Founded in 1997.
Logo art of Tall Goldenrod,
*Solidago altissima*,
by Nat Cleavitt, 2006.

# Solidago

## Newsletter of the Finger Lakes Native Plant Society

**Volume 24, No. 2** **June 2023**

OUTINGS

### Genesee Valley Conservancy Bluebell Hike

*Text by David Weeks*
*Scenics by Whitney Carleton*

***Scenic** on page 1: **An atmospheric morning shot** of the Bluebell woods, by Whitney Carleton*

***Flower details of EASTERN BLUEBELLS (Mertensia virginica)** in Ithaca, N.Y., by Robert Dirig, 17 April 2012, showing the pink buds.*
This gorgeous wildflower belongs to the **Boraginaceae** (Borage Family).

***Scenic** below, in brighter sun, by Whitney Carleton*

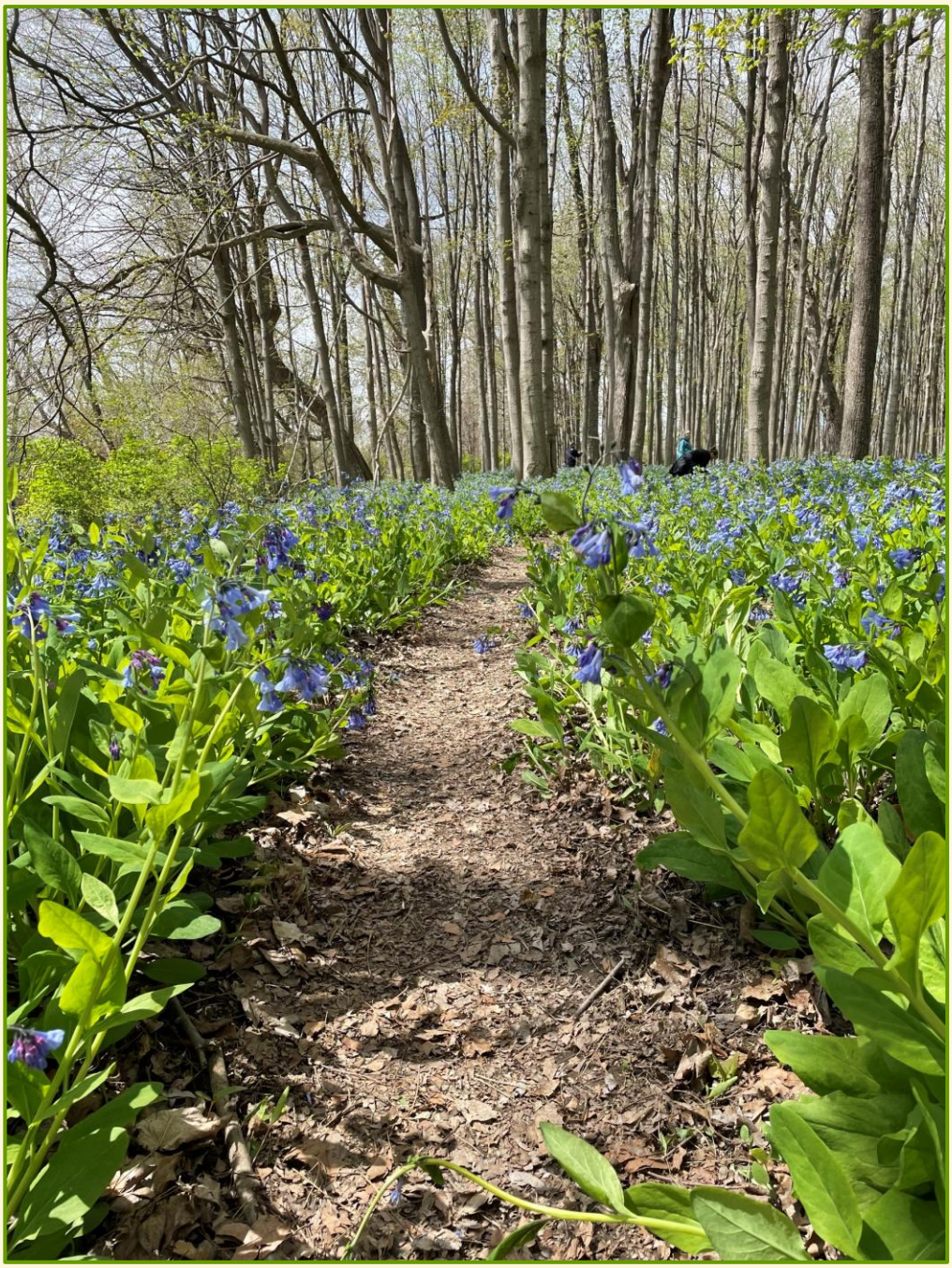
**Several FLNPS members attended a Bluebell Hike sponsored by the Genesee Valley Conservancy near Geneseo, N. Y.**

