

interesting results, for from the surface down to 45 feet the temperature was found to be practically uniform, but between 45 and 47½ feet a fall of about 5° Fahr. was recorded—equal to 2° per foot of depth—the total range from surface to bottom being 6°·2. The readings were as follows:—

Surface	58°·5 Fahr.
30 feet	58°·5 „
40 „	58°·0 „
45 „	58°·0 „
47½ „	53°·1 „
50 „	52°·3 „

Linlithgow Loch (see Plate CXIII.) lies close to the town of Linlithgow, with the ruins of the historic palace standing on its southern shore. It is nearly a mile in length from north-east to south-west, with a maximum breadth of a quarter of a mile, the superficial area being about 103 acres. The promontory on which the palace stands cuts the loch into two halves, the north-eastern half being flat-bottomed and shallow (maximum 10 feet), the south-western half deepening from the outflow towards the central promontory, off which the maximum depth of 29 feet was recorded. The volume of water is estimated at 34 million cubic feet, and the mean depth at 7½ feet. When surveyed on June 25, 1903, the surface was 149·8 feet above the sea, practically identical with the elevation (149·9 feet) recorded by the Ordnance Survey on May 6, 1896. The following temperatures taken in the deepest part show a range from surface to bottom of 7° Fahr., the greatest fall being one of 3° between 10 and 15 feet.—

Surface	62°·2 Fahr.
5 feet	61°·2 „
10 „	58°·8 „
15 „	55°·8 „
25 „	55° 2 „

Gartmorn Dam (see Plate CXIV.) lies less than 2 miles from the town of Alloa on the northern shore of the Firth of Forth, and is used in connection with the water-supply to that town. It exceeds a mile in length from east to west, with a maximum breadth of one-third of a mile, the superficial area being about 140 acres, and the drainage area nearly 3 square miles. The water deepens gradually on proceeding from the east end towards the outflow at the west end, where the maximum depth of 21 feet was recorded; nearly half the bottom is covered by less than 10 feet of water, while nearly 10 per cent. is covered by more than 20 feet of water. The volume is estimated at 65 million cubic feet, and the mean depth at 10¾ feet. When surveyed on May 17, 1905, the elevation could not be determined from bench-mark, but the scale at the weir showed 17 feet of water. The following temperatures taken in the deepest part show a range of 4° Fahr. from surface to bottom, there being a fall of no less than 3° between the surface and a depth of 5 feet.—