Chichester Harbour Wildlife & Ecology Report 2007-08

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

Brent Goose numbers peaked at 12,171 in January 2008, the second highest figure recorded in the harbour. 10% of the population were junvenile, a vast improvement on the previous year's 1%.

Shelduck numbers continued to plummet. 449 were counted in January 2008, representing a 50% decline in the last 10 years.


Shelduck

Dunlin (top) show a significant upward trend. A huge 18,759 birds were counted in storm conditions in December 2007.

Black-tailed Godwit and **Greenshank** ringing schemes have continued. Sightings from further afield have been flowing in with birds spotted in Devon, Scotland, Norway, France and Portugal.


Ringed Plover

Little **breeding** success was recorded with just 6 young fledged from 5 pairs of Ringed Plover.


Bee Orchid

Good year for **Orchids**. 758 pyramidal orchids were counted on Thorney Island.

The population of **Harbour Seals** is gradually increasing with a peak of 16 animals and a single Atlantic Grey has been spotted. A new tracking study will start in 2009.


Atlantic Grey Seal

The UK's strongest colony of the **moth** species *Coleophora vibecella* was found on Thorney Island.


European Otter

Three **otter** sightings were reported in September 2008 after not being seen in the area for decades.

Photo Credits: all birds by George Spraggs, Seal by Peter Willicombe, otter by Bernard Landgraf

CHICHESTER HARBOUR CONSERVANCY Agenda Item No.

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WILDLIFE AND ECOLOGY REPORT CHICHESTER HARBOUR 2007-8

REPORT BY CONSERVATION OFFICER

1 Introduction

Covering the period between September 2007 and December 2008, 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 2007/8

Similar to last year most of the Wetland Bird Survey (WeBS) counts took place in reasonably mild weather; no prolonged cold spells were experienced. The exceptions were: the windy November, and the gale force winds and rain we experienced on the December counts.

In general terms 2007-08 was a stable year for most species with increasing trends seen in some.

Brent Goose numbers peaked at 12,171 in January, the second highest figure recorded in the harbour, only surpassed by a count of 12,647 recorded in 1993/4. A winter average of 9,990 is a considerable increase on last years 9,474. Productivity counts also indicate 10% of the population were juvenile birds, a vast improvement on lasts years 1%. Brent Goose breeding success is strongly linked to predation and the availability of alternative prey. When populations of small rodents such as lemmings are high, Arctic breeding birds tend to have correspondingly high breeding success.

Accompanying the Brent Geese, a Red-breasted Goose arrived with the influx of Brent Geese and disappeared again during the return migration, giving credence to the fact that it may well have been a genuine wild bird, rather then an escapee. Red-breasted Geese breed in a similar area to Brent Geese, but, normally winter in the Black Sea.

On the whole the other wildfowl seem to have had a reasonable year, with increasing trends seen in Mallard (594 Sept), Pintail (184 Feb) and Wigeon. The peak count of 2,735 Wigeon was the highest ever recorded in the harbour for this species. The peak in October was quite early, but the harbour held on to good numbers through the winter period, with a mid winter average of

nearly 2,000 Wigeon. Numbers of Goldeneye (26 in Feb) and Teal (1,066 in Jan) seem to have stabilised after recent declines, whereas the Red-breasted Merganser population (211 Feb) seems to have stabilised after a recent increasing trend.

However, numbers of Shelduck have continued to plummet, with a meagre peak of 449 in January (down on last years low 643 in February). This represents a 50% decline in the last 10 years and a mere 15% of the population of the late 1980's. The long-term national population trend for Shelduck is stable, with increasing numbers in Northern Ireland and Wales, but declines in England. This is possibly due to the lack of severe weather conditions in recent years, that would have formally forced the birds further south.

As reported last year Little Grebe numbers (63 Nov) appear to be stable after the recent increasing trend. After seemingly stabilising at the 200 mark, a peak count in September of 264 Little Egrets, over last years 192, may indicate a renewed growth in the population.

Other interesting less common wildfowl species recorded in this years WeBS counts included Common and Velvet Scoters, and Great Northern and Red-throated Divers.

Species	**2007/8**	**2006/7**
Little Grebe	63 (jan)	61 (nov&dec)
Little Egret	264 (sep)	192 (sep)
Brent goose	12,171 (jan)	9,605 (feb)
Shelduck	449 (jan)	643 (feb)
Wigeon	2,735 (oct)	2,668 (dec)
Teal	1,066 (jan)	877 (dec)
Mallard	594 (sep)	435 (dec)
Pintail	184 (feb)	170 (feb)
Goldeneye	26 (feb)	23 (feb)
Red-breasted Merganser	211 (feb)	217 (feb)

Table 1. Peak numbers of wildfowl 2007-8

The wader passage in 2007-08 appeared to have a slow start, which may be due to the warm weather experienced in September and October. A late spring was also reported in some of the Arctic breeding areas.

