

tains in British America and the United States. But to this subject we shall refer later on.

The climate of South-eastern Alaska, between  $54^{\circ} 40'$  and  $58^{\circ} 10' N.$  lat., is a source of constant surprise to visitors from the Atlantic slope. It is true that Wrangel, at  $56^{\circ} 30'$ , is but a few miles north of Edinburgh; that Sitka, at  $57^{\circ}$ , is more than ten miles south of Aberdeen, and that Juneau is twenty miles south of Pentland Firth; but on the Atlantic coast of North America, the same parallels pass through bleak and dismal Labrador, while on Hudson's Bay, at  $57^{\circ}$ , lies Fort York, where the summer heat penetrates but a few feet below the surface. Yet, on this west coast trees grow three thousand feet above the sea at Wrangel, and up to the mountain tops at Juneau. The rainfall is great, amounting to one hundred and three inches at Juneau, though it is less at Sitka, directly on the ocean. The variation in temperature is not great; the mercury rarely falls below ten degrees above zero at Sitka, and as seldom rises above seventy-five degrees. Of course, the extremes are much greater on the mainland beyond the mountains, where the summer heat and winter cold are much more intense than immediately on the coast. Alaska has not been an unprofitable investment for the United States; its purchase secured the goodwill of Russia at a critical period in American history, and the purchase-money has been repaid, or nearly so, by royalties on seal fishing. But the agricultural capabilities are limited indeed; there is little land fit for tillage; and the moist summer with its low temperature is unfavourable to the ripening of grain. Gardens, however, are successful at Sitka and Wrangel, and the commoner vegetables are raised without difficulty. Berries of many kinds grow luxuriantly, and the coast Indians collect abundance of whortleberries, blackberries, and other familiar kinds for use in winter.

This remarkable contrast between the Atlantic and Pacific coasts of North America is due to the influence of the Kuro Siwo, or great Japanese current, which is similar to that of the Gulf Stream upon the west coast of Europe. And there are many points of resemblance between the two streams. The Japanese current is divided by a cold northern current at about N. lat.  $38^{\circ}$  and E. long.  $150^{\circ}$ , and fogs are produced by the contact, as they are when the Gulf Stream meets the Labrador current in the north Atlantic. The Kamschatka or northerly branch flows into Bering's Sea and passes through Bering's Strait into the Arctic Ocean, first striking the coast of Northern Alaska: the mild climate of that coast is due to it, and possibly its influence on the ocean temperature has much to do with the presence of fur-seals in Bering's Sea. The main body of the stream crosses the ocean and reaches the American coast not far from the straits of San Juan de Fuca, whence it flows southward to join the Great Northern Equatorial Current off Lower California. Many years ago, a junk with a cargo of beeswax was wrecked at the mouth of the Columbia river, and to this day pieces of the wax are thrown on the shore during severe storms. In 1833, a Japanese junk was wrecked off Cape Flattery, and in the early "sixties," another was found in mid-ocean by an American vessel on which the crew were taken to San Francisco.<sup>1</sup> Distinct proof

<sup>1</sup> George Davidson, in *U.S. Coast Survey Report for 1867*, pp. 202 et seq.