



Section 2

Effects of the cold winter of 1962-63 upon wildfowl in Britain

The exceptional severity of the weather in western Europe in the winter of 1962-63 aroused much concern for the welfare of birds as well as causing much attention to be paid to unusual occurrences. Though it is too early to measure the lasting consequences, if any, of this winter on wildfowl populations, it seems desirable to place on record some of the effects immediately apparent. The ten short papers which follow are chiefly concerned with reports upon those species which seemed to be affected by the cold weather, rather than with the larger number that showed few, if any, changes in abundance.

Wildfowl and other water-birds found dead in England and Wales in January-March 1963

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In appeals published in the journal *British Birds* and in the Bulletin of the Wildfowl Trust bird-watchers were asked to report details of all birds found dead during and after the exceptionally cold spell from late December, 1962, to early March, 1963. Over 70 informants recorded nearly 4,000 wildfowl and water-birds, of 34 species, as well as noting the occurrence of uncounted quantities of several of these species. Records from Scotland, where the winter was comparatively less severe, are being dealt with in *Scottish Birds*. Birds listed by R. E. M. Pilcher (p. 23) and J. Harrison and M. Hudson (p. 26) are included here.

The bodies found are listed by species and by month of finding, where known, in Table I. Six species of wildfowl (Mute Swan, Shelduck, Mallard, Wigeon, Tufted Duck, Black Scoter) and the Red-throated Diver, Great Crested Grebe, Moorhen and Coot are represented by more than 50 individuals each, suggesting pronounced vulnerability. Ten wildfowl species, two divers and two grebes are represented by fewer than ten individuals each and so merit little further attention. However it is worth remarking that if all 24 wildfowl species included in Table I are ranked in order of likely mid-winter abundance (data, modified by removal of Scottish totals, from

Table I. Wildfowl and other water-birds found dead in England and Wales during, and shortly after, the cold weather of January – March 1963.

species	when found			date uncertain	total	estimated national abundance
	January	February	March			
Mute Swan (<i>Cygnus olor</i>)	9	56	8	23	96	14,000
Bewick's Swan (<i>C. columbianus bewickii</i>)		2		17	19	2,000
Whooper Swan (<i>C. c. cygnus</i>)	2	2	2		6	500
Bean Goose (<i>Anser fabalis</i>)	5				5	200
Pink-footed Goose (<i>A. brachyrhynchus</i>)		2			2	15,000
White-fronted Goose (<i>A. albifrons</i>)	12			3	15	8,000
Greylag Goose (<i>A. anser</i>)		2			2	1,000
Brent Goose (<i>Branta bernicla</i>)	3	22	1	1	27	13,000
Shelduck (<i>Tadorna tadorna</i>)	98	417	88	151	754	30,000
Pintail (<i>Anas acuta</i>)		4	1	3	8	10,000
Teal (<i>A. crecca</i>)	4	7	2	10	23	120,000
Mallard (<i>A. platyrhynchos</i>)	22	52	4	42	120	220,000
Wigeon (<i>A. penelope</i>)	34	123	15	131	303	180,000
Shoveler (<i>A. clypeata</i>)		3	1	1	5	6,000
Eider (<i>Somateria mollissima</i>)	8	28	3		39	4,000
Pochard (<i>Aythya ferina</i>)	1	7	1		9	13,000
Tufted Duck (<i>A. fuligula</i>)	29	31	16	5	81	30,000
Scaup (<i>A. marila</i>)	1	14	5	5	25	3,000
Black Scoter (<i>Melanitta nigra</i>)	14	108	13	10	145	10,000
Velvet Scoter (<i>M. fusca</i>)	6	27	3		36	1,000
Goldeneye (<i>Bucephala clangula</i>)	4	2		1	7	2,000
Smew (<i>Mergus albellus</i>)			1		1	300
Red-breasted Merganser (<i>M. serrator</i>)	1	6	1		8	1,500
Goosander (<i>M. merganser</i>)	4	3	3		10	1,500
all Anatidae	257	918	168	403	1,746	
Black-throated Diver (<i>Colymbus arcticus</i>)	1			12	13	
Great Northern Diver (<i>C. immer</i>)			1		1	
Red-throated Diver (<i>C. stellatus</i>)	12	47	27		86	
Great Crested Grebe (<i>Podiceps cristatus</i>)	40	113	37	1	191	
Red-necked Grebe (<i>P. grisegena</i>)	4	7			11	
Slavonian Grebe (<i>P. auritus</i>)		1			1	
Black-necked Grebe (<i>P. caspicus</i>)		1			1	
Little Grebe (<i>P. ruficollis</i>)	2	6	5		13	
Moorhen (<i>Gallinula chloropus</i>)	29	58	9	65	161	
Coot (<i>Fulica atra</i>)	50	129	14	160	353	
all other waterfowl	138	362	93	238	831	
total	395	1,280	261	641	2,577	

