



Sandy Pond Shores

Sandy pond shores are a unique and challenging habitat for plants to grow in. Fluctuating water levels, wave action, and acidic, nutrient-poor soils on some lake and pond shores create an unusual wetland community characterized by species that are specially adapted to these difficult conditions. Found on sandy, gravelly, or peaty shores with fluctuating water levels, this natural community is characterized by zones of hardy herbaceous plant species that grow along the seasonally changing



shoreline. Pond and lake shores without an abundance of sand, with stabilized water levels, or with rapid transitions to deep water tend to be characterized by more common communities.

Water level fluctuations are closely tied to natural seasonal and year-to-year lake and groundwater levels due to porous soils that allow rapid passage of precipitation and upland runoff. A repeated cycle of flooding and drying out along the shoreline creates a highly stressful growing environment that excludes many other wetland species. Many pond shore-adapted species rely on a seed bank that allows them to wait out unfavorable conditions before germinating, growing, and reproducing. Within sites, some species may lie dormant or remain in vegetative form for many years until favorable conditions for growth and reproduction return. Pond shore communities may require several years of observation to determine their full species composition.

Characteristic and rare* plant species:

bayonet rush (*Juncus militaris*)
bulblet umbrella-sedge (*Cyperus dentatus*)
Canada rush (*Juncus canadensis*)
common beak-rush (*Rhynchospora capitellata*)
fall panic-grass (*Panicum dichotomiflorum*)*
false pimpernel (*Lindernia dubia* var. *anagallidea*)*
golden-pert (*Gratiola aurea*)
mermaid-weed (*Proserpinaca pectinata*)*
mud rush (*Juncus pelocarpus*)
one-flowered muhly (*Muhlenbergia uniflora*)

robust yellow-eyed grass (*Xyris difformis*)
sclerolepis (*Sclerolepis uniflora*)*
slender spike-rush (*Eleocharis tenuis*)
slender-leaved goldenrod (*Euthamia tenuifolia*)
small-flowered (*Lipocarpa micrantha*)*
snailseed pondweed (*Potamogeton bicupulatus*)
spurred panic grass (*Panicum spretum*)
stone nut-rush (*Scleria reticularis*)*
tuberled spike-rush (*Eleocharis tuberculosa*)
Virginia meadow beauty (*Rhexia virginica*)





NATURAL COMMUNITIES OF NEW HAMPSHIRE

Where Are They Found?

In New Hampshire, pond shore communities are primarily found scattered throughout the east central, southern, and south-eastern parts of the state, from near sea level to 150 m (492 ft.) in elevation. Many pond shore species are near the northernmost limit of their range, being more or less restricted to a narrow band along the Gulf and Atlantic coastlines of North America.

Types: Sweet gale-speckled alder-steeple-bush medium-tall shrub thicket; Twig-rush sandy turf pond shore; Bulblet umbrella-sedge open sandy pond shore; Submerged aquatic/rosette stress tolerant sandy pond shore with two variants.

Related Natural Communities: Beach strands. Also, some very similar habitats are found within small isolated basins that typically completely dry out during the summer, or along riverbanks associated with the extensive outwash plains of the Ossipee region.

Conservation status: Sandy pond shore communities are extremely rare and in rapid decline in New Hampshire.

Conservation Considerations:

Sandy pond shore communities are in decline primarily due to the fact that they are found along shorelines that have been under increasing human use. These sensitive communities can only withstand a limited amount of human disturbance. Trampling, removal, and burying of vegetation are all destructive and can also result in the introduction of non-native invasive species.

Artificial impoundment of water bodies where pond shore communities are found reduces water level fluctuations and threatens their long-term survival in several ways including reducing habitat, limiting the regeneration of species from the seed-bank, and by allowing woody shrubs and other more competitive vegetation to become established.

Another threat is the contamination of water quality by road and agricultural runoff, especially since these pond shore communities are adapted to nutrient-poor conditions. An increase in nutrients and pollutants leads to eutrophication which has negative consequences for the entire aquatic system.

These fact sheets were prepared by the NH Natural Heritage Bureau, a part of the Division of Forests & Lands in the Department of Resources and Economic Development. NH Natural Heritage is a member of NatureServe, which represents an international network of Heritage programs. Illustration by Libby Davidson from: Wetland, Woodland, Wildland © 2000 The Nature Conservancy & VT Dept. of Fish & Wildlife.

For more information, please visit our web page at www.nh.gov/dred/divisions/forestandlands/bureaus/naturalheritage or call (603) 271-2215.



NH Natural Heritage Bureau
PO Box 1856
Concord, NH 03302-1856

Funded by the Conservation License Plate Trust Fund (the "Mooseplate").
Mooseplate funds received by NH Natural Heritage are vital to developing information that leads to the protection of native plant species and natural communities.