

***Bontia daphnoides* L.**  
MYOPORACEAE

white alling

Synonyms: *Bontia daphnifolia* Salisb.  
*Bontia daphnoides* var. *menor* (Gaertn. f.) A. DC.  
*Bontia menor* Gaertn. f.



**General Description.**—White alling, also known as wild olive, mangle bobo, aceituna Americana, olivier bard, and oliba, is a shrub or small tree usually 3 or 4 m in height, occasionally reaching 9 m and 15 cm in stem diameter. Although seedlings have a tap and lateral root system, older plants rely on shallow lateral roots that are stiff and brittle with a brown, corky bark. Trunks of white alling are usually covered with a thick, light brown, furrowed bark. The heartwood is light gray-brown, hard, heavy, and somewhat brittle; the sapwood is tan in color. Multiple stems commonly diverge from the base of the principal stem. The crowns are vertical and narrow with a thin complement of foliage. Leaves are oblong to linear-lanceolate, 3 to 11 cm long by 1 to 2 cm broad, and pointed at both ends. The usually solitary, axillary tubular flowers are yellow blotched with purple and 2 cm long. Drupes are ovoid, tapering to a point with a permanently attached style. Their corky-textured flesh is yellowish-green to yellow at maturity, has a slightly bitter taste, and contains a single hard-

shelled stone (Howard 1989, Liogier 1997, Little and others 1974).

**Range.**—White alling is native to the Bahamas, the Greater and Lesser Antilles, Trinidad, Venezuela, and Guyana (Howard 1989, Little and others 1974). It is cultivated as an ornamental in Hawaii (Hawaiian Ecosystems at Risk 2001) and Spain (Sánchez 2001) and has naturalized in Florida (Nelson 1996).

**Ecology.**—White alling is most common in coastal thickets between the tidal mangroves and the upland forests. These areas are flooded during storm surges and receive a moderate amount of salt spray. The soils vary from sandy to clayey, are usually high in organic matter, and range in pH from 7.0 to 8.5. The water table is usually within 2 m of the surface. In Puerto Rico, the species grows in areas that receive from 750 to 1800 mm of mean annual precipitation. White alling plants are moderately intolerant of shade, generally starting in openings. Seedlings and saplings survive in relatively sunny understories. Adults flower and fruit in intermediate crown positions. The species is rare in uplands, probably because of competition. It has been cultivated successfully at elevations up to 1,500 m (Little and others 1974). White alling grows as rare to common components of stands but does not form pure or nearly pure stands.

**Reproduction.**—White alling flowers and fruits throughout the year (Little and others 1974). Fruits collected in Puerto Rico averaged  $0.311 \pm 0.015$  g/fruit. Air-dried seeds cleaned from the above collection averaged  $0.0898 \pm 0.0033$  g/seed or 11,000 seeds/kg. Sown in commercial potting mix, 44 percent of the seeds germinated between 12 and 68 days after sowing (author's observation). Seeds are dispersed by water and presumably by birds and mammals that eat the fruits. Fruit production is usually good and seedlings are common in small openings near seed sources. Although white alling are often tipped in hurricanes, they sprout from the trunks and reform

vertical crowns.

**Growth and Management.**—A small group of white alling seedlings grown in the nursery in Puerto Rico ranged in height from 21 to 86 cm, 8 months after being pricked into containers. Sapling and sprout growth rate is moderate (about 0.5 m/year) and individual plants live 10 to 30 years. Although no management experience has been published, the species can probably be established with nursery seedlings and be managed like other short-statured species.

**Benefits.**—White alling helps protect the soil and provides food and cover for wildlife. The wood is useful for fuel and stakes. Ethanol extracts of white alling showed promising insecticidal activity against *Boophilus microplus*, *Cylas formicarius*, and *Tribolium confusum* (Mansingh and Williams 1998, Williams and Caleb-Williams 1997, Williams and Mansingh 1993). White alling is frequently used to control diabetes in Trinidad (Mahabir and Gullifor 1997). Extracts of the plant are used to control intestinal worms, treat herpes, treat inflammation, insect bites, scarring, ulcers, and wounds (Liogier 1990).

## References

- Hawaiian Ecosystems at Risk 2001. Mystery plant # 2, *Bontia daphnoides* Linn. (Myoporaceae). <http://hear.org/mysteryplants/autogendhtml/mysteryplant2.htm>. 3 p.
- Howard, R. A. 1989. Flora of the Lesser Antilles, Leeward and Windward Islands. Vol. 6. Arnold Arboretum, Harvard University, Jamaica Plain, MA. 658 p.
- Liogier, H.A. 1990. Plantas medicinales de Puerto Rico y del Caribe. Iberoamericana de Ediciones, Inc., San Juan, PR. 566 p.
- Liogier, H.A. 1997. Descriptive flora of Puerto Rico and adjacent islands. Vol. 5. Editorial de la Universidad de Puerto Rico, San Juan, PR. 436 p.
- Little, E.L., Jr., R.O. Woodbury, and F.H. Wadsworth. 1974. Trees of Puerto Rico and the Virgin Islands. Vol. 2. Agriculture Handbook 449. U.S. Department of Agriculture, Washington, DC. 1,024 p.
- Mahabir, D. and M.C. Gullifor. 1997. Use of medicinal plants for diabetes in Trinidad and

Tobago. Revista Panamericana de Salud Pública 1(3): 174-179.

- Mansingh, A. and L.A.D. Williams. 1998. Pesticidal potential of tropical plants II. Acaricidal activity of crude extracts of several Jamaican plants. Insect Science and its Application. 18(2): 149-155.
- Nelson, G. 1996. The shrubs and woody vines of Florida. Pineapple Press, Inc., Sarasota, FL. 391 p.
- Sánchez deL.C., J. 2001. Plantas de la flora cubana cultivadas en España. <http://floraguide.es/arboles/plantasdecuba.htm>. 8 p.
- Williams, L.A.D. and L. Caleb-Williams. 1997. Insecticidally active sesquiterpene furan from *Bontia daphnoides* L. Philippine Journal of Science 126(2): 155-162.
- Williams, L.A.D. and A. Mansingh. 1993. Pesticidal potential of tropical plants I. Insecticidal activity in leaf extracts of sixty plants. Insect Science and its Application. 14(5): 697-700.

---

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