

THE DEPOSITS OF THE SCOTTISH FRESH-WATER LOCHS

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IN the course of the survey of the fresh-water lochs of Scotland some seven hundred samples of bottom-deposits were brought up, and eventually sent to the *Challenger* Office at Edinburgh. No systematic plan was adopted in collecting the deposits, and therefore some lochs are represented by a large series of samples, others by only a few, and others again (small lochs and reservoirs) by none at all. To some extent this is due to the practical difficulties of sampling, in that the sounding-tube frequently came up empty, or the material slipped out before it could be secured. Nevertheless, the material at hand is both plentiful and interesting. It has now, therefore, at the suggestion of Sir John Murray, been submitted to laboratory examination.

With a few exceptions, the Scottish lochs have deposits which differ scarcely at all from loch to loch. The great majority of the mainland lochs exist under closely similar conditions: they lie in a country of fairly uniform mineralogical aspect, are provided with an inflow and an outflow of soft peaty water, receive a large supply of vegetable refuse, and are remote from thickly populated districts. Consequently the floors of the various lochs tend to be carpeted with much the same kind of deposit, and it is possible to deal generally with the deposits as if they belonged to one huge lake. Only in certain island lochs on the one hand, and in small and comparatively stagnant lochs on the other, are local peculiarities developed, which will be referred to in due course.

Scottish loch deposits in general may be classified into three main varieties, viz. :—

- (1) Sand or Grit.
- (2) Clay.
- (3) Brown Mud.