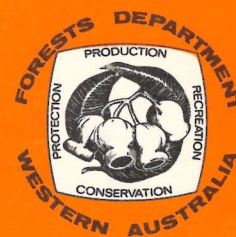




INFORMATION SHEET



PINE TREES growing in Western Australia

A. R. LUSH

Australia's, and particularly Western Australia's heritage of softwood species, the pines (or conifers), compares very unfavourably with the richness and variety of the hardwoods which are so characteristic of the Australian landscape. In all, only about a dozen species have been of any real economic importance at some time or other and most of the remaining species are shrubs of little economic significance. Considerable quantities of high quality softwood ply and mill logs have been won from the rain-forests of the Australian east coast and highlands. Further inland, in much lower rainfall areas, the smaller white cypress pine (*Callitris glauca*) covers extensive tracts and is an important source of timber. Another valuable group of softwood species occurs in the Tasmanian temperate rain-forest of the north-west and west coast regions. A few other cypress pines, notably northern cypress pine (*C. intratropica*) and coast cypress pine (*C. columellaris*) are used to a limited extent.

Within our State, the white cypress pine and northern cypress pine are the two most prominent naturally-occurring pines. The Rottneest Island pine (*C. robusta*) is confined to the south-west as a small, non-commercial tree. Fig. 1 shows the distribution of W.A.'s two most important native pines. These two species attain heights of between 20 and 25 m and diameters of between 25 and 50 cm, but under favourable conditions may grow to larger sizes. In the Goldfields, white cypress pine is usually stunted (about 9 m in height) with more or less spreading branches which give it a Christmas tree appearance. This tree is very much like its sister the

Rottneest Island pine and is found on the margins of salt lakes. Its timber is resistant to termite attack, which makes it valuable as a fence post timber.

At present, the native softwood supplies are dwindling and extensive plantations of introduced pines, mostly true pines such as radiata pine (*Pinus radiata*, or Monterey pine) and pinaster pine (*P. pinaster*, or maritime pine) are being established throughout the State (see Fig. 2). Pinaster pine favours the sandy coastal plain whereas radiata pine requires the more fertile river-valley sites. Radiata pine, also referred to as the "remarkable pine", which has been so successful in South Australia and other parts of the world, is extremely demanding as to site and can only be grown on carefully selected sites following intensive soil survey. It can attain a height in excess of 30 m in only 25 years, surpassing all other native and introduced pines in Western Australia, indeed, within Australia.

The first trial plantings of true pines, made in 1897 on coastal sand dunes near Bunbury, were a failure. It was a matter of experiment to find species which were suitable for Western Australian climatic and soil conditions and numerous species were tried. More than a dozen different pines are now grown successfully throughout Australia, however fewer than half of these will grow successfully in Western Australia and only two of these well enough to be a commercial proposition—namely radiata and pinaster pine. Such true pines as *Pinus brutia*, *P. canariensis*, *P. halepensis*, *P. pinea*, *P. elliottii*, *P. radiata* and *P. pinaster* will grow well under certain Western Australian conditions and are available from Forests Department nurseries. The seven pines listed above can be identified by their different cones and needles (see Fig. 3), however sub-cellular characteristics may need to be studied to separate them from the many other true pines found throughout Australia.

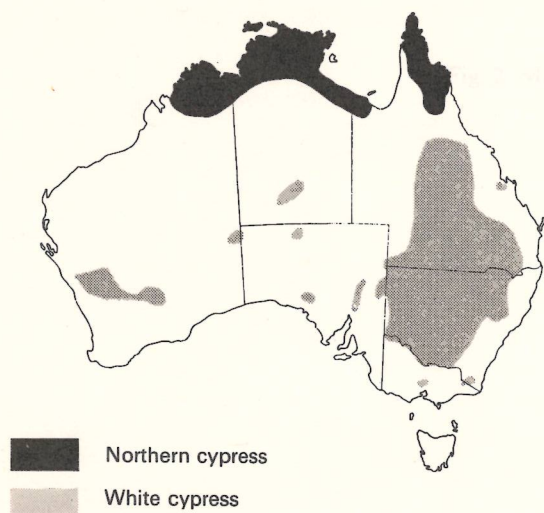


Fig. 1. *Forest Trees of Australia* (Forestry and Timber Bureau Publication).

