***Malvastrum americanum* (L.) Torr.** Indian Valley false mallow
MALVACEAE

Synonyms: *Malva americana* L.
*Malva spicata* auct. non L.
*Malvastrum spicatum* auct. non (L.) Gray
*Malva blumeana* Steud.
*Malva gangetica* L.
*Malva borbonica* Willd. (and others, Institute of Systematic Botany 2003)

**General Description.—**Indian Valley false mallow, also known as spiked malvastrum, false mallow, malva loca, malva silvestre, and mauve d'Amérique, is a shrub, subshrub, or woody herb that often reaches 1.5 m in height and 1 cm in basal diameter. The semideciduous plant generally has a single stem that is upright and sparsely branched. The wood is light colored, moderately hard, and moderately strong. Plants are supported by a tap and lateral root system of ivory colored roots. The twigs and leaves are stellate-pubescent. Gray-green leaves have a 1- to 6-cm petiole, usually ovate blades 2 to 8 cm long with serrate margins. Inflorescences are dense spikes, terminal on stems and branches. The flowers are sessile, subtended by an involucel of three linear bracts. The petals are pale yellow to yellow-orange and 8 to 9 mm long. The fruits are 5 to 6 mm in diameter and contain 10 to 15 mericarps without spines with seeds 1.5 mm long (Howard 1989, Liogier 1994, Stevens and others 2001). There are 2n = 24 chromosomes (Lavia and others 2000).

**Range.—**Indian Valley false mallow occurs in Florida and throughout the Caribbean including Puerto Rico and the U.S. Virgin Islands and from Texas through Central and South America to Argentina (Howard 1989, Stevens and others 2001). The species occurs as a naturalized exotic in Hawaii (Natural Resources Conservation Service 2003), Australia, India, and other locations in the Old World tropics and subtropics (Howard 1989).

**Ecology.—**Plants observed by the author appear to be short-lived shrubs that grow yearly without dieback. The species is reported also growing as an herb (annual) and subshrub (dieing back to permanent woody parts each year) (Howard 1989, Stevens and others 2001). Indian Valley false mallow is usually not eaten by cattle or other herbivores. Moderate grazing coupled with fire tends to make the species more abundant. It also grows in areas disturbed by river overflows, farming, road building, and land clearing. The species is intolerant of shade and severe competition. It disappears under closed tree canopies or in dense tall grass swards. However, Indian Valley false mallow does grow under a broken tree canopy. It grows on most types of well-drained soil. Mean annual rainfall in Puerto Rican habitat ranges from about 750 to 1000 mm (author's observation). It is known from near sea level to 1000 m in elevation in Nicaragua (Stevens and others 2001).

**Reproduction.—**Indian Valley false mallow is reported to flower and fruit throughout the year in Nicaragua (Stevens and others 2001). In Puerto Rico, plants begin flowering at about 15 cm in height and continue through life except for pauses during dry seasons. Air-dried seeds collected in Puerto Rico averaged 1.19 million seeds/kg. Placed on moist filter paper without pretreatment, 15 percent germinated over a period of 6 months. No specialized means of dispersal is apparent; the seeds are small and undoubtedly are moved to some extent by wind, water, and animals. Seedlings are relatively common in favorable sites. The dry fruits can easily be collected in quantity by hand but cleaning the tiny seeds is difficult.

**Growth and Management.—**Growth rates are moderate (0.3 to 0.5 m/year) and plants live 1 to 5 years, depending on competition and growing conditions. Although control is occasionally needed in rangelands and disturbed areas, no specific recommended treatments are known to the author.

**Benefits and Detriments.—**Indian Valley false mallow helps protect the soil, furnishes cover for wildlife, and because of its blooms contributes moderately to the aesthetics of wildlands where it grows. It is a host for the cotton bollworm, *Helicoverpa armigera* (Hubner) (Mensah and others 2003). The species also is the larval food-plant for the Laviana white-skipper butterfly, *Heliopetes laviana* (Hewitson) of Texas (Quinn 2003) and a Cuban butterfly, *Strymon columella cybira* (Hewitson) (Fernández 2001).

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