and polishes well; cut radially, the medullary plates give the wood a fine satiny lustre; it is strong and durable, but not so elastic as many of the western pines and firs. Professor Sargent describes it as the most valuable timber tree of the forests of Pacific North America. In England the tree grows well in warm situations, but suffers much in severe winters—its graceful form rendering it ornamental in the park or garden, where it sometimes grows 30 or 40 ft. in height; its success as a timber tree would be doubtful. In the eastern parts of the United States it does not flourish. It was discovered by Archibald Menzies in 1795 and was first described as *Taxodium sempervirens,* under which name it was known until distinguished by Stephan Endlicher as a new genus in 1S47.

The only other member of the genus is the giant tree of the Sierra Nevada, 5. *gigantea,* the largest of known conifers; it is confined to the western portion of the great Californian range for a length of about 260 m., at an altitude of from 5000 to 8400 ft. above the sea, and forms extensive forests, or, in the northern part of the area, isolated groves, such as the Calaveras Grove, the Mariposa Grove, and others. The leaves of this species are avd-shaped, short and rigid, with pointed apex; closely adpressed, they completely cover the branchlets. The male catkins are small, solitary, and are borne at the ends of the twigs; the cones are from 1½ to 3 in. long, ovoid, with scales thicker at the base than those of the redwood, and bearing below the depression a slender prickle. The young tree is more formal and rigid in growth than 5. *sempervirens,* but when old the outline of the head becomes cylindrical, with short branches sparsely clad with foliage sprays. The bark, of nearly the same tint as that of the redwood, is extremely thick and is channelled towards the base with vertical furrows; at the root the ridges often stand out in buttress-like projections. The average height is about 275 ft. with a diameter near the ground of 20 ft.; but specimens from 300 to 320 ft. tall, with trunks 25-35 ft. thick, are not rare.

The famous group known as the Mammoth Grove of Calaveras in California, containing above ninety large trees, stands in 38° N., about 4370 ft. above the sea, between the San Antonio and Stanislaus rivers. It was discovered by a hunter named Dowd in pursuit of a bear in 1852, but had been visited before by John Bidwill, who crossed the Sierra in 1841. Some trees in the Mariposa Grove rival these in size: one measures 101 ft. round the root, and a cut stump is 31 ft. in diameter. Gigantic as these trees are and imposing from their vast columnar trunks, they have little beauty, owing to the scanty foliage of the short rounded boughs; some of the trees stand very close together; they are said to be about four hundred in number. The age of the trees has been greatly overestimated. A few years ago a full-sized tree was felled in Fresno county, California, and contiguous transverse sections have been set up, one in the Museum of Natural History at New York, the other (upper one) in the British Museum of Natural History at South Kensington; the annual rings of the latter section have been carefully counted and found to indicate an age of 1335 years.

The growth of the “ mammoth tree" is fast when young, but old trees increase with extreme slowness. The timber is not of great value, but the heartwood is dense and of deeper colour than that of S. *sempervirens,* varying from brownish red to very deep brown; oiled and varnished, it has been used in cabinet work. 5. *gigantea* was brought to England by Lobb in 1853, and received from Dr Lindley the name of *Wellingtonia,* by which it is still popularly known, though its affinity to the redwood is too marked to admit of

generic distinction. In America it is sometimes called *Washingtonian* In the Atlantic States it does not succeed ; and, though nearly hardy in Great Britain, it is planted only as an ornament of the fawn or paddock.

In early geological times the sequoias occupied a far more important place in the vegetation of the earth. They occur in the Lower Chalk formations, and in Tertiary times were widely diffused ; the genus is represented in the Eocene flora of Great Britain, and in the succeeding Miocene period was widely distributed in Europe and western Asia. It is presumed that in the Glacial epoch the genus was exterminated except in the areas in western North America where it still persists.

