

REPORT ON THE EFFECT OF SEVERE WEATHER IN 1929 ON BIRD-LIFE.

BY

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IN response to our request for information on this subject (Vol. XXII., p. 376) we have received reports from widely separated districts, and although these are too few and far between to give any complete idea of the effects of the frost of February and March, 1929, they are of considerable value and we give below a summary of each, with particulars of cases of special interest.

In dealing with the severe weather experienced during the spring of 1929 and its effect upon bird-life generally, it is impossible to avoid comparison with the far more destructive frost of 1917, which was dealt with by the present writers in a paper which appeared in *British Birds*, XI., pp. 266-271, and XII., pp. 26-35.

No previous destructive frost had been investigated with the help of a large body of correspondents from all parts of the British Isles and we had also the advantage of the official Meteorological Records for reference.

On that occasion the enormous loss of bird-life was evidently due to the fact that the usual refuges to frozen-out immigrants proved to be veritable death-traps to them. In most winters there are certain parts of the British Isles, such as the Devonian peninsula and southern Ireland, which are frequently free from frost and snow when other parts of the country are frost-bound. In 1917 the cold in these districts was the most severe of which we have records, so that the half-starved arrivals, already weakened by their efforts to pick up a livelihood under very trying conditions, fell victims almost at once and perished literally by thousands of starvation. In the south the extreme cold was accompanied by heavy snowfalls, which lay deep on the ground right up to the edge of the sea and covered up all possible sources of food supply. In other districts conditions were different, but almost equally unfavourable. Where there was little snow, the first frosts were accompanied by driving rain which formed a glassy covering to the ground and even the tree-trunks as it froze, and this state of things proved especially fatal to the resident insect-eating birds, such as Creepers, Tits and Wrens.

Although some extraordinarily low temperatures were recorded in 1929, other conditions were totally different to

those of 1917. January was persistently cold and in all parts of the British Isles the temperature was below the normal for the season. It was, in fact, the first really cold January since 1917, but in the west of Ireland, Wales and Cornwall it was comparatively mild. Precipitation was heaviest on the western side. In February the cold became intense, especially in England, during the period from the 11th to the 17th, while an unusually persistent anticyclone spread over the greater part of England and Scotland. Precipitation was only about half the normal during the month and towards the end of the month the weather again became severe, though the cold was not so intense as before. March was, on the whole, abnormally dry, still and sunny and anticyclonic conditions prevailed until the 16th, when there was a general rise in temperature and southerly winds prevailed.

A consideration of the above summary shows that the conditions, though locally severe on the resident birds, were not on the whole very inimical to bird-life. Even in February, during the coldest weather, there were wide differences in the mean temperature in different districts. Though an absolute minimum of 1° below zero was recorded from Monmouth on the 14th and a similar temperature at Durham on the 17th, there were more favoured spots, such as Blacksod Point in co. Mayo, where the lowest temperature recorded during the month was 33° on the 16th, and in co. Kerry and co. Cork minima of 30° were recorded. At Falmouth also the temperature never fell below 30° .

Some of the reports we have received from coastal districts and from reservoirs give graphic evidence of severe mortality and in some districts resident birds have diminished, but it is clear that the severe weather of February, 1929, produced no such widespread effect on our resident birds as did the very prolonged severe weather of 1916-17.

One result of the frost, very noticeable in certain districts during its continuance, was the unusual movements caused among many species, this being evidenced by diminution or absence of birds normally present or by congregation of birds in numbers far in excess of what is usual. What ultimate effect on bird-life is produced by such abnormal movements there is no evidence to show.

A point of great interest upon which we have very little evidence this year is the effect of malnutrition during such exceptionally severe weather upon fecundity in the following breeding-season. In 1917 smaller clutches of eggs were noted

by several observers (Vol. XII., p. 35), but this year we have had only one definite report on this subject.

The following are summaries of the reports received, for which we have to thank all those correspondents concerned.

YORKSHIRE. Brighouse. J. C. S. Ellis.

Several Meadow-Pipits (*Anthus pratensis*) and Song-Thrushes (*Turdus philomelus*) perished on a sewage farm by sheltering in drains and becoming frozen in.

NORFOLK. Holt. D. L. Lack.

No mortality directly due to frost observed, but local absence and diminution of a number of species noted during the frost and less number of Stonechats (*Saxicola t. hibernans*) than normal up to the end of March. Also notes cessation of song by several species during frost.

SUFFOLK. Lowestoft. F. C. Cook.

Estimates number of birds found dead on shore between Lowestoft and Southwold at 250 of 40 different species. Most of these were "water" birds and included a number of Wigeon (*Anas penelope*); thirty Common Scoter (*Oidemia n. nigra*) which, curiously enough, though a sea-duck, suffered most severely; five Oyster-Catchers (*Hæmatopus ostralegus*); Dunlin (*Calidris alpina*) became very tame and twelve dead were found; six Curlews (*Numenius a. arquata*); twenty to thirty Black-headed Gulls (*Larus v. ridibundus*) on the beach besides others found dead in Lowestoft itself, where they became very tame and ate almost anything; over fifty Common Gulls (*L. c. canus*) which suffered most severely, while Divers (*Colymbus*) and Grebes (*Podiceps*) were also among the victims. Mr. Cook gives the following illustration of what must have happened to many birds during the worst of the weather: "On February 15th, during a short visit to the beach at Lowestoft, I found a Redshank (*Tringa totanus*) which had evidently sought shelter under the lee of a marram-tufted sandhill. During the night the snow had formed a drift round it, so that only its head was visible. It was frozen stiff in an attitude of sleep."

SUFFOLK. Southwold. C. E. Alford.

