

BROAD-LEAVED CATTAIL

Typha latifolia L.

plant symbol = TYLA

Contributed By: USDA, NRCS, National Plant Data Center & Idaho Plant Materials Center

Alternate Names

Flags, rushes, bulrushes, cat o' nine tails, Cossack



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asparagus, reed mace, baco (cattail)

Uses

Ethnobotanic: All parts of the cattail are edible when gathered at the appropriate stage of growth. The young shoots are cut from the rhizomes (underground stems) in the spring when they are about 4 to 16 inches long. The raw young shoots taste like cucumber and can also be made into pickles. When

the young shoots are steamed they taste like cabbage. The base of the stem where it attaches to the rhizome can be boiled or roasted like potatoes. The young flower stalks can be taken out of their sheaths and can be boiled or steamed just like corn (Roos-Collins 1990; Clarke 1977).

Cattail pollen is a fine substitute for flours. It is a bright yellow or green color, and turns pancakes, cookies or biscuits a pretty yellow color (which children love). The rhizomes (underground stems) and lower stems have a sweet flavor and can be eaten raw, baked, roasted, or broiled. Cattail rhizomes are fairly high in starch content; this is usually listed at about 30% to 46%. The core can be ground into flour. One acre of cattails would yield about 6,475 pounds of flour (Harrington 1972). This flour would probably contain about 80 % carbohydrates and around 6% to 8% protein. Since cattail occurs around the world, it is a potential source of food for the worlds' population.

Newly emerging shoots of cattails are edible, with delicate flavor and crispy asparagus like texture (Glenn Keator, Linda Yamane, Ann Lewis 1995). The end of a new stem of cattail is popular for eating with Washoes (Murphy 1959). When mixed with tallow, the brown fuzz can be chewed like gum.

The Klamath and Modocs of northern California and southern Oregon make flexible baskets of twined tule or cattail. Cattails or tules were also twined to form mats of varying sizes for sleeping, sitting, working, entertaining, covering doorways, for shade, and a myriad of other uses.

The Cahuilla Indians used the stalks for matting, bedding material, and ceremonial bundles (Barrows 1967). Some tribes used the leaves and sheath bases as caulking materials. Apaches used the pollen in female puberty ceremonies. After dipping the spike in coal oil, the stalk makes a fine torch. The fluff can also be used as tinder, insulation, or for lining baby cradleboards. The down is used for baby beds (Murphey 1959).

Lengths of cattail were plied into rope or other size cordage, and cattail rope was used in some areas to bind bundles of tule into tule boats. Air pockets or aerenchyma in the stems provide the buoyancy that makes tule good boat-building material.

Other Uses: Wildlife, wetland restoration, wastewater tertiary treatment, edible (young shoots, base of stem,

flower stalks, pollen, rhizomes), and aesthetics. The multitudes of tiny, wind-carried seeds are too small and too hairy to be attractive to birds (Hotchkiss and Dozier 1949). In a few exceptions, the seeds are eaten by several duck species. Cattail rootstocks are much more valuable as food for wildlife than are the seeds. Geese and muskrats prefer the stems and roots. Moose and elk eat fresh spring shoots. Shelter and nesting cover are provided for long-billed marsh wrens, red-wing blackbirds, and yellow-headed blackbirds.

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: Cattail Family (Typhaceae). Cattails are herbaceous, rhizomatous perennial plants with long, slender green stalks topped with brown, fluffy, sausage-shaped flowering heads. *Typha latifolia* plants are 15-30 dm tall. The spike-like, terminal, cylindrical inflorescence has staminate flowers above and pistillate flowers below with a naked axis between the staminate and pistillate flowers. The spike is green when fresh, becoming brown as it matures. The basal leaves are thin with parallel veins running the long, narrow length of the leaf. These plants are rhizomatous and colonial.

Distribution

For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site. Broad-leaved cattails are common throughout the United States and temperate and tropical places worldwide (Hickman 1993). *Typha latifolia* occurs in coastal and valley marshes at elevations lower than 2,000 m.

Establishment

Adaptation: *Typha latifolia* generally occurs in shallower water than *Typha angustifolia*. Compared to *T. angustifolia*, *T. latifolia* is exploitative in its ability to clone rapidly and produce a large leaf surface area, which may contribute to its superior competitive ability (Grace and Wetzel 1982). *Typha latifolia* has been found to be tolerant of water level fluctuations and moderate soil salinity. Cattail spreads both vegetatively and by seed, particularly under drawdown (Shay et al. 1986).

Cattails are always found in or near water, in marshes, ponds, lakes and depressions. They are obligate wetland indicator plant species. Cattails

tolerate perennial flooding, reduced soil conditions and moderate salinity. With influxes of nutrient or freshwater, cattails are aggressive invaders in both brackish salt marshes and freshwater wetlands.

