

diatoms; the loss on ignition, after drying at 90° C., amounted to 14 per cent.

The mud from the deeper part of Loch Drunkie was of a dirty brown colour, containing 10 to 20 per cent. of mineral particles with a mean diameter of 0·1 mm., but consisting principally of amorphous clayey matter, with many small mineral particles, and vegetable matter. A few diatoms were observed. The loss on ignition, after drying at 90° C., amounted to 26·38 per cent.

The deposit from the deeper parts of Loch Arklet was similar to that from Loch Drunkie, with even a larger quantity of vegetable matter.

The mud from the deeper parts of Lochs Doine and Voil was of a brown colour, with 30 to 40 per cent. of mineral particles, and clayey and vegetable matter, and a few diatoms. A sample from a depth of 80 feet in Loch Voil, after drying at 90° C., gave 22·74 per cent. loss on ignition.

The material from a depth of 136 feet in Loch Lubnaig was a brown impalpable mud, with 30 to 40 per cent. of mineral particles, much clayey and vegetable matter, and a few diatoms. The loss on ignition, after drying at 90° C., amounted in one sample to 16·29 per cent., and in another sample to 15·76 per cent.

Three brown muds were examined from Loch Chon, from depths of 10 feet, 14 feet, and 37 feet. The colour was lighter, and the mineral particles were more abundant and larger, in the shallower water. In the deposit from 10 feet the mineral particles made up probably 35 to 40 per cent., and included a few rock fragments which sometimes attained a diameter of 10 mm., the mean diameter of the mineral particles exceeding 0·05 mm. in diameter being about 0·3 mm., while in the deposit from 37 feet the percentage falls to about 10, with a mean diameter of 0·1 mm. Inversely, clayey matter and vegetable matter were more abundant in the deeper water, mixed with minute mineral particles, impregnated with ferric oxide, and containing diatoms, Sponge spicules, arenaceous Foraminifera, and Entomostracous skeletal fragments.

A sample from the deepest part of Loch Ard was a dark-grey mud, consisting principally of vegetable and clayey matter, the mineral particles not exceeding 10 per cent., with a mean diameter of about 0·1 mm. The organic remains observed were the same as in Loch Chon.

A fine-grained dark-brown mud from a depth of 60 feet in Loch Leven contained probably not more than 5 per cent. of mineral particles exceeding 0·05 mm. in diameter, the bulk of the deposit consisting of clayey and vegetable matter, containing many beautiful diatoms, with Sponge spicules and Entomostracan remains.

*Temperature Observations.*—During the various visits to the different lochs, many observations were made on the temperature of the water,