(p. 812). Calcareous and calcareo-magnesian formations are espe­cially prominent over this great area of nearly undisturbed strata. As we proceed westwards from the Appalachian belt we find the purely detrital and siliceous rocks diminishing and the calcareous gaining in importance and thickness. Thus the millstone grit, which on its eastern edge is in places more than 1000 feet thick, is found in parts of the Mississippi valley to have diminished to a few feet, or even in places to have disappeared altogether. With this diminution of coarser detrital and siliceous material comes in a wealth of organic forms, and the rocks of the region in question have been most fruitful of material for the palæontologist. Towards the western and north-western portions of the Palæozoic area there occur several marked breaks in the uniformity of the geological character of the region. These are due to the appearance at the sur­face of rocks older than the lowest Silurian—rocks, indeed, which, up to the present time, in spite of forty years of diligent search, have not been found to exhibit any traces of life. For this reason these rocks, which unconformably underlie the Lower Silurian, and are in such a position as to prove beyond a doubt that they assumed that position before the deposition of the lowest known fossiliferous rocks, were called Azoic by Foster and Whitney, but are now more generally known as Archæan, a name substituted by Dana. The Azoic areas of central Texas, northern Texas, and central Arkan­sas are comparatively small, and have been but little studied in detail, since, thus far, they have not been shown to be of much economical value. The Azoic area in south-eastern Missouri is also of small dimensions, but economically important, since iron ores, large in quantity and of great purity, occur here, at the well-known Iron Mountain, Pilot Knob, and other localities. Far more im­portant than those already mentioned, however, is the Azoic area of northern Wisconsin and north-western Minnesota, which is in direct connexion with the great Azoic district of so much import­ance in Canada as forming the mass of the Laurentian mountains. The region in Wisconsin forming the divide between the waters flowing into Lake Superior and those uniting with the Mississippi is one of Azoic rocks, and from this a long spur extends south­westerly through Minnesota and north-easterly to Lake Superior. It is in this region and in this formation that the iron mines occur which are of so much importance to the country (see p. 814), the principal mines lying about 1500 feet above the sea or 900 feet above Lake Superior. To the north-west of this Azoic area, on the borders of the lake, is the very important copper region (p. 816). The copper-bearing range, which rises in places to an elevation of as much as 2000 feet above the sea-level, is made up of old volcanic masses interstratified with sandstones and conglomerates of Lower Silurian age. The so-called trappean range runs from the extremity of Keweenaw Point south-westerly along and near the shore of the lake, and finally disappears some distance beyond its western end ; but the portion of the range which is of importance for its copper mines is in Michigan and on or near Keweenaw Point. The detrital formations which cover most of the surface of the Palæozoic area, the boundaries of which have here been indicated, arc of varied character. Over much of the country the principal detrital material present is that which has been left behind by the slow wasting away, under the influence of the rain and other atmospheric agencies, of the calcareous rocks which there occur. This kind of material forms the bulk of the soil in the higher portions of the region lying near the Ohio and its junction with the Mississippi, and north-west to Minnesota. The river-bottoms grow wider as we proceed in the direction of the drainage towards the Gulf of Mexico, but the thickness of alluvial soil overlying the Tertiary and Cretaceous does not seem, in general, to be very great. The material liberated by the decomposition of the rock has been so fine that most of it has been easily carried away where the volume of water in the rivers was considerable. Coarser detritus occurs near the mountain ranges, especially those on the east, where strata made up in large part of pebbles or even boulders of quartzose or other indecomposable rocks form a considerable portion of the underlying formations. An important feature in the surface geology of the northern portion of the central area as well as of the extreme north-eastern portion of the United States, or that comprised within New England, New York, the northern part of Pennsylvania, and the region adjacent to and south of the Great Lakes, is the presence of a large amount of coarse detrital material in the form of boulders, gravel, and sand, which has been, in large part, brought from the north, and which is mixed very unequally in different regions with the material resulting from the disaggregation, decomposition, and abrasion of the closely adjacent or underlying rocks. The origin and mode of distribution of this so-called “ northern drift ” has long been a fruitful subject of discussion among American geologists. By far the larger number of those who, in later years, have dis­cussed the problem have been inclined to ascribe the origin of the drift almost entirely to glacial causes. It is assumed that the northern portion of the continent was, during the so-called “ glacial epoch,” covered deeply with ice, and that all, or nearly all, that we see at the present time upon the surface of the region thus covered is the result either of this icy envelope or of the floods produced by its melting. The present writer believes the pheno­mena to be much more complicated and difficult of explanation than is generally supposed, but contents himself with simply stat­ing what is the current belief among American geologists.

