
*Mimosa pudica*

**System:** Terrestrial

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
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<tbody>
<tr>
<td>Plantae</td>
<td>Magnoliophyta</td>
<td>Magnoliopsida</td>
<td>Fabales</td>
<td>Fabaceae</td>
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</tbody>
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**Common name**
cogadrogadro (English, Fiji), co gadrogadro (English, Fiji), tottalaavadi (Tamil), vao tuitui (Samoan), touch-me-not (English), shameplant (English), attaapatti (Telugu), shampatara (Sanskrit), pikika’a (English, Aitutaki Atoll), mari-e-honte (English), action plant (English, Australia), shameweed (English, Australia), ngandrongandro (English, Fiji), morivivi (English), shamebush (English, Australia), mimosa (English, Australia), sensitive plant (English), limemeirh (English, Pohnpei Island), vergonzosa (English, Australia), humble plant (English, Australia), rakau pikika’a (English, Rarotonga Island), tita pikika’a (English, Cook Islands), dormidera (English), live and die (English, Australia), betguen sosa (English, Guam), pope ha'avare (English, Society Islands), chuimui (Hindi), samangaa (Sanskrit), sensitive grass (English), Kruidje-roer-me-niet (Dutch), lazza bati (English, Bangladesh), rakau avarevare (English, Ngaputoru Island), rakau pikika’a (English, Mangaia Island), tita avarevare (English, Miti’aro Island), sinnpflanze (German), mechiuaiu (English, Palau), mayhont (English), honteuse (English), reesamani (Gujarati), almindelig mimose (Danish), lajavathi (Bengali), laajak (Bengali), Gmeine Mimose (German), tuntokasvi (Finnish), sensitive (French), Raktapaadi (Sanskrit), tita ‘avarevare (English, Ma’uke Island), mattidare muni (Kannada), lajjavanthi (Hindi), namaskaar (Sanskrit), sensitiva (Spanish), lajouni (Hindi), Lajaalu (Hindi), laaari (Marathi), laajalu (Sanskrit), thoje jegri (English, India), khatiraka (Sanskrit), sleeping grass (English), ti mawi (English), tuitui (English, Samoa), memege (English, Niue), puteri malu (English, Brunei), mateloi (English, Tonga), tho ngandrongandro (English, Fiji), vao fefe (English, Samoa), lajalu (English, India), shamelady (English, Australia), la’au fefe (English, American Samoa/Samoa), dorme (English), pua hilahila (English, Hawaii), toogot-togot (English, Sabah, Malaysia), tho kandrodandro (English, Lau Island), lajja (English, India), paope ‘avare (English, Ngaputoru Island), pikika’a (English, Palmerston (Avarau) Island), rakau ‘avare (English, Atiu Island), tiare pikika’a (English, Cook Islands)

**Synonym**
*Mimosa tetrandra*, Humb. and Bonpl. ex Wild.
*Mimosa pudica*, L. var. *tetrandra* (Willd.) DC.
*Mimosa unijuga*, Duch. and Walp.
*Mimosa pudica*, L. var. *unijuga* (Duch. and Walp.) Griseb

**Similar species**
Summary

Mimosa pudica is native to South America, but has become a pantropical weed. It was introduced to many countries as an ornamental plant and is still widely available for sale. Mimosa pudica has become a pest in forest plantations, cropland, orchards and pasture. Mimosa pudica is used as a medicinal plant in many regions.

Species Description

*Mimosa pudica* is a more or less prostrate creeper; with cylindric stems reddish-brown, prickly; leaves immediately fold by pulvini if touched or jarred; pinnae 4, often reddish; leaflets 12-25 pairs, linear, acute, bristly; 9-12mm long, 1.5mm wide; flowers pink, in globose heads, nearly 1cm in diameter, axillary, peduncle up to 2.5cm long; pods crowded, flat, prickly-bristly, indented between the few (2-4) seeds, to nearly 2cm long; seeds about 2mm broad, rounded, brown (Stone, 1970; in PIER, 2005; CSIS, undated). It may reach up to 1 metre in height, although it usually grows 15-45cm high (CSIS, undated; Francis, undated; Land Protection, 2006). It is described variously as an annual, biennial or perennial plant (Wu et al., 2003; USDA, 2006; PIER, 2005).