SERAING, a town of Belgium in the province of Liége, adjoin­ing the city of that name. Pop. (1904) 30,843. It lies on the

right bank of the Meuse above Liége, with which it is connected by rail and tramway. Seraing owes all its prosperity and importance to the firm founded by John Cockerill, an Englishman, in 1817, with the co-operation of King William I. of the Nether­lands, who provided half the capital. The Cockerill family has long disappeared, and the enterprise is now known as “ the John Cockerill Company.” It is one of the largest factories of engines and machinery—apart from war material—on the continent. Its headquarters occupy the old summer palace of the prince-bishops of Liége. In 1890 it established a branch at Hoboken on the Scheldt for the purpose of undertaking ship­building. The company employs 14,000 hands.

SERAJEVO (pronounced SerÁjevo, “ the city of palaces ”; Turkish, *Bosna Serai;* Ger. *Sarajewo',* Ital. *Seraglio),* the capital of Bosnia, situated on the Miljačka, a small right-hand tributary of the Bosna and on the railway from Bosna-Brod, 167 m. N., to Ragusa. Pop. (1895) 37,713, chiefly Serbo~

Croatians, with small colonies of gipsies and Jews. The city, frequently called the “ Damascus of the North,” spreads over a narrow valley, closed on the east by a semicircle of rugged hills. Though still half oriental, and wholly beautiful, with its Turkish bazaar, its hundred mosques, wooden houses and cypress groves, it was largely rebuilt, after 1878, in western fashion. The river was also canalized, a telephone service introduced, and extensive drainage works carried out. Serajevo is the seat of the provincial government, of a Roman Catholic bishop, an Orthodox metropolitan, the highest Moslem ecclesi­astical authority or *Reis-el-ulema,* and the supreme court. It is the centre of Bosnian education, containing the celebrated orphanage founded in 1869 by Miss Irby and Miss Mackenzie (afterwards Lady Sebright) ; the *Scheriat-Schule,* which derives its name from the Turkish code or *scheri,* and is maintained by the state for Moslem law-students; a gymnasium, a technical institute and a teachers’ training-college. The *Begova Djamia (Džamia),* or mosque of Husref Bey, is only surpassed, among European mosques, by those of Adrianople and Constantinople. It was founded, in 1465, by Husref or Usref, pasha of Bosnia. The castle and barracks, occupied by an Austrian garrison, stand on a cliff commanding a fine view of the city. Other noteworthy buildings are the *konak* or governor’s residence, the Roman Catholic and Orthodox cathedrals, the hospital, the townhall and the museum, with fine antiquarian and natural history collections. In the *Sinan Tekke* or Dervish monastery the ceremonies of the howling and dancing Dervishes may be witnessed. Turkish baths and cafés are numerous. The bazaar, or *éarIija,* is a labyrinth of dark lanes, lined with booths, where embroideries, rugs, embossed fire-arms, filagree-work in gold and silver, and other native wares are displayed. There are also large potteries, silk-mills, a brewery and a tobacco factory. At the mineral baths of Ilidze near the city, where many Roman remains have been found, a hydropathic establishment was opened in 1899. The whole neighbourhood is rich in prehistoric remains.

Founded, in 1262, by the Hungarian General Cotroman, under the name of Bosnavar or Vrhbosna, Serajevo was enlarged by Husref Bey two centuries later, and takes its name from the palace (Turkish, *serai),* which he founded. During the wars between Turkey and Austria, its ownership was often contested; and it fell before King Matthias I. of Hungary in 1480, and before Prince Eugene of Savoy in 1697. Destructive fires laid it waste in 1480, 1644, 1656, 1687 and 1789. It was chosen as the seat of Turkish government in 1850, instead of Travnik. In 1878 it was seized by the Austrians, under Baron Philippović.

SERAMPUR, a town of British India, in the Hugli district of Bengal, on the right bank of the river Hugli, opposite Barrackpore, on the East Indian railway, 12 m. from Howrah. Pop. (1901) 44,451. A Danish factory was established here about the middle of the 17th century, and called by them Frederiks- nagar. With the rest of the Danish possessions in India, it was acquired by purchase by the English in 1845. Serampur was the home of the Baptist mission founded by Carey. The mission press has been transferred to Calcutta, but a training college is