Reports received too late for inclusion here have increased the number of dead birds found by several hundreds. In general, the relative abundance of duck casualties has been little affected. The numbers of Divers have been greatly augmented, to at least 25 Black-throated, 6 Great Northern and 152 Red-throated. At least 135 Mute Swans and 46 White-fronted Geese are now known to have been found.

Boyd in G. L. Atkinson-Willes, *Wildfowl in Great Britain*, 1963, pp. 249-305) there is a strong association between specific abundance and the numbers found dead (the Spearman rank correlation coefficient is 0.61, with a probability of less than 0.01). Three species had appreciably more casualties than expected from their abundance ranking: the Eider and the Black and Velvet Scoters. Three other species were found dead in much smaller numbers than might have been expected: the Pink-footed Goose, Pintail and Teal. The scarcity of dead Teal was probably due to massive emigration. In proportion to the numbers likely to have been present, the Shelduck suffered most severely.

The relative abundance of the divers and grebes in England and Wales is not known in any detail but the four species of which more than one dead bird was reported (Great Crested Grebe, Red-throated Diver, Little Grebe and Red-necked Grebe in descending frequency) are likely to have been present in that same order, though with Little Grebes more nearly as plentiful as Red-throated Divers than the casualties would indicate.

It is somewhat surprising that bodies were found much more frequently in February than in January or March, because the severest cold occurred in late January and a general thaw did not occur until March. Perhaps bird-watchers were making special efforts to look for casualties as soon as the weather permitted (see, for example, R. E. M. Pilcher, at p. 23). The scarcity of known casualties in December, 1962, even though continuous frosts began about 22nd, conforms to other evidence that a delay of two weeks or more is usual before large birds succumb in numbers to the effects of cold or starvation. There are very few specific departures from the monthly pattern. Dead Mallard were notably few in March; Tufted Ducks were relatively scarce in February, when Black Scoters were unusually frequent. Among the non-Anatidae, Red-throated Divers and Great Crested Grebes provided more March-found bodies than expected, while casualties among Moorhens and Coots included relatively large numbers found in January.

Reports were received from 37 coastal and 30 inland localities. 33 of the 34 species listed were represented in the coastal samples but no more than 13 species were found inland. The only species found more plentifully inland were the Moorhen and Little Grebe. Superficially this suggests that water-birds suffered more severely on the coast than inland. This cannot be verified, because too little is known about the extent of shifting from frozen inland waters to

later-freezing or open coastal waters, or about the relative extent of emigration overseas from these two habitats. Nor is it possible to determine the relative extent of the searching effort in different areas. Perhaps it is merely because of inadequate sampling that no clear regional differences in the specific composition of the casualties is apparent. But it seems rather unlikely that the preponderance of casualties in the south-east, from the Wash to Sussex, is due solely to concentration of observers in that region, especially since it is known that freezing of the inter-tidal zone was especially prevalent there (see Harrison and Hudson, p. 26).

In the difficult conditions, no one was able to examine a large number of casualties thoroughly so as to determine the causes of death, though R. E. M. Pilcher (see p. 23) has attempted to classify casualties on the Wash by likely date of death and by general condition. Wasting due to starvation was widely reported and this was presumably the principal cause of death.

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