



## Australian Pine, *Casuarina equisetifolia*

**Native Range:** Australia, Malaysia, and southern Asia

**Description:** A tall tree with a soft, wispy, pine-like appearance that can grow to 100 feet or more in height. Evergreen, needlelike foliage and woody cones resemble members of the pine family. Its flowers are tiny, brown, and wind-pollinated. Small oval cones turn from green to brown and contain winged seeds.

**Background:** Australian pine was introduced to Florida in the late 1800's and planted widely for the purposes of ditch and canal stabilization, shade, and lumber.



**Ecological Threat:** Australian pine is fast-growing (5-10 feet per year) and produces dense shade. Fallen leaves and fruit form a thick blanket that completely covers the ground beneath it. Dense thickets of Australian pine displace native dune and beach vegetation, including mangroves and many other resident, beach-adapted species. Because its roots are capable of producing nitrogen, Australian pine can colonize nutrient-poor soils. Once established, it radically alters the light, temperature, and soil chemistry of beach habitats as it out competes and displaces native plant species and destroys habitat for native insects and other wildlife.

Chemicals in the leaves of Australian pine may inhibit the growth of other plants underneath it. The ground below Australian pine trees becomes ecologically sterile and lacking in food value for native wildlife. Unlike native shrubbery, the thick, shallow roots of the Australian pine make it much more susceptible to blow-over during high wind events, leading



to increased beach and dune erosion and interference with the nesting activities of sea turtles and American crocodiles.

**Management Options:** No biological controls are currently available for management of Australian pine. For new or small infestations, manual removal of Australian pine seedlings and saplings is recommended. For heavier infestations, application of a systemic type herbicide to bark, cut stumps, or foliage is likely to be the most effective management tool. Prescribed fire has also been used for large infestations in fire-tolerant communities.

Raking and removal of leaf litter, cones, and seeds should be done whenever possible. Whenever possible, efforts should be taken to prevent the introduction or encroachment of Australian pine. For example, recently disturbed beach habitat may be planted with native vegetation to prevent Australian pine from invading.