

through the bread-bag during the progress of the dredge to the surface; and this made it all the more remarkable that no animal higher in the scale than a rhizopod was contained in the dredge.

A series of temperature soundings were taken at intervals of 50 fathoms down to 700 fathoms (see Table—Appendix A to this chapter), and a second series to a depth of 150 fathoms at closer intervals gave the following results:

Surface.....	20°·0 C.	100 fathoms.....	18°·5 C.
20 fathoms.....	19 ·6	120 “ .....	18 ·3
40 “ .....	19 ·0	140 “ .....	18 ·3
60 “ .....	18 ·5	150 “ .....	18 ·2
80 “ .....	18 ·6		

While the dredge was down, observations were made on the direction and force of the currents at the surface and at different depths below it. The surface-current can usually be determined without any great difficulty; indeed, we get at all events a rough approximation to its determination, in the difference at the end of a given time between the position of the ship by observation and her position by dead reckoning. In fine weather, however, the surface-current may be determined much more exactly. When the dredge is well on the bottom, one of the quarter-boats is lowered and anchored to the dredge-line, the line between the boat and the ship being kept slack, and the ship drifting away. The boat thus becomes a fixed point, and from it a current-log is run out, the log-ship consisting of a triangular piece of wood weighted at the apex, and kept at the surface by an oar lashed across its base. The log-line is marked to fathoms, and is allowed to run for a given time, say six or twelve minutes; the line is then checked, and the bearing of the log-ship taken from the boat, which gives the direction of the current; while the number of fathoms run out multiplied by the proportion which the time of running bears to an hour gives its hourly rate.