

## DOUGLAS IRIS

*Iris douglasiana* Herbert

plant symbol = IRDO

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### Uses

**Warning: Fresh iris roots may be toxic.**

**Ethnobotanical:** Iris makes some of the finest cordage; the fibers are particularly strong and flexible. Only two fibers can be taken from each iris leaf margin. Huge bunches of leaves were harvested in the fall and stored until needed. Iris cordage was used for fishing nets, string, rope, snares, hairnets, and regalia. The fibers are fine like silk, but surprisingly strong.

Rope was made from fibers, which occur, on the outside of iris leaves. The iris leaves were gathered in large bundles and a single silky fiber was taken from each margin of the leaf. None of the other fibers was used. Using a mussel-shell or abalone "thumbnail" the women stripped the fibers from the leaves. The fibers are detached from the leaves and scraped clean of all tissues. The men, mostly while sitting around in their sweathouses twisted the threads on the bare thigh. The men always knotted the fishing nets. A deer rope is near 20 feet long with lasso at one end, and about half an inch in diameter. This loop was set over a deer trail to catch the head

or antlers. Within the set loop over the trail was spread a delicate network of the same material to draw in the loop. One Indian stated that "it takes nearly six weeks to make a rope twelve feet long." In spite of the tremendous labor of preparing this material, the iris fiber was one of the most generally employed in northwestern California. The threads and cords of this fiber were used to make fishing nets, camping bags and snares for catching deer, birds, and other game.

Since iris is fine and can be bent at sharp angles, it makes an excellent starting knot in coiled baskets. It is said that babies were wrapped in the soft green leaves of *Iris douglasiana* while their mothers collected manzanita berries, to keep the babies cool and to prevent dehydration.

The Monache and the Southern Yokuts in California make flour from iris seed. The Pomo placed acorn meal in a shallow pit and covered the meal with Iris leaves before pouring water over the meal to leach out tannic acid.

A poultice of the raw rhizome is especially effective against staph sores. Externally, iris is successfully used in infected wounds, ulcers, and fistulas, plus to take away freckles. Only the dry root should be used internally. Iris is active as a cathartic, has a stimulating effect on the production of both pancreatic enzymes and bile, is a strong diuretic, and will stimulate both saliva and sweat. This is a useful medicinal plant, but in general should be used with care and preferably in combinations where less energetic plants form the bulk of a medicinal formula.

Tea from iris roots was used for kidney trouble by several California Indian peoples (Murphey 1959). The Yana chewed iris roots to cure coughs. The Modoc used an iris root decoction to soothe sore eyes. A piece of iris root was inserted in a tooth cavity to kill the nerve, so the tooth will come out. Tests showed slight bactericidal effects, slight effects on rabbit pneumonia, and an ascorbic acid content of 4% (Archer 1957). Roots were burned and the smoke inhaled to alleviate dizziness. A root decoction was used as a cathartic and emetic, but large doses could cause severe digestive problems.

**Landscaping & Wildlife:** The beautiful and variable blossoms lend themselves to landscaping, where they naturalize and require minimal maintenance.

Horticulturally, it is used for rock gardens, ground cover, borders, wetlands, ponds, and streams. Native irises are free flowering, most are long lived, require very little attention, and provide an abundance of seeds. Iris flowers attract insects and birds. Irises provide nectar to hummingbirds. The mountain beaver (*Aplodontia rufa*) is also known to feed on the leaves and stems of iris that occur in the vicinity of its tunnels.

**Invasive Potential:** Irises are sometimes invasive. Irises can become noxious weeds in pastures, because the leaves are unpalatable and bitter.

### **Status**

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

### **Description**

**General:** Iris Family (Iridaceae). The native irises are perennial herbs, usually evergreen and growing from a creeping, tuberous rhizome. Irises can be identified by their double row of leaves, which overlap like praying hands. The leaves are long and linear with parallel venation. Flower stems are erect and simple. Blossoms vary somewhat in spacing of the parts, width of sepals, and the inner, erect standards (petals). *Iris douglasiana* has pale cream to light, dark lavender or deep reddish purple flowers that bloom from May to June.

### **Distribution**

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site. *Iris douglasiana* grows abundantly along the coast from north Santa Barbara County, California, into Oregon. It is found in shade with moist soils with ample organic matter. This plant is common in grassy places, especially near the coast, at elevations generally less than 100 m. It grows naturally in the coastal prairie and mixed evergreen forest communities.

