

STATION 178.

At 1 P.M. got up steam. At 1.15 P.M. shortened and furled sails, proceeded under steam, and sounded in 2650 fathoms. Took serial temperatures down to 1500 fathoms. At 4.30 P.M. completed observations, and at 5 P.M. made sail.

Raine Island distant at noon, 1286 miles. Made good 149 miles. Amount of current 2 miles, direction S. 64° W.

ORGANISMS FROM
SURFACE-NETS.

Surface Organisms.—Several tow-nets were lost or torn; the following were, however, observed:—*Peridinium*, many *Globigerinæ*, *Sagitta*, many Crustaceans, Pteropods and Pteropod larvæ, *Salpæ*. The stomach of a *Salpa* contained many Rhabdospheres, a few Cocospheres, many Acanthometræ, and one or two *Coscinodisci*. The screw was taken up and found to be covered with *Sertularia*, *Tubularia*, and barnacles.

STATION 179.

Station 179 (Sounding 309), Fiji to Raine Island (see Chart 27 and Diagram 13).

August 21, 1874; lat. 15° 58' S., long. 160° 48' E.

Temperature of air at noon, 78°·8; mean for the day, 77°·3.

Temperature of water:—

Surface,	79·0	900 fathoms,	37·7
100 fathoms,	71·1	1000 „	36·8
200 „	55·5	1100 „	36·4
300 „	45·2	1200 „	36·0
400 „	41·6	1300 „	36·0
500 „	40·0	1400 „	36·0
600 „	38·9	1500 „	36·0
700 „	38·3	Bottom,	36·0
800 „	37·7		

Density at 60° F.:—

Surface,	1·02634	300 fathoms,	1·02614
100 fathoms,	1·02667	400 „	1·02591
200 „	1·02619	Bottom,	1·02594

Depth, 2325 fathoms; deposit, Globigerina Ooze, containing 32·29 per cent. of carbonate of lime (see Murray and Renard, Deep-Sea Deposits Chall. Exp.).

At 10 A.M. got up steam. At 11.30 A.M. shortened and furled sails. At noon proceeded under steam, and at 1 P.M. sounded in 2325 fathoms. Obtained serial temperatures down to 1500 fathoms, also specimens of water for analysis. The carbonic acid was determined in water from 200 fathoms, and amounted to 44·4 milligrammes per litre. At 3 P.M. completed observations, and at 3.20 P.M. made all plain sail.