

or one-sixth of a square mile, and it drains directly an area of over two-thirds of a square mile, but since it receives the outflow from Lochs Craiglush and Lowes, its total drainage area is about $8\frac{1}{2}$ square miles—an area 49 times greater than the area of the loch. Over 50 soundings were taken, the maximum depth observed being 25 feet. The volume of water contained in the loch is estimated at 53,238,000 cubic feet, and the mean depth at $11\frac{1}{4}$ feet, or 45 per cent. of the maximum depth. The length of the loch is 122 times the maximum depth and 271 times the mean depth. The Loch of Butterstone forms a simple basin, the maximum depth of 25 feet being observed approximately in the centre of the loch, but nearer the western and southern shores. The deeper water approaches much closer to the western than to the eastern shore, off which the shallow water extends some distance into the loch, especially opposite the point at the outflow, where the 10-foot contour-line makes a great bend inward; this bend affects also the 20-foot contour-line, so that the 20-foot basin becomes somewhat crescent-shaped. The area of the lake-floor covered by less than 10 feet of water is about $52\frac{1}{2}$ acres, or $48\frac{1}{2}$ per cent. of the entire area of the loch; that covered by water between 10 and 20 feet in depth is about $39\frac{1}{2}$ acres, or $36\frac{1}{2}$ per cent.; and that covered by more than 20 feet of water is about 16 acres, or 15 per cent. of the total area of the loch. The Loch of Butterstone was surveyed on June 1, 1903, and the surface of the water was found by levelling from bench-mark to be 314·4 feet above sea-level. The Ordnance Survey officers determined the level on July 31, 1899, as being 314·8 feet above the sea.

Temperature Observations.—Temperature observations were taken in the deepest part of the loch in the afternoon of June 1, 1903, with the following results:—

Surface	63°·0 Fahr.
5 feet	62° 8 ,,
8 ,,	62° 5 ,,
10 ,,	57° 0 ,,
25 ,,	53° 0 ,,

This series shows a range from surface to bottom of 10° , the greatest fall being one of $5^{\circ}\cdot 5$ between 8 and 10 feet. The water was warmer at all depths than in Lochs Craiglush and Lowes at corresponding depths; the greatest decrease of temperature was observed at the same depth as in Loch Craiglush; the range of temperature was the same as that in Loch Lowes, although there is only half the depth of water.

Loch of Clunie (see Plate XXX.).—The Loch of Clunie lies in a well-wooded valley, and is surrounded by cultivated ground, except at Forneth woods. The castle on the island in the loch, which seems to be artificial, is said to have been the birthplace of the Admirable Crichton. On this island a pair of herons built their nest in 1903, but nest and