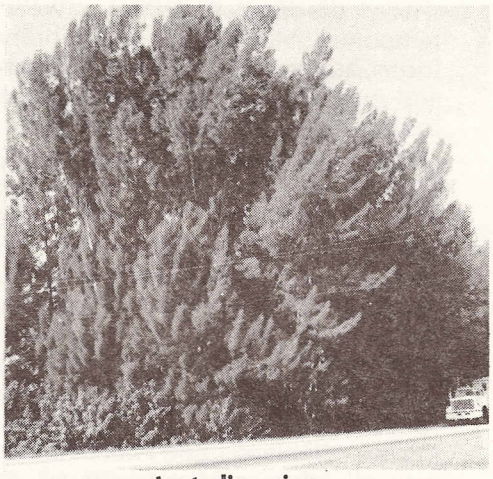
EXOTICS—The Monstrous Three

by Rita Hummel

Brazilian pepper



Australian pine

Melaleuca

Photos by Terry Mock

In Florida, large scale introduction of exotic subtropical and tropical plants started in the 1880s. Many individuals, from private plant collectors to nurserymen to professional botanists and plant explorers, engaged in gathering plants from around the world, introducing them into Florida (primarily south Florida). Starting in the early 1880s and continuing for more than 40 years, the Reasoner Brothers, nurserymen from Manatee County (Reasoner's Tropical Nurseries, Inc. Oneco) introduced tropical and subtropical plants. Fairchild Tropical Garden, south of Miami, bears the name of the most famous of Florida's plant explorers, David Fairchild.

Just down the street from Fairchild Tropical Garden is the present-day Subtropical Horticulture Unit of the U.S.D.A. where about 3,500 plant introductions are growing in research plots or germplasm collections. U.S.D.A. research on horticultural plant introductions began in Miami in 1898; subsequently at least 23,000 plant introductions have been registered. Plant collections at the Subtropical Horticulture Unit represent a valuable genetic resource; many positive results such as the development of mango, avocado, and Chinese hibiscus cultivars have come from this plant introduction activity.

However, along with the benefits of plant introduction have come problems caused by aggressive exotic species which have "gone wild" in parts of Florida, threatening to take over native plant communities and destroy the character of Florida's remaining environment. Three introductions—Brazilian pepper, *Schinus terebinthifolius* Raddi, cajeput or punk tree, *Melaleuca quinquenervia* S.T. Blake, and Australian pine, *Casuarina equisetifolia* L., *C. glauca* Sieb.—are fast growing, fertile trees that crowd out natives and have become common pests in south Florida.

An uninitiated person viewing Brazilian pepper in full fruit might share the opinion of early horticulturist Henry Nehrling: "It ought to be in every garden in Florida." The attractive small tree has been mistakely referred to as "Florida holly" because of its bright red berries and shining green leaves. A clear case of "Looks can be deceiving," Brazilian pepper is considered by some to be the primary exotic pest tree in Florida. From seeds first imported in 1898, Brazilian pepper has spread until it covers thousands of acres, threatens to destroy natural areas in south Florida and the Everglades, and is rapidly becoming the dominant species in Cape Florida State Park on Key Biscayne. It is a member of the same family as poison ivy, and also poses a threat to human health because of its allergenic properties. Efforts to educate the public to Brazilian pepper's destructive potential are under way, and it is hoped that public awareness may one day lead to control of this invasive pest.

Cajeput and Australian pine are both rapid-spreading Australian species that, like Brazilian pepper, threaten the Everglades, southern Florida, and the health of sensitive persons. In order to control these species, mature trees should be cut down and the stumps treated to prevent regrowth. Once seed producers are removed, herbicide treatment of young plants can hold populations to a manageable level. If an economic use could be found for these large trees (Australian pine can grow to 100 feet in height and cajeput to 40 feet), it would encourage their removal. Although early promoters of the fast-growing Australian pine (5 to 10 feet per year) expected it to be valued as a source of pulpwood, tannin, or lumber, the wood is brittle, cracks and splits easily, and the pulp is inferior to that of common pulpwood species. According to Julia Morton, south Florida author and director of Morton Collectanea, Univ. of Miami, the best use for Australian pine wood is fuel.

In contrast to Australian pine, cajeput has at least one use—after milling, it is an adequate substitute for pine bark in a one part pine bark: one part peat: one part sand medium for production of woody ornamental plants. At least one manufacturer, in an effort to offer a substitute for landscape mulch made from native cypress, is selling mulch and woodchip products made form cajeput.*

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