**DAVID WEEKS reports:**

"It was quite amazing. The section that had the most **Bluebells**, I'd say at least a 40-acre parcel, in a wooded section, was a solid — and I mean *solid* — carpet of Bluebells; no scrub carpeting the forest floor, just Bluebells, with a spattering of **White Trilliums** mixed in. Breath-taking! As you walked through, this carpet was on the right. On the left grew the largest **Sycamores** I've ever seen, majestic old-growth trees exceeding 15 ft. in circumference, easily 200+ years old."

"Along the way, large plots of wild **violets** grew, and an even larger amount of **Yellow Violets**. This tract of land is a must-see. No rain helped make it even more enjoyable."

[slightly edited from an email sent on 30 April 2023.]



## Please Contribute to *Solidago*

**We welcome contributions that feature wild plants of the Finger Lakes Region of New York and nearby.** We include cryptogams (bryophytes, lichens, fungi, and algae) as "flora," and recognize that green plants provide habitats and substrates for these and many animals, especially insects. We are interested in zoological associations as long as plants are an integral part of the story.

**We can use a wide spectrum of material in a variety of writing styles.** Our regular columns include **Local Flora** (plant lists or details of species from specific sites), **Outings** (reports of FLNPS-sponsored excursions), and **Plant Profiles** (on specific local plants). We also occasionally publish **Appreciations** (memorials to local botanists and naturalists), **Reviews** (of books, talks, meetings, workshops, and nurseries), **Letters** (commentaries and letters to the editor), **Essays** (on botanical themes), **Verse** (haiku, limericks, sonnets, and poems of less formal structure), **Art** (botanical illustrations, plant designs, pencil sketches, decorations), and **Photographs** (stand-alone images, photo essays, and full-page composite plates, or originals that can be scanned and returned). We also can always use **Fillers** (very short notes, small images, cartoons) for the last few inches of a column.


# *Solidago*

Newsletter of the
Finger Lakes Native Plant Society

Volume 24, No. 2 June 2023

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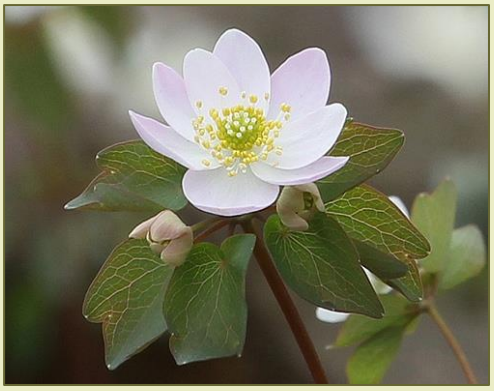
FLNPS (founded in 1997) is dedicated to the promotion of our native flora. We sponsor talks, walks, and other activities related to conservation of native plants and their habitats. *Solidago* is published as a colorful online version, and a B&W paper version that is mailed. The online format is posted 3 months after publication. Please see ***www.flnps.org*** for details of membership, past *Solidago* issues, and updates about our programs.

