

North America faces three oceans. On the north is the extremely cold Arctic Sea, mostly covered by enduring ice: it is the extreme coldness of this sea, and its ice-clad character near the continent of America, that in good part causes the great severity of its winters. Where the Arctic Sea lies against Europe and Asia it is partly warmed by the Gulf Stream, and so is not completely ice-bound even in winter; but that part of it which lies near the northern coast of America is ice-bound the whole year, and the winds that come from it are many degrees below those that come over open water.

Both the Atlantic and Pacific oceans send streams of warm water against the American coast. But the Gulf Stream has actually very little direct effect upon our climate; it only touches the coast about the Gulf of Mexico, where the temperature is naturally so high that its warming power is not felt. It then leaves our coast, to give its warmth to the shores of Europe and to the European part of the Arctic Ocean. The Pacific current corresponding to the Gulf Stream is feebler than the Atlantic current, and sends its tide of waters against the northwest shore of America. Its effects on that coast are very noticeable; but they are limited, by the geography of that shore, within narrow bounds. In the first place, the passage of Behring's Strait is too small to permit its waters to have access to the Arctic Sea; then the high ranges of the Cordilleras fence off the interior of the continent, so that the warm winds that blow from the sea cannot penetrate far to the east. Confined to the shore, the heat of the Pacific Gulf Stream generates a large amount of fog; this fog shuts off the sun's rays, and so lowers the temperature almost as much as the current itself serves to raise it.

The distribution of moisture over the surface of the continent is effected in much the same way as is the distribution of heat. The Gulf Stream gives an abundant rainfall to the States about the Gulf of Mexico lying to the north of that basin; its effects on the rainfall are seen even as far north as the New England States, but they have little effect to the west of the Mississippi River. The high mountains of the Cordilleras cut off the Pacific winds from the centre of the continent, so that very little of the water which flows down to the Gulf of Mexico or to the Atlantic is derived from the Pacific. From the general conditions thus rudely outlined the following arrangement of climates arises. The northern half of the continent is more completely under the dominion of the Arctic Sea than any part of Europe or Asia; the only parts of it fit for the use of civilized man are the northern watershed of the St. Lawrence, the valley of Lake Winnipeg and the Saskatchewan, and the west-coast region as far north as Alaska. The rest of the northern part of the continent is practically barred out from the life of the race by the intensity of the winter cold, and by the brevity of the summer season.

South of this domain of northern cold, North America divides itself, by its climate, soil, and topographical reliefs, into the following fairly distinct regions: (1) The eastern lowlands lying between the shore and the Appalachian range; these shade southwardly into (2) the lowlands of the Gulf States, which is the only part of North America in the immediate control of the Gulf Stream. These Gulf lowlands pass northwardly into (3) the great plain of the Mississippi Valley. Between these lowlands of the centre of the continent and the Atlantic sea-coast lie (4) the table-lands and moun-