

Juniperberry (*Citharexylum caudatum*)

An Alien Plant Report

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In cooperation with:
American Water Works Association Research Foundation
Maui County Board of Water Supply

March, 1999



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(Citharexylum caudatum)

What is Juniperberry? Why is it bad?

Juniperberry is a fast growing tree that forms a dense canopy, and smothers vegetation. It is distinguished by its bright orange leaves and orange berries. On O'ahu, juniperberry achieves higher densities than strawberry guava. On Maui, juniperberry is currently only known from Ohia gulch in Ha'iku, and on the way to Hana near Kolea stream.

What should you do if you see this plant?

1. Call the Hawaii Ecosystems at Risk (HEAR) project at 572-4418.
2. Pull out the tree, if possible. Otherwise, cut the tree near the root of the plant, and treat with an herbicide in accordance with label.
3. For more information, or additional copies of this poster, call 572-4418, or websurf to www.hear.org.



You can help keep Maui no ka oi.



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Biological Resources Division



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(*Citharexylum caudatum*)

Overview: Juniperberry was known to be a problem weed on O'ahu, but was previously thought to be absent on Maui. In preparing for this report, the authors learned what to look for, and as is becoming increasingly apparent, it was only a matter of time before juniperberry turned up. Juniperberry was found in both Ha'iku and near Kolea stream on the way to Hana. In both places, it is well established and would be difficult, if not impossible, to eradicate.

Public involvement potential: Juniperberry is probably beyond the eradication stage, but it provides an example of how plants can go undetected for many years and emphasizes that a list of all the plants on Maui is needed. The public can help by reporting any new locations of juniperberry, especially in the watershed.

Common Name: Juniperberry, fiddlewood.

Latin Name: *Citharexylum caudatum* L.

Taxonomy: *Citharexylum* is a genus of over 70 species from Bermuda, the West Indies, and southern United States through Mexico to South America. The generic name *Citharexylum* is Greek for fiddlewood. The English name fiddlewood and similar ones in French and Spanish for related species apparently were taken from the scientific name without regard to actual use of the wood.

Description: Large shrubs or small trees up to 20 m tall; branches nearly terete, glabrous. Leaves somewhat leathery, oblong to obovate or elliptic-oblong, 7-16 cm long, 3.5-5 cm wide, glabrous, upper surface glossy, lower surface dull, apex rounded or obtuse, base connate, petioles green, 1-2 cm long. Flowers in narrow, elongate-recurved racemes 4-10 cm long, pedicels usually 2-5 mm long; calyx campanulate, ca. 3 mm long, the rim unlobed and truncate in fruit; corolla white. Fruit purplish black, oblong-globose, ca. 5-8 mm long (Wagner et al. 1990).

Noxious Weed Acts: *Citharexylum caudatum* is not on the Hawai'i state noxious weed list.

Native Range: Native from Mexico and Central America to northern South America and the West Indies (Wagner et al. 1990).

Range of Invasion: Juniperberry is invading on O'ahu and Maui, where it forms dense thickets in wet habitats. On O'ahu, it is spreading out of Manoa Valley into the Ko'olau Mountains (Wagner et al. 1990). On Maui, it can be found in 'Ohia gulch and along west Kuiaha road in Ha'iku. It appears as if a planting of both *C. caudatum* and *C. spinosum* escaped the confines of the garden and spread in all directions along roadsides, into

pastures, and into nearby gulches. Near Kolea stream on the way to Hana, juniperberry can be seen at the wayside and in nearby roadsides, pastures, and gulches.

Value to humans: Nice specimen tree whose leaves turn orange and give the appearance of fall colors. The light brown wood is used elsewhere for posts, not for musical instruments. This species is a honey plant (Little 1989).

Problems: In Hawai'i cultivated and now naturalized and rapidly spreading via bird dispersal out of Manoa Valley into the Ko'olau Mountains.

Biology and Ecology: The coffee twig borer can be found in young shoots on O'ahu (P. Welton pers. comm. 1998). Juniperberry produces many seeds which can germinate in very dark situations. It can even germinate on steep rock faces. Juniperberry is also capable of rooting at the nodes if a stem is pinned to the ground. It has many characteristics in common with *C. spinosum*. First introduced to the Hawaiian Sugar Planters' Association Arboretum (now Harold L. Lyon Arboretum) in Manoa Valley from seed obtained by E. L. Caum in 1931 (Wagner et al. 1990).

Physical control: Seedlings and small plants can be pulled up by hand.

Chemical control: Little is known about chemical control methods for juniperberry, but herbicides will undoubtedly be a part of any control strategy for fiddlewood.

Management recommendations: Field crews and the public should familiarize themselves with juniperberry and report new locations to USGS-BRD-MAUI. New locations should be locally controlled if possible. A list of all plants on Maui should be compiled, and constantly updated to find plants like juniperberry before they become established and begin to spread.

