

It appears, then, that at the Falkland Islands the temperature of the sea is, as a rule, higher than the temperature of the air, and this seems the more extraordinary, because it is well known that the current in the vicinity comes from the southward, for on all parts of the southern shores of this group the beaches or rocks are covered with trees which have drifted from Staten Island or Tierra del Fuego; and at sea, northward of the Falklands, great quantities of drift-kelp are seen, besides water-worn trunks and branches of trees, near which there are generally fish and numbers of birds.

The fact appears to be that on the western coast of South America the surface drift, impelled by the westerly winds, strikes against the shore and there accumulating somewhat, runs off along the coast, or, in short, bifurcates somewhere between Chiloe Island and Valparaiso, one part running into warm latitudes and consequently cooling the temperature of the air along the whole seaboard of Chili and Peru, whilst the other part running southwards into colder latitudes warms the seaboard of Patagonia, and rounding Cape Horn, affects the climate of Tierra del Fuego and extends its influence even as far north as the Falkland Islands.

That such a current exists, and that it is warmer than the sea in its neighbourhood, is evident from the temperatures obtained in the vicinity of Cape Horn, for a comparison of the results registered in the Appendix to the voyages of the "Adventure" and "Beagle," with the temperatures published in pamphlet No. 11 of the Meteorological Committee, shows first, that in the vicinity of the western coast of Patagonia the mean temperature of the sea is almost invariably warmer than that of the air throughout the year; and secondly, that the temperature of the sea is decidedly warmer in the immediate vicinity of Cape Horn in the months of January, February, and March than it is a few miles south of it; for a reference to Fitz Roy's observations shows that in St. Martin's Cove, in December 1832, the mean temperature of the surface water was about 47° , and that this temperature extended to the Diego Ramirez Islands, whereas 30 miles to the southward in the same month it was 42° . Again, in January and February 1833, whilst the "Beagle" was employed surveying the anchorages surrounding Nassau Bay, the temperature of the sea surface ranged from $48^{\circ}5$ to $55^{\circ}5$, whilst in those months, in the square in which Cape Horn is situated, the mean temperature is 43° to 45° .¹

Unfortunately, comparisons cannot be drawn between the temperature of the sea in the immediate neighbourhood of the south coast of Tierra del Fuego and at a distance of from 40 to 50 miles southward in any other season of the year, for so far as is known there have been no observations taken except those of the "Chanticleer" at corresponding times. The one observation of the "Chanticleer" in March 1829 agrees with the theory of a warm current inshore, for on approaching Cape Horn the temperature of the sea increased 4° in 43 miles. The want of observations off Cape Horn is to some extent compensated by the observations of Sir James Ross at Port Louis, Falkland Islands, in

¹ No. 11 pamphlet of the Meteorological Committee.