Notes

When touched, an *Mimosa pudica* plant quickly folds its leaflets and pinnae and droops downward at the petiole attachment. The leaves also droop at night, and when exposed to rain or excessive heat. This response may be a defense against herbivorous insects, leaching loss of nutrients, or desiccation (Francis, undated).

*M. pudica* has been identified as having potential for phytoremediation of arsenic polluted areas in Thailand (Visoottiviseth et al., 2002).

Lifecycle Stages

In Puerto Rico, *M. pudica* plants live 1 to 2 years. Seedlings grow slowly for 2 or 3 months and then accelerate, reaching 0.5 to 2m of extension at the end of the first year. Growth of plants that survive into the second year is much slower. Potted and fieldgrown individuals are sensitive to overwatering (Bui, 2001). This species has been successfully tested and recommended for erosion control plantings using potted material at a spacing of 60 x 60cm (Coimbra and Magnanini, 1953) (all from Francis, undated).

In China, the flowering season from March to October, with fructescence from May to November (CSIS, undated).
Uses
The seeds and other plant parts of *M. pudica* contain mimosine, and extracts of the plant have been shown in scientific trials to be a moderate diuretic, depress duodenal contractions similar to atropine sulphone, promote regeneration of nerves, and reduce menorrhagia. Antidepressant activity has been demonstrated in humans (Martínez *et al.*, 1996). Root extracts are reported to be a strong emetic (Guzmán, 1975) (all from Francis, undated). *M. pudica* is used as a part of traditional medicine in SE and S Asia (Biswas and Mukherjee, 2003; Amitendu *et al.*, 2004; Rajan *et al.*, 2002; Ahmad and Holdsworth, 2003). See here for details on the ethnobotanical uses of *M. pudica*.

*M. pudica* is also a popular ornamental plant, as its leaves will fold up when stimulated by touch, heat or wind (Whatcom Seed Company, 2006; GRIN, 2006), and is also used for soil improvement (GRIN, 2006).

Habitat Description
*Mimosa pudica* occurs in croplands, orchards, pastures, mowed areas, roadsides, areas disturbed by construction, moist waste ground, open plantations, and weedy thickets (PIER, 2005; Francis, undated). It may grow as a single plant or in tangled thickets. *M. pudica* grows from near sea level up to 1,300m in elevation (Holm *et al.*, 1977; in Francis undated) and in areas with annual precipitations from about 1000 to over 2000mm. It is frost-sensitive (Francis, undated).

*M. Pudica* is shade intolerant and does not compete with tall vegetation or grow under forest canopies. The species’ roots produce carbon disulfide, which selectively inhibits colonization of the rhizosphere by mycorrhizal and pathogenic fungi (Feng *et al.*, 1998; in Francis, undated). *M. Pudica* is primarily found on soils with low nutrient concentrations, as it is probably outcompeted on richer soils (Magda *et al.*, 2006). It grows on most welldrained soils, even scalped or eroded subsoils. It requires disturbed soils to establish itself. Repeated burning may encourage its spread in pastures (Siregar *et al.*, 1990; in Francis, undated).

Reproduction
In the Philippines, *Mimosa pudica* flowers all year round, and may produce as many as 675 seeds per plant per year (Holm *et al.*, 1977). The species is both wind (Chieng and Huang, 1998) and bee-pollinated (Payawal *et al.*, 1991). Air-dry seeds from Puerto Rico weighed an average of 0.0065 ± 0.0002 g/seed. Seeds are transported by means of the bristles on the edges of their pods that cling to clothing or to the fur of mammals (Francis, undated).
General Impacts
Mimosa pudica forms a dense ground cover, preventing reproduction of other species (PIER, 2005). It has become a serious weed in fields of corn, soybeans, tomatoes, upland rice, cotton, bananas, sugarcane, coffee, oil palms, papayas, coconuts, and rubber in many tropical areas. It is particularly troublesome where hand pulling of weeds is practiced, as its thorns can cause painful wounds. On the other hand, it is tolerated or valued as a forage plant in pastures (Holm et al., 1977, Turtel and Thuraisingham, 1948; in Francis, undated). In fact, sheep grazing is reported to control M. pudica in pastures and plantations (Simonnet, 1990; in Francis, undated). The root nodules have been shown to fix nitrogen (Pokhriyal et al., 1990; in Francis, undated). Thickets of M. pudica may be a fire hazard when dry (PIER, 2005).

