

undoubtedly a gradual elevation of an intertropical belt of the underlying cold water, which is being raised by the subsiding of still colder water into its bed to supply the place of the water removed by the equatorial current and by excessive evaporation; but such a movement must be widely and irregularly diffused and excessively slow, not in any sense comparable with the diaphragm produced in the atmosphere by the rushing upwards of the north-east and south-east trade-winds in the zone of calms. Perhaps one of the most conclusive proofs of the extreme slowness of the movement of the deep indraught is the nature of the bottom. Over a great part of the floor of the Atlantic a deposit is being formed of microscopic shells. These with their living inhabitants differ little in specific weight from the water itself, and form a creamy flocculent layer, which must be at once removed wherever there is a perceptible movement. In water of moderate depth, in the course of any of the currents, this deposit is entirely absent, and is replaced by coarser or finer gravel.

It is only on the surface of the sea that a line is drawn between the two hemispheres by the equatorial current, whose effect in shedding a vast intertropical drift of water on either side as it breaks against the eastern shores of equatorial land may be seen at a glance on the most elementary physical chart.

The Gulf-stream loses an enormous amount of heat in its northern tour. At a point 200 miles west of Ushant, where observations at the greatest depths were made on board the 'Porcupine,' a section of the water of the Atlantic shows three surfaces at which interchange of temperature is taking place.