

approximately the outline of the loch, approaching very close to the west end, where between the mouths of the Ogle and Kendrum burns a sounding of 57 feet was taken about 300 feet from the shore, giving a slope of 1 in 5.3. At the opposite end of the loch the 50-foot contour is met with about one-third of a mile from the bridge across the river at St. Fillans. The 100-foot basin approaches to within less than a quarter of a mile from the west end, and less than half a mile from the east end, and is over $5\frac{3}{4}$ miles in length; it covers an area of nearly $2\frac{1}{3}$ square miles. The 200-foot basin is $4\frac{1}{2}$ miles in length, stretching from three-quarters of a mile from the west end to $1\frac{1}{4}$ miles from the east end, and covers an area of $1\frac{1}{3}$ square miles. The 250-foot basin is nearly 2 miles in length, and a quarter of a mile in maximum width, extending from $1\frac{1}{2}$ miles from the west end to 3 miles from the east end. The maximum depth of 287 feet was observed near the centre of the loch, between the mouths of the Allt Bhacaidh on the north and the Allt Dhùnain on the south, about $2\frac{3}{4}$ miles from the west end, and $3\frac{3}{4}$ miles from the east end. The area of the lake-floor covered by less than 100 feet of water is about 926 acres, or $38\frac{1}{2}$ per cent. of the total area of the loch; the area between the 100- and 200-foot contour-lines is about 755 acres, or $31\frac{1}{2}$ per cent.; and the area covered by more than 200 feet of water is about 700 acres, or 30 per cent. The flat-bottomed character of the loch is indicated by the last-mentioned percentage, which is nearly equal to the preceding one, though the interval of depth is only 87 feet as compared with the previous interval of 100 feet. The comparatively uniform average slope from the shore down to a depth of 100 feet is shown by the fact that the areas on each side of the 50-foot line are nearly equal, viz. 477 acres (or nearly 20 per cent. of the entire area of the loch) between the shore and the 50-foot contour, and 449 acres (or nearly 19 per cent.) between the 50- and 100-foot contours.

Loch Earn was surveyed on May 14 to 19, 1902, and the level of the surface of the water was determined by levelling from Ordnance Survey bench-mark as 317.2 feet above sea-level. This is identical with the level determined by the surveyors of the Ordnance Survey on August 25, 1899.

Temperature Observations.—On May 14, at 3.45 p.m., the temperature of the surface water near Lochearnhead was $46^{\circ}1$; at 6 p.m. the surface temperature was 44° , and at 7 p.m. near the shore $47^{\circ}2$. On May 15, at 11.30 a.m., the surface temperature near shore about a mile east of Lochearnhead was 44° . On May 16, at 10.30 a.m., the surface temperature at the St. Fillans end of the loch was $44^{\circ}1$, and at 1.30 p.m. it was 44° . On May 17, at 5 p.m., the surface temperature off Dalkenneth over the deepest part of the loch was $43^{\circ}8$. The range observed in the temperature of the surface water during those four days was thus $3^{\circ}4$, from $43^{\circ}8$ to $47^{\circ}2$, the range in the air temperature during the same period being $7^{\circ}5$, from $40^{\circ}5$ to 48° .