CHAPTER IV

THE AUSTRALIAN PINE AND CAJEPUT.

To me the **Australian pine** is one of the most remarkable members of the plant world. Some ardently admire it, others are not so fond of it, but all must admit that for quick results on all kinds of soils it has few, if any, rivals.

Although a native of far-away Australia and the South Seas it encircles the tropics of the globe. For binding shifting sand on the shores of the seas in windy situations it has no equal. It may be trimmed into **wind-break-hedge** to such a height that homes in its lee will be protected in times of severe storm.

It is called **she-oak** in some places and Australian pine in others, and it is neither a pine nor an oak, although it has wood like an oak and looks like a pine. It is called whistling pine, Polynesian ironwood, beefwood and a host of other native names, but its scientific name, **casuarina**, is not difficult and is appropriate, since it means with branchlets, like the feathers of the cassowary bird. It has no leaves, the branchlets are green and pendant.

This tree is a favorite with the natives of all sandy, tropical shores and is highly praised by almost every forester in tropical regions. It has been here a long time. There are many old trees in this section. On the seashore of Biscayne Bay, not far from Homestead, there was a group of trees called "cedars." These striking trees formed a landmark for sailors and was conspicuous for a long distance. This group consisted of Australian pines and the first that I can remember in this section. They were the leftovers of

an old nursery and the seed was brought from Cuba. In the early days, British ships brought seeds from the East to the British West Indies. Catholic missions throughout the world were also exchanging seeds. The **casuarina** was one of the first of these trees to get distributed throughout the tropics of the world.

Here are some of its virtues: It grows on salt marsh, seashore, sand, rock and muck at the rate of ten feet or more a year under favorable conditions and naturally grows straight into the air. It is long lived and reaches a height of one hundred and fifty feet. It is a gross feeder and has a very extensive and sturdy root system. To uproot a stump two feet in diameter is a real job for both man and dynamite. It fruits abundantly while very young and is easily propagated from seed. It is easily injured by fire and cold. Other ways it is marvelously hardy. I am in no position to pass on the beauty of this tree. This is purely a matter of personal opinion, but I can safely say that, from a forestry standpoint the casuarina will produce a large quantity of hard wood in places where the great majority of trees would fail utterly. I can also say that I am bitterly opposed to the reckless destruction of these trees by our road sides and the substitution of others that have not stood the test of time and that are its inferiors in many respects.

The common species is **equisetifolia,** meaning with jointed leaves like the horse-tails. There is another species in the Redland region. I am not sure who first introduced it and am not sure of its specific name, but think it is **cunninghamiana.** This species has never fruited in South Florida and I doubt if anyone can surely identify a species without the fruit. It is a beautiful tree, especially adapted to a rocky limestone soil and characterized by the production of many shoots from its roots. It soon produces a thick barricade and can be easily and quickly

propagated from these **root-suckers.** This species is rapidly spreading throughout this region, because it is liked by the majority of people.

The land of the kangaroo produces many odd plants and animals and there is a place in east Australia aptly called Botany Bay. From a botanical standpoint the inflorescence of casuarina is puzzling. The male and female flowers are separated on the same tree. The process of fertilization is primitive. The seeds form in a small cone and are released when the ripe fruit is dried in the sun. Its nearest relatives are the willows and walnuts. Its wood resembles red oak. The wood is pink, turning dark with age. It is heavy, hard and strong. Both the inflorescence and character of the wood are in need of further study. The wood is excellent for fuel and scaffold poles. It produces an enormous amount of wood in a very short time on soils where few other trees will flourish. In many places in the tropics it performs a far more welcome function conducive to the welfare of mankind in checking the force of the wind and in fixing shifting soils, especially sand dunes on the shores of the ocean.

