

different from those which are usually considered to be the only ones in action.

In order to obtain precision of language, I have chosen to distinguish between *streams* and *currents*, employing the former term to express the movements of water by which the circulation of the great mass of the ocean is maintained, and confining the latter to those less extensive in their influence, or local in their effects; and the direction from whence the great streams are derived as *polar* and *equatorial*.

I shall now proceed to speak of the streams which we met with on our voyage, citing, whenever it is necessary, such facts derived either from *general experience*, or the authority of individual observers, as may be useful to extend the inferences, or verify our own observations.

Immediately after our departure from the capes of Virginia, we felt the influence of a stream setting to the southward, and parallel to the coast. The existence of this was apparent from our first observation of latitude. It may, however, often escape notice, as the navigator is apt to ascribe the effect of this stream rather to an error in taking his departure, than to a set of current. In order that the fact may be clearly perceived, it is necessary that the distance of the vessel from the lighthouse, or other object on shore with which the dead reckoning begins, should be determined by precise observations, instead of being merely estimated, as is the usual mode. Notwithstanding the inaccuracy growing out of this cause, it has been long known to seamen that a counter-current is setting close to the inner edge of the Gulf Stream, and has been distinguished by them as its eddy. That it cannot be of the nature of an eddy of that heated body of water, is evident from the great difference of temperature, which falls suddenly fifteen or twenty degrees, in passing from the Gulf Stream into that which flows in an opposite direction. The latter is also five to ten, and even fifteen degrees colder, according to the season, than the waters of our bays or rivers.

The inner stream flowing to the southwest is now well known to exist along our whole eastern coast and that of Nova Scotia, and the masters of our packet-ships have by experience discovered the value of which it may be to them in their homeward passage. This they do by keeping to the north of the forty-second parallel until off Cape Sable.

Tracing this stream in a direction opposite to its course to the most distant part of Nova Scotia, it is found to be a part of one that flows southwards along the shore of Labrador, and which is well known by the name of that country. The Labrador Stream therefore flows along the coast of the New Continent, from Davis's Straits as far to the south