BignoniaceaeCTrumpetcreeper family

Chilopsis linearis (Cav.) Sweet

desert-willow

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Synonyms. *C. saligna* D. Don, *C. linearis* var. *originaria* Fosberg, *C. linearis* var. *glutinosa* (Engelm.) Fosberg, *C. linearis* var. *arcuata* Fosberg.

Other common names. false-willow, jano, flowering-willow, desert catalpa, catalpa-willow.

Growth habit, occurrence, and use. Desert-willow grows along dry washes and streams in the desert between 450 and 1,500 m of elevation from southern California through southern Utah to western Texas and southward into Mexico and Lower California. It is a deciduous shrub or small tree that attains heights of 3 to 7.5 m or occasionally more. Growth can be rapid, up to 1 m annually (Munz 1979). The plant is useful for wildlife cover, erosion control, restoration, stream stabilization, and ornamental plantings in arid regions (McMinn 1959; Bainbridge and Virginia 1989; Munz 1959). Seed pods and flowers are edible, but the major use for Native American people was the wood (for house frames, granaries, and bows) and the fibrous bark (for weaving nets, shirts, and breechclouts) (Bainbridge and Virginia 1989).

Flowering and fruiting. Desert-willow produces perfect flowers between April and August throughout its range (Magill 1974; McMinn 1959). The fruit is a 2-celled capsule about 6 mm in diameter and from 10 to 30 cm long. It ripens from late summer to late fall (Afanasiev 1942) and persists through winter (Little 1950). The numerous light-brown oval seeds are about 8 mm long and have a fringe of soft white hairs on each end (figures 1 and 2).

Collection, extraction, and storage. Seedpods can be hand-picked after late September and through the winter months. Care must be taken not to pick unripened fruit because they mature unevenly due to their long flowering period (Engstrom and Stoeckeler 1941). Seed extraction simply requires that the pods be spread, dried, beaten lightly and shaken, and then the seeds screened out. Each 45 kg (100 lb) of dried pods should produce 14 to 23 kg (30 to 50 lb) of clean seeds, which number from 88,200 to 282,240/kg (40,000 to 128,000/lb) and average 189,130/kg (86,000/lb) (Magill 1974). Commercial seed has averaged 92% in purity and 87% in soundness (Magill 1974). These seeds are orthodox in storage behavior, so cold, dry storage conditions are recommended for storage. Seeds have been successfully propagated after 4 years of refrigerated storage at 7 ˚C (CALR 1993).

Germination. Desert-willow seed is not dormant, but storage for several days in wet sand or between wet blotter paper will speed germination. In germination tests 1,000 seeds were placed in

a sand or water medium for 21 to 60 days with a night temperature of 20 ˚C and a day temperature of 30 ˚C (Engstrom and Stoeckeler 1941; Magill 1974). Germination averaged 14 to 60% in 9 to 30 days and germinative capacity ranged from 26 to 100% (Magill 1974). Average germination using blotter paper is 80% (CALR 1993).

Nursery field practice and seedling care. Desert-willow seed may decay unless sown in spring soon after the soil warms up. Sowing depth should be 6 mm (.25 in). A ratio of seven times as much viable seed as the desired number of usable seedlings is required to grow nursery stock (Magill 1974). Damping-off can be a problem.

Desert-willow may also be propagated from cuttings (Magill 1974); cuttings should be handled carefully and allowed to produce an extensive rootball before transplanting. Mature plants grown in 15-gallon pots and 30-inch tubes have been successfully outplanted as windbreaks and for desert restoration at Joshua Tree National Park (CALR 1993).

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