Assessment of the Importance of Winter Waterfowl/Wader Populations on Isles of Scilly

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Contents

Summary

- Following the National Winter Shorebird Count in 1984/85, when internationally important numbers of turnstone and nationally important numbers of sanderling and ringed plover were recorded, there was no further survey of winter waders/wildfowl until 1995/96.

- This report summarises counts from winter 1997/98, part of the national NEWS, and combines with data from co-ordinated counts made by RSPB/IoSET in winter 1995/96 and 1996/97, and other available data to assess the importance of the Isles of Scilly for wintering waders/wildfowl.

- No species were found in internationally important numbers.

- The Isles of Scilly are nationally important for sanderling and, given the likelihood of a reduced national population estimate at the next review, possibly for ringed plover. Populations of turnstone and purple sandpiper fall just below nationally important numbers.

- Nationally important criteria are also met for wintering lesser black-backed gull and greater black-backed gull, and the islands support a significant percentage of the small population of greenshank and little egret.

- The RSPB recommends that, given this importance, site designations and site management policies for the SPA and SAC support the maintenance and enhancement of these populations.

1 Introduction

As part of the National Winter Shorebird Count organised by the BTO, a systematic count of non-breeding water birds on the Isles of Scilly was carried out in winter 1984/85 (Moser and Summers 1987, Kirby 1985). This survey indicated internationally important numbers of turnstone and nationally important numbers of sanderling and ringed plover.

Between 1985 and 1995 there were no further co-ordinated counts of wader numbers and understanding of current populations and trends was poor.

The Isles of Scilly have been identified as an Important Bird Area (Pritchard et al 1992) and a candidate Special Protection Area (SPA) and Ramsar site for populations of breeding seabirds and non-breeding waders. The case for designation for non-breeding waders is based upon the results of the 1984/85 survey and lack of subsequent information that has held up the designation of the site for these species.

During the winters 1995/96 and 1996/97 the Isles of Scilly Environmental Trust and RSPB carried out co-ordinated wader counts to assess current populations on the islands. To complete the picture, co-ordinated winter counts on the islands, as part of the national Non-Estuarine Waterbird Survey (NEWS), were planned for winter 1997/98.

The results of this national survey (part of an international effort) would also allow the Isles of Scilly populations to be re-assessed within a national and international context.

This report sets out the results of the winter 1997/98 survey, and uses this and other available data from the last three years to assess the importance of the islands for non-breeding waders/waterfowl.

2 Survey methods

Much of the 1998 survey was carried out as part of the NEWS - co-ordinated by Wetland Bird Survey partners BTO, WWT, JNCC and RSPB. Following the standard survey methodology, counts of waterfowl were made within four hours of low tide.

Counts were made between 10 and 12 January 1998.

For the purpose of identifying maxima, some additional high tide counts were also made where these were thought to give a more complete count of birds.

3 Results

The results of the 1997/98 survey are shown in Table 1.

Results are shown for all waterfowl and wader species recorded.

Results of counts from 1996, and 1996/97 are shown in Tables 2 and 3. Results from the 1984/85 survey (Kirby 1985) are shown in Table 4. A summary of all recent counts between 1996 and 1998 is shown in Table 5.

The most important sites are shown in Table 7.

4 Discussion

4.1 Population trends

Data from the recent IoSET/RSPB counts (1996 onwards) (Tables 1-3) present a fairly consistent pattern of bird numbers and distribution across the islands.

Oystercatcher is the most abundant wader species, with peak counts in the region of 600-800 birds. However, these are not significant within a national/international context and the report focuses on the populations of turnstone, ringed plover, sanderling and purple sandpiper which have in the past approached national/international significance.

In comparison with data from the 1984/85 count, recent counts for these species are lower and, in some cases, much lower.

Table 6 indicates the percentage decline in population on the Isles of Scilly between 1984/85 and 1996/98.

Sanderling show a relatively small decline (8.5%) but this decline is 26.3% for ringed plover, 45.3% for purple sandpiper and a massive 66.9% for turnstone.

Declines have been noted at a national level. The pilot study for NEWS, carried out in 1995/96 and covering 8.5% of the UK's non-estuarine coast, indicated major declines in the four principal species - sanderling, turnstone, ringed plover and purple sandpiper - since the 1984/85 survey (Browne, Austin and Rehfisch 1996). This strongly suggests decline figures of 44% for turnstone, 21% for sanderling, 28% for ringed plover and 53% for purple sandpiper.

Data from the full NEWS adds further clarity to the population declines since the 1984 winter shorebird count. Estimated declines are 36% for turnstone, 33% for sanderling, 27% for ringed plover and 44% for purple sandpiper on coastal sections covered by both surveys (Cranswick et al, 1999).

