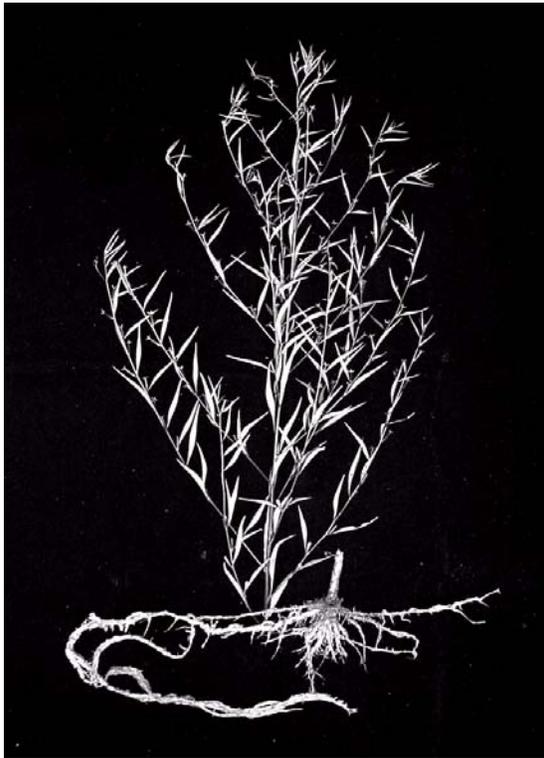


***Ludwigia octovalvis* (Jacq.) Raven**  
ONAGRACEAE

primrose willow

Synonyms: *Oenothera octovalvis* Jacq.  
*Jussiaea suffruticosa* L.  
*Jussiaea pubescens* L.  
*Jussiaea octovalvis* (Jacq.) Sw.  
*Jussiaea angustifolia* Lam.  
(many others Howard 1989, Liogier 1995)



**General Description.**—Primrose willow, also known as Jamaica loostrife, wild clove, many-seed, kamole, cangá, yerba de clavo, girofle-ma, grand giroflé, and manger mouton, is a suffruticose shrub or perennial woody herb to 2 m in height and 1 cm in stem diameter. The stems of older plants are woody through most of their height; branches become increasingly succulent toward the tips. Only the lower parts of young plants are woody. Primrose willow plants are supported by “sinker” roots, one of which may be the taproot, and long white, lateral roots that grow just under the soil surface. These roots have a hard central core and are surrounded by a cottony mass of root hairs. In the first year, the stem produces a number of fine lateral branches. In the next one or more years, the lateral branches each produce

similar secondary or tertiary branches. The alternate leaves are linear to narrowly ovate with blades 1.3 to 16.2 cm long. The species is highly variable in leaf size, shape, and pubescence. Primrose willow flowers are solitary in the upper leaf axils. Four sepals form a peg-like hypanthium, 5 to 12 mm long, from which emerge four yellow petals. The twigs, leaf veins, and hypanthium are often tinged in red. The capsules, which have a clove-like shape, are 2.5 to 5 cm long and contain many rounded, black seeds. Chromosome number for the species is  $2n = 32, 48$  (Howard 1989, Jones 1975, Liogier 1995, Long and Lakela 1976).

**Range.**—The original range of primrose willow is unknown. It grows today from Southern United States through the West Indies, and from Mexico through Central and South America to at least Bolivia (Hodgdon Herbarium 2002, Natural Resources Conservation Service 2002). It has naturalized in Hawaii (Fish and Wildlife Information Exchange 2002) and grows in tropical and subtropical regions almost worldwide (Burkill 1997, Howard 1989, Liogier 1995).

**Ecology.**—Primrose willow grows in wet soils and shallow water, such as drainage ditches, borrow pits, sloughs, marshes, ponds, seasonally flooded bottoms, river banks, and rice paddies. Soil type within those sites is apparently not very important. Primrose willow grows from near sea level to at least 800 m in elevation (Missouri Botanical Garden 2002). It prefers full sun and tolerates no more than side shade. The species grows singly or in clumps.

**Reproduction.**—After primrose willow plants in the tropics reach about 0.4 m, blooming and fruiting is continuous (author’s observation, Long and Lakela 1976). In Texas, it is reported to bloom from July through October (Correll and Johnston 1970). Seeds collected in Puerto Rico averaged 54 million per kg. Placed on moist filter paper, 28

percent of them germinated within 14 days, most on the seventh day (author's observation). Local dispersal is by wind and water. Long-distance dispersal is probably accidental on birds, machinery, or materials being shipped.

**Growth and Management.**—Primrose willow grows up to 1 m/year. Under favorable conditions, plants live at least 3 years and possibly more. There seems to be little reason to plant the species. Control may be necessary in drainage ditches to maintain flow and in rice paddies. Control can be achieved by cultivation, hand pulling, and by applying commercial weed killers.

**Benefits and Detrements.**—Primrose willow grows in wet areas where few other plants will grow and as such it aids in the successional process. It furnishes cover for wildlife. Its yellow flowers add a splash of color to areas often devoid of colorfully flowering plants. In herbal medicines, preparations of the leaves are used to treat diarrhea, dysentery, as a laxative and a vermifuge, and to relieve headache, chest pains, and rheumatoid pain (Burkill 1997, Liogier 1990, Parrotta 2001). A test of a local crude drug from Taiwan made from primrose willow effectively inhibited the cariogenic bacteria *Streptococcus mutans* (Chen and others 1989). The plant is a major weed in rice in the tropics and sometimes chokes drainage ditches and irrigation canals (Burkill 1997).

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John K. Francis, Research Forester, U.S. Department of Agriculture, Forest Service, International Institute of Tropical Forestry, Jardín Botánico Sur, 1201 Calle Ceiba, San Juan PR 00926-1119, in cooperation with the University of Puerto Rico, Río Piedras, PR 00936-4984