to near Myitkyína, in lat. 25º 30'. In Bengal or Assam it is not indigenous, but plantations have been formed in Assam as far as the 27th parallel. In the Punjab it is grown in gardens to the 32nd.

Teak requires a dry tropical climate, and the most important forests are found in those districts of India where, during the summer months, heavy rains are brought by the south-west monsoon, the winter months being nearly rainless. In the interior of the Indian peninsula, where the mean annual rain­fall is less than 30 in., teak is more scarce, and it thrives best with a mean annual fall of more than 50 in. The mean annual temperature which suits it best lies between 75ºand 81º Fahr. Near the coast the tree is absent, and inland the most valuable forests are on low hills up to 3000 ft. It grows on a great variety of soils, but there is one indispensable condition-perfect drainage or a dry subsoil. On level ground, with deep alluvial soil, teak does not always form regularly shaped stems, probably because the subsoil drainage is imperfect.

During the dry season the tree is leafless; in hot localities the leaves fall in January, but in moist places the tree remains green till March. At the end of the dry season, when the first monsoon rains fall, the fresh foliage comes out. The leaves, which stand opposite, or only whorled in very young specimens, are from 1 to 2 ft. in length and from 6 to 12 in. in breadth. On coppice shoots the leaves are much larger, and not rarely from 2 to 3 ft. long. In shape they somewhat resemble those of the tobacco plant, but their substance is hard and the surface rough. The small white flowers are very numerous, on large erect cross-branched panicles, which terminate the branches. They appear during the rains, generally in July and August, and the seed ripens in the succeeding January and February. On the east side of the Indian peninsula, the teak flowers during the rains in October and November. In Java the plantations are leafless in September, while during March and April, after the rains have commenced, they are clothed with foliage and the flowers open. During the rainy season the tree is readily recognized at a considerable distance by the whitish flower panicles, which overtop the green foliage, and during the dry season the feathery seed-bearing panicles distinguish it from its associates. The small oily seeds are enclosed in a hard, bony, 1-4-celled nut, which is surrounded by a thick covering, consisting of a dense felt of matted hairs. The fruit thus formed is further enclosed in the enlarged membranous calyx, in appearance like an irregularly plaited or crumpled bladder. The tree seeds freely every year, but its spread by means of self-sown seed is impeded by the forest fires of the dry season, which in India generally occur in March and April, after the seeds have ripened and have partly fallen. Of the seeds which escape, numbers are washed down the hills by the first heavy rains of the monsoon. These collect in the valleys, and it is here that groups of seedlings and young trees are frequently found. A portion of the seed remains on the tree; this falls gradually after the rains have commenced, and thus escapes the fires of the hot season. The germination of the seed is slow and uncertain; a large amount of moisture is needed to saturate the spongy covering; many seeds do not germinate until the second or third year, and many do not germinate at all. Where the teak tree is associated with dense clumps of bamboo, natural reproduction is almost absent, except when the bamboo flowers and dies, and even then, if the dry bamboos and the resultant bamboo seedlings arc not burnt, such young teak as may germinate are likely to be smothered at once.

The bark of the stem is about half an inch thick, grey or brownish grey, the sapwood white; the heartwood of the green tree has a pleasant and strong aromatic fragrance and a beautiful golden-yellow colour, which on seasoning soon darkens into brown, mottled with darker streaks. The timber retains its aromatic fragrance to a great age. On a transverse section the wood is marked by large pores, which are more numerous and larger in the spring wood, or the inner belt of each annual ring, while they are less numerous and smaller in the autumn wood or outer belt. In this manner the growth of each successive year is marked in the wood, and the age of a tree may be determined by counting the annual rings.

The principal value of teak timber for use in warm countries is its extraordinary durability. In India and in Burma beams of the wood in good preservation are often found in buildings several centuries old, and instances are known of teak beams having lasted more than a thousand years.@@1 Being one of the most durable of Indian timbers, teak has always been used for buildings, particu­larly for temples, and in India it has been the chief timber employed for shipbuilding. When iron commenced to be extensively used for the last-named purpose, it was supposed that the demand for teak would decrease. This, however, was not the case, for the wood was for long very largely used in shipbuilding, and though its employment in war-vessels has diminished, it is still in very great demand for “ liners ” and similar ships. It is also used for furni­ture, for door and window frames, for the construction of railway carriages, and for many other purposes. White ants eat the sap­wood, but rarely attack the heartwood of teak. It is not, however, proof against the borings of the teredo, from whose attacks the teak piles of the wharves in the Rangoon river have to be protected by a sheathing of metal.

Once seasoned, teak timber does not split, crack, shrink, or alter its shape. In these qualities it is superior to most timbers. In contact with iron, neither the iron nor the teak suffers, and in this respect it is far superior to oak. It is not very hard, is easily worked, and takes a beautiful polish. It has great elasticity and strength, and is not very heavy. The average weight of perfectly seasoned wood fluctuates between 38 and 46 lb per cub. ft.@@2 Its weight, therefore, is a little less than that of English oak. Green teak timber, however, is heavier than water, so that,

@@@1 In one of the oldest buildings among the ruins of the old city of Vijayanagar, on the banks of the Tungabhadra in southern India, the superstructure is supported by planks of teakwood l½ in. thick. These planks were examined in 1881 they were in a good state of preservation and showed the peculiar structure of teak timber in a very marked manner. They had been in the build­ing for 500 years *(Indian Forester,* vii. 260). In the wall of a palace of the Persian kings near Bagdad, which was pillaged in the 7th century, two Americans found in 1811 pieces of Indian teak which were perfectly sound (Ouseley, *Travels in Various Countries of the Fast,* ii. 280, n. 67). In the old cave temples of Sal- sette and elsewhere in western India pieces of teak have been found in good preservation which must have been more than 2000 years old.

@@@2 At 44∙8 lb per cub. ft. a load of 50 cub. ft. weighs a ton (2240 lb), hence in the Burma ports a ton of teak timber is taken as equivalent to a load of 50 cub. ft.