After a slow arrival a reasonable autumn peak of 518 Black-tailed Godwits occurred within the harbour. However, there after it was a frustrating year for Godwit-watchers in Chichester Harbour, with a considerably lower peak of 775 (1003 in 06/07), a winter average of just 217, and the near abandonment of previously favoured haunts in the Emsworth area. The habits of Black-tailed Godwits are notoriously difficult to predict, the availability of wet grassland feeding areas is a key requirement. Godwits will move about the country, regionally (Avon Valley, Nene Washes) and locally (Pulborough Brooks, Pagham, Farlington) in the search for suitable fields.

It was also a slow start for Bar-tailed Godwits with an Autumn peak of only 79 birds, however, numbers built up through the winter with an exceptional peak of 1,228 in February (last year 620) and a winter average of 920 birds.

Last year's counts indicated that Dunlin numbers were showing signs of stabilising after a period of decline. Counts this year, whilst not returning to mid 1980's levels, showed a significant upward trend. A huge 18,759 (14,152 last year) birds were counted in the storm conditions in December, and then consistently high counts leading to a winter average of 17,003. This increase is the opposite of the observed national trend and is not mirrored by local sites, as Pagham and Langstone both reported declines in the occurrence of this species. The reasons why we are bucking the trend is currently unclear and requires further investigation.

The decline in Grey Plover numbers appears to have stabilised and peak numbers were similar to last year with 1,604 birds in March and a winter average of 1221. Lapwing numbers remained generally stable this year at 1,883.

The Autumn passage of Greenshank was much reduced compared to last year, with a peak of 77 birds in September (last years 132 birds). A trend for greater numbers of birds over-wintering does appear to be developing, with a peak of 34 (last year 29) and a winter average of 16.67 (14 last year). Data from the Greenshank Project, a partnership between Farlington Ringing Group and the Conservancy which has been undertaking detailed monitoring of this species, would also appear to support this conclusion.

Knot counts remain unpredictable with a huge peak in February of 2,709 and a winter average of 1,687. Winter Oystercatcher numbers remain stable, however, autumn numbers are on a downward trend, possibly indicating a reduced or later migration. Redshank numbers have continued to remain stable with a peak count of 2,403 in October, mirroring last years 2,535. Turnstone numbers were well up on last years for both the autumn peak (242 in October), which was over a 100 up on last years peak, a winter peak of 334 compared to 279 last year and a winter average of 217, doubling last years figure of 98.

Ringed Plover numbers are still low and winter numbers indicate a continued decline. However, autumn passage showed a promising trend with an October count of 109 compared with just 41 last year. Sanderling also showed a strong autumn passage with 102 birds in October (just 25 in 06/07). The winter peak of 245, does not reach the heights of last years 324, but, it is a promising trend and may indicate a period of stability in Sanderling numbers. It has been suggested that the apparent decline in these two species, was actually due to a change in preferred roost sites to areas outside those normally counted. As an experiment, Hayling Beach was counted on the October and November counts and revealed a roost of Ringed Plover (200 Oct and 210 Nov) and Sanderling (150 Oct and 98 Nov), which goes someway to explain recent declines.

Species	Autumn 07/08	Autumn 06/07	Nov–Mar 07/08	Nov–Mar 06/07
Oystercatcher	890	938	1516	1484
Ringed Plover	109	41	233	365
Golden Plover	500	454	1572	824
Grey Plover	723	839	1604	1592
Lapwing	622	551	1872	1883
Knot	24	15	2709	1060
Sanderling	102	25	245	324
Dunlin	7757	823	18759	14152
Black-tailed Godwit	518	162	775	1003
Bar-tailed Godwit	79	489	1228	630
Curlew	1760	2052	1450	1332
Redshank	2403	2535	1567	1823
Greenshank	77	132	34	29
Turnstone	242	157	334	279

Table 2: Peak numbers of waders 2007-8

2.1.2 Ringing studies

Farlington Ringing Group have continued their detailed work on two harbour specialties; Black-tailed Godwit and Greenshank in partnership with the Conservancy. The projects have amassed a huge number of sightings, with almost daily reports from around the harbour. The movement of birds between local sites (Pulborough Brooks, Pagham, Farlington) has been regularly recorded. Records from further afield (Berkshire, Devon, Scotland, Norway, Iceland, France and Portugal) have also continued to flow in for both species.

Although cannon-netting attempts within the harbour this autumn failed to capture either Black-tailed Godwits or Greenshank, successful catches have been made which add to our knowledge base of harbour birds. Most notable was a large catch of 187 Redshank and the capture of an uncommon Spotted Redshank. A key part of the ringing process is the recording of a number of biometric statistics e.g. beak length, wing span, weight. These data when combined to the reported “recaptures” of ringed birds at the same location or by other ringing stations around the world, is one of the primary sources of data from which knowledge, such as migration routes, breeding success and longevity is ascertained.

