Orchid (*Anacamptis pyramidalis*) counted on Thorney Island (last year 758) and 44 Green-winged Orchid (*Orchis morio*) at Eames Farm (last year 40).

3.2 Unusual and rare plants

The Sea Heath (*Frankenia laevis*) population at Ellanore is still extant and the plant has also recently colonised Thornham Point. The population of Spiked Star of Bethlehem (*Ornithogalum pyrenaicum*) at Fishbourne is also doing well, with nearly 69 flower spikes counted this spring (last year 40) but unfortunately the site (a road verge nature reserve) was cut during peak flowering.

3.3 Rare arable flora

It was a good year for some of the Harbour's rare arable flora. The nationally scarce Spreading Hedge Parsley (*Torilis arvensis*) has expanded its

population and held the highest recorded population since we have been monitoring the site. The nationally rare and 'species of conservation concern' Grass Poly (*Lythrum hyssopifolium*) after a gap of 2 years has reappeared at one of its former sites, with a profusion of plants covering the specially managed site. However, unfortunately a continued lack of appropriate management has reduced the Shepherds Needle (*Scandix pecten-veneris*) population to a level where no plants were located this year. We continue to work with landowners to encourage suitable conditions and management for these rare species within the AONB farmland.

3.4 Botanical surveys and management plans

A full botanical survey which commenced last year on Eames Farm was completed this summer. The results will provide an ideal baseline to assess future management of the farm. A Farm Conservation Plan, forming part of the Farm Business Tenancy has been developed alongside our tenant, to ensure the sustainable management of the farm.

In partnership with the Hampshire and Isle of Wight Wildlife Trust a detailed survey of the seagrass beds around the harbour has continued this summer. A further tranche of the known sites have been surveyed in detail using handheld GPS. Both of the intertidal species Dwarf Eelgrass (*Zostera noltii*) and Narrow-leaved Eelgrass (*Zostera marina var. stenophylla*) were located, and possible records of the sub-tidal species Common Eelgrass (*Zostera marina*). Future resurveying will enable us to assess the status of seagrass beds in Chichester Harbour

Work has been continuing by the Sussex Botanical Recording Society on the 'New Sussex Flora' detailed recording of plant species to tetrad level for the whole of Sussex is due to be completed next year. The Society has kindly provided its records for tetrads within the harbour area.

4. Fixed point photography

The managed realignment sites at Thornham Point, West Chidham and Chalkdock Marsh were all covered by this years programme. A GPS enabled camera, which geo-references the images with the GIS, has been used extensively.

Monitoring landscape change is a difficult task, however a series of key views will be established and annually captured to assist with this task

5. Other taxa

Eames Farm holds a population of the moth (*Coleophora vibecella*), which is on the newly revised priority list of Biodiversity Action Plan species. Appropriate management for this species and its food plant Dyers Greenweed (*Genista tinctoria*) has been incorporated into the Farm Conservation Plan.

A survey for rare snail species has been undertaken this autumn by Dr Martin Willing (a leading authority on molluscs), with financial support of Chichester District Council's Wildlife Improvement Grant. Survey work for the rare Desmoulin's Whorl Snail (*Vertigo moulinsiana*) where we undertook urgent management work in 2007 to improve the site for this species, failed to locate the species. A further survey will be undertaken in the spring in an attempt to re-locate the population. On a happier note, the other target of the survey the Lagoon Spire Snail (*Heleobia stagnorum*), thought to be extinct in the UK, has been located on another site and has an apparently strong population

5.1 Terrestrial mammals

Water Voles, or evidence of their presence, have been regularly observed at Fishbourne Meadows, East Itchenor Marsh and Birdham Pond. We have also received records of the rare Water Shrew at Fishbourne Meadows and Eames Farm. The otter survey programme has continued but no further signs have been discovered since the 2007 sighting.

A bat walk at Chichester Marina attracted 65 attendees, who were entertained by the large population of Common and Soprano Pipistrelle's. Bat surveys have been undertaken at Thorney Island (by National Trust staff) initial results indicate that potentially 5 different species are present on the island. A further survey was undertaken at Maybush Copse, but only 2 bats were detected indicating a low bat population.

