REPORT ON THE SNOW SURVEY OF GREAT BRITAIN FOR THE SEASON 1952–53

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As in each of the previous six years, the basic material for this report is derived from the voluntary labours of an efficient observing corps who furnish the Society month by month with daily records of snowfall and of any snow cover that may exist within their range of vision. Since the post-war resumption of the Survey in 1946–47 the number of these co-workers has increased season by season from an initial figure of about 120 to nearly 400. Their returns now come not only from a network of land stations well distributed over England, Wales and Scotland (with one in Northern Ireland) but also from a majority of the lighthouses and light-vessels serving the British and Irish coastal waters and from many merchant ships at sea. Through the courtesy of the Director of the Meteorological Office the mass of data thus made available to the Society is augmented by day-to-day observations of snowfall and the state of the ground at a selection of the official weather stations. Further important information has again been received from travellers, climbers, leaders of exploring parties in the Scottish Highlands, and from the road patrols of the Automobile Association and the Royal Automobile Club.

To all who have joined in laying the foundations of these reports—the private observers, the Director of the Meteorological Office and his staff, the Elder Brethren of Trinity House and the Commissioners of Irish Lights with their lighthouse and light-vessel personnel, the various shipping companies and the masters of the ships controlled by them—the directors of the Survey express their most grateful appreciation. They would also mention particularly on this occasion the good offices of Mr. Maurice Dybeck (St. John's College, Oxford) and Mr. Adam Watson (Marischal College, Aberdeen) in giving them access to valuable records of snow conditions on a number of the higher Scottish mountains. E. L. H.

METRIC EQUIVALENTS OF INCHES AND FEET

1 in. = 0·025 m.	1 ft. = 0·305 m.
3 in. = 0·076 m.	2 ft. = 0·609 m.
6 in. = 0·152 m.	4 ft. = 1·219 m.
100 ft. = 30·5 m.	2500 ft. = 762·0 m.
500 ft. = 152·4 m.	3000 ft. = 914·4 m.
1000 ft. = 304·8 m.	3500 ft. = 1066·8 m.
1500 ft. = 457·2 m.	4000 ft. = 1219·2 m.
2000 ft. = 609·6 m.	

In general measurements of snow-depth cited in this report refer to 09.00 hr. G.M.T., or thereabouts.

SUMMARY OF THE 1952–53 SEASON

For Great Britain as a whole the season may be classed as one of moderate snowfall. Data from the ten representative stations at altitudes between 400 ft. and 1200 ft. (five in England, one in Wales, four in Scotland) which have been used for inter-seasonal comparison since the post-war re-institution of the Survey give an average total of 34 days with snow lying at the hour of morning observation from September 1952 to May 1953. This is the same value as in 1951–52. Over the five preceding seasons the corresponding average ranged from 66 in 1946–47 to 13 in 1948–49. Distribution of snowfall with respect to time during 1952–53 was unusual. Autumn and early winter produced a persistence of cold weather that has seldom been matched before the turn of the year since the start of the twentieth century. No November since 1919 is believed to have brought so much snow to Britain as did that of 1952. After mid-December, however, there were few general or really heavy falls. January proved notably mild in Scotland, and March was snow-free to an exceptional degree almost everywhere. The outstanding snowstorm of 1952–53 occurred

during the second week of February in North Wales and northern England, but even then no very widespread or prolonged interference with road or rail traffic was reported. One of the season's rare events was a fall of sleet on the hills of West Kent as late as *June 1st*. At about the same time there were snowfalls up to 3 ft. deep in the upper Cairngorms and extensive fresh cover down to 1500 ft. there. During the later stages of the summer mountain snow conditions appear to have been fairly normal. As usual, some of the Cairngorm gully-fillings survived until the autumn falls came to replenish them. At a few stations in Dorset, Devon and Cornwall neither snow nor sleet was observed throughout the season and complete absence of cover was not uncommon in the southernmost counties of England.

Notes on the Months

September 1952

As early as the *4th* to *6th* of this exceptionally bleak month (at Oxford the coldest September since continuous records of temperature were begun in 1815) there were snowfalls on some of the higher Scottish mountains, with a light cover above 3800 ft. Later, the Fannich Hills (Ross and Cromarty) were coated to below 3000 ft. from the *17th* to *22nd* and to below 1000 ft. on the *18th* and *19th*. Scattered showers of snow and sleet extended to the English and Welsh uplands from time to time during the second half of the month, penetrating on one occasion as far south as Dartmoor.

