***Mimosa pudica* L.** sensitive plant
LEGUMINOSAE-MIMOSIDAE

Synonyms: *Mimosa tetrandra* Humb. & Bonpl. *ex* Willd.
Mimosa pudica L. var. *tetrandra* (Willd.) DC.
Mimosa unijuga Duch. & Walp.
Mimosa pudica L. var. *unijuga* (Duch. & Walp.) Griseb.

General Description.—Sensitive plant is a small, prostrate or ascending, short-lived shrub. Some authors consider it a woody herb. It may reach 1 m in height when supported on other vegetation and more than 2 m in horizontal extension. The reddish-brown, woody stems are sparsely or densely armed with curved prickles. The root system consists of a taproot and extensive fibrous roots with nodules. The twigs are fine and flexible and support leaves with one or two pairs of pinnae and 15 to 25 pairs of oblong leaflets 3 to 12 mm long. The flowers are pink and clustered in globose heads. The legume (pod) is linear-oblong, 1.0 to 1.5 cm long and 3 mm broad, with bristles on the margins. The pods are born in groups and contain two to four brown seeds (Howard 1988, Liogier 1988, Pacific Island Ecosystems at Risk 2001). Sensitive plant is also known as dorme dorme, dormidera, humble plant, marie-honte, mayhont, morivivi, honteuse, sleeping grass, ti mawi, touch-me-not, and many other names (Holm and others 1977, Howard 1988, Liogier 1988). The great curiosity of sensitive plant and the source of most of its names is that when touched, it 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 defenses against herbivorous insects, leaching loss of nutrients, or desiccation.

Range.—Sensitive plant was first described from Brazil (Pacific Island Ecosystems at Risk 2001) and is perhaps native to much or all of the New World Tropics (Liogier 1988). Today, it is pantropical in its distribution (Howard 1988).

Ecology.—Sensitive plant grows on most well-drained soils, even scalped or eroded subsoils and soils with low nutrient concentrations. It requires disturbed soils to establish itself. Repeated burning may encourage its spread in pastures (Siregar and others 1990). Sensitive plant 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 and others 1998). This plant occurs in croplands, orchards, pastures, mowed areas, roadsides, and areas disturbed by construction. It may grow as a single plant or in tangled thickets. Sensitive plant grows from near sea level up to 1,300 m in elevation (Holm and others 1977) and in areas with annual precipitations from about 1000 to over 2000 mm. The species is frost-sensitive.

Reproduction.—In the Philippines, sensitive plant flowers all year and may produce as many as 675 seeds per plant per year (Holm and others 1977). The species is both wind (Chieng and Huang 1998) and bee-pollinated (Payawal and others 1991). Air-dry seeds from Puerto Rico weighed an average of 0.0065 $\pm$ 0.0002 g/seed. With no pretreatment, seeds from this collection began germinating 7 days after sowing and reached a maximum germination of 17 percent by 94 days (author's observation). In another test, 80 percent germination was obtained in 4 weeks with alternating temperatures of 20 and 40 °C (Holm and others 1977). Bui (2001) recommends a pretreatment with hot water followed by overnight soaking. Germination is epigeal. Seeds are transported by means of the bristles on the edges of their pods that cling to clothing or to the fur of mammals. Most nursery and home propagation is done using seeds, but summer cuttings may also be

used (Bui 2001).

Growth and Management.—In Puerto Rico, sensitive plants live 1 to 2 years. Seedlings grow slowly for 2 or 3 months and then accelerate, reaching 0.5 to 2 m of extension at the end of the first year. Growth of plants that survive into the second year is much slower. Potted and field-grown 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 60 cm (Coimbra and Magnanini 1953).

Benefits and Detriments.—Sensitive plant 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 weed is practiced. The species may be controlled by a number of commercial broad-leaf herbicides (Bui 2001). On the other hand, it is tolerated or valued as a forage plant in pastures (Holm and others 1977, Turbet and Thuraisingham 1948). In fact, sheep grazing is reported to control sensitive plant in pastures and plantations (Simonnet 1990). The root nodules have been shown to fix nitrogen (Pokhriyal and others 1990). Thickets of sensitive plant may be a fire hazard when dry (Pacific Island Ecosystems at Risk 2001). The seeds and other plant parts of sensitive plant contain mimonsine, an amino acid that is known to cause hair loss and depressed growth in mammals (Arora 1983). An unlikely large dose is necessary to cause problems, however. The pollen is important to honeybees in the Philippines (Payawal and others 1991). 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 (Modern-natural 2001). Anitdepressant activity has been demonstrated in humans (Martínez and others 1996). Root extracts are reported to be a strong emetic (Guzmán 1975).

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