Following a request from the British Trust for Ornithology, efforts are being made to learn more about the Harbour’s waterfowl population. This autumn some trial catches using cannon-nets, captured small numbers of Wigeon and Teal. A concerted effort will be made next year to establish a regular duck ringing “station” on Thorney Deeps. This will also hopefully lead to the Conservancy’s Eames Farm and North West Deeps Warden gaining qualification as a “ringer”.

2.2 Breeding birds

The weather during 2007-08 not only had an effect on birds breeding around the harbour, but also on attempts to monitor their success. The better start to the season seemed to encourage nesting, but, as the weather deteriorated, nesting and breeding activity apparently diminished.

2.2.1 Breeding waterfowl and waders

Poor breeding performance by Shelduck included just 17 young birds (21 in 06/07) in Thorney Deeps, 8 in the Fishbourne Channel (15 in 06/07) and 2 sighted at Gutner Point. Mallards conversely had a good year with first brood seen on the 14th April, indicating that the hen started laying in early March. A further 3 broods of Mallards, with a total of 17 fledged young, were noted at Cobnor, compared to none the previous year.

Breeding success in waders was mixed. Reasonable numbers of birds were seen in suitable habitat, and even starting nests, including 7 Oystercatchers, 14 Redshank and 13 Lapwing. But, very little successful breeding was recorded. Only 6 young fledged from 5 pairs of Ringed Plover on Pilsey Island, and a single young Ringed Plover was observed on North Stakes.

The inability to effectively monitor breeding success over the past two summers make it difficult to draw any firm conclusions. However, it is apparent that some species of wader and Shelduck are increasingly struggling to breed around the harbour.

2.2.2 Breeding seabirds

The good early season weather provided a promising start for seabird nesting with 2 Little Tern and 7 Common Tern nests observed on South Stakes. However, a tidal surge a few days later ended the attempts prematurely and the deteriorating weather discouraged further nesting attempts.

The story was similar in Langstone Harbour, with no young fledged from 37 nesting attempts.

2.2.3 Other species

Cetti's Warbler held their previous territories, mostly occurring in the Eames Farm area: with 17 pairs noted, their numbers have not increased this year. Three pairs of Turtle Doves were noted, 2 on Eames Farm and a further pair at West Chidham.

3 Habitats

3.1 Botanical Monitoring

Botanical monitoring at Fishbourne Meadows indicated a further decline in the number of flowering Southern Marsh Orchids (*Dactylorhiza praetermissa)*

(363 down from 439 last year). However, after an enforced break in grazing management caused by Foot and Mouth Disease and Bluetongue outbreaks last year, grazing was returned to the site. A grazing agreement has been secured with a local grazier, who is a member of the Three Harbours Beef Scheme. The site was grazed by 7 cattle this summer, which have successfully removed two seasons growth and providing better conditions for flowering in the spring.

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.

The Ragged Robin (*Lychnis flos-cuculi)* at Fishbourne Meadows appears to be continuing its comeback with 21 plants up from 10 last year.

It was also a good year for some species of orchid with 758 Pyramidal Orchid *(Anacamptis pyramidalis)* counted on Thorney Island (last year 245) and 40 Green-winged Orchid *(Orchis morio)* at Eames Farm (last year 22).

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 40 flower spikes counted this spring, almost identical to last years count.

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 maintained its population and has spread further across the site. However, unfortunately a lack of appropriate management reduced the Shepherds Needle (*Scandix pecten-veneris*) population to a just a couple of plants. 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

Due to poor weather conditions a full botanical survey of Eames Farm was not able to be completed. Of the results to-date the rare One-flowered Glasswort (*Salicornia pusilla)* was discovered in two locations on the site. The survey will be completed in Spring 2009.

A Higher Level Stewardship Scheme (HLS) application for Eames Farm developed by the new farming tenant, has been submitted to Natural England. The delivery of the Scheme objectives will be supported by the production of a Farm Conservation Plan, which will be jointly developed between the Conservancy and the tenant.

In partnership with the Hampshire and Isle of Wight Wildlife Trust a detailed survey of the seagrass beds around the harbour was undertaken this summer. Around half of the known sites were surveyed in detail using handheld GPS and a few new sites discovered. Both Dwarf Eelgrass (*Zostera noltii*) and Narrow-leaved Eelgrass (*Zostera marina var. stenophylla*) were located. Initial findings would indicate that the seagrass beds are generally in good condition, however, some areas appeared to be suffering from smothering by algal mats.

Salterns Copse has been surveyed and an updated management plan prepared. The plan outlines the future felling and coppicing regime for the woodland.

