

Native Freshwater Plants

The Uses and Benefits of Aquatic Plants



Aquatic plants are an often misunderstood and under-valued part of freshwater ecosystems. In fact, many people would rather not have them in their favorite swimming or fishing hole. The following points illustrate a few of the important roles that aquatic plants play in a waterbody.

Food

Aquatic plants provide important food for many animals. Ducks and geese eat the seeds, leafy parts, and tubers of plants such as pondweeds (*Potamogeton* spp.), [watershield](#) (*Brasenia schreberi*), arrowhead (*Sagittaria latifolia*), water pepper (*Polygonum* sp.), and duckweed (*Lemna* sp.). Songbirds use fluff from cattails (*Typha* sp.) as nest material and eat the seeds of many emergent plants. Otter, beaver, muskrats, turtles, and moose will also graze on a variety of aquatic plants.

Historically humans have also utilized aquatic plants as a food source. Cattails have edible shoots and roots and even the pollen has been used in making biscuits. Arrowheads form large edible tubers at the root ends, called duck potatoes, which were consumed by Native Americans. Watercress (*Rorippa nasturtium-aquaticum*) has many historic medicinal uses and its spicy vegetation continues to be used in salads and garnishes. Water lily roots are a common source of food in many parts of the world and have historic medicinal value. Even the submersed plant, [coontail](#) (*Ceratophyllum demersum*) has been used for medicinal purposes.

Habitat

Aquatic plants provide important living space for small animals such as aquatic insects, snails, and crustaceans, which in turn supply food for fish and waterfowl. Many studies have shown that vegetated areas support many times more of these tiny creatures than do unvegetated areas.



Cover

Young fish and amphibians will use aquatic plants as a source of cover from predatory fish and birds. This, coupled with the abundant food supply, makes aquatic plants important nurseries for baby fish (including our native salmon), frogs, and salamanders.

Photograph © by

Kerry Dressler

Housing Supplies

The sturdy emergent plants provide nest and den-building materials for many birds and mammals, including muskrats. Humans also construct baskets, mats, boats, and even dwellings from cattail, rush, and bulrush stems.

Erosion Control

Submersed and emergent plants protect shorelines from erosion due to wave action or currents. They can also help stabilize the sediment which can increase water clarity.

Nutrient Cycling

Aquatic plants form a vital part of the complex system of chemical cycling in a waterbody. They can also influence the supply of oxygen in the water. Recently aquatic plants have received a lot of attention for their ability to soak up pollutants from contaminated water. They utilize nutrients that would otherwise be used by algae, thereby improving water clarity. Increasing attention is being paid toward their possible use as indicators of water quality.

Resist Invasion by Invasive Exotics

A diverse healthy native plant community is more resistant to invasion by opportunistic exotic plants.

Why are Aquatic Plants Seen as a Problem?

If aquatic plants are so wonderful, why are they perceived as a problem? Most of the time, problems arise when plants are so numerous they impede recreational activities such as boating and swimming. When growth becomes very thick, they also harm some fisheries, particularly juvenile salmon and trout habitat. The causes of unnaturally high levels of plant growth are complex. Often it is attributed to increased nutrients, which come from around the lake or in the watershed. Contributing problems can include failing septic systems, fertilizer run-off, or agricultural waste. These increased nutrients cause



the natural process of lake aging (eutrophication) to proceed at an accelerated rate, and increased plant and algal growth is part of this process.

Another problem can arise if a nonnative species is inadvertently introduced to the lake. This often happens when recreational users unknowingly carry plants from one waterbody to another, or when someone discards aquarium plants into a lake. Several exotic species such as [Eurasian watermilfoil](#) (*Myriophyllum spicatum*) - seen here in the photograph - or [Brazilian elodea](#) (*Egeria densa*) are aggressive and can crowd out more desirable native vegetation.

Changes in vegetation may take slowly or quite rapidly. What can individuals concerned about a waterbody do? Along with preventing or eliminating pollution, you can monitor plant community changes by collecting and identifying aquatic plants on a year-to-year basis. This is also a good way to detect detrimental changes at an early stage when control or elimination of the problem is both less complicated and less costly. Collecting and preserving plants is not difficult, and the result is an increased awareness of aquatic plants, as well as a valuable historic record of what grows in the lake. However, proper identification of the plant can be tricky and is essential, particularly if you believe any to be exotic invasive species.

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