October 1952

Although cold weather continued to predominate, there was little snow except in northern, western and central Scotland, where local falls occurred at moderate to low levels on eight days—more frequently over some of the mountainous regions. Cover on the Fannich Hills reached to below 3000 ft. on 11 days, to below 2000 ft. on the *4th* and *30th*, and to below 1000 ft. on the *31st*. The Ben Nevis snow line underpassed 1500 ft. only from the *4th* to *6th* and was never down to 1000 ft.

November 1952

During the second half of this unseasonably severe month snow is believed to have come to Britain in greater amount and with greater frequency than in any previous November since 1919. From the *16th* onwards falls occurred daily on the higher hills of West Durham and on ten days even in parts of southern England. After the *22nd* accumulated depths of 6 in. were common, and towards the close of the month aggregate measurements of about 10 in. were reported from a number of stations in central Wales and the southern English midlands. Craswall, Herefordshire, at 1000 ft., was outstanding with an average depth of 18 in. on the *30th*. At this time there was local drifting to 30 ft. on upland roads in Brecon and Radnorshire and to 8 ft. on Dunstable Downs near Whipsnade (720 ft.), Bedfordshire, with considerable hindrance to traffic. Over much of Scotland November's weather was relatively less severe than in England. Snowfall on Ben Nevis was stated to be very slight.

December 1952

The predominant cold of the preceding three months persisted, and though snowfalls were in general neither so widespread nor so frequent as during the last fortnight of November they were nevertheless substantial over a large part of the country and in some districts heavy, especially from the *13th* to *20th*. Notable average depths were 12 in. at West Kirby (25 ft.), Cheshire, Mount Pleasant (523 ft.), Flintshire, and Clawd-newydd (998 ft.), Denbighshire, on the *15th*, and 16 in. at Bwlchgwyn (1267 ft.), Denbighshire, on the *16th*. At about this time local drifting to 15 ft. was reported in the Isle of Skye, while in the Orkneys and Shetlands a number of villages were isolated for a few days.

JANUARY 1953

This was yet another month of predominantly cold weather over the southern half of England and Wales, although farther north it proved mild and over much of Scotland very mild. Precipitation was subnormal almost everywhere and exceptionally so southward of the Scottish border. Over England and Wales as a whole no January had been so dry since 1896. Moderate snowfalls occurred sporadically during the first ten days and more widely on the *31st*. Among the few places to report average depths exceeding 5 in. were Glenmore Lodge (1075 ft.), Inverness-shire, with 9 in. during the first week, Hirnant (1250 ft.), Radnorshire, with 9 in. from the *5th* to *10th*, and Whipsnade with 6 in. on the *7th*. Over the mountainous areas of Scotland and northern England the general level of the snow line was unusually high for the season: by the *24th–25th* it had risen to between 2750 ft. and 3100 ft. on some of the Cairngorm and Monadhliath peaks. In the English Lake District there was never a continuous cover below 2000 ft. throughout the month. Balquhidder (Perthshire) and Mauchline (Ayrshire) both experienced what the observers described as one of the mildest Januarys on record.

FEBRUARY 1953

Over Britain as a whole there appears to have been more snow during the cold spell which marked the first half of February than at any other period of the 1952–53 season. The heaviest falls came during the second week, reaching maximum intensity in North Wales and the northern and north-midland counties of England, where average depths of about 12 in. were commonly reported above the 400 ft. level. On the Denbighshire heights Bwlchgwyn had a 17-in. cover from the *11th* to *13th*, with drifts to 12 ft. in the neighbourhood of the station and up to 30 ft. a few miles farther south. Buxton lay under 14 in. of snow on the *12th*. Drifting to 14 ft. occurred about this time at Chew Mount (1600 ft.), Yorkshire, and at Bishop's Castle (735 ft.), Salop. A number of upland roads were rendered impassable for several days. Just after the middle of the month a sudden change to unseasonably mild weather followed. This caused very rapid melting of the accumulated snow even at high levels. The Fannich Hills and Ben More were stated to have been free from general cover at their summits after the *16th*, and the snow line on Ben Nevis was reported to have gone up to about its average June level (between 3500 ft. and 4000 ft.) before the close of the month.

MARCH 1953

This was an exceptionally dry and quiet month, with almost continuous persistence of anticyclonic conditions until the *25th*. From the *26th* onwards there was some snow in Scotland, northern England and North Wales, but the falls were generally light and appreciable cover appears to have been confined to the higher mountains. The Fannich Hills remained snow-free until the *26th* and on Ben Nevis the snow line continued above 3500 ft. to the same date, then descending to between 1500 ft. and 2000 ft. from the *29th* to *31st*.

