

in length from north to south, and also in maximum breadth from east to west, the mean breadth being over a quarter of a mile, or 45 per cent. of the length. Its waters cover an area of over 100 acres, or about one-sixth of a square mile, and it drains an area ten times greater—over  $1\frac{1}{2}$  square miles. About 60 soundings were taken, the maximum depth observed being 70 feet. The volume of water is estimated at 108,333,000 cubic feet, and the mean depth at nearly 25 feet, or 35 per cent. of the maximum depth. The length of the loch is 44 times the maximum depth and 126 times the mean depth. A ridge crosses the loch at the narrowest part near the middle, the greatest depth on which is 34 feet. On both sides of this ridge the water deepens, the maximum depth in the southern basin being 45 feet, while the main deep basin lies to the north of the ridge, the maximum depth of the loch (70 feet) having been found less than a quarter of a mile from the north-eastern angle of the loch, where there is a small 50-foot basin about one-tenth of a mile in length; a short distance to the north-east is an isolated sounding of 50 feet, comparatively close to the north-east shore, separated from the 50-foot basin by a sounding of 38 feet. The 25-foot basin is a continuous area half a mile in length and over a quarter of a mile in breadth. The area of the lake-floor covered by less than 25 feet of water is about  $53\frac{1}{2}$  acres; that covered by water between 25 and 50 feet in depth is about  $44\frac{1}{2}$  acres; while that covered by more than 50 feet of water is about  $2\frac{1}{2}$  acres. Loch Derculich was surveyed on May 27, 1903; the elevation above the sea could not be determined.

*Temperature Observations.*—A series of temperatures was taken in the deepest part of the loch at 8 p.m. on May 27, 1903, with the following results:—

Surface ... ..	55° 0 Fahr.
10 feet . . . . .	51° 0 „
15 „ . . . . .	49° 0 „
25 „ . . . . .	47° 7 „
50 „ . . . . .	47° 1 „
65 „ . . . . .	47° 0 „
70 „ . . . . .	47° 0 „

The range of temperature from surface to bottom was  $8^{\circ}0$ , there being a fall of  $4^{\circ}0$  between the surface and a depth of 10 feet, and a further fall of  $3^{\circ}3$  between 10 and 25 feet. A comparison of these temperatures with those taken in Lochs Daimh and Giorra on the previous day shows that the water in Loch Derculich was much warmer from surface to bottom than in the two lochs referred to. At the surface the temperature was about  $5^{\circ}$ , and at 10 feet  $3^{\circ}$  to  $4^{\circ}$  higher; at the bottom it was  $4^{\circ}$  higher than at the bottom of Loch Daimh, and  $1^{\circ}$  higher than at the bottom of Loch Giorra at a much less depth.

*Loch Scoly* (see Plate XXVI).—Loch Scoly, a small hill loch in