

*Amyris elemifera* L.  
RUTACEAE

torchwood

Synonyms: *Amyris maritima* Jacq.  
*Amyris sylvatica* Jacq.  
*Elemifera maritima* (Jacq.) O. Kuntze



**General Description.**—Torchwood, also known as candlewood, sea amyris, tea, cuabilla, bois chandelle, bois flambeau, and bois pini, is an evergreen shrub or small tree reaching maximum heights of 4 to 13 m, depending on the environment. It usually has a single stem emerging from the ground, unless damaged in the past but may begin branching near the ground when there is plenty of sunlight. The trunk is smooth and gray, becoming rough with furrows and plates when old. The plants usually have a weak taproot, strong, stiff laterals, and abundant fine roots. Torchwood has a vertical branching habit. It may have a dense, low crown in open-grown individuals. The twigs are fine and yellowish-gray, becoming gray with age. The foliage is pendulous and aromatic, pale-green or pale-green with blue-green highlights. The leaves are opposite or subopposite with three (sometimes five) leaflets on a 3-cm petiole. The blades are ovate, rhombic ovate, or lanciolate, with a pointed or long-pointed tip. The terminal or axial panicle inflorescences contain many tiny flowers. The fruits are black globose drupes that are aromatic and contain one brown seed (Howard 1988, Liogier 1988, Little and Wadsworth 1964).

**Range.**—Torchwood is native to Florida, the Bahamas, the Greater Antilles, the Lesser Antilles, Trinidad, Guatemala, Belize, Honduras, and El Salvador (Liogier 1988, Little and Wadsworth 1964).

**Ecology.**—Torchwood is moderately intolerant of shade. Young plants compete well with shrubs and small trees, but do not survive in dense grass swards. In dry forests, understory plants linger for decades until openings in the overstory allow them to reach intermediate and codominant positions to flower and fruit. The species may be found in both remnant and secondary forests. In Puerto Rico, torchwood grows in areas receiving from 750 to over 2000 mm of mean annual precipitation. In the upper end of the rainfall range, the species is confined to excessively drained sites. Elevation ranges from near sea level to about 600 m. It tolerates a wide variety of soil textures, fertility levels, and pH's. Torchwood may be found in areas underlain by sedimentary rocks including limestone, igneous, and metamorphic including ultramafic rocks, and coastal sands. In the Bahamas, torchwood grows in rocky and sandy coastal thickets (Britton and Millspaugh 1962); in Florida, it grows in coastal areas and on rich hammocks farther inland (4-H Youth Development 2001).

**Reproduction.**—In Puerto Rico, torchwood flowers irregularly through the year (Little and Wadsworth 1964). Flowers are reported to appear over several months in the fall in Florida (West and Arnold 1952). Nursery plants in pots in Puerto Rico bloomed at 2 years of age. Seeds cleaned from ripe fruits and sown without any pretreatment germinate normally. Birds are the principal seed dispersers.

**Growth and Management.**—Nursery plants in pots reached 1.8 m in 2 years. However, older trees in the dry forests that torchwood inhabits grow slowly and may live for 50 years or more (author's observation). A release cut or thinning

should be effective if it were necessary to improve the position of torchwood in a stand.

**Benefits.**—The wood of torchwood is used for fence posts today but was formerly used for fuel, furniture, and torches—hence the name torchwood. In a test of untreated service life of posts, 20 of 20 posts were still sound after 13 years in the ground (Chudnoff and Goytia 1972). If the wood was more abundant and in larger pieces, it would be in demand for lumber because it is fragrant, fine-grained, strong, durable, and repellent to dry-wood termites (Little and Wadsworth 1964). Torchwood is valued as a honey plant in the Dominican Republic (Marcano Fondeur 1973). Birds eat the fruits, but there usually are many other more attractive foods present (West and Arnold 1952). In Florida, torchwood is valued as a larval food for the rare and endangered Schaus's swallowtail butterfly, *Papilio aristodemus ponceanus* (Hammer 2001). Key deer (*Odocoileus virginianus clavium*) will not eat the foliage (Schaus and others 2001). However, feral goats eat at least the bark, which has caused torchwood to decrease in abundance in Mona Island, Puerto Rico (Little and Wadsworth 1964). Taxaline, an oxazole extracted from torchwood, had the most effective antibacterial activity of several bioactive chemicals from West Indian plants against *Mycobacterium tuberculosis* and two other *Mycobacterium* species (Rastogi and others 1998). Root and resin extracts from torchwood and others of the genus are used as an expectorant (Liogier 1990).

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John K. Francis, Research Forester, U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984