Flower of Rue Anemone (*Thalictrum thalictroides*, formerly *Anemonella thalictroides*). Photo by Arieh Tal. See pp. 5-7.

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*Please send *Solidago* contributions & correspondence to Robert Dirig, Editor, at editorofsolidago@gmail.com

**Deadline for the Autumn 2023 issue is August 15th !**

## Name That Plant Contest

The photo from last issue's [*Solidago* 24(1), p. 6] Name That Plant Contest was of **Wild Oats** or **Sessile-leaved Bellwort** (*Uvularia sessilifolia*). It is an early blooming forest species in central New York. Bob Dirig wrote, "It's a lovely little plant. We had them near our yard in the Catskills, and always watched for them each spring." Thanks to all who entered the contest, and congratulations to contest winners: **Bob Dirig**, **Susanne Lorbeer**, **Rosemarie Parker**, **Charlie Smith**, and **Robert Wesley**.

***This issue's mystery plant is shown Below.***

As many of you know, I have been very ill during the past few months. Thanks in large part to your well wishes, as well as the plants (like the one pictured above), I am recovering.

Hints and suggestions are often provided to contest participants who try. Common and/or scientific names are acceptable, and more than one guess is allowed. Please submit your answer to **David Werier** at

***The photographs were taken in Tompkins County, New York, by David Werier, on April 28, 2023*** (left two early emerging plants, and deer-browsed plants on the right); ***May 17, 2022*** (background flowering plant); ***May 17, 2023*** (closeup of lower leaf surface); ***June 24, 2022*** (fruit); ***and May 21, 2023*** (closeup of flower).

PLANT PUZZLE

# Mystery of the Spring Asteroids

*by Arieh Tal*

*Photos by the author*

***Upon finding an unfamiliar plant variety***, we begin to think about other, more familiar plants that are similar or different in important ways. The comparison process triggers a period of investigation and learning, often with surprising results. Such was the case recently, when on my way home from an errand, I found a large patch of brilliant, blue-flowered, low-growing plants in a neighbor's front yard. These plants were strikingly different from the usual early spring blooming species, such as snowdrops, scillas and crocus. Curious, I drew closer. Superficially, they looked like asters, with multiple azure rays surrounding a yellow central disc.

***"What's this, a type of aster that flowers in April?"*** I asked.

There are indeed members of the Composite family (Asteraceae) that flower in spring, like Colts-foot (*Tussilago*) in April, or the fleabanes (*Erigeron*) in late May. But this species was truly aster-like (*asteroid*).

So, while completing my journey homeward, I began to consider where this early season species would fit into the Asteraceae "tribal" structure; that is artificial groups of species that presumably share a common lineage. I decided to return to the neighbor's yard with my camera and take pictures. However, as soon as I looked at the closeup images on my camera's screen, I noticed a few anomalies, characteristics that didn't quite match the description of an aster. Most salient was the dense ring of stamens encircling the *gynoecium* (the female, reproductive organs of a flower).


A population of *Anemone blanda* flowers.


Floral details of *Anemone blanda*.
Petals, gynoecium (center) and stamens.

***"That's just not how an aster's stamens should look,"*** I thought.

Instead of being five in number, fused into a cylinder, there were upwards of twenty, distinct (not fused) stamens in the ring. More-

over, there were no "disc florets" in the central portion of the flower. Instead, there were numerous, very short styles, growing together in a sort of low mound. And what about an involucre (a circle of small leaves that closely underlie the collection of florets in an aster flower head)? Nope. Just the circle of "rays" (petals).

***"No sepals either. What are these plants, and what plant family do they belong to?"***
I wondered.

I immediately considered the rose family (Rosaceae) and the buttercup family (Ranunculaceae) as possibilities, mainly because flowers in those two families tend to have lots of stamens. Along my way home again, I stopped to take pictures of a small colony of Lesser Celandines (*Ficaria verna*) growing on another lawn. To my surprise, I realized that the floral structure of the Lesser Celandines was quite similar to that of those blue, *asteroid* flowers.

