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## Very Interesting Letter from President Macaulay.

DEAR SUNSHINE,

If I can be afforded the requisite space in your columns, I would like to follow up my remarks in August number about the warm sea water of Prince Edward Island, with a communication in an endeavor to trace up its origin to the Gulf Stream. At first you may be disposed to regard the thought as purely chimerical with no foundation in fact. Well, it is said that "fools make feasts and wise men eat them :" and we are cautioned to " never wade in unknown waters." Saws like these may be useful in the nursery where excess of prudence is often needed and may be a virtue. Columbus is admired for his courage in wading in waters quite unknown to him. There is much truth in such sayings as "Never venture never win," and "Cast thy bread upon the waters, for thou shall find it after many days." Complete the reading of my MS. before confiding it to the waste tasket. These two incontrovertible facts demand explanation, viz., the "vapor net" and the purling of two waters in the St. Lawrence Gulf near to Gaspe, and the "peculiar phenomenon," quoted from Captain Nares' "Voyage of the Challenger," noted on page 116. One would like to know the cause of these phenomena. To me they seem to be traceable to the same potential cause, the Gulf Stream in conflict with the Arctic current as it curves around Newfoundland banks and Belle Isle Straits.

Personally I have had some experience at places where currents meet, and I may as well introduce my subject by briefly narrating those experiences.

The phenomena that distinguish such trysts is principally the warring element in one form or another—the element most characteristic of all antagonisms, human as well as unreasoning nature. The surface appearances, whether mild or furious, exhibit unmistakeable features of antagonism, mutual resistance. The critical observer perceives them readily.

I. There is the tempestuous Pentland Firth, in the North of Scotland, where several conflicting currents are thrown headlong into a narrow strait, between the mainland and the Orkneys, and where the tides also acquire great energy at certain stages in their diurnal progress; there the impact is fast and furious, throwing great volumes of water high into the air to the imminent danger of small craft seeking passage at the time. I can recall being aboard a deckless wherry when a boy, and greatly wondering at the dauntless courage of the sailors in daring to face such manifest danger in a ship so frail and so unprotected. Mutual resistance was very manifest.

2. The following two meets were of the mild and gentle sort. The first was on a hot calm July day on board the S.S. Miramichi as she paddled her southward course in the Gulf of St. Lawrence, somewhere south of Gaspé, there suddenly appeared as if a huge net was suspended from the sky right across the ship's bow. The time for observation was very brief indeed, for like a boys' soap bubble when pricked, it quickly dissolved and disappeared from view as we approached; but on the surface of the water, just about where the base of the net had been there was evident purling of two or more waters in gentle strife-very gentle indeed, yet it was distinguishable as a faint attempt at pouting and purling, the surface evidence of gentle resistance at the junction. That slight resistance was doubless responsible for the vapor that gave us the panoramic net view.

Now you will naturally enquire how should the impact of two considerable waters be so gentle? Well, I think some well-known facts will explain that. While I have said "two considerable waters," that was to accentuate the seeming anomaly, the fact being that there is reason to think the warm element to be quite inconsiderable, while the other in volume is very large yet its energy going southward is sluggish. The explanation I offer is that the Belle Isle