Management Info
Preventative measures: A Risk assessment of Mimosa pudica for the Pacific region was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 18 and a recommendation of rejection for import into Australia.

A Risk assessment of Mimosa pudica for Florida was prepared by Gordon et al 2008. The result is a score of 17 and a recommendation of rejection for import into Florida.

Physical: Hand weeding is difficult due to the presence of thorns and a woody root (Wagner, 1983; in PIER, 2005). Repeated burning may in fact encourage the spread of M. pudica in pastures (Magda et al., 2006).

Chemical: It is susceptible to several herbicides, including dicamba, glyphosate, picloram and triclopyr (Parsons and Cuthbertson, 1992). Very sensitive to picloram (0.25 lb/acre), sensitive to triclopyr. Dicamba and 2,4-D poor. Soil applied tebuthiuron effective (Motooka et al., 2002) (all from PIER, 2005).

In pasture situations, dicamba and fluroxypyr can be used to control M. pudica. Thorough wetting of all leaf surfaces is essential. If plants are disturbed before spraying, the leaves will fold up and the herbicide will be ineffective. Ensure all spraying is done with forward booms or ahead of operators with knapsack sprayers (Land Protection, 2006).


Coir dust, a waste from coconut processing, can be used as a mulch in pineapple crops to suppress M. pudica and other weeds (Van Mele et al., 1996).

Sheep grazing is reported to control the dominance of M. pudica in pasture (Magda et al., 2006; Francis, undated).

Principal source: Pacific Island Ecosystems at Risk. 2005. Mimosa pudica Species Information.


Compiler: IUCN SSC Invasive Species Specialist Group
Updates with support from the Overseas Territories Environmental Programme (OTEP) project XOT603, a joint project with the Cayman Islands Government - Department of Environment

Review:
ALIEN RANGE

[AUSTRALIA] [1] BANGLADESH
[10] TONGA [8] UNITED STATES

BIBLIOGRAPHY

46 references found for Mimosa pudica

Management information


Summary: This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc. Land Protection, 2006. Common sensitive plant Mimosa pudica. Facts: Pest series. Natural Resources, Mines and Water, Queensland Government.


Summary: This paper discusses the invasive impacts of M. pudica in French Guiana.

Pacific Island Ecosystems at Risk. 2005. Mimosa pudica Species Information.

Summary: This website provides comprehensive information about weed species in the Pacific, including distribution and management information.

**FULL ACCOUNT FOR: **

_Mimosa pudica_

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**Summary:** This paper outlines the biodiversity which can be found in the Upper Imbang-Caliban watershed of the North Negros Forest Reserve in the Philippines.


**USDA-ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GRIN) [Online Database]. National Germplasm Resources Laboratory, Beltsville, Maryland.**

**Summary:** This database provides basic information on _M. pudica_.


**USDA PLANTS profile. **_Mimosa pudica_.

**Summary:** This database provides basic information on _M. pudica_ distribution in the USA.


**Whatcom Seed Company. 2006.**

**Summary:** This website provides a list of garden plants which can be purchased over the internet.


**Summary:** This paper provides details on the naturalized members of Fabaceae in Taiwan, including _M. pudica_.

**WWF. 2006. National list of naturalised invasive and potentially invasive garden plants.**

**Summary:** This document was produced by WWF Australia, and provides information about invasive and potentially invasive garden plants in Australia.