### **Establishment**

The native irises are excellent in shade situations, even dense shade of walls and fences (Schmidt 1980). They will tolerate sun for most of the day in mild areas, and should have afternoon shade and ample water in the interior regions. Plants may be watered the year round. Fertilization increases biomass and seed production. This iris has a clumping rhizome system, and is readily propagated by plant division in fall or winter.

When allowed to increase freely, plants will naturalize and eventually form extensive ground cover. Unless the seed vessels are removed there will be many volunteer plants, but if inferior flower size or color appears it should be culled immediately. Irises start growing with the first cool weather and rains in fall, reaching the height of their growth in spring and early summer. They go dormant after seed set, in hot dry summer.

**Propagation by Plant Division:** *Iris douglasiana* is clonal, radiating outward in growth from the center. The best propagation method for these is division, in fall or winter after the first new roots are established but before the flowers form.

Native irises in the wild tend to produce only a small, dry rhizome with stringy roots, which is difficult to dig. Vigorous garden or greenhouse plants produce firm, white, growing roots especially in winter and spring growing seasons, and clumps are easily divided at those time. Remove a new fan with fleshy roots set in a prepared site, water it, and provide shade for a few days if the plant is placed in full sun. Frequent division appears to keep the plants vigorous, as well as being the best method of increasing the supply of superior forms.

**Propagation by Seed:** Iris seed is easily collected from the large capsules. The capsules turn from green to brown and open at the top when they are ripe. They have to be watched closely, because they disperse rapidly. Two days after ripening, the seed is gone. Collect capsules carefully to avoid spilling seeds. Each capsule has from 20 to 80 seeds.

Seeds should be stored in paper envelopes at room temperature until they are planted. The seeds of all species will keep up to 10 years at room temperature.

Plant seeds in 6-inch pots, using a combination of leaf mold and peat moss. Cover seeds with 1/2 inch of same material. Any good potting soil that's acidic is good for seed germination.

After planting, over-winter the pots outdoors in November or December. They will come up in 2-3 months, depending on the weather. Germination increases the second year, because there's always a percentage of hard seeds that won't germinate the first year. Part of the seed waits for the next year, to increase the probability for good weather conditions and optimize germination success.

Plant the seedlings in May, when the young plants are usually 3 to 6 inches tall or even taller. Plant

from 6 inches to one-foot spacing. If a natural look is desired, scatter and clump the plantings. Water plants through the dry season until the roots have established. After the first year the plants should be self-maintaining without additional watering, unless there is an unusually hot, dry spell. Plants will begin to bloom by their second year if growth has been continuous.

Direct seeding is possible in places that can be left undisturbed, as among shrubs, or among low perennials where the seedlings can be sheltered. If planting seeds in the ground, autumn is the best time for seeding; germination begins in two or three months and often continues beyond that time. A friable seed mixture of sand, loam, and either peat or screened leaf mold is best, covering the seed with sphagnum moss to aid in preventing damping-off of seedlings.

### Management

In autumn old leaves should be removed from the center of large clumps, the foliage cut back, and a mulch applied, especially if the irises are being naturalized in a semi-dry area. Traditional resource management included harvesting huge bunches of iris leaves in the fall, and storing these leaves until needed. The fibers are then harvested from the leaves. This naturally accomplished the pruning and mulching that modern horticulturists practice to maintain iris beds.

The PCI Borer (*Amphipoea americana* var. *pacifica*) and Iris Borer are serious pests of iris. The Iris Borer stays in the rhizome through the winter, then metamorphoses, coming out in the spring as a nocturnal moth. Controlling the moth when its flying, to prevent it from laying its eggs on the iris, would control the borer. The UC Botanical Garden used the biological control *Bacillus thuringiensis*, but it didn't help. At this time, it is recommended to dig the infected plant out entirely, put it in a plastic bag, and put them in the garbage can to avoid contamination of other plants.

Milkweed (*Asclepias* species) and dogbane (*Apocynum cannabinum*) were traditionally burned by native people in the fall to maintain vigorous plant production, to stimulate plant growth, to optimize long and abundant fiber production from leaves and stalks, and to stimulate seed production. It is probable that iris was burned for the same reasons.

### Cultivars, Improved and Selected Materials (and area of origin)

*Cultivars*: Seeds and plants of selected iris cultivars are available from many nurseries. It is best to plant species from your local area, adapted to the specific site conditions where the plants are to be grown.

Please check the Vendor Database, expected to be on-line through the PLANTS Web site in 2001 by clicking on Plant Materials.

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