Like many other tropical woods it is seasoned with difficulty. The trees should be sawn as soon as cut and then carefully piled in a ventilated but shaded place. The wood is useful for furniture. Small straight poles of casuarina could be quickly raised for rustic furniture or for rustic fences for which we pay so much and even import from Europe. This wood was used for war clubs by the natives of the South Seas. If suitable for spears and war clubs it ought serve as well for tool handles. In spite of the abundance of these tropical hard woods, we buy hickory handles for our grub hoes.

Brown in his book on tropical forestry says that in South India the casuarina has been used successfully in fixing shifting sands on the Madras coast and also that the precious **sandalwood,** the only tree that is

parasitic, will attach itself to the roots of the Australian pine.

Many people prefer the **Eucalyptus,** a famous genus of trees, which also come from Australia. There are probably five hundred species of this famous genus, two hundred species of which have been introduced into California, where most of them flourish as well as in their native land. Eucalyptus amydalina of southeastern Australia is probably the tallest tree in the world, reaching a height close to five hundred feet. None of these **eucalypts** seem to flourish in south Florida. They do better up the state away from our limestone rock, where they can get deep rootage in the soft sandy soil. Many trees of this genus have been planted in south Florida, but only a small percentage have survived.

We have several representatives of this great myrtle family which thrive here such as the **rose apple, guava** and **eugenias** so common in our hammocks, but the eucalypts, so far as I have been able to determine are not successful. The Australian pine on the other hand appears to do as well here as anywhere in the tropics. This tree seems very much at home on the Keys and has been a favorite as a shade tree in Key West for many years. Although, of course, not native, this tree may be classed as a naturalized immigrant and is so listed by several botanists. So far as I know the species of casuarina growing in the Redland district has never been studied, but is growing in popularity, is preferred by many to the common species and may in time supplant it.

There is another famous Australian tree called the **cajeput (Melaleuca leucadendron).** This tree which I introduced myself about twenty-five years ago is also able to withstand tidal overflow and has been able to maintain itself on the West Coast in the low pine land. Its trunk is covered with a thick coating of felty bark, so that it is not seriously injured by common ground fires. This too may be safely listed as a nat-

uralized immigrant. Its flowers are fine for honey, the oil is used in medicine and the wood is useful for fuel and furniture.

For many years the Bureau of Plant Introduction introduced many plants into south Florida for trial. Before the quarantine regulations came into force many nursery men and other persons interested were constantly bringing in new things from distant parts. Many of these have, of course, perished, some are barely holding their own, but I can safely say that none of them have a firmer hold in their new home than the two kinds of casuarina and the cajeput.

The Redland species (M. Cunninghamiana) with many little ones springing from the roots of the mother tree naturally forms a group capable of withstanding the severest gales. In fact group planting is by far the safest method in countries subject to strong winds. The wind hitting such an incline is diverted upward, forming a protected area of large extent in its lee. When growing in group form the trunks are protected from the scorching and drying effects of the summer sun.

These casuarinas seem remarkably free from disease and may form a very welcome mantle of green when our native Caribbean pine becomes a thing of the past, which seems likely in spite of its quick regeneration and rapid growth. It will be cut and used for lumber and fuel until it is all gone. Then we shall find the casuarinas handy for planting in places where better kinds will not grow. Thus man, with the help of wind and fire over a period of many generations, slowly changes the face of nature.

It is far quicker and safer to work with native species, because nature has done the experimenting long ago, but in the case of the casuarinas we may safely classify them as native since they have been here many years and have been able to hold their own in spite of fires and considerable unpopularity. Many claim that they lack color and are too sombre for this

section. Although they do not bear bright flowers they are always green and the bright-flowered species are always brighter by contrast.

Many claim that grass will not grow in its shade. This merely means that the tree is capable of appropriating to its own use all the moisture and fertility in its immediate vicinity. This is a good trait from a forestry standpoint. Its habit of growing straight into the air without pressure from the side is an admirable quality. The truth is we have not learned to use these trees in the ways for which they are most fit. Rightly planted these two casuarinas and perhaps other species of this genus, not yet introduced, may in time become as common as is Eucalyptus in California.