

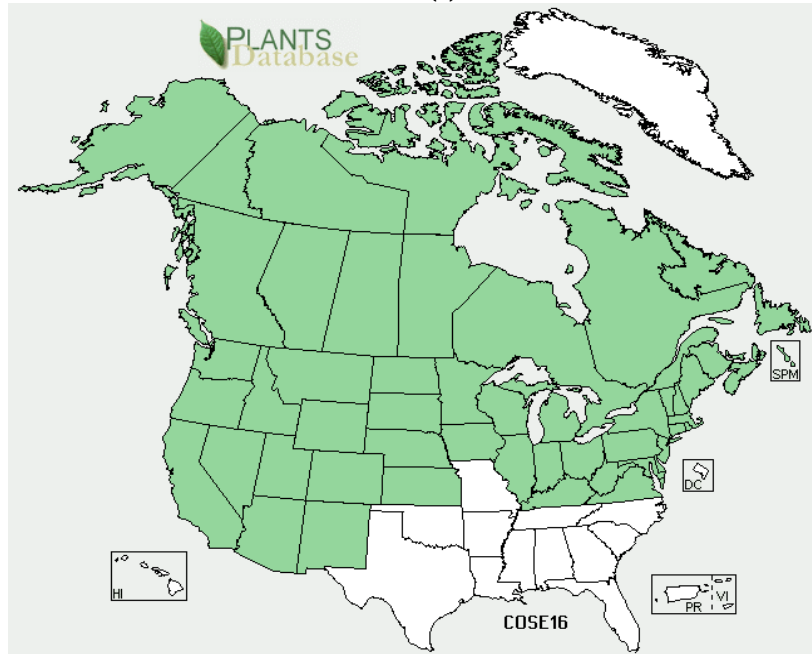
***Cornus sericea*, *C. stolonifera* Michx (includes several varieties) [1][2] Red osier Dogwood**



- Common names:** include Red Twig Dogwood, Western Dogwood, American Dogwood, Redstem Dogwood, Red Dogwood, Kinnikinnik, Squawbush, Creek Dogwood, California Dogwood, Red-stemmed Cornel, Redbrush, Gutter Tree, Red Willow, *harts rouges*, Poison Dogwood, Shoemack, Waxberry Cornel, Dogberry Tree. (1)
- Common synonyms:** *Cornus stolonifera*, *Cornus alba* var. *occidentalis*, *Cornus occidentalis*, *Cornus alba* var. *baileyi*, *Cornus alba* var. *californica*, *Cornus alba* var. *interior*, *Cornus alba* var. *coloradense*, *Cornus baileyi*, *Cornus instolonea*, *Cornus interior*, *Cornus sanguinea*, *Suida stolonifera*, *Cornus pubescens*, *Cornus californica*, *Suida interior*, *Ossea interior*, *Suida stolonifera* var. *riparia*, *Cornus instoloneus*, *Cornus nelsoni*, *Cornus amomum* (1)
- Taxonomic Serial Number:** 501637 (1) L. botanical reference 11,12,43(4)
- Description** A deciduous, many-stemmed shrub 3'-19' tall. Stems and twigs dark red when young, gradually fading to grey-green, becoming red again in the fall and winter.(1)Redosier dogwood is a woody deciduous shrub generally 1.4-6 m (4.6-20 ft) tall. The bark and twigs are reddish to purple and fairly smooth from autumn to late spring; after the leaves have fallen, the deep burgundy branches add color to the winter landscape. The bark, twigs, and leaves are bright green in spring through summer. The simple, opposite leaves are 5-10 cm (2-4 in) long, dark green above and hairy and lighter-colored below, with smooth margins, rounded bases, pointed tips, and falsely parallel veins. (7)
- Ecological** Temperate region of the Northern Hemisphere, Mexico and Preu

Range

Alaska to Labrador and Newfoundland, south to Virginia, Kansas, northern Mexico, and California. Common in the northeastern and Midwestern US in previously glaciated areas; south of these where site conditions are favorable.(1) Also indicated to be found in the Yukon (2)



Climate/ Elevation

A characteristic species of swamps, low meadows, and riparian zones; also found in forest openings, open forest understories, and along forest margins.(1) **Woodland Garden; Sunny Edge; Dappled Shade; Ground Cover; Bog Garden**[4]

Associated species

Trees: Paper Birch (*Betula papyrifera*), Quaking Aspen (*Populus tremuloides*)
Shrubs: Alders (*Alnus* spp.), Gooseberries (*Ribes* spp.), Wood's Rose (*Rosa woodsii*), Willows (*Salix* spp.). Herbs: Thistles (*Cirsium* spp.), Horsetails (*Equisetum* spp.) (1)

Local occurrence

Prefers rich, moist soils with pH range of 5.5 to 7.0. High levels of mineral nutrients needed for vigorous growth. Tolerates flooding and, consequently, is found on floodplains and wetlands. Its natural occurrence in full sunlight may be facilitated by its growth in wet situations where it encounters no water stress.
(1)

Plant strategy type/successional stage

An early to mid successional species that is suppressed in shade and is not normally found in the understory of closed canopy forests. It is found in the understory of mixed open forests...is often one of the first shrubs to invade wet meadows. Recommended for rehabilitating moist sites within its range, it is well adapted to disturbed sites, excellent at stabilizing soil, easy to establish, and grows rapidly. It needs fresh, aerated water to establish and may be particularly useful in stabilizing eroding stream banks.(1)It is tolerant of fluctuating water tables. The "osier" in redosier dogwood is derived from French, meaning "willow-like" [7]

