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Western Australia.



Forests Department.



Tuart.

TUART AND WANDOO.

Issued under the authority of the Minister controlling the Forests Department:

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By Authority: FRED. WM. SIMPSON, Government Printer, Perth.



TUART

(*Eucalyptus gomphocephala*).

TUART is in some respects unique. It is one of the toughest and densest timbers in the world, and for that reason has found acceptance wherever these qualities are prime essentials. The technical designation (*gomphocephala*) has reference to the markedly peculiar swelling or hanging-over appearance of the lid of the calyx tube. This is a very marked feature of the species. It is a handsome eucalypt, and has a wonderfully bright and cheerful appearance in the forest. In its younger stages the species is very beautiful, and on this account it has been utilised for ornamental purposes in places in the Eastern States. It is straight and well-clothed, and it has an attractive bright green leaf, and in this respect is not unlike the Karri. When it has developed out of the seedling and sapling stages, the leaves get narrower and more elongated than formerly. It is confined in its natural habitat to the limestone belt lying along the coast between Lake Pinjar, on the North, and the Sabina River, on the South, some 12 miles North of Busselton. Curiously enough, it is not to be found anywhere else in the State, although limestone occurs all round the coast line. The best Tuart is to be found between the Sabina River and the Capel. It attains a height up to 100 feet, with a bole 35 to 45 feet, and a diameter 7 to 8 feet. Its prime physical properties are:—

Weight per cubic foot (green) ..	78lbs.
At 12 per cent. moisture	68lbs.
Transverse strength	17,900lbs. per sq. inch.
Tensile strength	16,500lbs. per sq. inch.

The timber is very hard and dense, with an interlocked grain, and its colour is yellow. In the early days of the Colony's history its remarkable toughness was quickly noted, and in the Pioneer Flour Mills, where all the machinery was made of local timber, the cogs in the wheels were invariably

of Tuart. At the present time the timber is extensively used locally for wheelwright work, especially the large naves required for the 9ft. and 10ft. wheels of the timber whims which operate in the Jarrah and Karri forests. Its main use, along with Wandoo, is for railway wagons and truck construction. On the Western Australian Government Railways the cost of maintenance on trucks has been reduced from £3 7s. 6d. to 10s. per annum per truck by substituting for steel Tuart and Wandoo in the under-carriages. Like Wandoo, the cutting of Tuart, except for departmental purposes, is forbidden on Crown lands.

WANDOO

(*Eucalyptus redunca*, var. *elata*.)

WANDOO does not grow in close forests, but in open, savannah form, and it is found scattered in patches over nearly the whole of the South-West, either by itself or more frequently mixed with Jarrah and Marri. It prefers a clayey soil, although occasionally it is met with on the sand-plains. It was at one time known as the "White Gum," but in order to differentiate it from trees appearing under the same vernacular name in some of the Eastern States, the native aboriginal term of "Wandoo" has been adopted for the Western Australian variety. Its prime physical properties are—

Weight per cubic foot (green) ..	79lbs.
At 12 per cent. moisture	71lbs.
Transverse strength	16,100lbs. per sq. inch.
Tensile strength	16,100lbs. per sq. inch.

The colour is light brown, although trees with a yellowish tint are not uncommon. Its durability is remarkable, as the following instances will show:—

1. A pile from the old Serpentine bridge on the Bunbury Road, driven in 1854, when drawn in 1899, 45 years after driving, was in a remarkable state of preservation.

2. Cogs of this timber were in use at Ellen's Brook Flour Mill since 1837, and in 1899 showed very little wear, and were in a thorough state of seasoning and preservation.

It is used for all the purposes to which Tuart is applied, as mentioned above. In under-carriages of trucks it has a life of 25 years. The top planks of the trucks on the Western Australian Government Railways are always made of Wandoo, which stands the wear of loading and unloading better than steel. The stanchions also of such trucks are of Wandoo. A remarkable quality which this timber possesses is that, when used in conjunction with steel, there is no chemical action set up between the wood and the metal. Bolts have been taken from under-frames of trucks after 20 years use and have been found to be quite as clean as when put there, while the auger marks were still visible in the holes.