

Tree lookouts—a unique chapter in Western Australian history

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The detection of fires in Western Australian forests these days is an operation of almost military efficiency. Early each summer morning, forestry officers in district headquarters throughout the South-West, study the weather forecasts, calculate fire dangers, brief their pilots and then send them off, each in a small and specially equipped light aircraft, to scan the skies for the tell-tale wisps of smoke which could herald trouble in the forests below.

The aerial fire spotting system, with its interlocking circuit patterns, and predetermined flight schedules for each aeroplane, carefully tailored to particular forest types and daily weather conditions, is

highly flexible, effective and economic. In the years since it was introduced, the spotter operation has proven itself time and again, under the most severe emergency conditions. Similar systems are now being

introduced in forest areas elsewhere in Australia.

In Western Australia, aerial fire detection was developed in 1972 in the Pemberton region. Ironically, its success was a major factor in bringing to a close another famous and unique forest fire detection system, developed by an earlier generation of Western Australian foresters. This was the use of fire lookouts constructed on the tops of giant karri trees in the tall timber country of the lower South-West.

Nine lookout trees once stood in the karri forest, and five of these formed part of a detection network which operated almost daily each summer, for a period of nearly thirty years. Today, only one, the famous Gloucester Tree at Pemberton, remains in a condition which permits it to be safely climbed, but it is now more a tourist attraction than a working lookout.

The great trees have come and gone, and the story of their construction and operation has passed into the pages of history.

Early detection systems

Forestry in Western Australia really only began after the passing of the Forests Act in 1918. The first foresters quickly realised that before any form of fire control could be introduced, an effective fire detection system was required.

Before long, the first lookouts were installed. These were rough wooden cabins or short towers located on prominent natural high points in the northern jarrah forest, such as Mt. Gungin and Mt. Dale. From these vantage points, an uninterrupted panorama of surrounding forests was available. In the karri forests in the south, a number of difficulties arose. For a



◀ *The original Mt. Gungin fire lookout tower built in 1921 and situated some 6.5 km south-east of Mundaring Weir. The towers on Mt. Gungin and Mt. Dale (1921) were the first built by the department. (Anon.)*

Alco tree gave a magnificent view of the surrounding forest. (Anon.)

start, the landscape is generally very level and naturally outstanding high points simply did not exist. To add to this problem, southern forests were tremendously tall—hundreds of square kilometres of karri forest, each tree up to 80 m in height, were broken only by the scattered clearings of the pioneer settlers. Huge costly towers would have been needed to provide effective lookouts over such stands.

It was not until the mid-1930s that a solution presented itself. A young forest officer named Don Stewart (later to become Conservator of Forests), was watching the exploits of Pemberton's incredible dare-devil axeman, Dick Sprogue, whose particular specialty it was to drive pegs into tall karri trees, climb to the top and then chop through the upper stem at heights of 50 or 60 m from the ground. Suddenly, Stewart hit upon an ingenious idea. Why not find a tall, sound karri tree growing on a ridge or low hill, clear the surrounding trees and then build a lookout *on the tree itself*?

To test the theory, a large marri growing in a natural clearing on the Alco ridge, a few kilometres from Manjimup, was selected. The tree was pegged and a rough crowsnest bolted into the upper limbs. The result exceeded all expectations—a magnificent view of the surrounding forest was obtained. A solution of surprising simplicity and economy had been found.

Climbing the great trees

Then began a task involving some of the bravest and most skillful work ever undertaken by individuals in Australian forests—the climbing, proving and construction of the karri lookout trees. Stewart was fortunate in having the assistance of two remarkable foresters. The first was Jack Watson, who was



later to become Superintendent of King's Park, and who carried out the survey work and actually climbed the enormous trees (before they had

been pegged) to evaluate their suitability as lookouts. The second was George Reynolds, a highly skilled and fearless axeman, whose job it



◀ Gardner tree during construction—note the man up in the crown. (Anon.)

Inset: Jack Watson in his climbing gear.

Watson climbed, using only a safety rope, and iron spurs strapped to his legs. It was a fearsome and arduous task, for the trees were huge in both girth and height, and karri bark becomes dangerously slippery in moist conditions. When he reached the top, detailed surveys of the surrounding countryside were made, together with a thorough inspection of the tree itself for such things as configuration, strength and vitality of the upper crown, where a cabin would be built. Both Watson and Stewart climbed dozens of trees before the final selections were made.

Building the tree lookouts

For the construction job itself, Reynolds and a small team of carefully chosen assistants were called in. The first step was the pegging. With a short shanked two-inch augur, holes were bored through the bark and deep into the solid wood beneath. Into each hole was hammered a carefully selected sawn karri peg, each successive peg slightly offset so that a gradually spiralling ladderway was produced up and around the tree.

When the first limbs were reached, the real excitement began as Reynolds hoisted up his axe and set to work chopping them through. As each great branch was severed it would plummet off into the void, and the tree would jerk and shudder as its age-old balance was upset. On one occasion a falling limb swept out 12 metres of pegs, leaving Reynolds (quite happily) marooned up the tree for several hours, while the missing section was re-pegged from below.

With pegging and lopping completed, the final stage was the installation of the cabin and its special equipment of maps, telephones and

was to construct the ladderways up the tree trunks, lop off the upper branches, and build the towerman's cabin at the top.

Months of painstaking survey work through the forest followed, and a number of potential lookout trees were selected. These trees

Gloucester Tree near Pemberton, with its cabin perched in the branches 61 m above ground level. (Dale Watkins)

direction finders. The cabins were specially designed for each particular tree, prefabricated on the ground and then hoisted aloft in sections on a flying fox, rigged to pulleys in the crown of the tree. The final result was a perfect little weather-tight room—"the ultimate tree-cubby", as one visitor described it.

The nine tree lookouts constructed in the karri forest region between 1936 and 1952 were Alco, Diamond and Big Tree in the Manjimup district, and in the Pemberton area, Gardner No. 1, Gardner No. 2, Gloucester, Pemberton, Beard and Boorara Trees.

After considerable testing over a number of years, the key network of Diamond, Gloucester, Gardner 2, Boorara and Beard, was accepted as giving the most effective coverage and these trees were used constantly throughout the 1950s and 1960s.

Although lookouts on trees were used on occasions elsewhere in the world, the complete tree-dependent system used in Western Australia's karri region was a unique and highly successful operation. Had not the spotter aircraft system which replaced it, proved so superior, it might still be in operation today. Almost certainly replacement trees would have had to be found, for like all living things, trees deteriorate with age and in the case of the tree lookouts, the deterioration would have been inevitably accelerated by their decapitation and the rot which set in on their severed limbs. The top of the old Gardner No. 1 snapped off in a winter storm a few years ago, and shortly after, Beard Tree became so dangerous it had to be felled. Gardner No. 2, Diamond and Boorara are all considered unsafe today, and have had the bottom few metres of ladder removed to prevent people climbing them.

Today, only the famous Gloucester Tree remains. The era of the



great tree lookouts has passed—but for those who worked with them or in the cabins, "the trees" will always occupy a special place in the

memory, for they represent a spirit of courage, ingenuity and skill in our pioneer foresters, the like of which is unlikely to be seen again.