From the early days of history to the pioneering years of the nineteenth century people who did not have ready access to forests and their products were at a disadvantage in the struggle for existence and development compared with those who had such resources. Forests were exploited with dire consequences in the drier wheat belt areas. Settlers have since been planting a variety of trees, including many of the pines mentioned earlier, to provide shade and shelter for stock and homesteads, to help stabilise areas of erosion and to beautify the landscape generally. Throughout our State, pines planted in earlier years dominate the homes and parks of towns and farms as stark evidence to the wisdom of John Evelyn, who, in 1664, wrote in his famous *Sylva*, "Men seldom plant trees till they begin to be wise, this is, till they grow old, and find, by experience, the prudence and necessity of it."

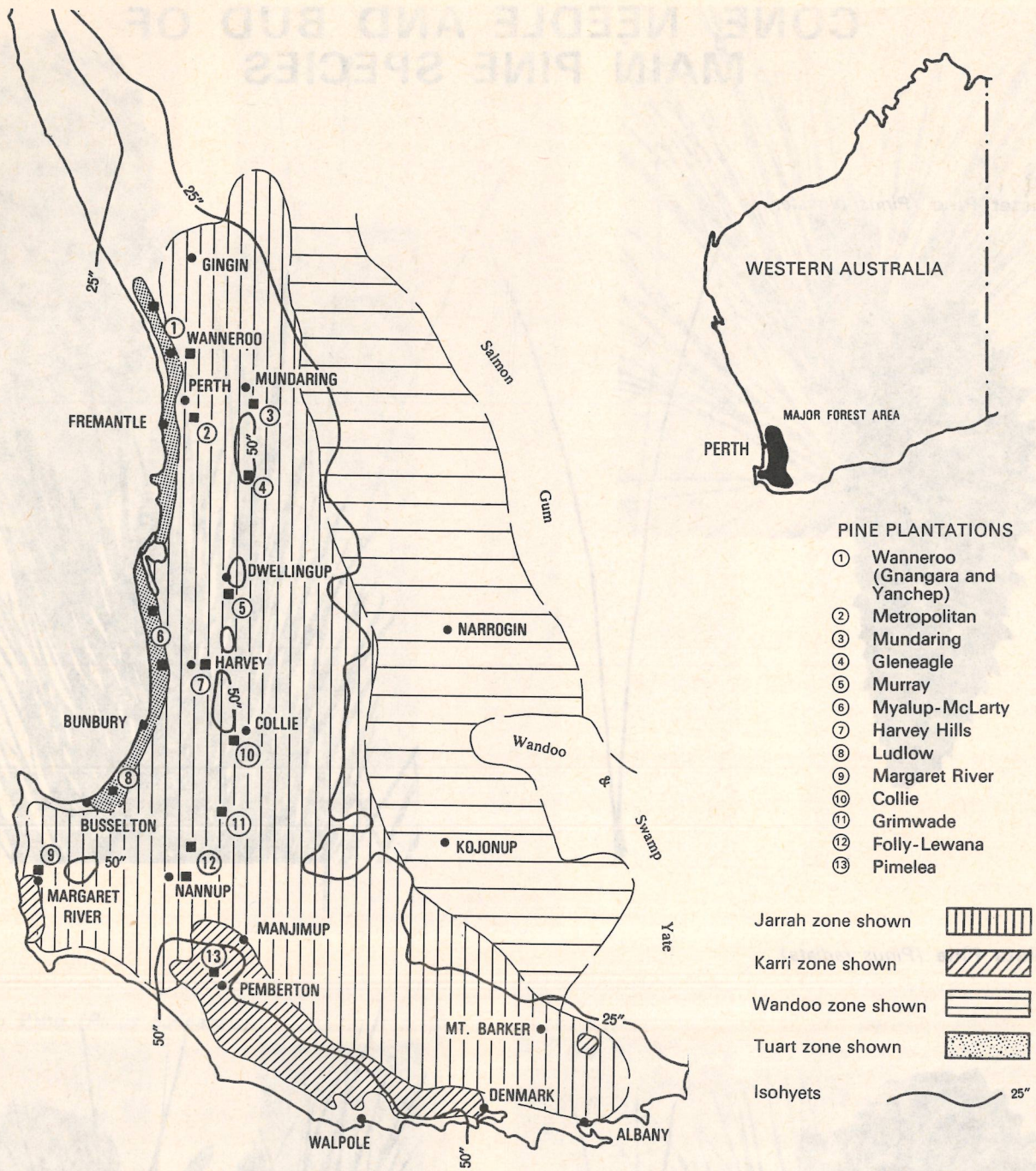
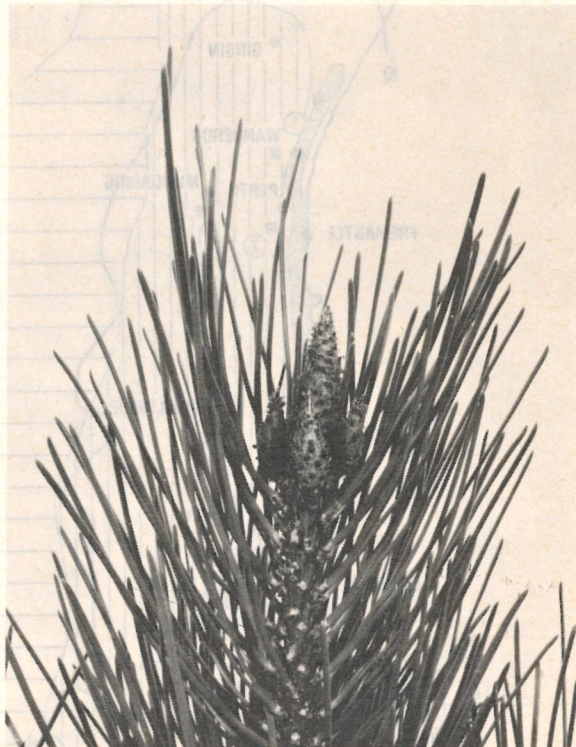
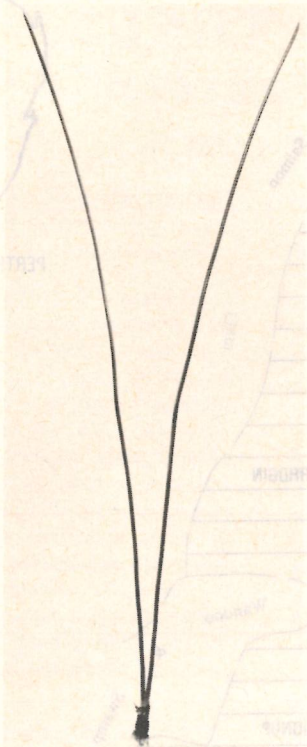


