Learn more about Virginia's wetlands and how to support the Flora during our Fall fund drive View in browser

FLORASCOPE

Occasional News from the Flora of Virginia Project

The Wonders of Wetlands

Look for our mailer and on social media to learn more about the flora of Virginia's wetlands.

American Lotus (*Nelumbo lutea*) is an example of a plant with a Floating Structure adaptation, with roots anchored in the mud and leaves generally floating on the surface of fluctuating water with flowers emerging above the water's surface.
Photo: @DCR-DNH, Irvine T. Wilson

Wetlands are arguably one of the most valuable environments in Virginia, playing a vital role in maintaining the health of our environment and supporting our economies. They cover approximately 4% of Virginia, about one million acres (Dahl 1990), and more than 70% occur in the Coastal Plain. Although they encompass a relatively small area of the Virginia landscape, wetland ecosystems provide essential functions and services. These rich landscapes act as natural water purifiers, absorbing pollutants and excess nutrients, which helps to protect our rivers, lakes, and coastal waters; are crucial for flood control, acting as sponges that absorb and slow down stormwater, for coastal resiliency and reducing the impact of floods; and, provide essential habitat for waterfowl, fisheries, and other wildlife

What is a wetland?

The Environmental Protection Agency (EPA), U.S. Army Corps of Engineers (USACE), and the Virginia Department of Environmental Quality (DEQ) share a common definition:

> *Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.*

Specially adapted vegetation is key to distinguishing wetlands from upland (terrestrial) communities. Wetland plants, referred to as ‘hydrophytes’ or hydrophytic vegetation’, have morphological, physiological, and/or reproductive strategies which allow them to compete and flourish in oxygen depleted (anerobic) soils and saturated conditions.

Environmental professionals and restoration ecologists rely on plant identification and community composition data as a first step to helping to identify, preserve, and restore wetlands. This is where the Flora of Virginia Project comes in. Through an understanding of plant ecology and ecosystem dynamics, maintaining, preserving, and expanding wonderful wetlands in the Commonwealth becomes possible.

Pickerelweed
(Pontederia cordata)
Kenneth Lawless

Aerenchyma Tissue Spongy tissue on many wetland herbaceous plants creates channels in leaves, stems, and roots for gas exchanges in hypoxic soils.

Bald Cypress
(*Taxodium distichum*)
@DCR-DNH, Gary P. Fleming

Pneumatophores Specialized root structures rising from the water most likely help anchor trees in soft soils and flooded conditions.

Virginia Sneezeweed
(*Helenium virginicum*)
@DCR-DNH, Gary P. Fleming

Specialized Reproduction Strategies Reproduction adaptions respond to fluctuating water levels and flooding conditions inherent to many wetlands.

Wetland Indicator Status

A national list of plant species that occur in wetlands was developed in 1988 to clarify the meaning of hydrophytic vegetation under the Clean Water Act, the Wetland Conservation Provisions of the Food Security Act; to support federal agencies in field identification of wetlands; and, to inform wetland restoration and creation projects. In 2006, the USACE assumed responsibility for the National Wetlands Plant List, updating data, name changes and indicator status ratings:

Rating/Indicator Status	Qualitative Definition
Obligate (OBL)	Almost always occurs in wetlands
Facultative-Wetland (FACW)	Usually occurs in wetlands
Facultative (FAC)	Occurs in wetlands and non-wetlands
Facultative-Upland (FACU)	Usually occurs in non-wetlands, but may occur in wetlands
Upland (UPL)	Almost never occurs in wetlands

Species were placed in these categories based on a national and regional panel review process that included botanists and ecologists from the US Fish and Wildlife Service (FWS), USACE, EPA, and Natural Resources Conservation Service (NRCS). Ratings were assigned to plant species separately within each of the ten USACE Wetland Delineation Regions. To inform these ratings the panels used best professional judgment and available literature, as well as feedback from universities, the private sector, and the public. However, it is not an exhaustive list of all plant species that may be encountered in a wetland delineation -- it only includes species that have been given an indicator status rating.

