

"A River in the Ocean "

THERE is a river in the ocean. In the severest droughts it never fails, and in the mightiest floods it never overflows. Its banks and its bottom are of cold water, while its current is of warm. The Gulf of Mexico is its fountain, and its mouth is in the Arctic Seas. It is the Gulf Stream. There is in the world no other such majestic flow of waters. Its current is more rapid than the Mississippi or the Amazon, and its volume more than a thousand times greater.

"Its waters, as far out from the gulf as the Carolina coasts, are of an indigo blue. They are so distinctly marked that their line of junction with the common sea water may be traced by the eye. Often one half of the vessel may be perceived floating in the Gulf Stream, while the other half is in common water of the sea ; so sharp is the line and such the want of affinity between those waters, and such, too, the reluctance, so to speak, on the part of those of the Gulf Stream to mingle with the common water of the sea."

With these words an American writer half a century ago began his famous study of the winds and currents of the Atlantic Ocean, of which the Gulf Stream is the most interesting feature. Whence comes this vast ocean river ? To what causes are its movements due ? We know that it issues from the Gulf of Mexico through the Strait of Florida and flows northwards parallel to the coast as far as Cape Hatteras, where it bends eastwards, making for the open ocean. Its source in the gulf is fed by a current from the Caribbean Sea ; this in its turn receives its waters partly from the south Atlantic, in the form of a drift current from Africa, and partly from the north Atlantic. Thus there is in the north Atlantic a vast circular movement or eddy, of which the Gulf Stream is the most rapid and the best known part.

In the centre of an eddy, such as we may see in any of our rivers, the water has little or no movement, and to this place is gathered much of the loose floating material which is drifting