

COMMON ARROWHEAD

When observing fauna in the wetlands, it can also be rewarding to observe some of the flora as well. One floral species that is common in our wetlands is the Common Arrowhead (*Sagittaria latifolia* Willdenow). This is the most common of all Arrowhead species.

Common Arrowhead is a member of the Arrowhead or the Water-plantain Family (*Arismataceae*). The generic name, *Sagittaria*, is Latin for “arrow-like” or “of an arrow”. *Sagitta* is “arrow”. The specific epithet, *latifolia*, is Latin for “broad- or wide-leaved”. *Lati* is “broad or wide” and *folia* are “leaves”.

A few other previous scientific synonyms for this species have been *Sagittaria esculenta* Howell, *S. longirostra* (Micheli) J. G. Smith, *S. obtusa* Muhlenberg ex Willdenow non Thunberg, *S. ornithorhyncha* Small, *S. planipes* Fernald, *S. pubescens* Muhlenberg, and *S. viscosa* C. Mohr. At different times and places, other common names for this plant have been Arrowhead, Arrowleaf, Arrowroot, Broadleaf Arrowhead, Broad-leaved Arrowhead, Bull Tongue, Chinese Onion, Duck Potato, Dutch Potato, Indian Onion, Indian Potato, Katniss, Muskrat Potato, Swamp Potato, Swan Potato, Swanroot, Tule, Tule Potato, Tule Root, Wapato, Wappata, Wappatoo, Water Archer, Water Nut, Waxflower, and White Bull Tongue.

DESCRIPTION OF THE COMMON ARROWHEAD

Perennial

Height: Its total height is 6-48 inches.

Leaves: Its leaves are simple and are arranged in basal rosettes. The leaves have entire margins and are prominently veined. The veins are vertically parallel and meet in the middle and at the ends. The leaves exude a bitter, milky sap.

The petioles are long and stout. They are both wider and sheath-like near the base.

These leaves are arrowhead shaped and have 2-16 inch long leaf blades. The blades are as wide as 10 inches and are arrow-shaped, or are as narrow as ½ inches and are linear. Some leaves only have broad leafless petioles (phyllodes).

The leaves above the water are wider than the leaves below the water. These narrow, submerged leaves can more easily tolerate the water's currents.

The leaf blades may be lobed or unlobed. If lobed, they have 2 long, sharp, backward projecting lobes at their base.

Flowers: Its flowers are arranged in loose, racemous clusters upon tall, erect, simple or branched, leafless scapes. These scapes also exude a bitter, milky sap.

The flowers are also arranged in 2-15 whorls of 3. At the base of each whorl are 3 thin, papery bracts. These bracts are elliptic or lanceolate, are less than ½ inch long, and have blunt tips.

Each flower is radially symmetrical and is about ½-1½ inch wide. It has 3 white, broad, rounded, delicate petals; 3 short, blunt, curved, persistent, dark green sepals; 6-50 yellow stamens with smooth filaments; and a pistil with numerous 1-celled, green carpels crowded into a dense rounded head. The upper flowers are usually male (staminate) and

have longer pedicels. The lower flowers are usually female (pistillate) and have shorter pedicels.

These flowers are insect-pollinated. Some of the pollinating insects are Bees (Superfamily *Apoidea*), Flies (Order *Diptera*), Beetles (Order *Coleoptera*), and Damselflies and Dragonflies (Order *Odonata*).

These flowers may stay in bloom for only 1 day. Flowering season is usually July to October.

Fruits: Its fruits are aggregated into ½-1½ inch wide, spherical clusters. Each single fruit is a flat, dry, hard, 2-winged, 1-seeded achene.

Seeds: Each seed is about 1/8 inch in diameter. Its styled beak projects at right horizontal angles from the tip of the seed. Ducks (Family *Anatidae*), Herons (Family *Ardeidae*), and Rails (Family *Rallidae*) eat these seeds.

Roots: Its root system is short and fibrous, and consists of long rhizomes that end in thick, starchy corms or tubers. The tubers are about ¼-2 inches thick, about 2 times longer, have pointed tips, and have milky sap. These root systems can grow more plants. Many aquatic animals, such as Ducks, Geese (Tribe *Anserini*), Swans (*Cygnus* sp.), Muskrats (*Ondatra zibethicus* L.), and North American Beavers (*Castor canadensis* Kuhl), eat these tubers.