Source: Wetland Ratings on the National Wetland Plant List (NWPL) By Betsy Bultema and Jennifer Gillrich — USACE, ERDC-Cold Regions Research and Engineering Laboratory

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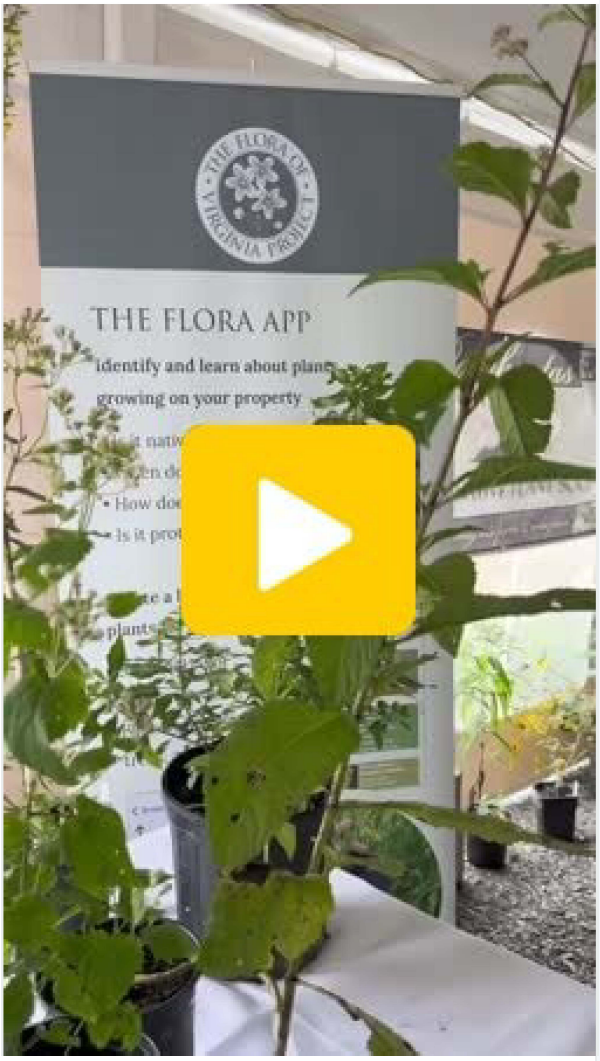
The State Fair Welcomes The Flora

Our first visit to the State Fair of Virginia was a rousing success! Approximately 400 visitors stopped at our table to learn more, and 187 entered our raffle to win one of ten free Flora of Virginia Apps. The vast majority of folks had never heard of us and were incredibly curious about the importance of native flora to local ecosystems, how to identify both natives and invasives, and introducing native plants into their gardens.



Support the Flora of Virginia Project

The volunteer Flora of Virginia Project board of directors is committed to keeping the Flora of Virginia, a critical resource at the forefront of plant identification and conservation efforts, current and accessible.

In 2025, with your help, we are focused on:

- Upgrading our database infrastructure to enhance data sharing with collaborators and allow for easier updates, including Wetland Indicator Status for plant species;
- Expanding educational outreach through our Flora Ambassador Program and increased representation at statewide events;
- Enhancing the App's functionality to better serve its users; and
- Publishing a reprint of the *Flora of Virginia*.

There are a number of ways to contribute during our Fall Fund Drive:

Visit our website to learn the many options to donate through the mail, by PayPal, and more.

Follow and share our GivingTuesday campaign on the unique flora found in Virginia Wetlands on Facebook, Instagram and LinkedIn.

Participate in the Combined Federal Campaign (CFC) – The annual giving campaign for federal employees and retirees, support the Flora of Virginia Project using **CFC#85168**.

Support the Commonwealth of Virginia Campaign (CVC) – Commonwealth employees can donate now using **CVC#201631**.

Regardless of how you choose to give, please consider making a tax-deductible donation to the Flora of Virginia Project. Your support is essential to helping us to provide resources that professionals, educators, and nature enthusiasts alike rely on to protect Virginia's spectacular biodiversity.

Flora of Virginia Project, Inc.
P.O. Box 512
Richmond, VA 23218
flora@floraofvirginia.org