

STATION 171A.

Station 171A (Sounding 295), New Zealand to Tongatabu (see Chart 27 and Diagram 12).

July 17, 1874; lat. $25^{\circ} 5' S.$, long. $172^{\circ} 56' W.$

Temperature of air at noon, $72^{\circ} \cdot 3$; mean for the day, $70^{\circ} \cdot 9$.

Temperature of water :—

Surface,	$72^{\circ} 0$	800 fathoms,	$37^{\circ} 2$
100 fathoms,	$67 \cdot 6$	900 "	$36 \cdot 9$
200 "	$59 \cdot 2$	1000 "	$36 \cdot 7$
300 "	$50 \cdot 4$	1100 "	$36 \cdot 4$
400 "	$44 \cdot 0$	1200 "	$36 \cdot 2$
500 "	$41 \cdot 3$	1300 "	$36 \cdot 0$
600 "	$39 \cdot 2$	Bottom,	$34 \cdot 3$
700 "	$37 \cdot 9$		

Density at $60^{\circ} F.$:—

Surface,	$1 \cdot 02642$	400 fathoms,	$1 \cdot 02576$
100 fathoms,	$1 \cdot 02635$	Bottom,	$1 \cdot 02626$
200 "	$1 \cdot 02646$		

Depth, 2900 fathoms; deposit, Red Clay with pumice, containing no carbonate of lime (see Murray and Renard, Deep-Sea Deposits Chall. Exp.).

At 8.30 A.M. got up steam. At 9 A.M. shortened and furled sails, proceeded under steam, and sounded in 2900 fathoms. Obtained serial temperatures at intervals of 100 fathoms down to 1300 fathoms. At 1.20 P.M. completed heaving in line, and at 1.30 P.M. made sail. At 6 P.M. got up steam, and at 6.30 P.M. proceeded under steam.

Distance at noon from Eooa Island, 248 miles. Made good 126 miles. Amount of current 28 miles, direction S. $52^{\circ} E.$

AT TONGATABU.

The Challenger arrived at Tongatabu at 9 A.M. on July 19, remaining there till 8 A.M. on July 22, 1874 (for description of Tongatabu see *Narr. Chall. Exp.*, vol. i. pp. 477-486).

STATIONS 172
AND 172A
(TONGATABU).

Stations 172 and 172A (Soundings 296 and 297), off Tongatabu (see Chart 28).

July 22, 1874.

Temperature of air at noon, $71^{\circ} \cdot 0$; mean for the day, $69^{\circ} \cdot 7$.

Temperature of water at surface, $75^{\circ} \cdot 0$.

At 7 A.M. got up steam. At 7.50 A.M. weighed anchor and proceeded out of Tongatabu Harbour, passing between Mallenoah and Attataa Islands. At 10 A.M. stopped and