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# LESLEY NATURE TRAIL



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## WELCOME TO THE DALE FOREST

There is a growing public appreciation of, and interest in, our State's forests. Each year, many thousands of people visit them seeking the pleasures and adventures which can be found within them, and a knowledge and understanding of the forests themselves - how they grow, develop and change, what they produce and how they are managed.

This nature trail and the adjoining picnic area have been developed for your use and enjoyment. Features of interest along the trail, which are described in this guide, are indicated by numbered pegs. Please help to maintain the trail by not picking wildflowers or damaging the vegetation in any way. Consider the results if other visitors treat the area as you do.

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A forest is a complex biological community and, like any group of living organisms, is in a continual state of change. To the casual observer, the jarrah (Eucalyptus marginata) forests of the Darling Range may appear to remain virtually unchanged from year to year, but nature is never static and there is a continual progression as new replaces old. Left untouched the jarrah forest would most likely continue to provide trees in perpetuity. However, the majority of trees in a virgin forest, by virtue of their great age, would be overmature and of little commercial value to man. Their large size would also hinder the development of younger, more vigorous trees.

There are a variety of reasons for managing the forest resource, the principle objective being to insure that the State's forests continue to fulfil the community's need for a wide range of wood products. In a sense, forest management is simply an attempt to improve on what Nature has already provided. By using proven techniques, the forester can channel Nature's energy into more productive forms to man.

The forester therefore attempts to create conditions that favour the more vigorously growing trees. In the jarrah forest, the removal of individual trees creates small openings. It is in these openings that the jarrah life cycle is renewed. Following the first winter rains in May and June, seed that has fallen from nearby trees begins to germinate. As many as 1 million young seedlings per hectare may develop, but normally less than 1% of these survive past the first and second summers due to intense root competition, the activity of natural parasites and the dry, hot summer climate.

Those which do survive consolidate their position and ensure their survival by the formation of swellings called lignotubers at the base of the stem. These lignotubers put out dwarf shoots which give the jarrah seedlings a bushy appearance (STOP 1). After a period of several years, the seedling strengthens and one or more of the shoots emerge upwards (STOP 2). In jarrah, this dominant stem is commonly termed a dynamic shoot and the resulting seedling an advance growth. Once a single shoot has emerged, the young saplings will continue to grow into larger poles, unless subject to attack by insects or frosts (STOP 3).

Another way in which many of the eucalypts including jarrah, may regenerate is by coppice shoots (STOPS 4 & 5). Once a tree is cut down, shoots may arise from dormant buds on the stump and will eventually develop into small trees.

When a tree reaches maturity and slackens off in growth, it is removed to make room for more vigorous young trees coming on. Old veterans and poorly formed or defective trees (STOP 6) which are not merchantable are killed by ringbarking (STOP 7). All age classes of trees are represented in the forest so that as mature trees are removed for milling, others are available to produce future crops with a minimum lapse of time. Spacing between trees of similar size and age is also

controlled by thinning out some of the stems to permit an adequate area for the growth of the remaining individuals. There is an example of a thinned stand of trees between STOPS 12 & 13. Providing a tree has sufficient room, it will grow into a future crop tree or sawlog (STOPS 12 & 13).

Another tree which grows in association with jarrah throughout the southwest is marri (Eucalyptus calophylla), a species which belongs to the group of eucalypts known as the bloodwoods (STOP 8). Generally speaking, bloodwoods are of relatively low commercial value due to the prevalence of kino (gum) veins and pockets in their timbers. At STOP 10, the track passes through the remains of a third species of eucalypt, blackbutt (Eucalyptus patens). This species, whose distribution is restricted to the moister areas along creeks and rivers, has timber with characteristics very similar to jarrah. Further along the trail at STOP 11, an old survey marker can be seen. These reference points were established in the initial assessment and mapping of the forest.

In addition to timber, the jarrah forest provides food and cover for a variety of birds, mammals and reptiles. The dense vegetation which occurs along creeks (STOPS 9 & 10), valley bottoms and in swamps is particularly suited to the requirements of many species. The jarrah forest is also the major source of water for the metropolitan region and provides a wide variety of recreational attractions.

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We hope you have enjoyed your visit. Any comments or questions pertaining to this area are welcomed and should be directed to the Forests Department, Kelmscott.