

doubt, are the recurvations of the Australian and Good Hope streams; they, like the Gulf Stream and Kuro-Siwo, throwing only portions of their volume into the Polar Sea, whilst the rest recurves and falls again into the equatorial currents on the opposite sides of the oceans from whence they spring.

THE CLIMATE OF ITALY.

Of the oceanic coasts of the northern hemisphere I have before spoken, but not of those of the Mediterranean, and to which I will now call your attention. Naples, in southern Italy, is in the same latitude as New York, and Genoa and Marseilles about the same parallel as Toronto—yet, at Genoa I have plucked ripe oranges from the tree early in February, and Naples has even a much more vernal climate. This is attributed to the warm winds from Africa; but, as you will observe, these winds have to cross the Mediterranean at its widest part, a distance of near four hundred miles. Now, if these winds have such influence as this, why should not those from the perpetual snows of the Alps give a severe climate to the plains of France and Italy, which lie directly at their feet, and not fifty miles from this snow? Yet these plains, in the latitude of Maine, are verdant with a perennial summer. The winds, therefore, are not the agency that produces this, but rather the warm waters of the Gulf Stream, which, as a surface current, flows constantly into the Mediterranean through the Straits of Gibraltar, and with such velocity, too, that when the wind is from the westward, sailing vessels are unable, sometimes for weeks together, to pass out into the Atlantic. But, even admit that the winds from Africa are the cause, then whence does northern Africa, with its latitude of 34° north, obtain such an excess of heat, as to be able to throw off enough across the whole width of the Mediterranean to change so materially the climate of such an immense region as this? It cannot be derived directly from the sun, for DuChaillu, as before shown, found a lower average of temperature within one degree of the equator than is enjoyed in Italy. But, it may be said, northern Africa being a desert, will account for its being so much hotter than the region visited by Du Chaillu. This, no doubt, has its effect, but not to the extent necessary to produce such results; for I have been in this desert, and also in the jungles of Ceylon and India, where the rank growth of vegetation was so dense that the sun's rays never reached the soil, yet the latter were hotter than the former, because, as before shown, the waters of the Indian Ocean are hotter than those of the Mediterranean. The latter, however, are sufficiently warm, when bathing the shores of Spain, France, and Italy, to diffuse heat enough to give them the delicious tropical climates they enjoy.

Pursuing these reflections, this matter presents a phase of