

and that the climate of the interior of the country differs from that of the sea-coast, whether of the Atlantic or Pacific side. So in the interior, bordering on these lakes at the north and west, you know that these bodies of water very much modify the climate. All who live near these lakes, know very well that the climate is very much modified by them, that is to say, that the capability of the land to produce certain crops, is modified by the position it occupies on the borders of these great inland seas. You know further, that the rivers of a country have a great influence, not only on the agricultural products of a country. Suppose the interior of this country were not intersected by these great rivers. Large rivers, are the great highways to market, and you know how little would be the profit to the farmer, who is distant from market, but for these rivers, though he might raise any quantity of grain.

ELEVATIONS—DELTA, &c.

A most important point in physical geography, is the elevation of a place above the level of the sea. In various parts of the world there are great ridges of mountains all of which you are familiar with, as well with the high table lands, which are to be found in many localities in Europe and America. All these mountain elevations, table lands, and plains, are characterized from certain circumstances, by peculiar agricultural products, entirely depending on physical conformation. These things are obvious and I pass over them.

But the effect of elevations is felt at a great distance. Two illustrations will suffice, on the first, I do not, I will merely name it. Prof. J. here pointed to the map of Europe—to the North sea—to Holland—to the Rhine, tracing its rise in the mountains of Switzerland, until it empties into the North sea, forming at its mouth, islands or deltas. All of you, he continued, recollect the fact, I shall hereafter advert to, of the peculiar unhealthiness of the deltas there.—Now, the character of these islands, and of the low country at the mouth of the Rhine, is determined very much by the nature of the elevations from which the water comes. As it has been published of the Natural History of your own State, tells you how much the region through which the water flows, determines its quality, what it holds in solution, and how, when it reaches the sea this matter is deposited in the form of deltas and islands that occupy the mouths of rivers. This is an illustration of the effect of elevations to modify the character of a country, through which the rivers coming from them flow.

But a more striking illustration is presented in another part of the world. The river Nile rises in Abyssinia, flows through Nubia and Egypt into the Mediterranean. It is remarkable that the countries through which the Nile flows, are bounded by deserts.—These countries would have formed part of these great deserts, but for the waters of the Nile. This river rises in the Mountains of the Moon, which are covered with snow at their summits. At certain seasons of the year, this snow melts, and swells the Nile to such a degree as to overflow and cover this vast plain, and fertilizes what would otherwise be barren, thus giving to the soil its capability to grow crops, and sustain a population which, in remote times, was very great. It is interesting to remark how, on apparently small things, which have their connection with distinct branches of human knowledge, the comfort and even existence of whole nations is found clearly and distinctly to depend.

Another remarkable phenomena, which has attracted the attention of physical geographers, is the large deltas formed at the mouths of great rivers, everywhere. Those at the mouth of the Mississippi, are familiar to you all. You know that these deltas found at the

mouths of all great rivers, being formed of rich alluvial soils, are generally of an unhealthy character; unhealthy, because of their richness, and because of that unhealthy character in other situations, and under other circumstances, would not be cultivated at all. If time permitted, I might here show you, how much the agricultural prosperity of a country, not its capability, (for these deltas are capable of the highest degree of production,) but how much agricultural products depend on the healthy character of the climate. Farmers thrive in countries far more cold and severe, than others; because these cold and severe countries are mostly healthy. I am sure the hardy farmers, who cultivate the soil of New Brunswick, though they suffer from the extreme cold of the country, and complain of it, yet certainly enjoy far more happiness, so far as happiness depends on bodily health, than the inhabitants of other richer countries, such as Georgia, the Carolinas, Florida, and other southern States, which are far richer, and produce more, with far less labour. Hence, in all cases, in the temperate and colder climates, rural economy in general, attains much higher state of improvement, than in the richer and warmer, but less healthy countries.

There is one circumstance, in connection with these deltas, to which I will draw your attention, and only one; that is to say, of the lands at the mouths of rivers, and the character of the banks of the rivers themselves, when they are of great width, and when deposits have formed of alluvial soil, as is the case at the mouth of the Mississippi, and in other parts of the world. It is the character of these deposits to a higher elevation at the exterior than the interior part; and from this peculiar conformation—the depression of the interior parts—marshes and bogs, and bogs of peat marsh, in some localities are formed in these depressed portions.

DEPRESSIONS—RELATIVE LEVEL OF CASPIAN, BLACK AND DEAD SEA.

Among the most interesting phenomena of physical geography, are the depressions in certain parts of the world, compared with the level of the sea. I have spoken of elevations; but there are parts of the world, below the level of the sea, which notwithstanding, grow crops and nourish a large population.

I draw your attention to the Caspian Sea. This is a large body of water, from the edges of which, start plains in every direction.—This body of water is considerably below the level of the Black Sea and the Atlantic. If any circumstance should happen, by which a connection were formed between the Black Sea and the Caspian, the waters of the latter would be raised from 60 to 80 feet: a very great area of country would be submerged, and the borders of that sea greatly enlarged.

But the most remarkable case of this kind is presented in that part of the world with which we are familiar by name, and that is Palestine. In the interior of this country, is the Dead Sea, into which the river Jordan flows, through certain lakes, among them the Lake Tiberias. The Dead Sea is twelve hundred or thirteen hundred feet below the level of the Mediterranean. The Lake Tiberias is some five hundred feet below the level of that sea. If any circumstance should open a track or canal from the Mediterranean into the valley of the Dead Sea, its waters would rise twelve hundred feet and drown a large portion of the people of that country, with which our oldest and most sacred associations are connected.

I shall have occasion in a subsequent lecture, to draw your attention to the circumstance of there being certain parts of the world in which no rain ever falls, and certain other parts where the quantity of rain is very small. It is because the rain that falls in this country,