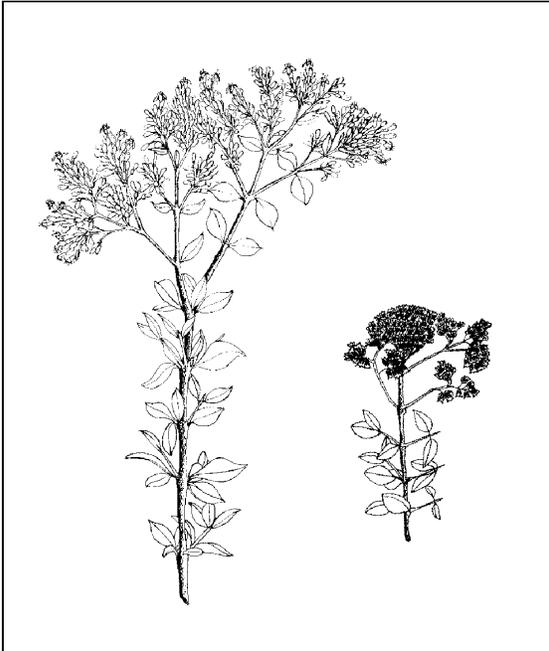


***Machaonia portoricensis* Baill.**
RUBIACEAE

alfilerillo

Synonyms: none



General Description.—Alfilerillo, also known as roseta, is a spiny shrub or small tree that occasionally reaches 6 m in height and 7.5 cm in stem diameter. It is supported by an extensive lateral root system. Alfilerillo may have single or multiple stems arising just above the ground level, but it is always branchy and thorny. The stem bark is gray and smooth becoming fissured in old plants. The branches and twigs are brown, slender and stiff and support paired spines 1 to 2.5 cm long at the nodes and ends of twigs. The plant tends to have a slender, vertical profile. Opposite or whorled, almost sessile leaves are orbicular to elliptic with entire edges and blades 7 to 16 mm long and 5 to 10 cm broad. Tiny, white flowers are grouped in many-flowered terminal panicles. The capsules are turbinate (inverse conical), brown, quadrangular, 4 to 5 mm long, crowned with four calyx lobes and contain two seeds (Liogier 1997, Little and others 1974).

Range.—Alfilerillo is native to Puerto Rico (Liogier 1997) from Salinas to Cabo Rojo. A closely-related, recently-separated species, *Machaonia woodburyana* Acev.-Rodr., occurs on St. John in the U.S. Virgin Islands (New York

Botanical Garden 2002) where it is endangered (University of the Virgin Islands 2002). Alfilerillo is not known to have been planted or naturalized elsewhere.

Ecology.—Alfilerillo grows on a wide variety of well-drained soils derived from a variety of rock types including limestone and ultramafics (serpentine). These are usually rocky, sandy, or moderately salty so that competition is somewhat reduced. It is moderately intolerant of shade and can inhabit forests with low basal areas. The species grows in dry habitat that receives from about 750 to about 950 mm of mean annual precipitation at elevations ranging from near sea level to about 400 m. Alfilerillo is relatively tolerant of fire, being killed to the ground, but readily sprouting. It seems to be resistant to grazing by cattle probably owing to the spines. The species may be found in remnant forests on ridges and bluffs, in overgrazed brush lands and savannas, near mangroves and salt ponds, and in beach strand vegetation (author's observation, New York Botanical Garden 2002, Vázquez and Kolterman 1998).

Reproduction.—Alfilerillo flowers and fruits irregularly through the year (Little and others 1974). Seeds collected from trees in western Puerto Rico weighed an average of 0.00182 g/seed or 548,000 seeds/kg. Sown on moist filter paper, 24 percent germinated within 54 days. Germination is epigeal. No specialized means of seed dispersal is apparent aside from a weak tendency to cling to clothing. Seedlings are uncommon in spite of relatively good seed production. Plants sprout when disturbed.

Growth and Management.—Growth of alfilerillo is relatively slow. A 3-cm thick stem cut by the author had 11 growth rings. No planting or management experience has been published.

Benefits.—Alfilerillo helps protect the soil in the fragile environments where it grows and furnishes cover for wildlife. The wood, which is light-brown, hard, and brittle, is good for fuel.

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