3.5 Fixed point photography

The purchase of a GPS enabled camera has greatly aided the fixed-point photography programme: the geo-referencing enables the images to be linked with the GIS for easy future reference. The managed realignment sites at Thornham Point, West Chidham and Chalkdock Marsh were all covered, by this years programme, to help monitor and identify change.

4. 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. Initial surveys by Butterfly Conservation indicate that the site is the strongest colony in the UK. Appropriate management for this species and its food plant Dyers Greenweed (*Genista tinctoria*) will be incorporated into the Farm Conservation Plan.

The management work required for the continued survival of Desmoulin's Whorl Snail (*Vertigo moulinsiana*) on a site at the head of Fishbourne Channel was completed. The Alder and Willow coppicing work has helped the fen habitat to re-establish in the cleared area. The site will be surveyed for the snail during spring 2009, to see if the management work has helped to secure the site for this rare species.

4.1 Terrestrial mammals

After a gap of decades, otters have once again been recorded in the harbour, with 3 sightings in one week in September, around the East Head and Mill Rythe area. The survey programme established last year will be continued to monitor any further otter activity.

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.

4.2 Marine mammals

The population of Harbour Seals is still gradually increasing with counts peaking at 16 animals, an Atlantic Grey Seal was also noted on a number of occasions.

A whale identified as a Northern Bottlenose entered the harbour in late July. The Conservancy working with a volunteer from the British Divers Marine Life Rescue attempted to keep the animal out of shallow water and successfully guided the whale to the harbour entrance. Unfortunately, the whale returned once again overnight and stranded itself and eventually had to be put down.

4.3 Reptiles and amphibians

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.

5. Specific projects and research

5.1 Solent Seal Project

Funding has been secured for detailed work on the Solent seal population in partnership with the Hampshire and Isle Of Wight Wildlife Trust. Apart from peak numbers at haul out sites and occasional sightings, very little is known about the how the seals use the Solent. The project will include the GPS tagging of a number of animals by the Sea Mammal Research Unit, which will enable the tracking of movements throughout the Solent, to ascertain their favoured feeding and loafing areas. A photo-id database will also be produced, so that individual seals can be identified and their movement monitored throughout the Solent. An educational package will be developed using the seal research to raise awareness of marine conservation and marine mammals.

5.2 Solent Disturbance and Mitigation Project and Wader Roost Strategy

Both of these projects have been initiated by the Solent Forum Nature Conservation Group and the Conservancy has been an active partner. The aim of the Wader Roost Strategy is to identify the key areas and potential future sites for roosting waders in the Solent. Now in its final year of field work, volunteers throughout the Solent have been monitoring wader roosts, many of which are fields adjacent to the AONB. The results will be collated and robust criteria will be developed to determine which are the important roosting sites. A final stage of the project will be “Site Characterisation”, to see if there are any common factors that make a site attractive as a wader roost, and thereby, where and how to create new wader roosts. It is planned to use Chichester Harbour as a pilot area for the characterisation work, based upon the Conservancy’s comprehensive data holding and GIS capability.

The second study is an investigation of, if or how, recreational disturbance affects the designated interest features of the Solent European Marine Sites (SEMS), with a particular focus on providing an evidence base to assess plans and projects, such as Local Development Frameworks. The work has recently completed its first phase; a desktop study examining the current evidence and perceptions of disturbance to species and habitats, and the possible mitigation measures that could be implemented. The second phase (recently commenced) will attempt to investigate the effect of disturbance on the SEMS, through a series of field surveys over 3 seasons and a visitor survey. The final phase will use the data collected to model the significance of any effects of increased recreational disturbance and attempt to quantify the level and type of mitigation that might be required. Again, it is proposed that Chichester Harbour is used as a detailed study site based upon existing data availability.

5.2 Goose Watch

Previously monitoring the fields around the AONB used by Brent Geese was undertaken in-house, resulting in a considerable time commitment and a limitation on the frequency of visits to certain areas. This year "Goose Watch" has been launched, whereby volunteers will undertake regular visits to allocated areas and record the presence/absence and numbers of geese, using a standardised recording methodology. Nearly 30 volunteers have already signed up and will be submitting records to the Conservancy until the birds leave in March.

6. Data and administration

Further refinements have been made to the Conservancy's data handling systems. All WeBS data is now submitted through an online system which has proven to be highly effective and time saving. It has also aided the analysis of bird trends, through easy access to local site and historic data for comparison.

Improvements to our GIS capability have also been implemented. The holding of data within the GIS enables the rapid assessment and visualisation of the information held on a given location. The acquisition of new datasets such as high resolution aerial photography, terrain model and Ordnance Survey mapping, has added to the Conservancy's GIS capabilities.

7. Recommendation

The Conservancy is asked to note this report.