ward, until it reached 41° on the 21st May in lat. 42° 10′ N., long. 63° 39′ W. From this position the change was more rapid, as at 7 A.M. on the 22nd, in lat. 41° 19′ N., long. 63° 11′ W., the temperature at the surface was 57°·5. It is remarkable that although the ship remained stationary the whole of that day, sounding and dredging, and although no current whatever could be detected whilst so employed, yet the temperature at the surface increased from 57°·5 at 7 A.M. to 62°·5 at 4 P.M. It is true that the sky was clear, and that the power of the sun was therefore great, still it will be seen, by referring to the meteorological register, that the maximum temperature of the air was 61°·0, or 1°·5 below that of the water, although the wind was from the southward.

At 6 P.M. on that day, having completed the observations, the vessel proceeded towards Bermuda, the surface water retaining its temperature of 62°·5 until 8 P.M., after which it fell to 58°·0, and at midnight to 54°·0, but at 1 A.M. on the 23rd May it rose again to 64°·8, and at 1.30 A.M. to 68°. At 4 A.M. the surface water attained a temperature of 70°·5, which it retained until 9 A.M., when a line of ripple on the water was passed, and the temperature fell to 66°·5. At 10.15 A.M. on the 23rd the ship stopped to sound, remaining stationary until 5 P.M.; during this time the surface water, which was ascertained, by astronomical observation, to be running to the southward (confirmed by having to steam to the northward to keep the line perpendicular), varied in temperature from 67°·2 to 68°·0. The position at this time was lat. 39° 44′ N., long. 63° 22′ W., and the serial temperature sounding placed the isotherms of 60°, 50°, and 40° at precisely the depths that they occupied at Bermuda, then distant 450 miles, and these depths they steadily retained for the remainder of the section (see Diagram 2).

At 5 P.M. on the 23rd the course was continued towards Bermuda, and the surface temperature was found to vary from 67°·0 to 71°·2 until 8 A.M. on the 24th, when it rose to 73°·5, and remained steady until 6 P.M. A serial temperature, taken at 4 P.M. in lat. 38° 16′ N., long. 63° 17′ W., showed that the temperature of 73° continued to a depth of 50 fathoms, but that between 50 and 75 fathoms a decrease of 5°·5 took place. The current, as ascertained by difference between the position calculated from D.R. and observation between 9.30 A.M. and 4 P.M. was easterly, its rate being 1½ miles per hour. Unfortunately, the weather on the 24th was unfavourable either for sounding or dredging, so that it was impossible to test the current by mooring a boat.

After 6 P.M. on the 24th the surface temperature again became variable, falling to 64°·5 by 8 A.M. on the 25th, and varying between 64°·5 and 69°·5 until 4 A.M. on the 26th, when it again rose to 70°·5 and at 2 P.M to 73°·5, but the serial temperatures on that day (at Station 53) showed that the warm water was quite superficial, as at 25 fathoms the temperature was 69°, and at 50 fathoms 66°, whereas on the 24th the temperature of 73° was observed at the latter depth.