Involucral leaves of *Anemone blanda*.

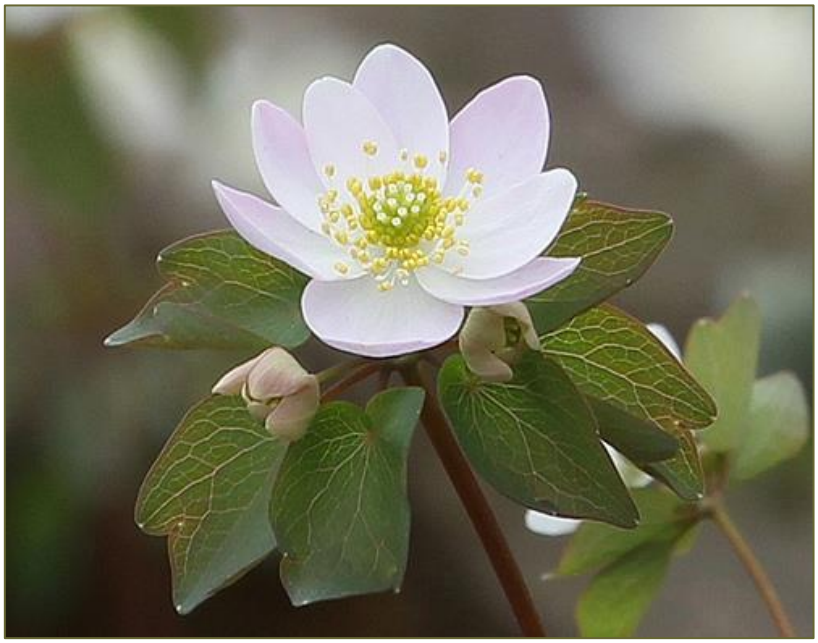

Flower of Lesser Celandine (*Ficara verna*).

So that's it, I concluded. They're in the Buttercup family, along with Marsh Marigold (*Caltha palustris*), Hepaticas, Rue Anemone (*Thalictrum thalictroides*), common Buttercups (various *Ranunculus*), Canada Anemone (*Anemone canadensis*), Thimble-weed (*Anemone virginiana*), and Clematis (various). The flowers of all of these species have a dense ring of stamens surrounding a central cluster of styles.

***"So, could these mystery plants be anemones?"***

The anemones I'm familiar with have from five to eight or so petals, not fifteen or twenty. Moreover, familiar anemones have white or yellow flowers, maybe red or pink, but not blue (except for Hepatica).

I took a chance and typed "blue anemone" into the Google search engine, and sure enough, hundreds of images of *Anemone blanda* flowers materialized on my computer screen. (Okay, so I cheated.)


Flower of Rue Anemone (*Thalictrum thalictroides*, formerly *Anemonella thalictroides*).

A couple more points to mention. While some species in the buttercup family have both petals and sepals, such as *Ranunculus* species, others have only sepals. That is, the sepals of Anemones are "*petaloid*" (petal-like in appearance). All the species mentioned above, except *Ranunculus*, lack true petals.

Also, many of these species have involucres, though not exactly like the *involucres* of Composite family plants. An *involucre* is a collection of special leaves that grow below (underlie, subtend) a flower or group of flowers. It's not clear what function *involucres* serve. Some anemone species have involucres that are located immediately below the flowers, such as Rue Anemone, but others have involucres that are located farther down the flower stalk. In the latter case, the involucres are said to be "remote." The involucres of *Anemone blanda* and *Anemone canadensis* are remote.

The native range of *Anemone blanda* stretches from Greece to the Black Sea, and includes Cyprus and parts of Turkey.

## Letters

Hi Bob,

I enjoyed reading this month's *Solidago* [24(1), March 2023] and particularly appreciated the article on lichens — I'm looking forward to future installments! Thanks for always putting together a great newsletter!

