

crack yielded a little and the sea water was gradually forced in, driving the contents of the thermometer before it, and, taking it at a disadvantage from within, breaking the shell of the large bulb, which was unsupported on account of the belt of rarefied vapour between it and its outer shell. The pressure was now equalised within and without the instrument, and the injury went no farther. Alcohol, creosote, mercury, and sea water were mixed up in the outer case of the large bulb with the débris of the inner bulb, and one of the steel indices lay uninjured across its centre.

As this was the deepest sounding yet taken, it was desirable to try whether the dredge would still prove serviceable. The small dredge was accordingly lowered at 10.30 A.M., with the usual bar and tangles, and from the centre of the bar a Hydra sounding tube, weighted with 4 cwt., was suspended about 2 fathoms below the dredge. A 2-inch rope was veered to 4400 fathoms; a toggle was stopped on the rope 500 fathoms from the dredge, and when the dredge was well down, two weights of 1 cwt. each were slipped down the rope to the toggle. Heaving in was commenced about 1.30 P.M., and the dredge came up at 5 P.M., with a considerable quantity of reddish-grey ooze. The mud was carefully examined, but no animals were detected, except a few small calcareous Foraminifera, and some, considerably larger, of the arenaceous type.

The officers of the United States Coast Survey have recently obtained depths of 4561 and 4223 fathoms about 50 miles to the west of this sounding of 3875 fathoms; so that this, the deepest part of the Atlantic, is probably a depression of considerable extent, with its longest diameter running east and west. On the 27th, 100 miles north of the 3875 fathoms sounding, the depth had decreased to 2800 fathoms.

On this St. Thomas-Bermuda section, twelve soundings, five dredgings, and five serial temperature soundings were obtained (see Sheet 6).

The ocean bed rises gradually from the deep depression just referred to towards Bermuda, the depth being 2475 fathoms at a distance of 50 miles from that island (see Diagram 2).

The temperature at the bottom ranged from $36^{\circ}2$ to $36^{\circ}7$, the mean being $36^{\circ}4$.



FIG. 53.—Thermometer tubes broken by pressure at a depth of 3875 fathoms (Station 25).