4.2 Assessment of national/international importance

Given the evidence of national declines, there is a need to re-assess the national population and hence the 1% qualifying levels. Population estimates are reviewed once every three years in keeping with internationally agreed timetables and UK populations will be next revised in 2000, and the figures given within this report will need to be re-assessed then.

However, whilst applying the current levels (Cranswick et al, 1999), the following conclusions can be made.

- No wintering wader populations approach percentage levels of international importance and therefore the Isles of Scilly fail to qualify as an SPA for this interest alone. Wintering turnstone, which reached levels of international importance in 1984, are now present in much lower numbers than in the past.

- However, the Isles of Scilly are nationally important for wintering sanderling and support 1.3% of the GB wintering population (see Table 5). If national population levels are revised, in the light of declines highlighted by NEWS (see Table 5), ringed plover also meet nationally important criteria.

- The Isles of Scilly also support 6-9% of the wintering GB population of greenshank and approximately 3% of the wintering population of little egret.

- Also of note, during the gathering of information on wintering waders, available data suggests that populations of wintering lesser black-backed gull and greater black-backed gull also meet nationally important criteria.

4.3 Important sites

Whilst the entire Isles of Scilly shoreline is used by non-breeding waders/waterfowl for feeding, resting and roosting, data from the 1984/85, 1995/96, 1996/97and 1997/98 surveys and additional recent count data (Will Wagstaff, pers comm) suggests that some areas are of particular importance for the key species concerned.

Table 7 indicates all areas regularly supporting more than 20% of a population of one of the four key wader species. Particular conservation measures should be directed towards these sites.

5 Recommendations

5.1 Population monitoring

Given the importance of the population, there is a clear need for further monitoring of non-breeding wader/waterfowl numbers on the Isles of Scilly, and for these populations to be continually assessed within a national and international context.

Following the pilot survey of 1994/95, a full scale repeat survey was undertaken in the 1997/98 winter: the Non-Estuarine Coastal Waterfowl Survey (NEWS), co-ordinated by the Wetland Bird Survey partners (BTO, WWT, JNCC and RSPB) and carried out by volunteers.

As part of this national/international effort, comprehensive coverage of all the Isles of Scilly coastline is essential so that an accurate current population figure can be obtained.

It is recommended that more regular counts of some areas are made. Ideally, all of the coastline of the six major islands should be surveyed every five years. This would allow monitoring of the major sites for the key species and allow some monitoring of trends on the Isles of Scilly.

In addition, some attempt should be made to get more complete coverage of the outer islands during the winter - particularly as these may be of importance for purple sandpiper. Access is however difficult.

5.2 Conservation measures

(i) Disturbance
Given the relatively small number of people on the islands during the winter months and given the extent of suitable intertidal habitat, it is not considered that widespread disturbance to roosting/feeding waders is currently a serious problem. However, given the importance of the areas between Porthloo and the Harbour on St Mary's, recreational use of this area needs to be carefully controlled and monitored, and disturbance to birds minimised.

(ii) Beach cleaning
Concern has recently been expressed over the effects of beach cleaning programmes on populations of strandline invertebrates and consequently on bird populations (Llewellyn & Shackley 1996). On Scilly, mechanical beach cleaning is currently largely restricted to Town Beach, St Mary's, with hand picking methods employed elsewhere to remove human-related debris and driftwood. As there are extensive sections of coastline elsewhere where strandline communities are able to develop, at

this time beach cleaning is not considered to present a problem for wintering shorebirds. However, an expansion of the mechanical beach cleaning programme should be approached with caution.

5.3 Summary of recommendations

- **Population monitoring**
  Complete coverage of all coastal habitats on six major islands (St Mary's, Tresco, Bryher, Samson, St Martin's, St Agnes) every five years. Surveys in 2003, 2008.
  IoSET/RSPB/EN

- **Conservation measures**
  Monitor recreational use of key areas.
  IoSET/EN

  Monitor expansion of beach cleaning programme.
  IoSET/EN

6 Conclusions

The results of the 1997/98 survey and other available data from the last three winters confirms the Isles of Scilly as a site of national importance for wintering waders.

The islands clearly support nationally important populations of sanderling (with between 1.3% and 1.9% of the UK population).

The islands may also be of national importance for ringed plover, but further clarification of the UK population and therefore of the 1% qualifying levels is needed.

In addition, the Isles of Scilly appear to be of national importance for greater black-backed gull and lesser black-backed gull, and support a significant percentage of the small wintering populations of greenshank and little egret.

Although none of the wintering species reach levels of international importance, and support the case for Special Protection Area (SPA) designation in isolation, the Isles of Scilly do meet criteria for SPA designation for breeding seabirds. Large areas of coastal/marine habitat have also been designated as Special Area of Conservation (SAC).