Cattails, like many emergent wetland species, tolerate flood drawdown cycles that occur to varying degrees in different wetland and riparian systems. Flood and drought are disturbance factors that vary in frequency, magnitude, and predictability. Frequency relates to the number of episodes per unit time while magnitude of flooding can be expressed in terms of water volume, velocity, gradient, depth, duration, and season of inundation. When planting cattails, the flood-draw-down cycles must be taken into consideration for successful revegetation.

Planting: *Typha* species may be planted from bare rootstock or seedlings from container stalk or directly seeded into the soil. Bare rootstock or seedlings are preferred revegetation methods where there is moving water. *Typha* seeds germinate readily and are a cost-effective means to propagate cattail on moist soils. To ensure a long-term stable ecosystem, it is recommended that *Typha* be just one of the species in the mix for wetland restoration.

Seed Collections: Select seed collection sites where continuous stands with few intermixed species can easily be found. At each collection location, obtain permission for seed collection.

- Seed is harvested by either taking hand clippers and cutting the stem off below the seed heads or stripping the seed heads off the stalk.
- Collect and store seeds in brown paper bags or burlap bags. Seeds are then dried in these bags.
- Seeds can be harvested when they are slightly immature. It is important to harvest the staminate stalks before they dry and blow away.
- Seeds and seed heads need to be cleaned in a seed cleaner. Plant cleaned seed in fall.
- Plant in clean, weed - free, moist seed bed. Flooded or ponded soils will significantly increase seedling mortality.
- Broadcast seed and roll in or rake 1/4" to 1/2" from the soil surface.
- Some seed may be lost due to scour or flooding. Recommended seed density is unknown at this time.

Seed germination in greenhouse: Clean seed - blow out light seed.

- To grow seeds, plant in greenhouse in 1" x 1" x 2" pots, 1/4" under the soil surface. Keep soil surface moist. Greenhouse temperature should

be 100 degrees F (plus or minus 5 degrees). Seeds begin to germinate after a couple weeks in warm temperatures.

- Plants are ready in 100 - 120 days to come out as plugs. By planting seeds in August, plugs are ready to plant in soil by November. These plants are very small; growing plants to a larger size will result in increased revegetation success.

Live Plant Collections: No more than 1/4 of the plants in an area should be collected. If no more than 0.09 m² (1 ft²) should be removed from a 0.4 m² (4 ft²) area, the plants will grow back in the hole in one good growing season. A depth of 15 cm (6 in) is sufficiently deep for digging plugs. This will leave enough plants and rhizomes to grow back during the growing season. Donor plants, which are drought-stressed, tend to have higher revegetation success.

Live transplants should be planted in moist (not flooded or anoxic) soils as soon as possible. Plants should be transported and stored in a cool location prior to planting. Plugs may be split into smaller units, generally no smaller than 6 x 6 cm (2.4 x 2.4 in), with healthy rhizomes and tops. The important factor in live plant collections is to be sure to include a growing bud in either plugs or rhizomes. Weeds in the plugs should be removed by hand. For ease in transport, soil may be washed gently from roots. The roots should always remain moist or in water until planted.

Clip leaves and stems from 15 to 25 cm (6 to 10 in); this allows the plant to allocate more energy into root production. Plant approximately 1 meter apart. Plants should be planted closer together if the site has fine soils such as clay or silt, steep slopes, or prolonged inundation.

Ideally, plants should be planted in moist soils in late fall just after the first rains (usually late October to November). This enables plant root systems to become established before heavy flooding and winter dormancy occurs. Survival is highest when plants are dormant and soils are moist. Fertilization is very helpful for plant growth and reproduction. Many more seeds are produced with moderate fertilization.

Management

Heavy grazing will eliminate *Typha* species as well as other native species from riparian corridors. However, cattails are fairly resistant to moderate grazing, providing wet soils are not compacted.

Because cattails have relatively little value for ducks, they are often regarded as undesirable weeds in

places intended primarily for ducks. It has been found that mowing cattails after the heads are well formed but not mature and then following up with another mowing about a month later, when new growth is two or three feet high, will kill at least 75% of the plants. This will enable other emergent vegetation with more palatable and nutritious seeds to become established.

Ecologically, cattails tend to invade native plant communities when hydrology, salinity, or fertility changes. In this case they out compete native species, often becoming monotypic stands of dense cattails. Maintaining water flows into the wetland, reducing nutrient input and maintaining salinity in tidal marshes will help maintain desirable species composition. If cattails begin to invade, physical removal may be necessary.

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

Please check the Vendor Database, expected to be on-line through the PLANTS Web site in 2001 by clicking on Plant Materials. Local sources are recommended. This species should be available from any local nursery specializing in aquatic plants.

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Prepared By

Michelle Stevens

Formerly USDA, NRCS, National Plant Data Center

Chris Hoag

Interagency Riparian/Wetlands Project
USDA, NRCS, Plant Materials Center, Aberdeen,
Idaho

Email: choag@id.nrcs.usda.gov

Species Coordinator

M. Kat Anderson

USDA, NRCS, National Plant Data Center
c/o Environmental Horticulture Department,
University of California, Davis, California

Edited: 04dec00 jsp

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