Political and Natural Subdivisions.

As politically organized at present the area included within the limits of the United States is divided into forty-nine subdivisions, including Alaska. There are thirty-eight States, eight Territories, and three subdivisions, neither States nor Territories, each of which stands in a peculiar relation to the general Government—namely, the District of Columbia, the Indian Territory, and Alaska.

In the following table of the States and Territories the names are followed by their customary abbreviations. The dates are those of admission into the Union as States; in the case of the thirteen original States (printed in small capitals), they are the dates when those States ratified the constitution. The names of the Territories are printed in italics.

Table I.—Area and Population of the States and Territories.@@1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| States and Territories. | Date of Admission. | Area in Square Miles. | Popula­tion, June 1, 1870. | Popula­tion,  June 1, 1880. | Increase per Cent. | Population per Square Mile (1880). |
| Alabama (Ala.) | 1819 | 52,250 | 996,992 | 1,262,505 | 26∙6 | 24∙5 |
| *Arizona* (Ari.) |  | 113,020 | 9,658 | 40,440 | 318 7 | 0∙4 |
| Arkansas (Ark.) | 1836 | 53,850 | 484,471 | 802,525 | 65∙6 | 15∙1 |
| California (Cal.) | 1850 | 158,360 | 560,247 | 864,694 | 54 ∙3 | 5∙5 |
| Colorado (Col.) | 1875 | 103,925 | 39,864 | 194,327 | 387∙4 | 1∙9 |
| Connecticut (Conn. or Ct.) | 1788 | 4,990 | 537,454 | 622,700 | 15∙8 | 128∙5 |
| *Dakota* (Dak.) |  | 149,100 | 14,181 | 135,177 | 853∙2 | 09 |
| Delaware (Del.) | 1787 | 2,050 | 125,015 | 146,608 | 17∙2 | 74 8 |
| *District of Columbia* (D. C.) |  | 70 | 131,700 | 177,624 | 34∙8 | 2960∙4 |
| Florida (Fla.) | 1845 | 58,680 | 187,748 | 269,493 | 43∙5 | 50 |
| Georgia (Ga.) | 1788 | 59,475 | 1,184,109 | 1,542,180 | 30∙2 | 261 |
| *Idaho* (Id.) |  | 84,800 | 14,999 | 32,610 | 117∙4 | 0∙4 |
| Illinois (Ill.) | 1818 | 56,650 | 2,539,891 | 3,077,871 | 21∙1 | 55Ό |
| Indiana (Ind.) | 1816 | 36,350 | 1,680,637 | 1,978,301 | 17∙7 | 55∙1 |
| *Indian Territory* |  | 64,690 |  |  |
| Iowa (Ia.) | 1846 | 56,025 | 1,194,020 | . 1,624,615 | 36∙0 | 29∙3 |
| Kansas (Kan.) | 1861 | 82,080 | 364,399 | 996,096 | 173∙3 | 122 |
| Kentucky (Ky.) | 1791 | 40,400 | 1,321,011 | 1,648,690 | 24∙8 | 41∙2 |
| Louisiana (La.) | 1812 | 48,720 | 726,915 | 939,946 | 29∙3 | 207 |
| Maine (Me.).. | 1820 | 33,040 | 626,915 | 648,936 | 3∙5 | 21∙7 |
| Maryland (Md.) | 1788 | 12,210 | 780,894 | 934,943 | 19∙7 | 94∙8 |
| Massachusetts (Mass.) | 1788 | 8,315 | 1,457,351 | 1,783,085 | 22∙3 | 221∙8 |
| Michigan (Mich.) | 1837 | 58,915 | 1,184,059 | 1,636,937 | 38∙2 | 28∙5 |
| Minnesota (Minn.) | 1858 | 83,365 | 439.706 | 780,773 | 77∙5 | 9∙8 |
| Mississippi (Miss.). | 1817 | 46,810 | 827,922 | 1,131,597 | 36∙6 | 24∙4 |
| Missouri (Mo.) | 1821 | 69,415 | 1,721,295 | 2,168,380 | 25∙9 | 31 5 |
| *Montana* (Mon.) |  | 146,080 | 20,595 | 39,159 | 90∙l | 03 |
