

***Philadelphus microphyllus* Gray**
HYDRANGEACEAE

littleleaf mock orange

Synonyms: *P. occidentalis* A. Nels.
P. argenteus Rydb.
P. minutus Rydb.
P. nitidis A. Nels.
P. stramineus Rydb.

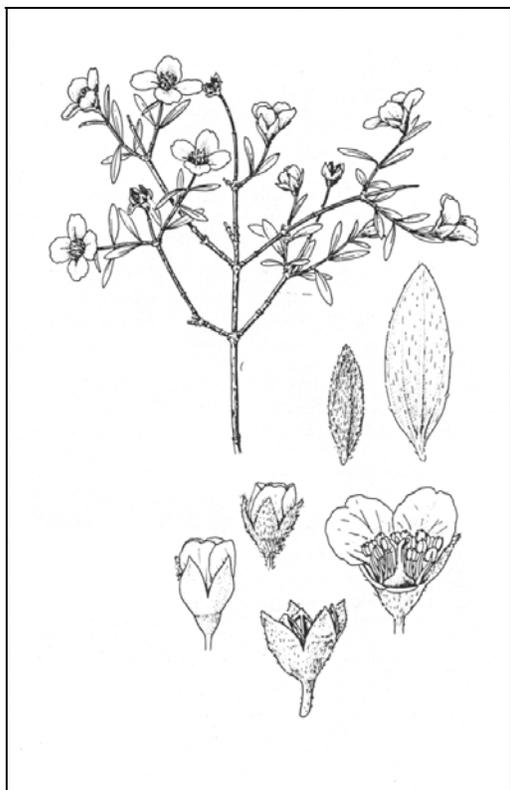


Illustration source: Cronquist and others 1997

General Description.—Littleleaf mock orange, also known as desert mock orange, is a small, rounded, multistemmed shrub 0.9 to 2.1 m tall with a crown diameter of about 1.2 m. New woody growth is strigose, while bark of mature stems is gray to yellowish and exfoliating. Some stems may be subspinose. Leaves are opposite, entire, short petiolate, 8 to 25 mm long, 2 to 13 mm wide, elliptic to lanceolate or linear, and sometimes revolute. Flowers are solitary or in clusters of three at the ends of branches produced the previous year. They are showy, white or creamy, fragrant, and four-merous with numerous stamens. Fruits are four-chambered loculicidal capsules containing numerous black, short-caudate seeds. The chromosome number is

$2n = 26$ (Cronquist and others 1997, Hickman 1993, Munz and Keck 1973, Welsh and others 1987).

Range.—Littleleaf mock orange is distributed from southern California east into southern and central Nevada; most of Utah; southwestern Wyoming; western, central, and southern California; Arizona; New Mexico; central Texas; and central Mexico (Cronquist and others 1997). The species exhibits considerable morphological variability and has been subdivided into a number of species or subspecific taxa by various authors.

Ecology.—Littleleaf mock orange grows in *Pinus* spp. L.-*Juniperus* spp. L., *Quercus* spp. L., mountain brush, *Populus tremuloides* Michx., *Pinus contorta* Dougl. ex Loud., *Pseudotsuga menziesii* (Mirb.) Franco, and *Abies concolor* Lindl. communities at elevations from 1,200 to 3,100 m (Cronquist and others 1997, Hitchcock 1943, Welsh and others 1987). A drought-tolerant species, it is often found growing in cracks or fissures in rocky surfaces and in other dry, sandy, gravelly, or rocky areas.

Reproduction.—Plants flower in May to September depending upon location. The capsules mature in late summer. Mature capsules are harvested by hand just after they have begun to dehisce. Dried capsules are crushed with a barley debearder to permit seed extraction. Seed is separated from debris using an aspirator or air-screen machine. Littleleaf mock orange is readily propagated from seed (Sutton and Johnson 1974, Swingle 1939). Germination of a New Mexico seed collection was 12 times greater when incubated at 15 compared to 20/10 °C (8 hrs/16 hrs) for 28 days (Stickney and others 2001). Germination was improved by a 28-day moist prechill at 3 to 5 °C when seeds were subsequently incubated at

20/10 °C, but not at 15 °C. Germination is epigeal.

Growth and Management.—Little data are available on the propagation of littleleaf mock orange, but species of the genus *Philadelphus* are generally easily propagated from softwood or hardwood cuttings, rooted suckers, divisions, or layers (Hartmann and others 1990, Macdonald 1986). Littleleaf mock orange is easily transplanted (Sutton and Johnson 1974). Seeds of *Philadelphus* spp. are tiny and may be broadcast seeded on a rough seedbed and covered lightly or spot seeded on prepared seedbeds (Stevens and others, in press). Seeds may also be surface-planted using a Brillion or similar seeder. Best results are obtained if seeds are planted in well-drained sites free of herbaceous competition. Seeds may be mixed with other shrub seeds that require surface or shallow planting. Growth of littleleaf mock orange is moderate to rapid (Sutton and Johnson 1974).

Benefits.—Littleleaf mock orange provides good cover for small animals. It is used to some extent by mule deer (*Odocoileus hemionus* Rafinesque) (Patton and Ertl 1982). Although the species receives little use in revegetation, it has potential for planting on disturbances on steep, rocky, unstable slopes within its native range (Stevens and others, in press). Seedlings or larger stock are recommended for such use. The species might also be used to advantage in drier areas of degraded riparian zones. Littleleaf mock orange is an attractive ornamental because of its showy flowers and fall coloration. It was first cultivated in 1883 (Rehder 1940). It can be used in borders, screens, hedges, or as isolated specimens in sunny areas. It can also be used for low maintenance landscaping and in recreational area plantings. The small seeds were eaten by Native Americans (Cronquist and others 1997).

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