feet in height. The big tree occurs on the western slope of the Sierra in somewhat isolated groves or patches always intermingled with other trees, and not forming forests by itself as the redwood does. Its range is from 36o to a little beyond 38o N. lat., there being nine groves, the largest of which is about thirty miles north- north-east of Visalia, on the tributaries of King’s and Kaweah rivers. The groves in Mariposa and Calaveras counties are those most visited by tourists, and in the latter is the tallest of these trees, and the tallest tree on the American continent, so far as known (325 feet). Another conifer of much interest from its beauty and its very limited range is the Monterey cypress (*Cup­ressus macrocarpa),* a species occurring only on Cypress Point, near Monterey. The Port Orford cedar (*Chamæcyparis Law- soniana),* a strictly Pacific Coast species, ranging from Coos Bay in Oregon into northern California, is a large and valuable tree, with an odoriferous, highly resinous wood. The white cedar of the Pacific coast (*Libocedrus decurrens,* called by some botanists *Thuja gigantea)* is also a Pacific Coast species, ranging from the Santiam river in Oregon south through the Coast ranges as far as Mount San Bernardino. The *Thuja gigantea* proper, or red or canoe cedar, is another Pacific Coast range tree ; but, unlike the two species last mentioned, it extends its range into the northern Rocky Mountain region. It is a large tree, which has its maxi­mum development in the Coast ranges of Washington Territory and Oregon.

The deciduous trees of the Sierra Nevada and the Cascade range, as well as of the Pacific Coast ranges from California north to the boundary line, are of comparatively little importance. There are several species of oak, but of little value,—among them being the Coast live oak (*Q. agrifolia)* the largest and most generally dis­tributed oak in the south - western part of California ; the black oak (*Q. Kelloggii),* ranging along the coast mountains of Oregon, and the most characteristic hardwood tree of the western slope of the Sierra ; and the chestnut oak (*Q. densiflora),* occurring in the Coast ranges from Oregon to central California. An evergreen tree, very characteristic of the coast ranges of Oregon and Cali­fornia, and very ornamental, is the California laurel (*Umbellularia californica),* of which the wood is hard and strong, and of a very pleasing light-brown mottled colour. The tree called the mad- rona or madroño (*Arbutus Menziesii)* occurs from British Columbia south through the Coast ranges to the Santa Lucia Mountains, and is a very characteristic tree of the region, with its red bark and beautiful glossy foliage. The wood is used in the manufacture of gunpowder, and the bark to some extent in tanning.

In the area included between the two heavily-timbered regions described above, or between the summit of the Sierra Nevada and Cascade range and the western border of the great eastern forest region, the paucity of rainfall corresponds to paucity or almost entire absence of forests over much the larger portion. We may here distinguish, first, the Rocky Mountain region ; then the Great Basin and the plateaus north and south of it ; then the “ Plains,” or the nearly level country lying east of the base of the Rocky Mountains; and, finally, the “Prairie” region, or that portion of the scantily timbered area which for the most part lies enclosed within the eastern forested belt, and where other causes than the absence of moisture have operated to bring about the growth of a peculiar vegetation.

The Rocky Mountain belt is not destitute of forests, but these are very irregularly scattered over the surface, and the species are few in number, chiefly belonging to coniferous genera, and of little economic value. The species of conifers have been already men­tioned, and their range indicated in speaking of the forests of the Sierra Nevada and Cascade range. Few forests in the Rocky Mountains at all compare in density or in the size of the individual trees with those of the Sierra and the Cascade range. What trees there are usually grow most densely in the moist places at the foot of the ranges, where the streams debouch from them, in the ravines and gorges, and on the lower slopes. By far the most common deciduous tree throughout this region is the aspen (*Populus tremuloides),* often called cottonwood and sometimes poplar, which most commonly springs up, forming dense thickets, throughout the Rocky Mountains, wherever the coniferous forest has been burned off. It ranges from Newfoundland to Arizona, and is the most widely distributed of North American trees, and highly character­istic of northern and elevated regions. In various portions of the Rocky Mountains there are scattered oaks. The scrub oak (*Q. undulata,* var. *Gambelii)* occurs in some quantity on the mountains of southern New Mexico and Arizona, and is also found in Colo­rado and along the Wahsatch range. The black oak (*Q. Emoryi),* the white oak (*Q. grisea),* and a few other species are found here and there in the southern part of the Rocky Mountains, as also in Arizona, and ranging south into Mexico. The most densely forested portions of the Rocky Mountains are the extreme north­ern in north-western Montana, the north-west corner of Wyo­ming, the higher part of Colorado, the eastern slope of the range in New Mexico, and the higher portions of Arizona.

