locally called “groves,” at an altitude of from 4000 to 5000 feet above the sea. The leaves of this species are awl- shaped, short and rigid, with pointed apex ; closely ad- pressed, they completely cover the branchlets. The male catkins are small, solitary, and are borne at the ends of the twigs; the cones are from 1 1/2 to 3 inches 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 *S. 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. Some of these vast vegetable columns are upwards of 30 feet in diameter and a few have attained a height of 400 feet or more.

The famous group known as the Mammoth Grove of Calaveras in California, containing above ninety large trees, stands in 38° N. lat., about 4370 feet above the sea, between the San Antonio and Stanislaus rivers. According to Vischer, it was discovered by a hunter in pursuit of a bear in 1852, but had apparently been visited before, as the date 1850 is cut on one of the trees. The bark of one of the finest trunks was foolishly stripped off to the height of 116 feet, and exhibited in New York and London ; it now stands in the Crystal Palace, Sydenham. The tree, known as the “mother of the forest,” soon died; at the base it measured 90 feet in girth, and the dead tree was 321 feet high ; a prostrate trunk in the neighbourhood is 18 feet in diameter 300 feet from the base. Some trees in the Mariposa grove rival these in size : one measures 101 feet round the root, and a cut stump is 31 feet 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 400 in number. Some are of vast age, perhaps 3000 years or more ; they appear to bo the remains of extensive woods belonging to a past epoch, and probably have been in distant time much injured by forest fires. 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. *S. 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 *Washing- tonia.* In the Atlantic States it does not succeed ; and, though nearly hardy in Great Britain, it is planted only as an ornament of the lawn or paddock. It is never likely to acquire any economic importance in Europe. (C. P. J.)

SERAIEVO. See Bosna Serai.

SERAING, a town of Belgium, stretching nearly a mile along the right bank of the Meuse, across which a sus­pension bridge connects it with Jemeppe, 3 miles south­west of Liége. It has one of the largest manufactories of machinery on the Continent, founded by John Cockerill, an Englishman, in 1817, on the site of the former palace of the prince-bishops of Liége. Including offices, the works extend over 270 acres, employ 11,000 hands, and the annual value of their products is more than 45,000,000 francs. Down to 1882 they had turned out 52,600 engines or pieces of machinery, including the first locomotive engine built on the Continent (1835). After Cockerill’s death in 1840, the works were purchased by “La John Cockerill Société.” A monument was erected to his memory in 1871. The population, which numbered but 2226 in 1827, amounted to 24,315 in 1877, and is now (1886) estimated at about 27,500.

SERAMPUR, a town of British India, in Hugli(Hooghly) district, Bengal, situated on the right bank of the Hugli river, 13 miles by rail north of Calcutta, in 22° 45' 26'' N. lat. and 88° 23' 10" E. long. It was formerly a Danish settlement, and remained so until 1845, when all the Danish possessions in India were ceded by treaty to the East India Company. Serampur is famed as the

residence of a body of Protestant Baptist missionaries, who made it the centre of their Christianizing efforts. At the census of 1881 the population of the town was 25,559 (13,137 males and 12,422 females).

SERAPHIM. In the vision of Isaiah vi. the throne of God is surrounded by seraphim,—figures apparently human (ver. 6), but with six wings, which constantly pro­claim the *trisagion.* The seraphim are not again mentioned in the Bible ; but in later Jewish theology they are taken to be a class of angels. As the whole vision of Isaiah is symbolical, the seraphim also are in this connexion symbol­ical figures, aiding the delineation of Jehovah’s awful holiness. But the imagery is probably borrowed from some popular conception analogous to that of the Cherubim (q.v.). The name is sometimes explained to mean “ lofty ones,” after the Arabic *sharufa* (Gesenius) ; but if it has a Hebrew etymology it must signify “ burning ones ” (“consuming,” not “fiery”), so that in Isaiah’s vision the seraphim will mean the same thing as the “devouring fire” of God’s holiness (Isa. xxxiii. 14). But this, again, is a spiritual interpretation of the old Hebrew conception that Jehovah appears in the thunderstorm (Judges v. 4 ; Ps. xviii., xxix.) escorted by thunderbolts *(resheph,* Hab. iii. 5). Among the Phoenicians Resheph is a god *(C.I.S.,* i. 38), probably identical with the Arabian divine archer Kozah, who shoots lightnings. In prophetic monotheism such mythological conceptions could only survive as personi­fications of the natural phenomena attending a theophany.

In Num. xxi. 6 *sq.* the word “seraphim” is used of a kind of serpents, not “ fiery serpents " (A. V.) hut burning, *i.e.,* poisonous ones (comp. *hēmah,* “glowing heat,” “ venom ”). In Isa. xiv. 29 and xxx. 6 the singular *saraph* occurs with the epithet “flying,” and from the second passage we see that such flying serpents were supposed to inhabit the desert between Palestine and Egypt ; comp. Herod, ii. 75 and the

white flying serpents in an Arabian legend *(Agh.,* xx. 135, 30).

SERAPIS, or Sarapis, in the Leyden papyrus *’Οσαράππ, i.e.,* Osiris-Apis, apparently meaning the dead Apis wor­shipped as Osiris (see Apis), and so as lord of the under­world, was the name under which the Egyptian priests consulted by Ptolemy Soter incorporated with the old religion the Greek worship of Hades. The statue with the attributes of Hades which they professed to identify as Serapis (a name which had till then played no prominent part in Egyptian religion) was brought by the king from Sinope to Alexandria in consequence, it was given out, of a revelation granted to him in a dream (Plut., *Is. et Os.,* 28). The real object of Ptolemy was to provide a mixed Greek and Egyptian religion for his mixed subjects, especi­ally in Alexandria ; the true Egyptians disliked the inno­vation, and no Serapeum or Serapis temple was admitted within the walls of Egyptian cities (Macrob., i. 7, 14). Thus the great Serapeum at Memphis lay outside the town (Strabo, xvii. 1, 32), where its ruins were laid bare by Mariette in 1850. From papyri found on the spot it is known that a sort of monastery was connected with this and other Serapea. The so-called Egyptian Serapeum or series of Apis graves excavated in the rock near the Greek Serapeum is distinct and belongs to the old religion, though the old Osiris worship was gradually transferred to Serapis. The cult of Serapis also spread largely in the Græco-Roman world. Egyptian monasticism seems to have borrowed something from the monks of Serapis, and the Egyptian Christians were accused of worshipping Serapis as well as Christ ( *Vita Saturnini,* 8), perhaps because they identified the god who is represented bearing a corn-measure on his head with the Biblical Joseph ; see Firmicus Maternus, c. 13, and Suidas, *s.v. Σάρατης.*

SERENA, a city of Chili, capital of the province of Coquimbo, is situated on an elevated plain on the south side of the river Coquimbo, about 5 miles from the sea, in 29° 54' S. lat. and 71° 13' W. long. The original town