Captain Maury is also of opinion * that a submarine counter-current prevails to the south of Cape Horn, and carries into the Pacific the superfluous waters of the Atlantic. In truth, the Atlantic is incessantly fed and nourished by copious rivers, while the Pacific, receiving no important tributary, must, on the contrary, undergo an enormous loss through the great evaporation which takes place on its surface.

Lieutenants Walsh and Lee, of the American Navy, have made some interesting experiments on the under-currents. They weighted a piece of wood so as to make it sink, but retained command of it with a fishing-line, to whose other extremity they attached an empty barrel, sufficiently large to support the apparatus; then they allowed the whole to go free. It was a truly extraordinary spectacle to see the barrel moving against wind and tide, at the rate of more than a knot an hour. The crew uttered exclamations of surprise on seeing it speed ahead as if dragged by some marine monster; many of the sailors even manifested a degree of alarm. The velocity of the barrel was evidently equal to the difference of velocity between the upper and under currents.

In 1773, the vessel of one Captain Deslandes was lying at anchor in the Gulf of Guinea; a strong current pouring into the bay prevented it from going more to the south. Deslandes then remarked that there existed an under counter-current, at a depth of fifteen fathoms, and took advantage of it in a very ingenious manner. A machine, offering a considerable extent of surface, was lowered to the depth of the counter-current, by which it was drawn forward with so much impetuosity as to tow the ship at the rate of a mile and a half per hour.

In the Caribbean Sea, a vessel may sometimes moor herself, by the same means, in the very centre of a current.

In the Sound, a double upper and under current was long ago proved to exist.

* [The subject of ocean-currents is fully investigated by Captain Maury in his admirable work on "The Physical Geography of the Sea."]