

of a lump of pyrolusite, but that the glossy black film covering the stem and branches of the coral gave also the reaction of manganese. There seemed to be little doubt that it was a case of slow substitution, for the mass of peroxide of manganese forming the root showed, on fracture in some places, the concentric layers and intimate structure of the original coral. The coral, where it was unaltered, had the ordinary composition, consisting chiefly of calcic carbonate. Water was obtained by the slip water-bottle from 300 fathoms with a specific gravity of 1.02510 at 21°·1 C.; from 400 fathoms, of 1.02475 at 20°·9 C.; from 500 fathoms, of 1.02619 at 20°·5 C.; and at 200 fathoms, of 1.2515 at 21°·6 C. The water from the bottom (2435 fathoms) had a specific gravity of 1.02576 at 22° C., and the surface water of 1.02526 at 24°·4 C.

On Saturday, the 8th, a sounding was taken in 2385 fathoms, and the tube brought up a sample of mud of a bright, light chocolate color, with a mere trace of calcic carbonate—nearly a pure red clay. We were laying our course so as to include a sounding of Lieutenant Lee in lat. 19° 2' 36'' N., long. 59° 33' 20'' W., of 3300 fathoms, and it seemed that we were gradually passing off the plateau—which Captain Nares has called, in recognition of the vessel from which its position was first determined, the "Dolphin Rise"—into the depression indicated by the deep sounding, and that again we had a change in the nature of the bottom coincident with increase in depth. A series of temperatures were taken, with the results tabulated:

Surface.....	23°·3 C.	900 fathoms.....	4°·2 C.
100 fathoms.....	21 ·0	1000 "	3 ·6
200 "	16 ·0	1100 "	3 ·4
300 "	12 ·5	1200 "	3 ·2
400 "	8 ·1	1300 "	—
500 "	7 ·4	1400 "	2 ·5
600 "	5 ·6	1500 "	2 ·5
700 "	5 ·0	2385 "	bottom..... 1 ·9
800 "	4 ·7		