***Psychotria deflexa* DC.** garricillo
RUBIACEAE

Synonyms: *Psychotria patens* of authors, not of Sw.
Psychotria flexulosa of authors, not of Willd.
Palicourea patens (Sw.) Urban

General Description.—Garricillo (a Panamanian name), sometimes referred to by the general name "cachimbo," is an evergreen shrub usually 1.5 to 2.0 m and 1.0 to 2.0 cm in basal diameter, sometimes reaching 3 m in height. Multiple stems are common, but not thick clumps. The wood is moderately hard with faint annual rings. The angular twigs and the foliage are glabrous. Persistent, bilobed, long-pointed stipules are characteristic of the species. Paired, dark-green, elliptic to oblong lanceolate leaves are 5 to 18 cm long with 3- to 10-mm petioles. Inflorescences are few-flowered terminal panicles. The small, sessile flowers are white. Fruits are subglobose, 3 to 5 mm in diameter, white or pale blue. Normally, there are two hemispherical seeds per fruit that are striated on the convex surface and have a medial groove on the opposite, flat or slightly concave surface (Croat 1978, Liogier 1997, Stevens and other 2001).

Range.—Garricillo is native to the Greater Antilles, Trinidad, southern Mexico, Central America, and South America to Bolivia (Croat 1978, Liogier 1997, Stevens and others 2001). It is not known to have naturalized outside the native range.

Ecology.—Garricillo is a shrub of moist and wet forests, areas receiving from about 1600 mm to over 3000 mm of mean annual precipitation. Although the species may occur from a few meters above sea level to over 1,000 m in elevation (Instituto Nacional de Biodiversidad 2002), it generally grows at medium to high elevations (Liogier 1997) because there is greater available moisture. The species grows on poorly drained to well drained soils generally with loamy to clayey texture and pH's from about 4.5 to 6.5. Garricillo is intermediate in tolerance to shade and grows in the forest understory (if not too dark), at forest edges, in overgrown fencerows (Molano and others 2002), and in openings. Most fruit and seed production takes place in openings or situations with increased to full sunlight. The species competes well with herbs and low brush.

Reproduction.—Garricillo flowers from May to July and matures fruits mostly from August to December in Panama (Croat 1978). The flowers are both insect-pollinated and self-pollinated (Faivre 2002). Fresh fruits collected in Puerto Rico weighed an average of 0.0758 $\pm$ 0.0006 g/fruit. Air-dried seeds separated from them weighed an average of 0.0057 $\pm$ 0.0001 g/seed, or 175,000 seeds/kg. There was an average of 1.7 seeds/fruit in this sample. Sown without pretreatment in moist potting mix, 69 percent germinated between 68 and 117 days after sowing. Fruit and seed production is good and consistent. Birds disperse the seeds (Molano and others 2002). Seedlings are common but suffer high mortality. Damaged plants resprout. Prostrate stems of young plants layer (root) readily when in contact with the soil.

Growth and Management.—Seedlings of garricillo grow slowly at first. Older plants and sprouts add from 20 to 40 cm to their height each year. Individual stems live about 10 years; plants may last longer by producing new sprouts. Although the species is more or less common, it does not appear to cause any difficulties for forest users.

Benefits.—Garricillo contributes to the biodiversity and biomass of forest communities, helps protect the soil, and furnishes food and cover for wildlife.

References

Croat, T.B. 1978. Flora of Barro Colorado Island. Stanford University Press, Stanford, CA. 943 p.

Faivre, A.E. 2002. Reproductive biology of seven understory *Psychotria* species on Barro Colorado Island, Panama. Cedar Crest College, Allentown, PA. http://botany2002.org.section3/abstracts/21.shtml. 1 p.

Instituto Nacional de Biodiversidad. 2002. Lista de especímenes de *Psychotria deflexa*. Costa Rica. http://www.inbio.ac.cr/bims/k03/p13/c045/o0142/f01359/g008913/s028252.htm. 4 p.

Liogier, H.A. 1997. Descriptive flora of Puerto Rico and adjacent islands. Vol. 5. Editorial de la Universidad de Puerto Rico, Río Piedras, PR. 436 p.

Molano, J.G., M.P. Quiceno, and C. Roa. 2002. El papel de las cercas vivas en un sistema de producción agropecuaria en el Piédemonte Llanero. http://www.lead.virtualcentre.org/es/ele/conferencia2/vbconfe3.htm. 18 p.

Stevens, W.D., C. Ulloa-U., A. Pool, and O.M. Montiel, eds. 2001. Flora de Nicaragua. Monographs in Systematic Botany Vol.85, No. 3. Missouri Botanical Garden Press, St. Louis, MO. p. 1,911-2,666.

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