Habitat: The habitat of this emergent plant consists of wet sites or the shallow waters of lakes, ponds, streams, swamps, marshes, ditches, and muddy shores. This plant grows in large colonies.

This species can tolerate strong currents and waves. It can also survive fluctuating water levels, hard water, and high levels of phosphorus.

Range: Its native range covers most of the eastern U.S. as far west as the Great Plains, western Canada, central California, Hawaii, and the Caribbean. It was introduced into Europe and Australia, where it is an invasive species.

Edible Uses of the Common Arrowhead:

The Common Arrowhead has edible uses. The tubers, the fruits, and the seeds are all edible. Both the Native Americans and the European settlers consumed them.

The tubers are edible and taste like Potatoes (*Solanum tuberosum* L.). If eaten raw, they have an unpleasant, acrid taste. If eaten cooked, they have a pleasant, sweet taste.

The tubers are first washed and are then cooked by frying, by boiling for 15 minutes in salt water, or by roasting for 30 minutes at 350 degrees. After cooking, they may be peeled. If not consumed, they may be dried, sliced, or mashed, and stored for the winter.

These tubers are gathered from the late fall until the early spring. They are best gathered by removing them from the floor of the wetlands with hoes, rakes, or bare feet. The released tubers float to the surface. Pulling upon the plants will likely cause them to break at their roots.

Some Native Americans raided Muskrat or Beaver dens for their cached tubers. However, they often replaced the tubers taken from their dens with other foods to appease the Great Spirit.

Lewis and Clark's Corps of Discovery observed and subsisted upon this plant along the Columbia River during their long expedition to the Pacific Coast. During the late 19th Century, Chinese immigrants in San Francisco cultivated this plant for subsistence.

Medicinal Uses of the Common Arrowhead:

This plant also has some medicinal uses. The tubers were made into a decoction for treating indigestion, rheumatism or as a diuretic for urinary and kidney ailments. The tubers were also used as a poultice for treating wounds and sores. The leaves were also made into a decoction for treating rheumatism or were used as a wash for treating fevers in small children. However, handling this plant may cause contact dermatitis in some people.

REFERENCES

WILDFLOWERS OF WISCONSIN AND THE GREAT LAKES REGION

By Merel R. Black and Emmet J. Judziewicz

NATIONAL WILDLIFE FEDERATION FIELD GUIDE TO WILDFLOWERS OF NORTH AMERICA

By David M. Brandenburg

A GREAT LAKES WETLAND FLORA

By Steve W. Chadde

THE HISTORY AND FOLKLORE OF NORTH AMERICAN WILDFLOWERS

By Timothy Coffey

DICTIONARY OF PLANT NAMES

By Allen J. Coombes

WILDFLOWERS OF THE EAST

By Mabel Crittenden and Dorothy Telfer

THE BOOK OF SWAMP AND BOG

By John Eastman and Amelia Hansen

EDIBLE WILD PLANTS

By Thomas S. Elias and Peter A. Dykeman

EASTERN/CENTRAL MEDICINAL PLANTS AND HERBS

By Steven Foster and James A. Duke

WILDFLOWERS OF OHIO

By Robert L. Henn

MEDICINAL PLANTS OF THE HEARTLAND

By Connie Kaye and Neil Billington

NORTH WOODS WILDFLOWERS

By Doug Ladd

EASTERN NORTH AMERICA'S WILDFLOWERS

By Louis C. Linn

WALKING THE WETLANDS

By Janet Lyons and Sandra Jordan

NEWCOMB'S WILDFLOWER GUIDE
By Lawrence Newcomb and Gordon Morrison

EDIBLE WILD PLANTS
By Lee Allen Peterson

WILDFLOWERS
By Roger Tory Peterson and Margaret Mc Kenny

WILDFLOWERS AND OTHER PLANTS OF IOWA WETLANDS
By Sylvan T. Runkel and Dean M. Roosa

NATIONAL AUDUBON SOCIETY FIELD GUIDE TO NORTH AMERICAN WILDFLOWERS
(EASTERN REGION)
By John W. Thieret, William A. Niering, and Nancy C. Olmstead

THE USES OF WILD PLANTS
By Frank Tozer

en.wikipedia.org/wiki/Sagittaria_latifolia