Plant characteristics

Wood is hard, heavy and durable, none are used for reforestation.(2) A deciduous, many-stemmed shrub 3'-19' tall. **Leaves** opposite with prominent lateral veins that curve toward the tip and smooth edges. **Stems** and twigs dark red when young, gradually fading to grey-green, becoming red again in the fall and winter.(1)

Seed habit	Small perfect flowers, white/ green white/ yellow, in the spring. The fruit is a globular to oval drupe 1/8" - 1/4" in diameter. The seed has a thin succulent or meaty flesh containing a single two-celled bony stone that ripens in late summer of fall. (2) The seed shows a delayed germination due to a dormant embryo and in most cases due to the impermeability or hardness of the pericarp. Warm stratification for @60 days in moist sand or peat at temperatures of 70-80 degrees F followed by a usually longer period at much lower temperatures required. Immersion in concentrated sulfuric acid and possibly mechanical scarification can be used in place of warm stratification(2) (3)
Collected as	Seed, or cuttings
Propagation method	By seed, following cold stratification. Cuttings root easily without treatment and can be directly planted providing sufficient moisture is available. Rooted cuttings or nursery-grown seedlings are easily established on moist, well-drained soils and grow rapidly(1)Cuttings in June -July into early fall 1000ppm IBA solution, peat, perlite, mist yields 90%-100% rooting in 4-5 weeks. Hardwood cuttings also root easily, long branches gathered in winter 6-12" long with saw stuck directly into nursery rows in late winter early spring after a 3000 ppm IBA solution set in talc, sand, peat and perlite, mist. 72 degrees from bottom heat (3)The best results are obtained from fall sowing of freshly harvested seeds. Fruits collected too late to sow in the fall should be stored, pre-chilled until the next season, and sown outdoors the following fall. To effectively condition the seed for germination, store for two months in moist sand at 5°C for 90 days. After pre-chilling, expose the seeds to fluctuating temperatures from 12/72°C for 10 days (Young and Young 1992). With some species, the warm stratification period may be replaced by mechanical scarification or soaking in sulfuric acid. Seeds sown in nursery beds should be covered with 0.25-0.5 in (0.6-1.25 cm) of soil. Fall-sown beds should be mulched during the winter. [7]
Growing time	Natural germination occurs in the spring after falling and has laid above ground over the winter, it is very likely to lay over till the second spring. There is some evidence that seed collected green and sown immediately will germinate the next Spring. Germination is epigeous.(2)
Collection and restrictions	As soon as the fruit is rip they are collected by stripping or shaking from the branches to prevent consumption by birds and other animals. After being collected they can be sown or put into stratification. Stored seeds should be cleaned to reduce bulk.(Most varieties can be grown from root cuttings, layering and division and can be grown from cuttings off mature wood.(2)
Seed life	Seed will remain viable in cold storage 4-8 years. (1) Practically no data available on longevity of seed <i>C. racemosa</i> gives good germination after having been stored for 18 months in sealed containers at 41 degrees F. Until optimum methods are worked out it is suggested these conditions be used for other <i>Cornus</i> species.(2)
Recommended cleaning and seed storage conditions	By seed, following cold stratification. Seed will remain viable in cold storage 4-8 years. Seeds have dormant embryos and need cold stratification for 1-3 months. Occasionally, hard seed coats require scarification.(1) the stones are readily extracted by macerating the fruit in water or running thru a hammer mill allowing pulp and empty stones to wash away, after drying cleaned stones are ready for sowing or storage. 15-20 lbs of seed per 100lbs of fruit. Average cleaned stones per lb- 18,700 a purity of 99% and soundness of 85% (2)
Soil or medium requirements	Rooted cuttings or nursery-grown seedlings are easily established on moist, well-drained soils and grow rapidly(1)The best seed bed is moist but well drained, rich loams(2)

Installation form	Stone or fruits sown in fall or stratified and sown in April or early May. Seeds usually sown in drills sometimes broadcast, covered with ¼"-½" of nursery soil. Beds are given a mulch of leaves which is removed at first signs of germination. One year olds are usually large enough for field planting and should be planted on reather moist sites(2) <i>Propagation from cuttings:</i> Redosier dogwood can be started easily by division, french layering, and hardwood cuttings. [7]
Recommended planting density	40 viable seed of smaller variations sown per square foot. (2)
Care requirements after installed (water weekly, water once, never water, etc.)	Young seedlings are given half shade and are resistant to damping off and root rot. One year olds are susceptible to Septoria cornicola and Cercospora cornicola. Controlled applications of 4-6-50 Bordeaux mixture at two week intervals have been effective in checking the spread of these.(2)Redosier dogwood is often coppiced in late fall after the leaves turn brown and fall off the stem. Cut all stems to approximately 2-3 in (5-8 cm) from the base before growth begins in spring. Apply fertilizer around the shrub to promote new growth, then apply mulch around the base. Coppicing stimulates the growth of new, vigorous stems whose deep burgundy color is especially vivid. [7]
Normal rate of growth or spread; lifespan	Birch shade is unfavorable for germination of birch seed, but spruce seedlings are common. By 120-150 years after fire, black or white spruce dominate. In boreal mixed woods, paper birch begin dying by 75 years after fire. By 125 years most paper birch are dead. Height growth ceases at about 60-70 years of age; few live more than 140 years. (5)

References:

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