| Nebraska (Neb.) | 1867 | 76,855 | 122,993 | 452,402 | 267∙8 | 5∙9 |
| Nevada (Nev.) | 1864 | 110,700 | 42,491 | 62,266 | 46∙5 | 0∙6 |
| New Hampshire (N. H.).... | 1788 | 9,305 | 318,300 | 346,991 | 9Ό | 38∙5 |
| New Jersey (N. J.) | 1787 | 7,815 | 906,096 | 1,131,116 | 24∙8 | 151∙7 |
| *New Mexico* (N. Μ.) |  | 122,580 | 91,874 | 119,565 | 30∙1 | 1∙0 |
| New York (N. Y.) | 1788 | 49,170 | 4,382,759 | 5,082,871 | 15∙9 | 106∙7 |
| North Carolina (N. C.)... | 1789 | 52,250 | 1,071,361 | 1,399,750 | 30∙6 | 28∙8 |
| Ohio (O.). | 1802 | 41,060 | 2,665,260 | 3,198,062 | 19∙9 | 78∙5 |
| Oregon (Or.) | 1859 | 96,030 | 90,923 | 174,768 | 92∙2 | 1∙8 |
| Pennsylvania (Pa.) | 1787 | 45,215 | 3,521,951 | 4,282,891 | 21 ∙6 | 95∙2 |
| Rhode Island (R. I.) | 1790 | 1,250 | 217,353 | 276,531 | 27∙2 | 254∙9 |
| South Carolina (S. C.) | 1788 | 30,570 | 705,606 | 995,577 | 41∙0 | 33Ό |
| Tennessee (Tenn.) | 1796 | 42,050 | 1,258,520 | 1,542,359 | 22∙5 | 36∙9 |
| Texas (Tex.) | 1845 | 265,780 | 818,579 | 1,591,749 | 94∙4 | 6Ί |
| *Utah* (Ut.) |  | 84,970 | 86,786 | 143,963 | 65∙8 | 1∙7 |
| Vermont (Vt.) | 1791 | 9,565 | 330,551 | 332,286 | 0∙5 | 36∙4 |
| Virginia (Va.) | 1788 | 42,450 | 1,225,163 | 1,512,565 | 23∙4 | 37∙7 |
| *Washington* (Wash.) |  | 69,180 | 23,955 | 75,116 | 213∙5 | 1Ί |
| West Virginia (W. Va.) | 1862 | 24,780 | 442,014 | 618,457 | 39∙9 | 251 |
| Wisconsin (Wis.) | 1847 | 56,040 | 1,054,670 | 1,315,497 | 24∙7 | 24∙2 |
| *Wyoming (Wy.)* |  | 97,890 | 9,118 | 20,789 | 127∙9 | 0∙2 |
| United States  *Alaska* |  | 3,019,140  531,409 | 38,558,371 | 50,155,783  33,426 | 30∙08 | 17∙29 |

@@@1 The total area (excluding Alaska) is 3,025,600 square miles,—made up by the addition of unorganized territory (5740), Delaware Bay (620), and Raritan Bay, &c. (100). The last column shows the population per square mile of the *land* surface, which amounts in all to 2,970,000 square miles.

As long as the population of the country was limited to the Atlantic and Gulf coasts there was no difficulty in classifying the divisions geographically; the Northern, Middle, Southern Atlantic, and Gulf States constituted a natural grouping. The almost un­known and at that time not easily accessible region beyond them to the west was known as “the West,” and by this term until more than a quarter of the present century had elapsed the valley of the Mississippi and its tributaries on the east was designated. It was not until about the middle of the century that a still farther “ West” began to be taken into consideration.

Early in the history of the country the six north-eastern States (Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut) received the still current designation of New England. And till after the Civil War there was the division of the States into Southern or Northern, according as slavery was or was not permitted.

The suggestion was made by Mr Gannett, geographer of the census of 1880, “ to divide the country into three great divisions,—