perature for the last mile and three-quarters is its absolute uniformity, which appears to be inconsistent with the idea of anything like a current in the ordinary sense, and rather to point to a slow and general indraught of cold water, falling in chiefly by gravitation from the coldest and deepest sources available, to supply the place of the warm water constantly moving to the northward.

In 1870, Mr. Gwyn Jeffreys took his first temperature observations at the mouth of the Channel, and found them to correspond very closely with those of the previous year; on the 9th of July the bottom temperature at 358 fathoms, Station 6 Pl. V., was 10°·0 C., against 9°·8 C., at about the same depth in a serial sounding in 1869, in the immediate neighbourhood. The next few soundings, Stations 10 to 13, are in comparatively shallow water, off the coast of Portugal, while the next four Stations, a little north of Lisbon, may serve as an example of the temperatures to a considerable depth in that latitude. Station 14, 469 fathoms, with a surface temperature of 18°·3 C., has a bottom temperature of 10°·7 C.; Station 15, at 722 fathoms, a temperature of 9°·7 C.; Station 16, at 994 fathoms, 4°·4 C.; and Station 17, at 1,095 fathoms, 4°·3 C. This result is very similar to that which we met with in 1869 off Ushant. With certain differences, which seem to depend mainly upon the differences of latitude, we have the same phenomena—a thin surface-layer, superheated by the direct rays of the sun; a layer of warm water through which the temperature descends very slowly down to 800 fathoms; a zone of intermixture and rapid descent of the thermometer of nearly 200