

AGATHIS (*Salisbury*). Dammar Pine.

*Agathis australis* (*Bentham*, and *Hooker f.*). "Kauri." (*Dammara australis*, *Lambert*.) New Zealand, North Cape to Mercury Bay and Kawhia.—A noble tree, 80ft. to 150ft. high, with a trunk 3ft. to 6ft. in diameter. The timber is one of the finest in the world; it is of firm, compact, yet silky texture; easily worked, strong, and durable; it is used for furniture, general house-building, bridges and constructive works, masts, deck-planking, and other purposes of naval architecture, and is adapted to a greater variety of uses than any other pine-timber. It was exported during the year ending the 31st December, 1885, to the value of £143,475; while the export of all other kinds together amounted only to £13,872. Kauri resin, which is produced entirely by this tree, was exported to the value of £342,151 during 1884, and £299,762 during 1885. Planted trees make an average growth of a foot per annum.

*A. robusta* (*Bentham* and *Hooker*). "Queensland Kauri." Queensland.—Attains fully 150ft. in height; but the timber, although valuable, is not equal to the New Zealand kauri. It is, however, of more rapid growth. Adapted to the warmer portions of the North Island.

ARAUCARIA (*Jussieu*).

*Araucaria imbricata* (*Pavon*). "Monkey-puzzle." Chili.—A noble tree, 150ft. to 200ft. in height, affording durable timber, easily worked, and adapted to a great variety of purposes. The resin is used as a remedy for wounds, and the seeds are edible. Suitable for mountain-forests, although of rather slow growth.

*A. Bidwillii* (*Hooker*). "Bunya-Bunya." Queensland.—Attains the height of fully 150ft., and affords a valuable timber of great durability. Nuts edible. Suitable for lowland cultivation in sheltered places in the North Island.

*A. excelsa* (*R. Brown*). "Norfolk Island Pine." Norfolk Island.—A noble pine, 150ft. to 200ft. in height. Timber not fully equal to the preceding, although more valuable than many kinds in common use. It is of rapid growth north of Wanganui, but is not adapted to the climate of the South Island. Numerous fine specimens are to be seen in the Auckland and Taranaki Districts.

PINUS (*Linne*).*A. Species with Two Leaves in a Sheath.*

*Pinus muricata* (*Don*). "Bishop's Pine." California.—A small tree, rarely exceeding 50ft. in height, but very hardy, and flourishes in all parts of the colony.

*P. inops* (*Solander*). "Scrub Pine." Kentucky, Virginia, &c.—A small tree, well adapted to poor soils, and, like the *Pinaster*, will grow in blown sand. Produces tar and resin in abundance; but the timber is of little value.

*P. mitis* (*Michaux*). "Yellow Pine." New England States to Georgia.—Attains the height of 60ft., and affords a smooth-grained timber of great value.

*P. contorta* (*Douglas*). "Tamarac." British North America, California.—Height, 50ft. to 80ft. Affords a durable timber of great value for various purposes. Adapted to mountain districts.

*P. Pinea* (*Linne*). "Stone Pine." Southern Europe, Canary Islands.—Height, 60ft. to 80ft. Affords a useful timber. The large nuts are edible.

*P. Pinaster* (*Solander*). "The Cluster Pine." Southern Europe, Algeria. (*P. maritima*, *Lamarck*; *P. novæ-zelandiæ*, *Loddiges*.)—Height, 50ft. to 80ft. Wood soft, suitable for packing-cases. Yields resin abundantly. In Austria, tracts of *Pinaster* forest are leased for the extraction of resin on payment of an annual rental of 3d. or 4d. per tree. One of the best trees for planting on blown sand.

*P. Halepensis* (*Miller*). "The Aleppo Pine." Southern Europe, Georgia, Persia, Syria, &c.—Height, 40ft. to 60ft. Affording serviceable timber, although of small dimensions. Will grow on poor soils, and may be planted on blown sand. Excellent for shelter-belts, and flourishes in all parts of the colony.

*P. sylvestris* (*Linne*). "Scotch Pine." Northern Europe and Asia, extending to Siberia.—Height, 80ft. to 100ft. Affording one of the most valuable timbers of commerce. It is the red deal of most Baltic ports, the yellow deal of Onega and Archangel. In New Zealand its average rate of growth in lowland situations is nearly 3ft. per annum. It will, however, produce timber of greater value in alpine districts, and will prove one of the best species at our command for mountain-forests above 2,500ft. It yields tar and resin freely, and the cones have been used for tanning.

*P. Laricio* (*Poirer*). "The Corsican Pine." Southern Europe, Sardinia, Corsica, &c. *P. austriaca* (*Höss*). "Black Austrian Pine." Central Europe.—The latter plant would be more correctly considered as a variety of the former, and affords the more valuable timber of the two. It may be planted on poor soils, and resists high winds, even in the most exposed situations. Both species attain upwards of 100ft. in height, and are worthy of being generally planted.

*P. resinosa* (*Solander*). "Red Pine of Canada." Canada, Nova Scotia, &c.—A valuable pine, attaining the height of from 80ft. to 100ft., and affording a heavy resinous timber of great durability.

*P. densiflora* (*Siebold*). "The Japanese Pine." Japan.

*P. Thunbergii* (*Parlatore*). "Thunberg's Pine." China, Japan.

*P. Massoniana* (*Lambert*). "Masson's Pine." China, Japan.

Three useful species, from 60ft. to 80ft. in height, and affording serviceable timber. *P. Thunbergii* is the least valuable of the three.

*B. Species with Three Leaves in a Sheath.*

*P. Kasya* (*Rozle*). "Kasya." Nepaul.—A lofty pine, affording timber of great durability.

*P. longifolia* (*Roxburgh*). "The Long-leaved Pine." Cashmere, Nepaul, &c.—Height, 100ft.