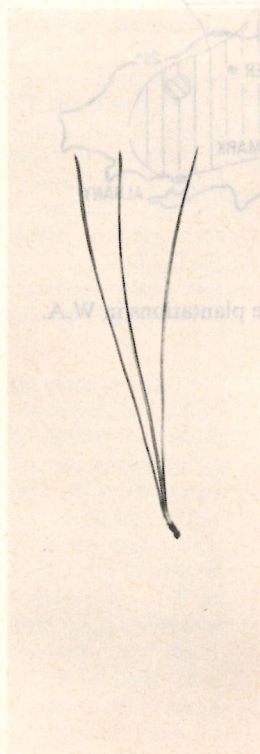
Fig. 2. Major pine plantations in W.A.

CONE, NEEDLE AND BUD OF MAIN PINE SPECIES

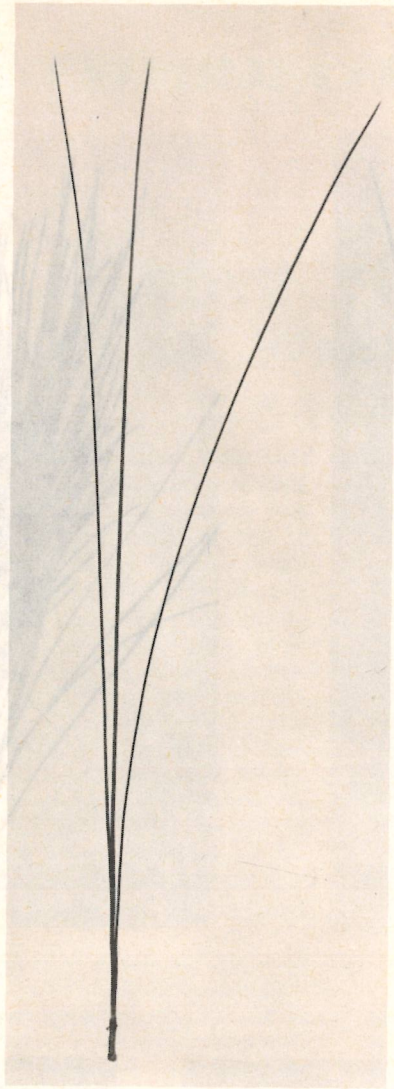
Pinaster Pine (*Pinus pinaster*)



