

Tuart (*Eucalyptus gonophlocephala*) is found only on the Swan Coastal Plain, growing from Jurien Bay in the north to the Sabina River, east of Busselton, in the south of Western Australia, and is generally confined to limestone soils close to the coast. It is estimated that before Europeans arrived there were more than 111,600 hectares of tuart woodland. Most of these were later cleared for agriculture and urban development.

In recent years, reductions in the health and vitality of some remaining tuart woodlands at Yalgorup, south of

Mandurah, has highlighted the need for a comprehensive conservation and management strategy for all tuart ecosystems. Likely threatening processes include climate variability, changed hydrology, altered fire regimes and repeated attack by insect wood borers. Little is known about the tuart's requirements for nutrients, or the role of soil-borne fungi.

Early descriptions

Tuart specimens were first collected from Geographe Bay and by the French explorer Leschenault in May

1801, and the name later published in 1828. Descriptions of tuart woodlands were undertaken soon after European settlement of WA's south-west. In 1831, Lieutenant William Preston described the Vasse estuary area:

'The country passed over this morning was beautiful, resembling a fine Park in England, with excellent timber, five or six to the acre.'

Later that year, John Bussell wrote:

'A farmer could hardly grudge the fine spreading trees of red and white gum and peppermint the small portion of the ground they occupied, with an understorey typically of bright scarlet and yellow flower, daisy, buttercup and a purple marigold.'

In 1836, Lieutenant H W Bunbury described the Lake Preston Capel River area as:

'Open country with a good deal of grass growing on a light soil under very large white gums called ... "toorts".'

Sixty years later, in 1896, pioneer forester John Ednie-Brown wrote of the Ludlow area as:

'Limestone country with tuarts dotted in a parklike fashion, and occasional brakes of peppermint (*Agonis flexuosa*) ... and a rich carpet of annual grasses.'



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Large mature tuart tree at Manning Lake, Perth.

Photo - Jiri Lachman

Left Tuart grove within Woodman Point Regional Park south of Fremantle.

Photo - Sallyanne Cousins

Scales of mapping

State scale In 1964, the Director of the Kings Park and Botanic Garden, Dr J S Beard and others, initiated a project called the Vegetation Survey of Western Australia that was later published as a map series between 1979 and 1981. All vegetation in the State was classified according to dominant ecological structural units. The study defined the original pre-1750 extent and identified six broad dominant types for tuart on the Swan Coastal Plain from Moore River to Busselton.

Regional scale In 1983 the then Department of Conservation and Environment mapped vegetation communities of the Swan Coastal Plain as part of the review of conservation reserves within the Darling System 6 area. Geology, landform and soil values, climate zones and plant descriptions were used to determine the communities. Tuart woodlands were defined as part of this project.

Local scale In 1996 the Department of Environmental Protection and others used survey plots to assess the occurrence of local tuart populations. As expected, tuart occurs in a variety of floristic populations across its range including wetlands and uplands. Only in the southern tuart and peppermint woodlands of the Spearwood Dunes, and the tuart and/or peppermint woodlands of the Quindalup Dunes is tuart a defining species.