APRIL 1953

Cold, changeable weather ruled and snow, though seldom heavy, was much more frequent and more widely distributed than in March. Falls occurred on 16 days at Glenlivet (1050 ft.), Banffshire, and on 13 to 15 days at several upland stations in Aberdeenshire, Inverness-shire and Cumberland. Cover was 2 in. deep as far south as Princetown (1359 ft.), Dartmoor, on the *5th* and about 4 in. deep locally at moderate to low levels in western and northern Scotland on the *14th* and *15th*. On the *7th* some of the drifts on Crossfell (2930 ft.) were estimated to have a maximum depth of 15 ft. to 20 ft. The snow line on the Nairnshire Hills was below 1000 ft. from the *3rd* onwards. Ben Nevis was coated to below 2500 ft. and the Fannich Hills to below 3000 ft. throughout the month.

MAY 1953

Except at high levels fresh snow was virtually absent during this notably warm month. Melting of the winter accumulations on the mountains proceeded rapidly. On Crossfell the last traces of drifts which had an estimated maximum depth of 8 ft. on the *1st* disappeared by the afternoon of the *17th*. In the Cairngorms Sròn Riach (3534 ft.) was snow-free by the *24th*.

SUMMER 1953

June opened with a spell of unseasonable cold, the temperature ranging commonly fron 15° to 20° F. below normal. On the *1st* sleet occurred as far south as Downe (560 ft.), Kent, and on both the *1st* and *2nd* snow was widely distributed at high and moderate levels in Scotland. Cover on the Cairngorms extended down to 1500 ft. and at greater altitudes there a general thick layer, said to have been 3 ft. deep in places, was reported. On the *16th* about one-third of the southward-facing slope of Cairn Gorm was completely coated. At the end of June's third week very warm weather set in, temperatures of 81° to 83° F. being attained even in northern Scotland on the *23rd* and *24th*. Extremely quick thawing of the snow-beds resulted: one in Coire an t' Sneachda decreased in depth at the rate of more than 12 in. per day from the *22nd* to *25th*. By the latter date the southern face of Cairn Gorm was clear. On *July 1st* the only part of the Cairngorm range still harbouring a fairly extensive cover was the eastern flank of the Ben Macdhui *massif*. Late in July a patch of snow measuring about 500 ft. by 300 ft. was found a mile or so north of the summit of Ben Macdhui, and on *August 23rd* two areas of compacted snow occupying some 9000 and 15,000 sq. ft. respectively were observed on the slope above Tailors' Burn and near Snowy Coire in the same vicinity. Towards the end of September this patch in Snowy Coire had disappeared. Ben Nevis was reported to have become snow-free at about the same time. But, as usual, minor patches in Cairngorm gullies survived throughout the summer and early autumn. One of these, described as "very icy," and measuring 28 ft. by 10 ft., was examined in Garbh Choire Mòr (Braeriach) on *October 17th*, and another was observed from a distance in Allt Choire Mòr (western face of Ben Macdhui) on the same date.

E. L. H.

NOTE ON DURATION OF SNOW COVER ON BRITISH MOUNTAINS

THE duration of snow cover was again moderate; the average at 2500 ft. on the mountain groups used as indices in these reports was 79 days, which is the average for the past six seasons.

Diagrams showing the distribution of snow cover relative to height for seven stations are given on page 361.

Harris, in the Outer Hebrides, reported snow cover in each month from September to April. The snow line reached sea level on 8 days in the season, and the maximum duration of cover occurred in December with 13 days above 1500 ft.

The Cuillins of Skye had some cover in each month from September to March, with a maximum of 27 days in December down to 3000 ft. The snow line fell to sea level on 10 days during the season.

The peaks around Glen Lyon also had cover in the months September to April, with a maximum duration of 25 days at 3000 ft. in December and at 3500 ft. in April.

The summit of Ben Nevis was under continuous cover from *October 1st* to *July 4th*, a total of 277 days, and down to 2000 ft. the mountain was under snow continuously throughout December and January. The snow line reached sea level on only 5 days, all in February.

The Paps of Jura were snow-free in September, October, January and May. The maximum cover occurred in December with 12 days' cover down to 1500 ft. The snow line fell to sea level on one occasion only, *April 3rd*.