

***Capparis indica* (L.) Druce**  
CAPPARACEAE

sapo prieto

Synonyms: *Capparis indica* (L.) Rawc. & Rendle  
*Breynia indica* L.  
*Capparis breynia* L.  
*Capparis amygdalifolia* Jacq.  
*Capparis amygdalina* Lam.  
*Linnaeobreynia indica* (L.) Hutch.



**General Description.**—Sapo prieto, a name used in Puerto Rico that means black toad in Spanish, is also known as caper, linguam, burro, white willow, colorín, vara prieta, palo zapo, taiche, endurece maíz, curumo, guacoco, naranjuelo, pachaca, olivo macho, olivo, bois de mêche, bois-puant, bois-noir, pois à mabou, paaloe pretae, and raba stokki (Little and others 1974, Zamora 1989). It is a shrub or a small tree, which under favorable circumstances may reach 8 m in height and 15 cm in diameter at breast height. Sapo prieto usually has a single stem unless it has been damaged, but the species is very limby and may have major branches emerging low on the trunk. The stem and branch bark is gray or light brown and smooth with a bitter, yellow or reddish inner bark. The twigs, petioles, and undersides of leaves are covered with silvery, gray, or golden scales. The alternate, simple leaves are supported by 6- to 10-mm petioles and have narrowly elliptic, leathery

blades 4 to 11 cm long and 2 to 4.5 cm broad. The inflorescences (corymbs) are near the ends of branches and contain a few small, white flowers with long white stamens and short yellow anthers. The fruits are silvery-brown legume-like pods 4 to 26 cm long that split along one side at maturity to expose a bright-red interior and pulp-covered seeds. The seeds are black, elliptic, and 5 to 7 mm in diameter (Howard 1988, Liogier 1985, Little and others 1974, Zamora 1989).

**Range.**—The range of sapo prieto includes Jamaica, Hispaniola, Puerto Rico, the Virgin Islands, the Lesser Antilles, the Dutch Antilles, Trinidad, Venezuela, Southern Mexico to Costa Rica and possibly Panama (Liogier 1985, Little and others 1974, Zamora 1989).

**Ecology.**—Sapo prieto grows in a wide range of well-drained soils derived from both sedimentary (including limestone), igneous, and metamorphic rocks. It may be found from near sea level to about 600 m on steep as well as level slopes, and in areas receiving from 750 to about 1700 mm of precipitation in Puerto Rico. In Costa Rica, sapo prieto grows from sea level to 300 m in elevation in very rocky soils (Zamora 1989). The species is reported to root deeply (Zoológico Virtual de Barranquilla 2002). Sapo prieto may be found growing in secondary and remnant forests. It is not a pioneer and will rarely be found in abandoned fields or areas where all vegetation has been removed. It is moderately intolerant of shade and consequently does not grow under dense forest canopies. It most frequently grows in an intermediate crown position in relatively open dry forests or as a codominant in clumps of shrubs and low trees in disturbed secondary forests.

**Reproduction.**—Little and others (1974) state that sapo prieto flowers and fruits intermittently. Flowers were observed in Costa Rica in May and September and fruits were present from May to

September (Zamora 1989). A collection of sapo prieto fruits from Puerto Rico weighed an average of  $6.948 \pm 0.773$  g/fruit. The air-dry seeds collected from these fruits weighed an average of  $0.0838 \pm 0.0021$  g/seed or 12,000 seeds/kg. Sown on commercial potting mix without any pre-treatment, the seedlings began to emerge in 7 days and reached a maximum germination of 49 percent in 64 days (author's observation). The seeds are covered with a thin, pasty, scarlet pulp that is presumably eaten by birds that transport the seeds.

**Growth and Management.**—Sapo prieto has been referred to as slow growing (Zoológico Virtual de Barranquilla 2002). Weaver (1990) measured one tree in St. John, U.S. Virgin Islands, as a part of a larger study and found a 0.4 mm annual diameter increment over a 5-year period. Increases in sapo prieto density can probably be encouraged by treatments to dry and moist forests near seed sources to eliminate dense shade and create brush patches and small openings. No wildland planting experience has been reported.

**Benefits.**—Sapo prieto makes a good ornamental that is evergreen, with attractive bicolor leaves. It has showy flowers and fruits, and a crown that can be shaped by pruning. However, the species is not commonly used because it grows very slowly (Virgin Islands Wetlands Reserve 2002, Zoológico Virtual de Barranquilla 2002). The wood is heavy and hard and useful for fuel, stakes, and small-diameter fence posts. Sapo prieto contributes to the biodiversity of the forests it inhabits, helps protect those sites from erosion, and furnishes minor amounts of food and cover for wildlife. The flowers are nectar sources for butterflies (Debrot and others 1999).

## References

- Debrot, A.O., J.Y. Miller, L.D. Miller, and B.T. Leysner. 1999. The butterfly fauna of Curaçao, West Indies: 1996 status and long-term species turnover. *Caribbean Journal of Science* 35(3-4): 184-194.
- Howard R.A. 1988. Flora of the Lesser Antilles, Leeward and Windward Islands. Dicotyledoneae, Part 1. Vol. 4. Arnold Arboretum, Harvard University, Jamaica Plain, MA. 673 p.
- Liogier H.A. 1985. Descriptive flora of Puerto Rico and adjacent islands, Spermatophyta. Vol. 1. Editorial de la Universidad de Puerto Rico, Río Piedras, PR. 352 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.
- Virgin Islands Wetlands Reserve. 2002. A list of plants tagged along the trail at the reserve and some of their uses. Virgin Islands Wetlands Reserve, University of the Virgin Islands, St. Croix, U.S. Virgin Islands. <http://rps.uvi.edu/VIMAS/plantlist.htm>. 5 p.
- Weaver, P.L. 1990. Tree diameter growth rates in Cinnamon Bay Watershed, St. John, U.S. Virgin Islands. *Caribbean Journal of Science* 26(1-2): 1-6.
- Zamora, N. 1989. Flora arborecente de Costa Rica. Editorial Tecnológica de Costa Rica, San Jose, Costa Rica. 262 p.
- Zoológico Virtual de Barranquilla. 2002. Resultados de busca por: Olivo macho. <http://zoobaq.org/formas/consultaveg2.php3?comun=Olivo>. 1 p.
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