5.2 Marine mammals

The detailed work on the population of Harbour Seals is discussed in more detailed below. The population is however still apparently increasing with counts peaking at 18 animals, with a maximum of 2 Atlantic Grey Seals also present. At least one Grey Seal has been present throughout the year.

5.3 Reptiles and amphibians

A full reptile survey was undertaken on the Maybush Copse site. The site contains a good population of Slow Worm including evidence of breeding, no other reptiles were located. However, good numbers of Common Toad were also found during the survey.

Work continues on collating ad hoc records and generating interest in reptiles and amphibians in the AONB. Known sites were surveyed and continued presence confirmed.

6. Specific projects and research

6.1 Solent Seal Project

The Solent Seal Tagging project, a collaboration with the Wildlife Trust South East Marine Programme, has produced some exciting results. The tagging operation, led by the Sea Mammal Research Unit (SMRU), was undertaken in

March, resulting in the deployment of 5 tracking devices utilising GPS and cell phone technology. As part of the capture operation blood and tissue samples were taken which are being screened for a number of health factors and DNA fingerprinting. Of the five animals tagged, four were adult males and one juvenile female. The tracking devices sent back daily reports of the seal's movements until the final tag was lost in late July when the animals moulted.

The tags created a high resolution record of the seal's movements; each seal had a very individual pattern of how they utilised the area. One seal staying within the three harbours, while the three other males ventured further afield, regularly travelling to the Isle of Wight, into Southampton Water and to Selsey Bill, with a few longer distance trips recorded as far as Shoreham.

Other elements of the project have included the collation of sightings, co-ordinated counts at the main haul-out sites, seabed surveys in the main feeding areas, establishment of a photo-identification database and the development of a range of educational resources.

Current efforts are focusing on drawing together various threads of the project and the analysis of the data.

This project would not have been possible without the assistance of funding from Natural England, Sita Trust and the Friends of Chichester Harbour

6.2 Solent Disturbance and Mitigation Project and Wader Roost Strategy

Work has progressed on both of these Solent Forum Nature Conservation group initiated projects and the Conservancy has maintained a close engagement with their development.

Three years field work for the Wader Roost and Brent Goose Strategy has resulted in 15,000 records (3,600 from Chichester Harbour) throughout the Solent. Consultants are currently analysing the data, which will result in the identification of the important sites for waders and Brent Geese. The project will also characterise what makes a site important and thereby provide advice on creation of new sites. The final report is expected in January 2010.

The Solent Disturbance and Mitigation Project is an attempt to establish the potential impact recreational disturbance has on the Solent European Marine Site, primarily on the SPA bird species. Field work recording the effect of disturbance on birds and visitor surveys are ongoing. The data arising from the field work will be modelled for Chichester Harbour and Southampton Water, where good quality data exist, for bird prey biomass and tidal models. These results will then be scaled up to determine the current effect of disturbance upon the SPA bird assemblage of the Solent. Predictions will then be made on the potential effect of an increasing population and propose a suite of suitable mitigation measures to inform the LDF process.

6.3 Goose Watch

Goosewatch, a project to enable volunteers to assist with monitoring the use of inland fields by Brent Geese, got off to a flying start. Volunteers covered 970ha and submitting 378 records, recording the presence/absence of geese on a weekly or fortnightly basis. It was, unfortunately, a bit of a slow year for inland feeding by Brent Geese with only 6% of records locating geese.

The same team, plus a number of new recruits, have signed up for this years survey and are out busily recording goose activity around the harbour.

7. Data and administration

Continued refinements are being made to our data handling systems to enable easier analysis and accessibility of our data holdings. We are in the process of adopting the Conservation Management System software, which will enable more effective planning and recording of our management activity. The software also provides a link to our GIS system to enable the rapid assessment and visualisation of the information and management activity at a given location

Paper records of inland field use by Brent Geese dating back to 1984 have recently been digitised, enabling a far quicker assessment of the importance of fields within the AONB for Brent Geese, particularly when assessing some planning applications.

8. Recommendation

The Conservancy is requested to note this report.