

Effects of recent hard winters on the Shelducks of the Ythan

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Shelducks (*Tadorna tadorna* (L.)) from the breeding colony on the Ythan estuary, Aberdeenshire spend the winter months moving gradually up the east coast of Britain on their return from moulting grounds on the North Sea coast of Germany. By the critical months of January and February, most of the Ythan birds have reached central Scotland; some in fact arrive back at the Ythan as early as the first week of January. Most of them, however, appear to spend the coldest part of the winter on the great tidal mud flats of the Eden estuary in Fife and in Montrose Basin in Angus, and it is at these stopping places that our birds would have experienced their greatest hardships during the severe winters of 1961-62 and 1962-63.

A count on 22nd February, 1963 at Edenmouth revealed 1,200 Shelducks, a number about average for that time of year as compared with counts by Boase from 1947 to 1954 (*British Birds* 52: 90-96, 1959). A count of 414 in Montrose Basin on 24th February, 1963 was considerably higher than any previous count in that area, Boase giving a February mean of 50 for the years 1952-1954. There have been no records of unusual numbers of dead or dying Shelducks found in either of these areas in

1963.

The early arrivals to the Ythan did however show some signs of the ravages of the hard weather. Many of the birds (perhaps 10%) had frost-bitten feet. In some this appeared only as inflamed swellings on the toes and webs, while in others the webs were completely necrotic and in extreme cases the webs had disappeared altogether. It was also noted that birds arriving back in the spring of 1963 were on the average about 90 gms. lighter in weight than those of 1962 (average 1370 gms.) which might well be a reflection of the scarcity of food during the prolonged freeze-up.

It was only after all the Ythan birds had returned to their feeding territories that a reduction in total numbers became obvious. Counts made during the height of the breeding season showed that the resident population had declined from 115 pairs in 1962 to 92 in 1963 (a reduction of 20%). This may or may not have been a direct consequence of the severe weather. There is a considerable amount of indiscriminate shooting both at Edenmouth and at Montrose (personal observation) and this rather than the climatic factor may have been at least partly responsible for the apparent drop in Shelduck numbers.

The Shelduck population of the Mersey area in summer, 1957-1963

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The purpose of this report is to show that the summer population of the Shelduck (*Tadorna tadorna* (L.)) in 1963, following the extremely hard winter, was not below average on the coasts of Lancashire, Cheshire, and North Wales. Counts of the Shelduck in the estuaries of the Rivers Mersey, Dee, Clwyd and Conway (hereafter referred to collectively as 'Area A') were first organised in 1957. The object was to find out how the totals for this area compared with the scale of moult migration recorded annually in Cheshire since 1950 (R. H. Allen and G. E. Rutter, *British Birds* 49: 221-226, 1956 and later duplicated reports). Counts were made at the end of June, be-

fore migration commenced, and, from 1959 to 1962, again in mid-August when the moult-migrants had departed. The mid-August counts were abandoned after 1962 because the previous four years observations showed consistently that about nine out of ten adults migrated from Area A.

Table I compares the numbers of adults and young counted in Area A on 23rd June, 1963, with those found in late June or early July each year from 1957 to 1962. The numbers of adults found on the Mersey and Clwyd are below the average for the previous six years, continuing a trend of several years duration, but the total for the whole of Area A was very close to the aver-

age and only exceeded in two earlier years, 1961 and 1959. The number of ducklings seen in 1963 was above average, as was the ratio of ducklings to full-grown birds suggesting that nesting success was better than usual. The low ratio of ducklings to full-grown birds in all years is largely due to the accumulation of non-breeders on the Dee.

In 1960, with the aid of more friends and helpers, the area searched was extended to include Anglesey and the Caernarvonshire coasts and in 1963 northwards to include Morecambe Bay. As there have been gaps in some years in the search in these additional areas, no long-term comparisons are possible, but Table II compares numbers recorded outside Area A in places looked at in both 1962 and 1963. The general impression is of no marked change, despite substantial local differences.

A search of the north shore of the Solway Firth from the Locher mouth, Dumfriesshire west to Port William, Wigtownshire, made by A. F. Airey between 21st June and 20th July, 1963, produced a total of 982 adults and 452 young. No comparable figures for earlier years are available but these figures merit inclusion because they show how large the population of this area is and also because of the many young birds seen.

The results of the moult migration watch in Cheshire in 1963 conflict at first sight with these breeding season counts. No flights of

migrants were seen until 7th July and on several evenings with sky conditions ideal no flights were seen. The migration ended on 6th August, with a season total of 894 migrants, the lowest in 14 years of watching and recording. In 1962 the total was 1,582, the annual average has been 2,030 and the highest number 3,857 in 1961. This dramatic reduction in the number of migrants might be attributed to high mortality in the previous winter. This may have been so among birds coming from elsewhere, even though untrue for local residents. In our view, however, this fluctuation, and two previous ones, is more likely to reflect a temporary change in the routes followed by migrants. It is hoped to solve this problem by a further extension of the areas to be counted in future years.

Table II. Numbers of adult and young Shelducks counted in 1962 and 1963 on parts of the coasts of north Wales and north-west England, outside Area A.

area	adults		young	
	1962	1963	1962	1963
Anglesey	53	54	71	91
Menai Straits	32	118	45	108
Leyn Penin	3	16	10	29
Traeth Bach	32	16	35	13
North Wales total	120	204	161	241
parts of Morecambe				
Bay	998	1061		
Duddon - Esk	c. 300	216		

Table I. Numbers of full-grown and young Shelducks counted in late June or early July, 1957 to 1963, in the estuaries of the Rivers Mersey, Dee, Clwyd and Conway.

estuary	1957		census dates		1961	1962	average	1963
	29 June	30 June	1959 5 July	1960 26 June				
(a) full-grown								
Mersey	161	70	162	68	84	35	97	18
Dee	475	633	1,130	874	1,081	992	865	1,012
Clwyd	60	107	14	15	6	21	37	7
Conway	60	235	36	281	323	128	176	247
seen	756	1,045	1,342	1,238	1,494	1,176	1,175	1,284
prior departures*	245	—	290	—	242	—	—	—
corrected full-grown total	1,001	1,045	1,632	1,238	1,736	1,176	1,305	1,284
(b) ducklings								
Mersey	—	5	—	—	26	—	5	6
Dee	—	31	69	74	33	7	36	34
Clwyd	34	18	56	50	46	7	35	43
Conway	32	87	82	97	34	26	60	98
total ducklings	66	141	207	221	139	40	136	181
full-grown %	6.6	13.5	12.7	17.9	8.0	3.4	10.4	14.1

* an allowance for early emigrants in 3 years, based on observed departures.