

soundings run from 2 to 5 feet; the south-western expansion is the shallowest, with a maximum depth of 3 feet to the west of the central large island (Eilean na Coille), the bottom to the east and south of that island being covered by only 1 foot of water. Over 90 per cent. of the entire lake-floor is covered by less than 10 feet of water, and less than 2 per cent. by over 20 feet of water. The surface temperature in the eastern expansion at 11 a.m. on April 21, 1902, was $44^{\circ} \cdot 2$.

Loch Rannoch (see Plate XIX.).—Loch Rannoch, one of the larger and more important of the lochs in the Tay basin, was the headquarters of the Lake Survey for nearly four months, from March 20 to July 10, 1902, and during that period a great many soundings, as well as observations on the temperature of the water, on the biology, and on the rise and fall of the surface of the loch, were taken, all the members of the staff taking part in the work. The lake trends in an east-and-west direction, and is a lovely sheet of water, the hills on both sides, and the woods clothing its shores in many places, adding beauty to the scene. The famous Black Wood of Rannoch on the south side is of great antiquity. The loch contains many small trout, and is famed for large *Salmo ferax*. It is nearly $9\frac{3}{4}$ miles in length, considerably over a mile in maximum breadth, the mean breadth being about three-quarters of a mile, or about 8 per cent. of the length. Its waters cover an area of over 4700 acres, or nearly $7\frac{1}{2}$ square miles, and it drains directly an area of about 130 square miles, but, since it receives the outflow from Loch Ericht, Loch Eigheach, Loch Laidon, Loch Bà, &c, its total drainage area is about $243\frac{1}{2}$ square miles, or 33 times the area of the loch.

Over eight hundred soundings were taken in Loch Rannoch, the maximum depth observed being 440 feet, or 20 feet deeper than the maximum depth recorded by Mr. Grant-Wilson during his survey in the year 1888, when he took about 320 soundings. The volume of water contained in the loch is estimated at about 34,387,131,000 cubic feet, or less than a quarter of a cubic mile, and the mean depth at $167\frac{1}{2}$ feet, or 38 per cent. of the maximum depth. The length of the loch is 116 times the maximum depth, and 306 times the mean depth. The loch is widest and deepest in the eastern half, narrowing and shallowing towards the west on approaching the island Eilean nam Faoileag, then deepening again to the west of that island. It consists of one large main basin, with two subsidiary small basins over 50 feet in depth towards the west end, separated from the main basin by the shallow water in the neighbourhood of Eilean nam Faoileag. The larger of the two subsidiary basins is about three-quarters of a mile in length, stretching from south of the island An t-Eilean Fearna, at the entrance of the river Ericht, towards the west end of the loch, and the maximum depth recorded in it was 84 feet, the smaller basin lies between the two islands mentioned and towards the northern shore,