The RSPB recommends that, given the nationally important wintering bird interest, site designations and site management policies should support the maintenance and enhancement of these populations.

7 Acknowledgements

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Table 1 Isles of Scilly wader/waterfowl counts, January 1998

SPECIES	ST MARY'S	ST AGNES	SAMSON	BRYHER	TRESCO	TEAN + ST HELEN'S	ST MARTIN'S	TOTALS
WADERS								
Oystercatcher	144	132	95	64	159	54	106	754
Ringed plover	45	10	-	-	185	-	30	270
Grey plover	1	55	-	-	33	-	1	55*
Sanderling	-	1	-	-	188	-	2	191
Purple sandpiper	35	44	-	-	-	-	5	84
Dunlin	2	-	-	-	8	-	-	10
Bar-tailed godwit	2	-	-	-		6	-	8
Curlew	28	16	59	23	35	70	11	242
Redshank	5	5	-	1	31	-	2	44
Greenshank	6	1	1	-	9	-	2	19
Turnstone	169	58	3	9	81	-	27	347
OTHER SPECIES								
Black-throated diver	-	-	-	-	1	-	-	1
Great northern diver	4	-	3	3	6	1	2	19
Slavonian grebe	-	-	-	-	2	-	1	3
Cormorant	-	-	26	-	-	-	5	31
Little egret	4	-	-	1	12	-	-	12x
Grey heron	5	1	2	1	-	-	1	10
Shelduck	3	5	32	-	4	-	-	44
Gadwall	-	-	22	-	-	-	-	22
Mallard	17	-	4	-	2	-	-	23
Common scoter	-	-	-	-	-	-	-	-
Red-breasted merganser	-	-	-	-	-	-	-	-

* St Agnes high tide roost count thought to be whole islands count

x Tresco high tide roost count thought to be whole islands count

Table 2 Isles of Scilly wader counts March 1996 (Lock 1996)

SPECIES	ST MARY'S	ST AGNES & GUGH	SAMSON	BRYHER	TRESCO	TEAN & OTHERS	ST MARTIN'S	TOTAL
Oystercatcher	47	57	156	47	95	127	-	529
Ringed plover	16	3	-	30	30	-	-	79
Grey plover	3	6	-	10	5	-	-	24
Sanderling	225	10	-	-	21	-	-	256
Purple sandpiper	14	12	-	-	0	-	-	26
Dunlin	8	-	-	-	1	-	-	9
Bar-tailed godwit	-	-	5	-	-	-	-	5
Curlew	11	6	18	16	6	4	-	61
Redshank	2	4	2	1	15	-	-	24
Greenshank	3	-	-	2	2	-	-	7
Turnstone	208	36	1	80	21	-	-	346
TOTALS	537	134	182	186	196	131	-	1,366
Notes			Includes Puffin Island/ Green Island			Island not visited. Large waders counted from Tresco	Island not visited	

Table 3 Isles of Scilly wader/waterfowl counts January 1997

SPECIES	ST MARY'S	TRESCO	BRYHER	ST AGNES	ST MARTIN'S	SAMSON	TOTALS
Black throated diver	3	1	0	0	0	0	4
Great northern diver	1	4	0	0	0	1	6
Great crested grebe	1	0	0	1	0	0	2
Slavonian grebe	0	3	0	0	0	0	3
Cormorant	3		0	2	1	18	24
Shag	247		58	9	31	93	438
Little egret	2	2	2	0	3	3	12
Grey heron	9	2	7	1	2	4	25
Mute swan	0	0	0	0	0	7	7
Shelduck	2	5	3	4	0	31	45
Wigeon	1	0	0	0	0	0	1
Gadwall	8	18	5	0	0	6	37
Teal	4	0	0	1	0	28	33
Mallard	30	29	10	3	14	53	139
Black duck	0	0	1	0	0	0	1
Pintail	0	2	0	0	0	2	4
Shoveler	0	0	0	0	0	16	16
Pochard	6	0	0	0	0	0	6
Tufted duck	15	0	0	0	0	0	15
Goldeneye	3	1	0	0	0	0	4
Oystercatcher	121	141	126	36	98	97	619
Avocet	0	0	1	0	0	0	1
Ringed plover	10	157	58	28	31	0	284
Golden plover	0	0	0	1	0	0	1
Grey plover	6	9	46	9	4	2	76

