the Atlantic region, the region of the Great Valley, and the Western or Cordilleran region.” The region of the Great Valley he calls the Central region, and this is again subdivided into two parts— the Northern Central and the Southern Central—by the Ohio river and the southern boundary of Missouri and Kansas. The Atlantic division is also subdivided, by a line following the south boundary of Pennsylvania and New Jersey, into the North Atlantic and South Atlantic divisions. The Western or Cordilleran division is limited on the east by the eastern boundaries of Montana, Wyoming, Colorado, and New Mexico. A farther subdivision will be found convenient at times, the Northern Central region being divided into two parts (the North-Eastern and the North-Western) by the Mississippi, and the Southern Central also into two parts (the South-Eastern and South-Western) by the same river. The Western or Cordilleran division may be naturally divided into the Rocky Mountain, the Plateau, and the Pacific Coast regions. Adopting the scheme thus suggested, we have the following grouping of all the States and Territories of the United States (Table II.), the only differences between this scheme and that of Mr Gannett, besides those already indicated, being that the Atlantic States are divided into three subdivisions—the Northern, Middle, and Southern,—and that West Virginia is placed with the Central States because its drainage is to the Ohio and in its physical characters it is allied to the North-Eastern Central group:@@1 —

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Division. | Subdivision. | States and Territories. | Area. | | | Population. | | |
| Gross Area. Square Miles. | Per cent. of Total | Land Surface. Square  Miles. | Number. | Per cent. of Total | No. per Sq. m. of Land Surface. |
| ( | Northern Atlantic | New England States, New York, New Jersey, Pennsylvania. | 168,765 | 5∙6 | 162,065 | 14,507,407 | 28∙9 | 89∙5 |
| Atlantic - | Middle Atlantic | Delaware, Maryland, Virginia, District of Columbia | 57,400  200,975 | 1∙9 | 52,005  191,970 | 2.771,740 | 5∙5 | 53∙3 |
| Southern Atlantic | North Carolina, South Carolina, Georgia, Florida | 6∙6 | 4,207,000 | 8∙4 | 21∙9 |
|  |  |  |
|  |  |  | 427,140 | 141 | 406,040 | 21,486,147 | 42∙8 | 53-8 |
| Central | North-Eastern Central....  North-Western Central...  South-Eastern Central.... | West Virginia, Ohio, Indiana, Illinois, Michigan, Wisconsin Minnesota, Dakota, Iowa, Nebraska, Kansas, Missouri.  Kentucky, Tennessee, Alabama, Mississippi | 273,795  516,840  181,510 | 9  17∙1  6 | 269,195  509,000  179,630  430,585 | 11,825,125  6,157,443  5,5S5,151  3,412,362 | 23∙5 12∙3 11·1 | 43∙9  12∙1  311 |
|  | South-Western Central | Arkansas, Louisiana, Texas, Indian Territory (including “ unorganized territory") ) | 438,780 | 145 | 6∙8 | 7∙9 |
|  |  |  | 1,410,925 | 46∙6 | 1,388,410 | 26,980,081 | 53∙7 | 19∙3 |
| ( | Rocky Mountain | Montana, Idaho, Wyoming, Colorado, New Mexico | 555,275  308,690  323,570 | 18∙4 | 553,280  304,850  317,420 | 406,450 | ∙8 | 0∙7 |
| Cordilleran | Plateau | Utah, Nevada, Arizona | 10∙2 | 246.669 | ∙5 | 0∙8 |
| Pacific Coast | Washington Territory, Oregon, California | 10∙7 | 1,114,578 | 2∙2 | 3∙5 |
|  |  |  | 1,187,535 | 39∙3 | 1,175,550 | 1,767,697 | 3∙5 | 1∙5 |

Climate.

From the Atlantic seaboard west to near the base of the Rocky Mountains the lines of equal mean temperature have a consider­able degree of regularity, running approximately east and west. When, on the other hand, we reach the borders of the Cordilleran region we find the isothermal lines suddenly deflected from their normal course, and in passing across the mountain and plateau belt we find them irregular, often concentric over large areas and through great ranges of temperature, according as the altitude, width, and general trend of each separate range or system of ranges make their influence felt Hence there are three distinct climatic divisions of the United States:—(1) the eastern region, from the Atlantic to the foot of the high plateaus at the base of the Rocky Mountains ; (2) the plateau and mountain region of the Cordilleras; (3) a narrow strip on the Pacific coast, lying west of the Sierra Nevada and the Cascade range. These three divisions are of very unequal size and importance. The first embraces about three-fifths of the entire country, and contains fully nineteen- twentieths of its population ; the second is also much larger than the third, containing not much less than a million square miles, but is very sparsely peopled. The third is more densely peopled than the second, but small in area, although its limits are not capable of being accurately defined. These three divisions will here be designated the Eastern, Cordilleran, and Pacific.