All the best,
***Audrey Bowe***
*Ithaca, N.Y., 13 March 2023*

Hi Bob,

I loved the *Solidago* issue that you just put out. So beautiful and useful.

Thanks,
***Diane Florini***
*Ithaca, N.Y., 10 March 2023*

For the Summer 2023 Calendar, please see our website [www. flnps.org].

▼ More Bluebells, *by Whitney Carleton*

PLANT PROFILES

# Jacob's Ladders (*Polemonium* spp.)

by Rosemarie Parker

**THE GENUS *POLEMONIUM*** has many species, mostly in the northern hemisphere. The number of species depends on who is listing them, as many of the named European species are sometimes lumped with European native *P. caeruleum* [*next page*]. Most *Polemoniums* are perennials, and most have blue-to-purple flowers, although annuals, biennials, and other colors are found in the genus. According to USDA Plants database[1], roughly 40 species are native to North America.

In New York State, two *Polemonium* species are recognized. ***Polemonium reptans*** and ***Polemonium vanbruntiae*** [*below*] are both native. Many gardeners have ***Polemonium caeruleum*** [*next page*], as its cultivars are frequently sold in catalogs and nurseries, and it has naturalized in some New England states. BONAP (Biota of North America Program)[7] shows it as found in N.Y. But it is not listed in the *New York Flora Atlas* as escaped or naturalized in N.Y., so if you see a Jacob's Ladder in the wild, it is likely to be one of our two natives.

***Polemonium reptans*** **(Spreading Jacob's Ladder, Greek Valerian)** is a low growing, lax plant with blue (or white) flowers in mid-May [*below & p. 10*]. It is found from the Midwest through much of New England, Ontario, and Quebec[1], although northern populations are considered introduced[2], and it is "imperiled" at the edges of its range[5]. The original natural range of *P. reptans* in N.Y. extended as far north and east as Chemung and Big Flats. It is 12-18 inches high at blooming, and the stems are weak and sprawling. In N.Y. it is found in floodplains and rich mesic forests[3]. Wildflower.org lists *Polemonium reptans* as of special value to bumblebees. **Cultivation:** In rich, moist soil, this species will naturalize. Best grown in part shade, although it can take full sun in cool locations. It will decline and even go dormant in droughts. It is reputed[4] to tolerate both deer and Black Walnut! There are cultivars and possible hybrids in the trade. One popular cultivar is the highly variegated "Stairway to Heaven" found in a group of *Polemonium reptans* seedlings that were growing in a nursery in Framingham, Mass. Patented by William Cullina, it was introduced by the New England Wildflower Society. I killed one years ago. To me it looks suspiciously like variegated forms of *P. caeruleum*.

***Polemonium vanbruntiae*** **(Bog Jacob's Ladder, Van Brunt's Jacob's Ladder)** has a more limited range from West Virginia through New England and Quebec[1]. It is rare or imperiled throughout its range[2,5] and found in wetlands, ditches, stream sides, and seeps. It is a state-listed rarity in N.Y. In our region it is most frequently found in old beaver meadows and swamps. There are probably about 40 populations in N.Y., the majority located within the Catskill Mountains, Tug Hill Plateau, and the Allegany Plateau. A few new populations have been found in Central N.Y. in recent years[6]. Habitat loss is a serious threat, both by development and by succession (open canopies & disturbance are needed for flowering)[5]. Tall (up to 3 feet), erect, and blooming in early-mid summer, this species also has fewer flowers per cluster than *P. reptans* [*below*]. Bees are known to pollinate this species, and many other insects, and even hummingbirds have been observed visiting the showy flowers. **Cultivation:** Unless you have a wetland, and some sort of special permit, you shouldn't be trying to cultivate this species.

