

and the Alaskan islands, and then turns to sweep southward along the coast of British America. The prevailing winds there, as everywhere else in the North Temperate Zone, are from the West; and these, after passing across thousands of miles of unobstructed and well-warmed ocean, come to us loaded with moisture. Warm air, you must remember, because expanded by its warmth, will absorb more moisture than cold, so that these Pacific winds are saturated by the time they reach the shore.

Now the mountains begin to do their part.

One cannot appreciate how important is the influence of the mountains of the globe upon its climates, until he stops to think what a state of things would exist in their absence. Weather is simply the state of the atmosphere in respect to temperature, dryness or wetness and the like. What affects these conditions causes a change in the weather. Were the surface of the continents flat, temperature would decrease from the equator precisely in ratio with the latitude, subject only to the influence of winds from the ocean, which would blow with unfailing regularity and continuance, bearing a definite quantity of moisture and depositing it, probably unceasingly, in the same place, year after year. Heat and cold in climate would then be almost entirely a matter of summer or winter, or distance from the equator, and wet weather would belong wholly to certain zones, migrating with the seasons, while all the rest of the world would be arid.

But the irregularities of the surface of the globe interfere with this, and make it a tolerable place to live. Without mountains (if we can conceive of such a state of things) the earth would scarcely be habitable—or at any rate comfortable. But the hills rise up toward the spaces of eternal frost which encircle the globe only a few thousand feet overhead, and act as condensers. The damp ocean air coming near them is cooled down to its dew point—that is, to a point where the invisible vapor of water it carries is changed into perceptible drops, clouds are formed and perhaps rain falls.