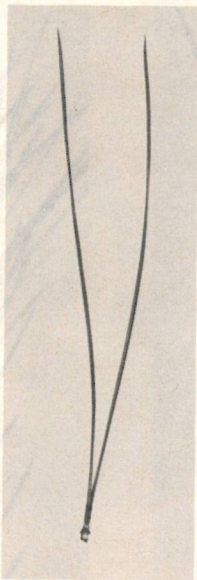
Radiata Pine (*Pinus radiata*)



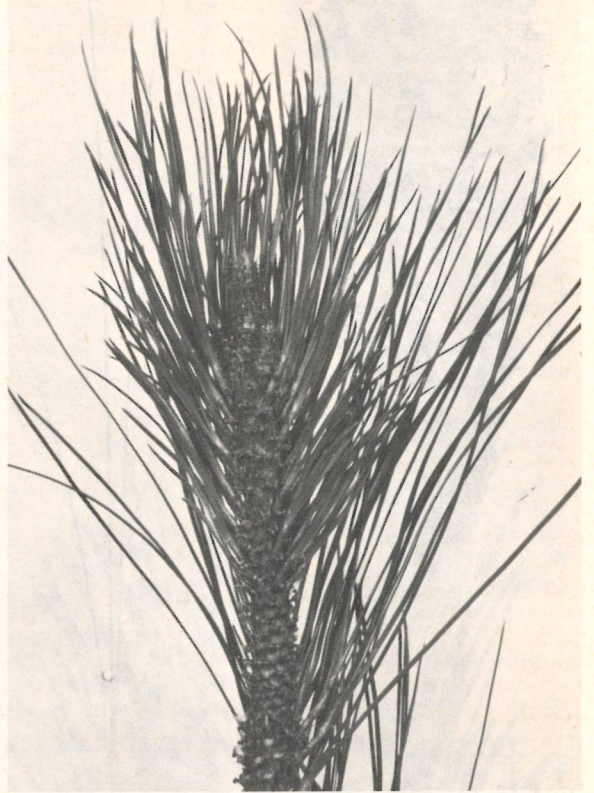
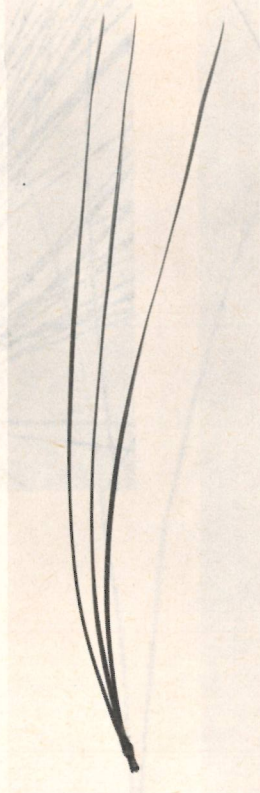
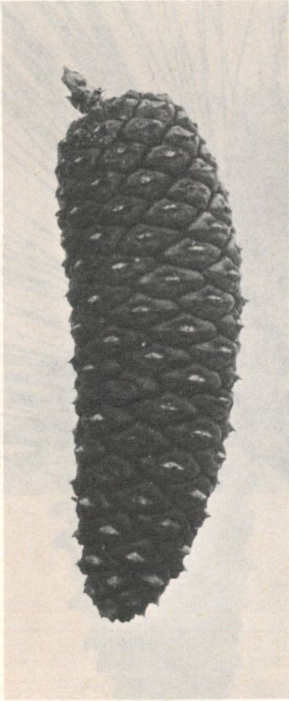
Canary Island Pine (*Pinus canariensis*)



Aleppo Pine (*Pinus halipensis*)



Slash Pine (*Pinus elliottii*)



Stone Pine (*Pinus pinea*)

