

Pavonia spinifex (L.) Cav.
MALVACEAE

cadillo espinoso

Synonyms: *Hibiscus spinifex* L.
Malache spinifex (L.) Kuntze



General Description.—Cadillo espinoso, also known as spiny abutilon, abutilon espinoso, mahot jaune, and coquelicot, is a suffruticose shrub usually 1 to 1.5 m in height, but occasionally reaching 5 m. The plant is supported by a shallow root system consisting of a weak taproot, lateral roots, and abundant fine roots. Older plants have multiple stems arising from the root crown and the lower 15 cm of stem. The plant dies back to the main stem or sometimes to the root crown during the dry season. The branches are slender and relatively few in number. The alternate leaves are ovate with rounded or cordate bases and pointed tips. The leaf blades are 4 to 12 cm long and have serrate edges. Bright, 2- to 3-cm yellow flowers are usually axillary and solitary and develop into fruits that are schizocarps, dividing into five mericarps. Each mericarp has three barbed spines, the central spine, the largest, being about 1 cm long (Howard 1989, Liogier 1994).

Range.—There is considerable confusion about the extent of the native range of cadillo espinoso. It is reported to be native from Bermuda through the West Indies and from Mexico to Peru and

Argentina (Griffiths 1994, New York Botanical Garden 2002). Howard (1989) states that Southeastern United States and the West Indies are the only range; other claims are based on unsubstantiated reports or misidentifications of other species. Finally, Nelson (1996) refers to the populations in Florida as escapes from cultivation.

Ecology.—Cadillo espinoso grows in dry areas. It is found in Puerto Rico in habitat that receives from 750 to about 1100 mm of precipitation and at elevations from near sea level to about 600 m. The species grows in well-drained soils with a wide variety of textures and fertility levels. Cadillo espinoso is more common in areas of igneous rocks but does occur over limestone and other sedimentary rocks. Cadillo espinoso is moderately intolerant of shade. It grows in open areas but more frequently under low, open stands of small trees. The species competes well with tall grass, herbs, and brush, except on the most fertile sites where forest stands are dense. Probably because of competition, the plant is rarely found in bottoms and north slopes. Most of the areas where the species is common are recovering from past disturbance such as fire, severe overgrazing, or clearing. Cadillo espinoso tolerates all but the most severe grazing. It sprouts after fires. The species occurs as occasional plants or in mixture with other species, not as pure or dense stands.

Reproduction.—Cadillo espinoso flowers during the summer (July and August). Fruits mature at the start of the dry season (January-February) and are dispersed by sticking to the clothing or fur of animals. In addition to attaching directly from the shrub, fruits rest on the ground so that the central spine points up, so they may be picked up by the feet of passing animals. Seed production is reliable and moderately abundant. Air-dried fruits collected in Puerto Rico averaged 0.0258 ± 0.0005 g. Incubated in a plastic bag with moist peat, only 4 percent germinated in 10 months. Germination is epigeal.

Growth and Management.—Annual growth is rapid (about 1 m) from sprouts arising from

established suffruticose plants. Growth begins during the early summer rains and continues through the fall rainy season. The leaves and branches dry out and die during the late winter-early spring dry season (in Puerto Rico). Individual plants probably live at least a decade. Except for the spiny fruits that cling to clothing, there seems to be little need to control *cadillo espinoso* in range or forest land. When necessary, the species probably could be controlled by spot spraying with broadleaf weed killer to eliminate individual plants. The development of a closed canopy forest eventually eliminates the shrub.

Benefits.—*Cadillo espinoso* is planted to a limited extent as an ornamental for its handsome yellow flowers. It contributes to the recovery of disturbed areas, furnishes cover for wildlife, and is eaten by grazing animals. In herbal medicine, infusions of the flowers are used to treat sore throats and skin problems, and infusions of leaves and twigs are used to treat stomach problems, gall stones, and liver pain (Liogier 1990).

References

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