SPECIES	ST MARY'S	TRESCO	BRYHER	ST AGNES	ST MARTIN'S	SAMSON	TOTALS
Knot	0	0	0	0	0	1	1
Sanderling	75	134	0	40	60	0	309
Purple sandpiper	34	0	0	21	10	0	65
Dunlin	15	30	8	14	3	0	70
Snipe	0	2	2	0	4	0	8
Bar-tailed godwit	0	0	0	0	1	21	22
Curlew	21	25	19	8	24	16	113
Redshank	4	24	3	6	5	27	69
Greenshank	3	6	3	0	1	0	13
Turnstone	95	57	10	22	53	1	238
Black-headed gull	90	101	4	7	11	19	232
Ring-billed gull	1	0	0	0	1	0	2
Lesser black-backed gull	1	283	4	19	1	328	636
Herring gull	392	366	443	104	108	352	1,765
Great black-backed gull	84	186	185	5	38	158	656
Guillemot	2	0	0	0	0	0	2
Razorbill	3	0	0	1	0	7	11
TOTALS	1,292	1,588	998	342	504	1,291	6,015

Table 4 Isles of Scilly wader counts 1984/85 (Kirby 1985)

SPECIES	ST MARY'S	ST AGNES & GUGH	SAMSON	BRYHER	TRESCO	TEAN & OTHERS	ST MARTIN'S	TOTAL
Oystercatcher	147	111	44	50	109	48	74	583
Ringed plover	42	15	90	77	52	4	32	312
Golden plover	0	25	0	0	0	0	0	25
Grey plover	11	11	16	30	29	9	5	111
Lapwing	1	0	0	1	3	0	0	5
Knot	0	0	0	0	0	0	10	10
Sanderling	168	17	21	0	105	4	14	329
Purple sandpiper	3	47	43	0	0	1	12	106
Dunlin	0	0	36	24	58	0	0	118
Bar-tailed godwit	1	3	9	0	40	0	2	55
Curlew	20	15	44	20	25	34	23	181
Redshank	8	15	8	3	10	5	0	49
Greenshank	2	0	2	1	1	0	2	8
Turnstone	219	148	149	138	198	39	45	936
TOTALS	622	407	462	344	630	144	219	2,828

Table 5 Assessment of importance of wader/waterfowl populations on Isles of Scilly

SPECIES	1995/96 A	1996/97 A	1997/98 A	MAXIMUM	MEAN	GB WINTER POPULATION B	NATIONAL % LEVEL B	REVISED GB POPULATION C	REVISED NATIONAL % LEVEL	IMPORTANCE
Great northern diver	-	6	18	18	12	3,000	50	-	-	0.5% of GB pop
Little egret	16#	12	12	16	13	500	50	-	-	c3% of GB pop present
Ringed plover	137#	284	270	284	230	29,000	290	21,170	212	***/** 0.8-1.1% of GB pop
Sanderling	256	309	337#	337	301	23,000	230	15,410	154	**** 1.3-2.0% of GB pop
Purple sandpiper	26	65	84	84	58	21,000	210	11,760	118	0.3-0.5% of GB pop
Greenshank	8#	13	19	19	13	200	50	-	-	6-9% of GB pop
Turnstone	346	238	347	347	310	64,000	640	40,960	410	* 0.5-0.8% of GB pop
Lesser black-backed gull	-	636	-	636	636	50,000	500	-	-	**1.3% of GB pop
Great black-backed gull	-	656	-	656	656	40,000	400-	-	-	** 1.6% of GB pop

A Counts from IoSET/RSPB co-ordinated counts except those marked # which are taken from Isles of Scilly Bird Reports.
B Cranswick et al, 1999.
C Revised UK population using declines highlighted in NEWS. 36% turnstone, 33% sanderling, 27% ringed plover and 44% purple sandpiper.
**** Nationally important mean counts.
*** Nationally important peak counts.
** Nationally important mean counts - revised level.
* Nationally important peak counts - revised level.

Table 6 Percentage decline of key wader populations on Isles of Scilly between 1984/85 and 1996/98

SPECIES	MEAN 1996-1998	1984/85	PERCENTAGE ESTIMATED DECLINE 1984/85 - 1996/98
Ringed plover	230	312	26.3
Sanderling	301	329	8.5
Purple sandpiper	58	106	45.3
Turnstone	310	936	66.9

Table 7 Important winter wader sites on Isles of Scilly
(areas regularly supporting >20% of ringed plover, sanderling, purple sandpiper and turnstone)

SITE	SPECIES PRESENT (>20% Isles of Scilly population)
ST MARY'S	
Porthmelon/Thomas Porth/Porthloo	Sanderling, ringed plover
Quay	Turnstone, (purple sandpiper)
Porthcressa	Sanderling
Porthellick	Ringed plover
ST AGNES	
Pereglis/Burnt Island/Porthkillier	Turnstone, purple sandpiper
TRESCO	
Pentle Bay/Rushy Point	Sanderling, ringed plover, turnstone
BRYHER	
Green Bay	Ringed plover
SAMSON	
East Porth/Samson Flats	Ringed plover (?)
ST MARTIN'S	
Neck of the Pool/St Martin's Flats	Sanderling, ringed plover