east from Loch Grunavat. An isolated hill, Suainaval, 1403 feet in height, stands at the lower end of the loch on the east side. It is one of the longest lochs in Lewis, measuring 2⅔ miles in a straight line from north to south. The greatest breadth towards the north end is a little more than half a mile.

Loch Suainaval is a simple basin, with the slope of the bottom steepest from the shore to the depth of 100 feet. The 100-feet contour closely follows the shore-line except at the ends, and the area enclosed by it is 2¼ miles in length. From the 100-feet contour to the centre the slope is more gradual, and only two small areas exceed 200 feet in depth. The larger of these areas, in the broadest part of the loch, is one-third of a mile long by one-fifth of a mile broad, and is flat-bottomed, with a greatest depth of 212 feet. The lesser 200-feet area is a little south of the centre, is very narrow, and includes the maximum depth of 219 feet. A study of the contours shows that the loch has the U-shaped cross-section characteristic of lochs formed in valleys which have been occupied by glaciers.* The mean depth, 108½ feet, is very great, more than three times that of any other loch in Lewis.

The superficial area is nearly a square mile, or about one-fourth that of Loch Langavat. The volume of water, 2843 millions of cubic feet, shows that Loch Suainaval is the greatest lake in Lewis, being 450 millions of cubic feet more than that of Loch Langavat, six times that of Loch Grunavat, and eighteen times that of Loch Trealaval or Loch Fadagoa. The drainage area amounts to nearly 10 square miles. The outflow northward to Loch Stacsavat is by the short river Eyscleit, with a fall of about 1½ feet. The surface was 37·4 feet above sea-level on July 24, 1903, which is about a foot lower than the level found by the Ordnance Survey on October 2, 1895.

A series of temperatures taken on July 24, 1903, showed, consistently with the great depth of the loch, a greater range than was observed in any other loch in Lewis. The range from surface to bottom was 11°·2 Fahr., and the distribution as shown in the following table :—

| | | | | | | |
|---|---|---|---|---|---|---|
| Surface ... | ... | ... | .. | . . | . | 57°·0 Fahr. |
| 25 feet ... | ... | . | | . | . | 55°·2 ,, |
| 50 ,, . . | .. | . | . | . | ... | 53°·0 ,, |
| 75 ,, ... | ... | .. | . . | .. | . . | 50°·4 ,, |
| 100 ,, | . . | | ... | . . | | 47°·7 ,, |
| 200 ,, .. | .. | . . | . . | .. | . . | 45°·8 ,, |

*Loch Raonasgail* (see Plate LXXXVIII.) is a small loch among the high hills which lie between the south end of Loch Suainaval and the west coast. It occupies a narrow valley between Tahaval, 1688 feet, on the east, and Mealasval, 1885 feet, on the west, which rise in steep crags covered with large and small stones on either side. The loch is of oblong

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* See Collet and Johnston, " On the Formation of Certain Lakes in the Highlands," *Proc. Roy. Soc. Edin.*, vol. 26, p. 108 (1906).