

Acacia auriculiformis

Earpod wattle

Fabaceae

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OVERVIEW

Earpod wattle (*Acacia auriculiformis*) is a tree native to Northern Australia, Papua New Guinea, and eastern Indonesia (PIER 2002). *Acacia auriculiformis* is sparingly planted on Maui, and possibly other Hawaiian Islands. This species has been cultivated in various places in the world as a forestry tree and has escaped from plantings in various places, including Florida (PIER 2002). With a history of weediness elsewhere and limited distribution on Maui, this species is a good candidate for eradication and control. Further island wide surveys are needed to locate any other sites where *Acacia auriculiformis* grows. It is likely planted on other Hawaiian Islands and surveys there for this species could also be conducted.

TAXONOMY

Family: Fabaceae (Pea family) (Wagner et al. 1999).

Latin name: *Acacia auriculiformis* Cunn. ex Benth. (PIER 2002).

Synonyms: *Racosperma auriculiforme* (Benth.) Pedley (Randall 2002).

Common names: Earpod wattle, Papuan wattle, auri, earleaf acacia, northern black wattle, Darwin black wattle (GRIN 2002, PIER 2002).

Taxonomic notes: The genus *Acacia* is made up of about 1,200 species that are widespread but with a large number in Australia (Wagner et al. 1999).

Nomenclature: The genus name is derived from *akakia*, the Greek name for *Acacia arabica* (Lam.) Willd., which is derived from *akis*, a Greek word meaning sharp point, in reference to the thorns of the plant (Wagner et al. 1999).

Related species in Hawai'i: Numerous *Acacia* species are known from Hawai'i, including native species such as *A. koa* and *A. koaia*, and naturalized non-native species such as *A. farnesiana*, *A. confusa*, *A. mearnsii*, and *A. melanoxylon*. Several non-native *Acacia* species have recently been found on Maui that are also potentially invasive including *A. retinodes*, *A. mangium*, and *A. podalyriifolia*.

DESCRIPTION

"Tree; leaves simple, sickle-shaped, 5-8 by 1-2 in; pods woody, nearly flat, irregularly twisted and wavy-edged, about 0.5 in wide." (Neal 1965).

"Evergreen, unarmed tree to 15 m (50 ft) tall, with compact spread, often multi-stemmed; young growth glaucous. Leaves alternate, simple, reduced to phyllodes (flattened leaf stalks), these blade-like, slightly curved, 11-20 cm (5-8 in) long, with 3-7 main parallel veins and a marginal gland near the base; surfaces dark green. Flowers in loose, yellow-

orange spikes at leaf axils or in clusters of spikes at stems tips; flowers mimosa-like, with numerous free stamens. Fruit a flat, oblong pod, twisted at maturity, splitting to reveal flat black seeds attached by orange, string like arils." (Langeland and Burks 1998).

BIOLOGY & ECOLOGY

Cultivation: According to PIER (2002), *Acacia auriculiformis* is a commonly planted forestry tree. This tree is widely cultivated for pulpwood and fuelwood (Langeland and Burks 1998).

Invasiveness: According to PIER (2002), *Acacia auriculiformis* can become naturalized where planted. It is a pest of southern Florida (Hammer 1996). *A. auriculiformis* is adapted to both wet and dry conditions and seed germination may be enhanced by fire (Langeland and Burks 1998).

Pollination: Not known.

Propagation: *A. auriculiformis* is propagated from seeds (PIER 2002). Apparently, seed germination is facilitated by fire (Langeland and Burks 1998).

Dispersal: In Florida, seeds are dispersed by several bird species, including the introduced European starling (Langeland and Burks 1998).

Pests and diseases: Not known.

DISTRIBUTION

Native range: Earpod wattle (*Acacia auriculiformis*) is a tree native to Northern Australia, Papua New Guinea, and eastern Indonesia (PIER 2002), where it is found from dune ridges to river banks (Langeland and Burks 1998).

Global distribution: *Acacia auriculiformis* is naturalized in Florida. It was planted before 1932 for ornament and used extensively as a street tree for many years (Langeland and Burks 1998). It was first documented as spreading by the 1970's and is now common in disturbed areas, but has also invaded threatened native pinelands, scrub, and hammocks in south Florida (Langeland and Burks 1998).

The following describes the distribution of *Acacia auriculiformis* in the Pacific, according to PIER (2003). "American Samoa (cultivated, not common) (Tutuila, Ta'u), Commonwealth of the Northern Mariana Islands (Rota, Saipan), Cook Islands (Rarotonga, Mangaia), Federated States of Micronesia (Chuuk (observed on Weno, Tol and Fefan; probably on other islands as well), Kosrae, Pohnpei), Guam, Marshall Islands (Majuro (cult.)), Palau, Papua New Guinea (native), Samoa (Upolu, Sava'i), Tonga (Lifuka (cult.))" and "Christmas Island, Mauritius, Reunion, Rodrigues." PIER notes that there is little natural regeneration of this species seen in Micronesia. Some naturalization noted mostly on bare soil, on Mangaia, Cook Islands.

State of Hawai'i distribution: *Acacia auriculiformis* is sparingly cultivated on Maui. It is likely present on other Hawaiian Islands. An *Acacia* species with curly seed pods that appears similar to *Acacia auriculiformis* was observed on Kaua'i, planted near an agricultural experiment station near the Opaeka'a area. It is not certain which species this tree represents.

Island of Maui distribution: *Acacia auriculiformis* is sparingly cultivated in groves at two agriculture experiment stations. These stations apparently introduced and planted numerous species in Hawai'i to evaluate their potential for cultivation. The first location is in Paia, approximately 300 ft (91 m) elevation, in warm moist lowlands surrounded by agriculture (sugar cane). The site is an abandoned school that has also been used as an agriculture experiment station. The site is about to become County property. The second location is also at an agricultural experiment station in Pi'iholo, approximately 1,700 ft (518 m) elevation, in disturbed moist area bounded by agriculture (pineapple) below, residential Pi'iholo above, and Makawao Forest Reserve to the east. Both plantings are limited to small areas where trees were planted in groves. This species is also cultivated at Olowalu in the garden of a former agriculture station employee. There may be other places on Maui where this species is cultivated.

CONTROL METHODS

Physical control: Girdle, pull seedlings (PIER 2002)

Chemical control: Triclopyr herbicide mixed with an oil (Hammer 1996).

Biological control: None known.

Cultural control: This species could be discontinued in plantings in Hawai'i.

Noxious weed acts: None known, though listed as a category I invasive species in Florida by the Florida Exotic Pest Plant Council (FLEPPC).

MANAGEMENT RECOMMENDATIONS

Acacia auriculiformis is widely planted in the Pacific and elsewhere as a forestry tree and for other purposes. It has become invasive in southern Florida where it invades natural areas. In Hawai'i, it is sparingly cultivated on Maui. Other forestry areas and agriculture stations on Maui should be surveyed to find new locations. Other Hawaiian Islands may want to survey for this species in similar areas. Eradication and control of this tree now may help to avoid its eventual invasion.

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