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## Cattail Use in the Landscape

### Introduction

Historically, the cattail was viewed and used as an everyday source of food and construction materials. During the last 50-100 years, public opinion soured and cattails were vilified as invasive and destructive; much research was performed both to show that they should be controlled and how they should be controlled. Today, the value of cattails is being rediscovered as a highly-efficient means of improving water quality, a process called phytoremediation.

### Historical Use of Cattails

In spring the rootstocks and rhizomes were an important food source for native peoples when other food was scarce. These roots are quite nutritious, containing more starch than potatoes and more protein than rice. The young shoots are tasty as cooked vegetables, and the pollen can be used in baked goods. In addition to food, cattails have also provided people with building materials. The dried leaves were often woven into furniture and mats, and their pulp and fibers can be made into paper and string. Even the fluff from the seed heads has been used for padding, bedding and insulation. Cattails also have medicinal value. Many cultures have used the roots to treat intestinal maladies and burns. (Cattail; a common and useful native plant, n.d.)

### Cattails are Invasive Weeds!

Industrialized society has rendered useless indigenous peoples' charming uses of cattail. Cattails quickly became viewed as nuisance plants.

Botanists have called *Typha* species "weeds" (Grace, 1986) and assigned *Typha* spp. the lowest ranking within a floristic quality assessment, an indication that the plant is common to many habitats. (Herman, 2001).

Prominent organizations classify *Typha* spp. as an invasive species that reduces biodiversity ((ISSG), 2006) and can prevent other species from becoming established ((ISSG), 2006).

Cattails also provide roosting habitat for blackbirds that can severely damage crops, especially sunflowers and other seed-bearing crops. Elimination of cattails removes roosting habitat and can reduce local crop damage, but the damage is often simply shifted to other areas where the displaced birds create new roosts (Solberg, 1993).

Popular culture has even created how-to guides on how to kill cattails (How to Get Rid of Cattails, n.d.)

## New Hope for Cattails' Reputation

Interest in cattails as wildlife habitat and as a cornerstone of reducing water and soil-borne pollutants is gaining quickly; the latter is called phytoremediation.

Use of native plants in phytoremediation provides advantages over other species and helps bring back the heritage of flora lost through human activity. In addition to restoring biodiversity to areas that have been disturbed, remediating Superfund sites using native species provides for wildlife habitat enhancement and conservation and saves money over alternative cleanup methods. Unlike many introduced species, once established, native plants do not require fertilize, pesticides, or watering. As encouraged by the Superfund Redevelopment Initiative, use of native plants in site restoration may serve to restore wetlands and other habitats and create nature parks, sanctuaries, and other green areas (United States Environmental Protection Agency, n.d.).

Phytoremediation is the direct use of green plants and their associated microorganisms to stabilize or reduce contamination in soils, sludges, sediments, surface water, or ground water. First tested actively at waste sites in the early 1990s, phytoremediation has been tested at more than 200 sites nationwide. Because it is a natural process, phytoremediation can be an effective remediation method at a variety of sites and on numerous contaminants. However, sites with low concentrations of contaminants over large cleanup areas and at shallow depths present especially favorable conditions for phytoremediation. Plant species are selected for use based on factors such as ability to extract or degrade the contaminants of concern, adaptation to local climates, high biomass, depth root structure, compatibility with soils, growth rate, ease of planting and maintenance, and ability to take up large quantities of water through the roots (United States Environmental Protection Agency, n.d.).

Cattails are emerging as the weapon of choice against water contamination, and perhaps even global warming. In addition to its use in large phytoremediation projects to absorb contamination from groundwater and wetlands, the cattail could also work in on a small, inexpensive scale, helping to reduce arsenic contamination in impoverished areas. (Casey, 2009)

Cattails are classified as hyper-accumulators of water and soil pollutants, including phosphorous, nitrates and nitrites, arsenic, lead, manganese, zinc, cadmium, nickel, and even plutonium. Cattails have even been identified as being an effective water quality monitoring tool for suspect polluters (i.e., similar to a drug test for athletes) (Ahmet Sasmaz, 2008).

Cattails should be cut, removed, and disposed of properly annually, ideally in early winter; Dead and decaying cattail leaf litter release accumulated nutrients and pollutants back into the environment upon decomposition (Dennis Jurries, 2003).

## Alternatives to Cattail in the Landscape

Despite cattails' newfound usefulness, many people associate their presence in the landscape as a sign of neglect. There are other native plant species that rank as hyper-accumulators including some willows (*Salix* spp.) and big blue stem (*Andropogon gerardii*).

For a saturated area where pollutant removal requirements are modest, try Joe-Pye (*Eutrochium* spp.).

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