

EXTRACT of a letter from Vice-Admiral Sir ALEXANDER MILNE, K. C. B., to the President, concerning the currents on the N. E. coast of America.

“I am much interested in the question of the currents, and during many years that I navigated the coast of Nova Scotia, and between Halifax and Bermuda, had invariably attended to the set of the Gulf Stream. The best information, however, which has been published of its strength, &c. off the coast of the United States, will be found in Blunt’s American Coast Pilot, from the survey and report of the Government Surveyors. My own observations extend more to the north, and give the northern limit, or rather a north west limit, of which I will give you an abstract from my notes. I conceive this limit is caused by the deep current coming in contact with the shoals or soundings in some two or three hundred fathoms water extending from the shore of Nova Scotia, after passing over this limit, or from the line of the warm water into the cold, the currents become uncertain, and this is the case all along the coast of Nova Scotia up to the latitude of Scatterie. The other great current is the one from the Polar Regions, along the east coast of Newfoundland, extending down to the latitude of Cape Race, when a western part of it runs round it into the Bay of St. Mary’s; but the eastern part becomes lost; it is probably checked by a northern limit of the Gulf Stream and turns it more into a north east direction. In the admiralty there is no single volume specially devoted to these various currents; but in Bayfield’s St. Lawrence, and the Nova Scotia Pilot, Rennells’ currents, you will find various extracts from the surveyor’s report, but the outer currents, that is, those distant from the shore, are but little known. * * *

“I have no doubt that tropical seeds, fish, crustacea, &c., are carried up to northern latitudes and deposited by the Gulf Stream. Very much to my surprise I saw a shoal of flying fish in Lat. $37^{\circ} 50' N.$ Long. $64^{\circ} 50' W.$, the temperature of the water being 73° , air 71° . I never expected to have seen them so far from a West Indian sea, although some few exist at Bermuda of a small size, but those in the Stream were of a larger description of the West Indian fish. They were very lively and rose in numbers. There is no record of soundings on the north edge of the Gulf Stream, and I cannot find that any sand &c. has ever been brought up by the lead; no doubt it would be an interesting source of investigation, but I see no prospect of its ever being carried out by government, unless a special surveying vessel was employed to trace the line of sounding from the eastward of Sable Island round to the St. George’s Shoals.”

“P. S.—The mean northern limit of the Gulf Stream between Halifax and Bermuda from fourteen voyages was found to be in Lat. $40^{\circ} 56' N.$, Long. $63^{\circ} 45' W.$ ”