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Literature cited & references:

Haselwood, E. L. 1983. Handbook of Hawaiian Weeds, second edition. University of Hawai'i Press, Honolulu, Hawai'i.

Little E. L. Jr. and R. G. Skolmen. 1989. Common forest trees of Hawai'i (native and introduced). United States Department of Agriculture.

Turner, R. J. Jr. and E. Wasson. 1997. Botanica. Mynah Publishing. NSW Australia. 1007 pp.

Wagner, W. H., D. R. Herbst, S. H. Sohmer. 1990. Manual of the Flowering Plants of Hawai'i. University of Hawai'i press, Honolulu, Hawai'i.

Welton, Patricia. 1998. Personal communication with authors. November 17, 1998.



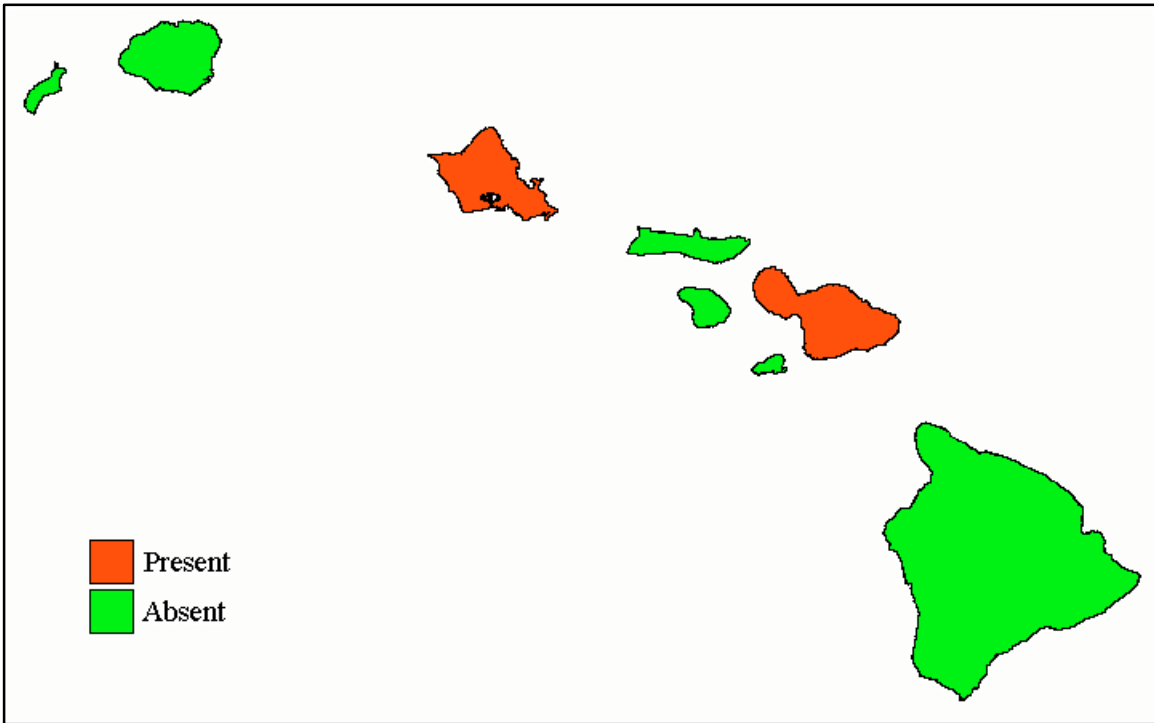
Juniperberry flowers - Haiku, Maui



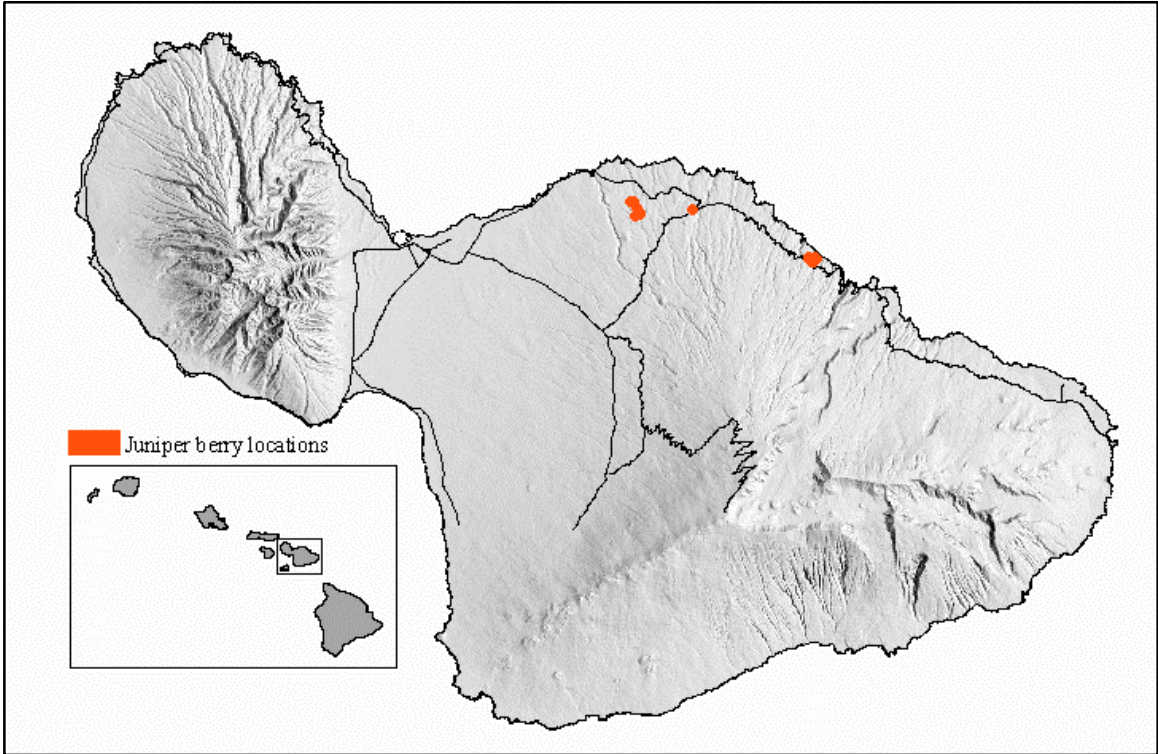
Seedlings of juniperberry - Kolea, East Maui watershed, Maui



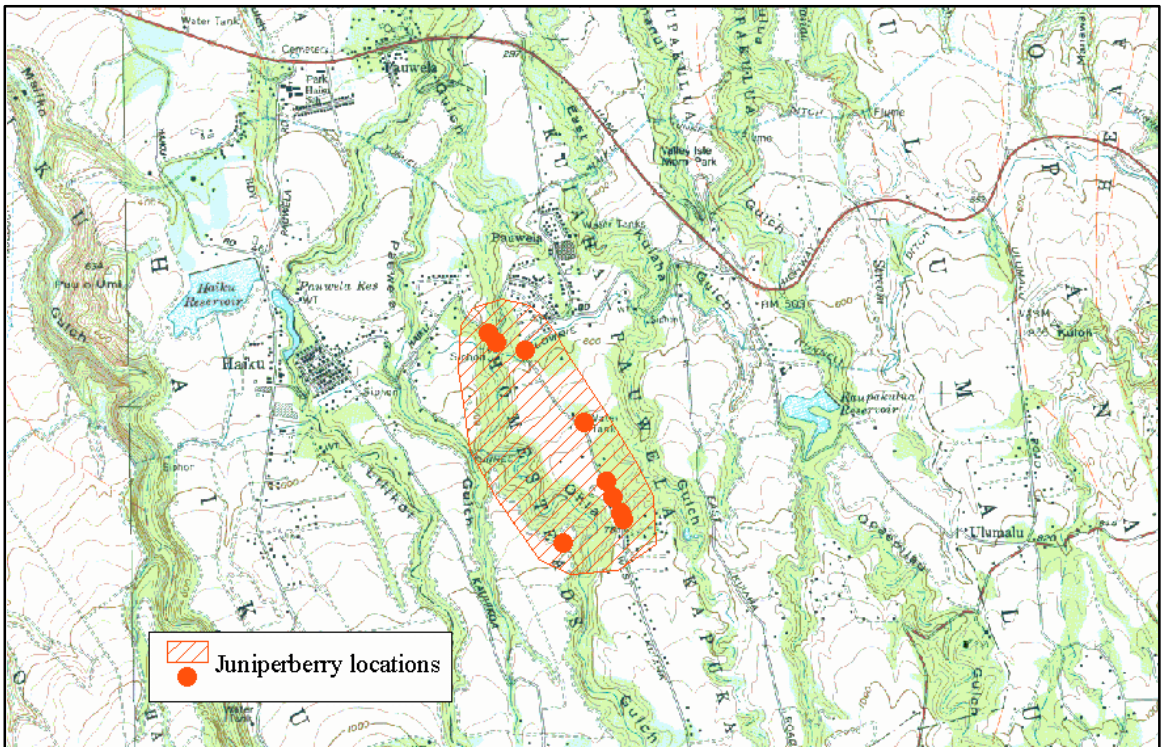
Known global distribution of juniperberry



Known distribution of juniperberry in the State of Hawai'i, U.S.A



Known distribution of juniperberry on the island of Maui, State of Hawai'i



Known distribution of juniperberry in Ha'iku, Maui