Reports considerable losses in Fieldfares (*Turdus pilaris*) and Redwings (*T. musicus*) and, to a less extent, Blackbirds (*T. merula*). Also states that Scoters were badly affected (*cf.* F. C. Cook).

Mr. A. H. Patterson of Yarmouth also confirms generally the great mortality on this coast.

MIDDLESEX AND SURREY RESERVOIRS. T. H. Harrison.

Sends a list of dead birds found mostly at Littleton, Staines and Molesey Reservoirs on March 2nd and 3rd. These included over sixty

Black-headed Gulls, twelve Coot (*Fulica atra*), four Tufted Duck (*Nyroca fuligula*) and small numbers of other ducks, gulls, a few grebes and other birds.

The subsequent effect on the numbers of breeding birds in the Harrow district was not noticeable except in the case of the Golden-crested Wren (*Regulus r. anglorum*) which was seriously decreased.

SUSSEX. Bexhill to Eastbourne. Stuart Smith.

Found some dead birds between February 16th and 20th, such as six Fieldfares (and some so weak that they could be taken in the hand); eight Redwings much emaciated; a Curlew so weak that it was caught and found to be starved and emaciated; other birds, including Brent Goose (*Branta bernicla*), noted as becoming very tame.

Considers the following residents to be much diminished; Golden-crested Wren disappeared in the frost and none detected up to April 4th; Coal-Tit (*Parus a. britannicus*) reduced by about half; Long-tailed Tit (*Ægithalos c. roseus*), common in the previous autumn, were reduced to a few pairs by April; Stonechats present in January gradually disappeared during the frost (one starved picked up February 22nd); five appeared on March 22nd, but the population estimated as decreased by 75 per cent.; Wrens (*Troglodytes t. troglodytes*) reduced by half.

HAMPSHIRE. Bournemouth. Rev. F. C. R. Jourdain.

Considerable reductions in breeding stock of Stonechat, Golden-crested Wren, Common Wren and Song-Thrush. Notes extraordinary tameness of Black-headed Gulls during the frost.

CORNWALL. Mawgan-in-Pydar. Col. B. H. Ryves.

Notes unprecedented influx of Lapwings (*Vanellus vanellus*) and Redwings, but considers effect of the severe frost trivial, suggesting as a probable reason that little or no snow fell in the district. Long-tailed Tit only resident noticeably reduced (about 60 per cent.).

SOMERSET. Mendip Districts. Stanley Lewis.

Redwings and Song-Thrushes suffered greatly and many dead (much emaciated) were seen; a few dead Blackbirds and Starlings (*Sturnus vulgaris*), but many of the latter were reduced to a very weak state. Black-headed Gulls fed in barn yards and fowl runs. The following resident birds reduced: Stonechat almost vanished from former breeding-places, Reed-Bunting (*Emberiza schœniclus*) much diminished, and some reductions in Golden-crested Wren, Wren, Long-tailed Tit. Majority of nests of Blackbird, Song-Thrush and also Snipe had only two or three eggs each as full clutch.

PEMBROKESHIRE. Skokholm and neighbouring coast. R. M. Lockley.

Large influx of birds and great mortality between February 11th and 18th. Many dead found, but many more dead and dying eaten by

Ravens, Crows, Buzzards, Herring and Great Black-backed Gulls. On the mainland on February 17th a two-mile lane at a low estimate contained 200 corpses of Redwings, Song-Thrushes, Starlings and a few Blackbirds. Birds were noted dropping into the sea on the very short passage between the mainland and Skomer, and on a very small beach were forty Starlings, some Song-Thrushes and a Blackbird dead, washed up on the tide-line. On Skokholm a conservative estimate of the numbers of the chief victims calculated from the remains found was as follows: Golden Plover (*Charadrius apricarius*) 240, Lapwing 30, Starling and Redwing 200 each, and Song-Thrush 100.

PEMBROKESHIRE. Solva. H. A. Gilbert.

Large numbers of dead birds found on February 22nd and 23rd, including eleven Snipe (*Capella gallinago*) at one spring.

ANGLESEY AND CARNARVONSHIRE. Prof. Kennedy Orton.

The following resident birds are noted as being considerably diminished: Long-tailed Tit, very greatly; Golden-crested Wren, Tree-Creeper, Wren, Song-Thrush, Dipper (*Cinclus c. gularis*) and Great Spotted Woodpecker (*Dryobates m. anglicus*) greatly; Great, Blue and Coal Tits considerably; others affected to a less degree were Mistle-Thrush, Stonechat, Robin, Little Grebe and Snipe. Many dead Starlings found, but the breeding-stock not obviously affected.

CHESHIRE. Dee Estuary. W. Wilson.

Numbers of dead Dunlin and Redshanks found and some Knot and Curlew. Very unusual numbers of Waders noted and proportionately does not consider the loss very high.

CHESHIRE, Northwich. A. W. Boyd.

Song-Thrush and Blackbird frequently seen dead during the frost and breeding numbers of Song-Thrush especially reduced. Long-tailed Tit possibly slightly reduced. The most striking effect of the frost was the almost entire absence after February of Fieldfares and Redwings, which are normally present in the district in numbers.

HEREFORDSHIRE. Between Ross and Glasbury. H. A. Gilbert.

Numerous dead birds, chiefly Thrushes, found during frost. Breeding birds generally diminished, noting particularly Wood-Larks (*Lullula arborea*) and the three Woodpeckers. Mr. H. G. Alexander also notes the absence of Wood-Larks from certain haunts in Herefordshire, but notes abundance of Long-tailed Tits there.

WORCESTERSHIRE. Birmingham District. H. G. Alexander.

Notes diminution of Golden-crested Wren from 5 or 6 pairs to one, and Long-tailed Tit not seen since March, though usually about six pairs. Great decrease in Coot.