In the Eastern division the passage from one type of climate to another is gradual and uniform, though rapid. The difference in climate between the eastern and western coast of the Atlantic was long ago noticed and commented on. It was George Forster who first controverted the prevailing idea that the New World in general was colder than the Old, and recognized the analogy between the climates of the eastern coasts of the Atlantic and Pacific. Humboldt afterwards investigated the facts and pub­lished a tabular statement, which, as enlarged by Hann, is here presented (Table III.):—

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | Mean T | Temperatu | re of the |  |
| Place. | Latitude. | Year. | Coldest Month. | Warmest  Month. | Difference.  Year. ∣ |
|  | o | o | , |  | -. |
| Nain, Labrador  Aberdeen, Scotland | 57 12  57 12 | 25∙16  46∙76 | 3∙82  37∙22 | 51∙08  57∙74 | 21∙6 |
| St John’s, Newfoundland...  Brest, France | 1. 36 2. 24 | 40∙10  53∙60 | 22∙46  42∙44 | 59∙54  64∙76 | 13∙5 |
| Halifax, Nova Scotia  Bordeaux | 44 42  44 48 | 43∙34  55 04 | 22∙64  42∙44 | 64∙40  69∙08 | 11∙7 |
| New York.  Naples | 40 42  i 40 48 | 51∙08  61∙70 | 28∙94  48∙20 | 75∙56  77∙18 | 10∙6 |
| Norfolk, Virginia  San Fernando, Spain | 36 50  36 30 | 59∙18  63∙50 | 40∙28  52∙70 | 78∙62  76∙10 | 4∙3 |

From the above table it will be seen that the difference between the mean annual temperature of places in high latitudes on the opposite sides of the Atlantic is very large, and that it diminishes

as we go south. About lat. 30o the two sides of the Atlantic have nearly the same mean temperature, the difference in climate being very great, but chiefly dependent on differences in the amount of precipitation. Nearly the whole area of the United States is in­cluded between the annual isothermals of 44° and 68o—a difference of 24°, the corresponding difference of latitude being about 15°. The average change of temperature is, therefore, 1o∙6 for each degree of latitude,—the most rapid change of temperature with the latitude known in any region of anything like equal extent. The causes of the rapid increase of temperature in going south along the Atlantic seaboard are the position of the Gulf of Mexico, the high temperature of its waters, and the increasing predominance of south-westerly winds. From these circumstances the southern portion of the Atlantic coast of the United States is decidedly warmer than the regions corresponding to it in latitude on the west side of the Pacific, while farther north places in the same latitude on the west sides of the two oceans have approximately the same temperature. This similarity of temperature on the corre­sponding sides of the Atlantic and Pacific is the result of causes now easily understood, the chief being the position of the mass of the land with reference to the direction of the prevailing winds. From the Atlantic coast to the eastern base of the Cordilleras the isothermal curves for the year are nearly parallel, and have a general east and west course, being only interrupted in this regularity and deflected to a certain moderate extent in passing across the Appalachian chain, which nowhere rises high enough to give a chance for permanent accumulation of snow. These curves, of course, are roughly parallel to the coast-line of the Gulf of Mexico, which over a breadth of fourteen degrees of longitude does not vary much from an east and west direction. The region over which a higher mean annual temperature than 68° F. prevails includes nearly the whole of Florida and a narrow strip along the Gulf, which widens rapidly in Texas, where the trend of the coast-line suddenly becomes nearly north and south. The extreme south end of Florida, which just touches 35°, has a mean temperature of over 72°, the isothermal of 76° being nearly on that parallel. The isothermal of 64°, which meets the Atlantic coast near the borders of North and South Carolina, keeps nearly on the parallel of 34° as far west as about 100° W. long., where it is rapidly deflected southward, in con­formity with the direction of the other isothermals, by the gradually increasing elevation of the country when the plateau region is en­countered. The isothermal of 60° is nearly parallel to that of 64°, except that it manifests the influence of the high southern extremity of the Appalachians, and is in consequence considerably deflected to the south between the meridians of 83° and 87o. The

@@@1 The name Cordilleran is preferred for the Western division, because thereby any confusion is avoided which might arise from the fact that the people of the eastern States are still more or less inclined to call any portion of the region lying to their west by that name. No grouping in which all the States and Territories are included can be entirely satisfactory; but in that here suggested they are, while geographically connected, in most respects pretty closely allied to each other by their physical, climatic, and agricultural characters.