

turies, diverted about four miles to the south. In like manner it is evident that, at some remote period, the river Alde entered the sea at Aldborough, until its ancient outlet was barred up and at length transferred to a point no less than ten miles distant to the south-west. In this case, ridges of sand and shingle, like those of Lowestoff Ness, which will be described by and bye, have been thrown up between the river and the sea; and an ancient sea-cliff is to be seen, now inland.

It may be asked why the rivers on our east coast are always deflected southwards, although the tidal current flows alternately from the south and north? The cause is to be found in the superior force of what is commonly called "the flood tide from the north," a tidal wave derived from the Atlantic, a small part of which passes eastward up the English Channel, and through the Straits of Dover and then northwards, while the principal body of water, moving much more rapidly in a more open sea, on the western side of Britain, first passes the Orkneys, and then turning, flows down between Norway and Scotland, and sweeps with great velocity along our eastern coast. It is well known that the highest tides on this coast are occasioned by a powerful north-west wind which raises the eastern part of the Atlantic, and causes it to pour a greater volume of water into the German Ocean. This circumstance of a violent *off-shore* wind being attended with a rise of the waters, instead of a general retreat of the sea, naturally excites the wonder of the inhabitants of our coast. In many districts they look with confidence for a rich harvest of that valuable manure, the sea-weed, when the north-westerly gales prevail, and are rarely disappointed. The phenomenon is so well calculated to awaken curiosity, that I have heard the cause discussed by peasants and fishermen; and more than once they have hazarded a theory of their own to account for it. The most ingenious idea which I heard suggested was this: a vast body of surface water, say they, is repelled by the wind from the shore, which afterwards returns in order to restore the level of the sea; by this means a strong under-current is produced, which tears up the weed from the bed of the sea, and casts it ashore. The true explanation, however, of the phenomenon is doubtless that above mentioned.

*Coast of Suffolk.* — The cliffs of Suffolk, to which we next proceed, are somewhat less elevated than those of Norfolk, but composed of similar alternations of clay, sand, and gravel. From Gorleston in Suffolk, to within a few miles north of Lowestoff, the cliffs are slowly undermined. Near the last-mentioned town, there is an inland cliff about sixty feet high, the sloping talus of which is covered with turf and heath. Between the cliff and the sea is a low flat tract of sand, called the Ness, nearly three miles long, and for the most part out of reach of the highest tides. The point of the Ness projects from the base of the original cliff to the distance of 660 yards. This accession of land, says Mr. Taylor, has been effected at distinct and distant intervals, by the influence of currents running between the land and a shoal about a mile off Lowestoff, called the Holm Sand. The lines