

his address to the Royal Institution, Dr. Carpenter states, that "the Gulf-stream constitutes a peculiar case, modified by local conditions," of "a great general movement of equatorial water towards the polar area." I confess I feel myself compelled to take a totally different view. It seems to me that the Gulf-stream is the one natural physical phenomenon on the surface of the earth whose origin and principal cause, the drift of the trade-winds, can be most clearly and easily traced.

The further progress and extension of the Gulf-stream through the North Atlantic in relation to influence upon climate has been, however, a fruitful source of controversy. The first part of its course, after leaving the strait, is sufficiently evident, for its water long remains conspicuously different in colour and temperature from that of the ocean, and a current having a marked effect on navigation is long perceptible in the peculiar Gulf-stream water. "Narrow at first, it flows round the peninsula of Florida, and, with a speed of about 70 or 80 miles, follows the coast at first in a due north, afterwards in a north-east direction. At the latitude of Washington it leaves the North American coast altogether, keeping its north-eastward course; and to the south of the St. George's and Newfoundland Banks it spreads its waters more and more over the Atlantic Ocean, as far as the Açores. At these islands a part of it turns southwards again towards the African coast. The Gulf-stream has, so long as its waters are kept together along the American coast, a temperature of  $26^{\circ}6$  C.; but, even under north latitude  $36^{\circ}$ , Sabine found that