Enclosed between the densely-forested Pacific belt and the poorly-timbered region of the Rocky Mountains is an extensive area, including the northern and southern plateaus and the Great Basin, which practically is nearly destitute of trees. The coniferous species occurring in the Rocky Mountains are found here and there along the moister tracts of the higher ranges in the Great Basin, especially in its eastern and higher portion, but by far the larger part of the slopes and nearly all the valleys are treeless, being chiefly occupied by the well-known “sage-brush” (*Arte­misia tridentata),* which covers many thousands of square miles, especially in Nevada and Utah. Two trees are, however, very characteristic of the Great Basin, especially of its western portion —the juniper (*Juniperus occidentalis)* and the pinon or nut pine (*Pinus monophylla).* These two species, usually much dwarfed in size and scrubby in appearance, are almost the only trees of western and central Nevada, where they occur hidden away in the canons. Everywhere in a wide sweep adjacent to the mining districts all this vegetation has been completely cleared away.

An order of plants peculiarly American, and characterizing in a most marked manner the hot dry region adjacent to the lower Colorado, is that of the *Cactaceæ.* The cactus ranges from the extreme north of the plateau region to the extreme south, but its most abundant and striking development takes place in southern Nevada, southern California, and in general the region adjacent to the Mexican boundary line. The so-called prickly pear (*Opuntia)* is the cactus family which has the widest range, being found from the upper Missouri through the Great Basin to Arizona. It has many species, that which ranges farthest north being *O. missouri∙ ensis.* The genera *Mamillaria, Echinocactus,* and *Cereus* are found in various localities in the Great Basin, as well as in southern California, in portions of which region, as well as in lower Cali­fornia and Arizona, there are large areas where various kinds of cactus form almost the exclusive vegetation, often rising to such a height as to be properly called trees ; the loftiest of all is the singularly striking *Cereus giganteus.* Mingled with them are yuccas (called the “Spanish bayonet”), mezquites (*Algarobia glandulosa),* and the creosote bush (*Larrea mexicana),* which are among the most abundant and characteristic plants of this region.

The vast area extending east from the base of the Rocky Mountains to near the 95th meridian is the district universally known as “the Plains,” and one not at all to be confounded with the “Prairies,” which are almost entirely included within a region of dense forests, and over which the partial absence of trees is due to a cause entirely different from that which has made the plains the home of the grasses and not of trees. The transition from the forested region of the east to the region of the plains is, almost without excep­tion, coincident with the diminution in the precipitation, which as we proceed westward goes on rapidly, and, on the whole, pretty regularly. Thus Dakota, between 97° and 104o W. long., is practically destitute of timber, except in its river bottoms and the small territory between the north and south forks of the Cheyenne, the region of the Black Hills. In Minnesota, which lies east of 97o, only the north-eastern portion, especially that adjacent to Lake Superior, is heavily timbered. The south-western corner of the State, embracing about one-third of its area, and the area west of the 96th meridian, are classed in the census report as having less than two cords of wood to the acre. Nebraska and Kansas, still farther south, are almost destitute of forests. In Nebraska only a narrow strip along the Missouri, near the meri­dian of 96o, is given as having from one to two cords of wood per acre. The heavy forest growth of the Mississippi basin just reaches the extreme south-eastern corner of Kansas. North of this, and along the eastern border of the State, there is a belt of from thirty to a hundred miles in width in which there is valuable timber on the borders of the streams. West of 97° W. long. the trees are confined to the immediate banks of the large streams, and are small and of little value. West of 99o we find the typical vegeta­tion of the plains, with only a few small stunted willows and cottonwoods scattered at wide intervals along the streams. The yearly isohyetal of 26 inches forms a limit beyond which arboreal vegetation is almost entirely absent, while in going east there is little of value until we reach the belt in which the rainfall is over 32 inches. The same may be said of the Indian Territory and Texas, the bending of the isohyetal curves to the west as we approach the Gulf of Mexico being, however, as might be expected, accom­panied by a corresponding extension of the forest belt in that direc­tion. Thus, in Texas, the limit of what may be designated as the well - timbered region lies between 96° and 97o, while the line marking the entire disappearance of the forests may be placed somewhere between 99o and 100o, and pretty closely adjacent to the isohyetal of 26 inches.

The French word “prairie,” a meadow or grassy plain, was employed by Hennepin about 1680, in his excellent description of the prairies of Illinois. The word has become current in the Mississippi valley, and still farther west. In the northern portion of the Rocky Mountains the small grassy areas adjacent to the streams and surrounded by mountains are called “ prairies,” while farther south they are known as “parks,” the still smaller