

The results of Mr. Buchanan's observations are given for each section in tables forming Appendices to the several chapters. In these tables the specific gravity is given at the temperature at which the determination was made; at the temperature reduced to $15^{\circ}56$ C.; and at the temperature which it had in the position in the ocean from which it was taken—the specific gravity of distilled water at 4° C. being retained as the unit.

With a single exception, off the coast of Brazil, the densest water which we have met with in the ocean was found on the section from Teneriffe to St. Thomas in the heart of the north-east trade-wind territory, where, from the strength and dryness of the wind, the amount of evaporation must be very large. Round about the Canary Islands the mean specific gravity was found to be 1.02730; to the westward it rises steadily until in long. 28° W. it has reached 1.02762. Between long. 28° W. and 54° W. the mean specific gravity is 1.02773, the maximum being 1.02781. On approaching the West Indies, it rapidly falls off to an average of 1.02719 in the neighborhood of St. Thomas; and if we take into account all the observations made on the western side of the Atlantic, from St. Thomas northward to the edge of the cold water which separates the Gulf-stream from the coast of America, we obtain the same average, 1.02719. Between Bermudas and the Açores an almost perfectly uniform specific gravity was observed, the mean being 1.02713, and the extremes 1.02694 and 1.02727. As Madeira is approached, the specific gravity rises until it reaches 1.02746 close to the island itself. The mean specific gravity on the eastern side of the North Atlantic, between the latitude of St. Thomas and that of the Açores, is 1.02727, or slightly higher than that of the water on the western side.

After leaving the Cape Verde Islands, the ship's course lay almost parallel to the African coast, and at an average distance of about 200 miles from it. Proceeding thus in a south-easterly