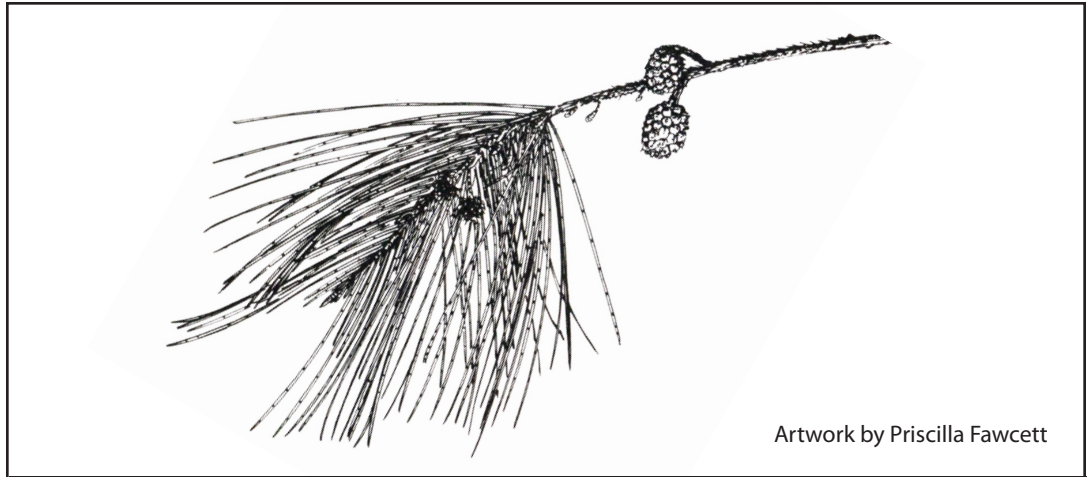




Invasive Species of the Bahamas



Artwork by Priscilla Fawcett

Casuarina

SCIENTIFIC NAME

Casuarina equisetifolia

FAMILY

Casuarinaceae

HISTORY OF INTRODUCTION

The Casuarina was introduced to Southern Florida in the late 1800's where it was planted near homesteads and orchids for shade or windbreak. In the 1930's it was planted on reclaimed land in swamp areas as it was believed to aid in drying up swamps, which it didn't. Experts estimate that Casuarina was planted in the Bahamas around the same time and just like Florida, the plant has exploded to an uncontrollable population.

DESCRIPTION

A tall tree growing to about 20 meters (65 feet) tall in the Americas and even taller in Australia. The trunk can get about a meter (3.3 feet) in diameter. The branches are usually long and slender and give the plant a drooping appearance. The bark is a brown-grey and heavily furrowed, often peeling.

It is also called the Australian Pine or in the Bahamas it is often referred to as "Cedar" as its appearance does resemble these plants. However, it is neither a pine nor a type of Cedar (*Juniperus sp.*). Casuarina is a type of flowering plant that appears to have very fine leaves similar to that of a pine or cedar family. In fact, closer inspection of the "leaves" proves that they are not actually leaves at all but rather modified photosynthetic branches. The actual leaves are tiny colourless scales that surround the numerous stem joints. This plant also appears to produce "cones" about 1.3 cm (0.5 in) which house the seeds.

HABITAT

Casuarinas are well adapted to grow in any habitat in the Bahamas. They prefer the sandy soils and are salt tolerant, therefore are most common along the shore line. The seedlings grow very quickly and so areas that are recently cleared or "disturbed" can rapidly be covered in these plants.

DISTRIBUTION

A native of Australia, Southern Asia and the Pacific but it is now found in all tropical areas of the world. In the Bahamas it is found on virtually all islands throughout the Bahamas, with the exception of Crooked and Acklins Islands, Mayaguana and Cat Island.

REPRODUCTION

These trees are simultaneously or synchronously monoecious, meaning that they produce separate male flowers and female flowers at the same time, on the same plant. *C. equisetifolia* does lightly flower year round but there are usually two times throughout the year where the plant is very reproductively active.

The tiny male flowers are produced at the twig tips and look like a "pine needle" that is a little fuzzy at its end. The tiny brown-red female flowers grow in heads attached to the branchlets and are followed by the production of cones that contain 70-90 winged seeds. An adult tree can produce many hundreds of these cones a year.

CONSERVATION CONCERNS

The Casuarina is a hardy plant being salt and drought tolerant, it is fast growing and reproduces at an accelerated rate. This enables the Casuarina to become established very quickly, replacing the slowing growing Bahamian native flora. Further to its growing patterns, the Casuarina covers the surrounding soil with its modified stems producing mats of brown "needles" which further inhibit the growth of other plants. It is also thought that the roots of the Casuarina produce a type of natural herbicide known as allelopathic toxins again further reducing the competition from other plants. All of these properties make the Casuarina an extremely aggressive invader and once established it is extremely hard to remove.

Hence, the Casuarina is a major contributor to biodiversity loss in the Bahamas. It has also caused the deterioration of sand dunes throughout the country as its root system does not hold onto the sand as well as the native flora. Therefore falling over easily during storms or simply allowing the sand to wash away directly from underneath the plant.

INTERESTING FACTS

There are over 50 different species of Casuarina in Australia. The Bahamas has two of them, the other being *C. glauca*.

Casuarina wood is very dense and sinks even in sea water.

The Casuarina wood makes a very good fire wood as it burns very slowly.