

STATION 42.

to 1500 fathoms, at intervals of 100 fathoms, to complete the series of the previous evening. At 2 P.M. the temperature of the sea-surface suddenly rose from $65^{\circ}5$ to $71^{\circ}5$, showing that the ship had slipped over the eastern edge of the Gulf Stream. Owing to the cloudy and somewhat boisterous weather, little difference was observed in the appearance of the water. At 8 P.M. the surface temperature reached 73° , while the thermometer in the air stood at 64° . A flock of water-rails alighted on the rigging of the ship, and several were caught by the sailors; numerous stormy petrels were about the ship.

Distance from Sandy Hook at noon, 308 miles. Made good 37 miles. Amount of current 17 miles, direction N. 65° W.

ORGANISMS FROM
SURFACE-NETS.

Surface Organisms.—The following species is recorded from this Station, evidently from the surface:—

MACRURA (Spence Bate, Zool. pt. 52).

Sergestes atlanticus, M.-Edwards.

STATION 43.

Station 43 (Sounding 101), Bermuda to Halifax (see Chart 9 and Diagram 2).

May 1, 1873; lat. $36^{\circ} 23' N.$, long. $71^{\circ} 46' W.$

Temperature of air at noon, $60^{\circ}0$; mean for the day, $62^{\circ}5$.

Temperature of water:—

Surface,	$75^{\circ}0$	225 fathoms,	$51^{\circ}0$
20 fathoms,	$71^{\circ}2$	250 "	$49^{\circ}7$
40 "	$71^{\circ}0$	300 "	$47^{\circ}7$
60 "	$71^{\circ}0$	350 "	$46^{\circ}2$
80 "	$68^{\circ}0$	400 "	$44^{\circ}8$
100 "	$64^{\circ}0$	450 "	$43^{\circ}8$
125 "	$59^{\circ}5$	500 "	$42^{\circ}9$
150 "	$56^{\circ}4$	550 "	$42^{\circ}0$
175 "	$54^{\circ}0$	600 "	$41^{\circ}0$
200 "	$52^{\circ}2$	2600 "	$36^{\circ}8$

Density at 60° F. at surface, 1.02674.

Depth, 2600 fathoms.

At 6.30 A.M. shortened and furled sails, and got up steam to sound. At 7 A.M. commenced sounding. A considerable swell made the various operations somewhat difficult. The line parted, and two thermometers, the hydra, and water-bottle were lost. In the second sounding no bottom was found at a depth exceeding 2600 fathoms. At 1 P.M. tried current at different depths, and obtained serial temperatures. During the ten hours