

soundings taken giving a depth of 9 feet. The shores are mostly of rock, with stony *débris*, sandy gravel covering the eastern shore at the narrow part near the north end. The temperature of the surface water on the date of the survey varied from $58^{\circ}5$ to $60^{\circ}5$ Fahr., a reading at a depth of 8 feet giving $58^{\circ}0$.

Loch Ken (see Plate XLV.).—Loch Ken is the largest in the basin, trending from north-west to south-east, the northern end being over a mile south of New Galloway, and the southern end about 7 miles north of Castle Douglas, the confluence of the Black Water of Dee with the river Dee being looked upon as the southern limit of Loch Ken. The length exceeds $4\frac{1}{2}$ miles, the maximum breadth across the centre of the loch at the entrance of the Dullarg burn being about half a mile, and the mean breadth over a quarter of a mile. The waters of the loch cover an area of about 867 acres, or $1\frac{1}{3}$ square miles, and the area draining into it is very large, extending far to the north and west, and including the other lochs within the basin dealt with in the preceding pages, as well as a few lochs which were not surveyed. The total drainage area thus amounts to about 282 square miles. The maximum depth of 62 feet was recorded about a mile from the upper end. The volume of water is estimated at 792 millions of cubic feet, and the mean depth at 21 feet. The loch was surveyed on July 14, 1903, the elevation being 142·0 feet above the sea.

The floor of Loch Ken is irregular, there being six separated areas where the depth exceeds 25 feet, and two areas where the depth exceeds 50 feet. The 20-feet contour would be continuous almost from end to end, except for a slight break opposite the entrance of the Arvie burn, where the deepest sounding was 19 feet. The deepest basin occupies the wide portion at the head of the loch, where there is a 25-foot area over $1\frac{1}{2}$ miles in length, enclosing a 50-foot area over three-quarters of a mile in length, the maximum depth of 62 feet having been observed towards the eastern shore. The second 50-foot area, based on a sounding in 52 feet, lies less than a mile from the foot of the loch, occupying a central position in a 25-foot area three-quarters of a mile in length. To the south of this area the water deepens again to 31 feet, and near the entrance of the Black Water of Dee another sounding in 33 feet was taken. Of the entire lake-floor 71 per cent. is covered by less than 25 feet of water.

Temperature Observations.—Serial temperatures taken in the deepest basin showed a gradual decrease of temperature, the total range from surface to bottom being $4^{\circ}7$ Fahr., as follows:—

Surface	60° 2 Fahr
25 feet	59°·5 „
30 „	58°·5 „
35 „	57°·5 „
40 „	56°·5 „
55 „	55°·5 „

Expansions of the River Dee (see Plate XLV.).—The expansions of the