***Polemonium reptans*** [*large photo, left,* photo by R. Parker, 5 May 2023]. *See additional photos on p. 10.*

***Polemonium vanbruntiae***, note the long stamens and stigma extending beyond the petals [*inset, left*, photo by S. Daniel, 2016]

***Polemonium caeruleum***, with very erect, tall flower stems in native Germany [photo by OhWeh via Wikimedia].

***Polemonium caeruleum* (Blue Jacob's Ladder)** is found in disturbed sites in New England, and in meadows or fields[2]. It is more often in moist to wet sites than otherwise. It is intermediate in height (18–24 inches) between *P. reptans* & *P. vanbruntiae*, blooms in mid-spring like *P. reptans*, and is erect like *P. vanbruntiae*. For details of distinguishing what is in your garden, see the discussion below. **Cultivation:** Grows in part to full shade in medium moisture conditions. Deer resistant. Many named cultivars are available. Just be sure to keep it away from your *P. reptans* if you ever hope to give away the latter.

**Distinguishing between *Polemonium reptans, P. caeruleum, & P. vanbruntiae*[2]**

***Polemonium vanbruntiae***: In addition to size, erect stature and a later bloom date, *P. vanbruntiae* has the leaflets shortly petiolulate, the petiolules mostly 0.1–1.5 mm long, and stamens and style well exserted from the corolla. Both of the other two have larger leaves, sessile leaflets and stamens, and style not or shortly exserted from the corolla.

***Polemonium reptans***: See above for *P. vanbruntiae*. In addition to smaller size and spreading habit, *P. reptans* has many or all of the pedicels *as long as or longer than* the calyx at anthesis, leaves with 11–17 leaflets, and corolla 12–16 mm long.

***Polemonium caeruleum*** is taller, more erect, and has most of the pedicels *shorter than* the calyx at anthesis, leaves with 19–29 leaflets, and corolla 15–20 mm long.

**References**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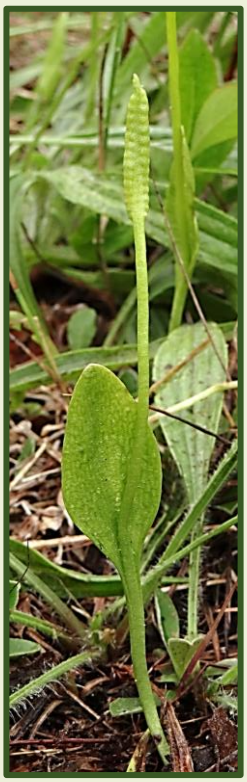
***P. reptans***, habit with short spreading flower stalks [photo by R. Parker, 5 May 2023].

***P. reptans***, white flowers are common [photo by R. Parker, 5 May 2023].

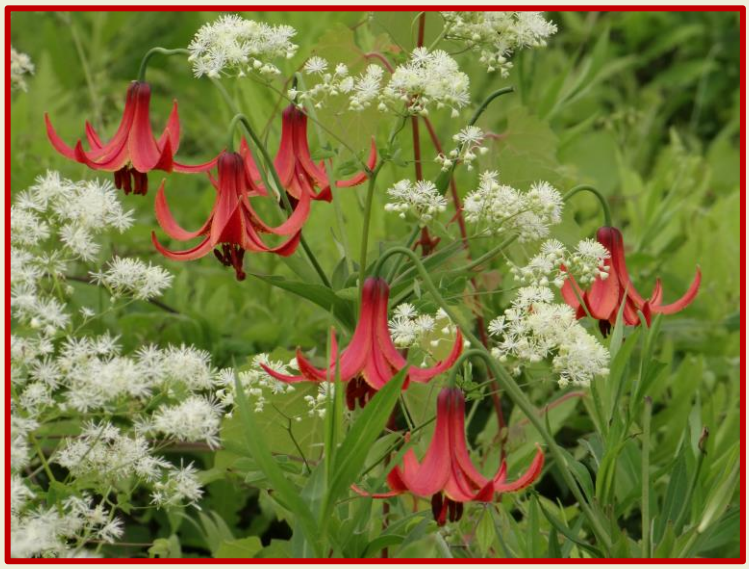


# Floral Glories of June & July

*A Photo Essay by Robert Wesley*

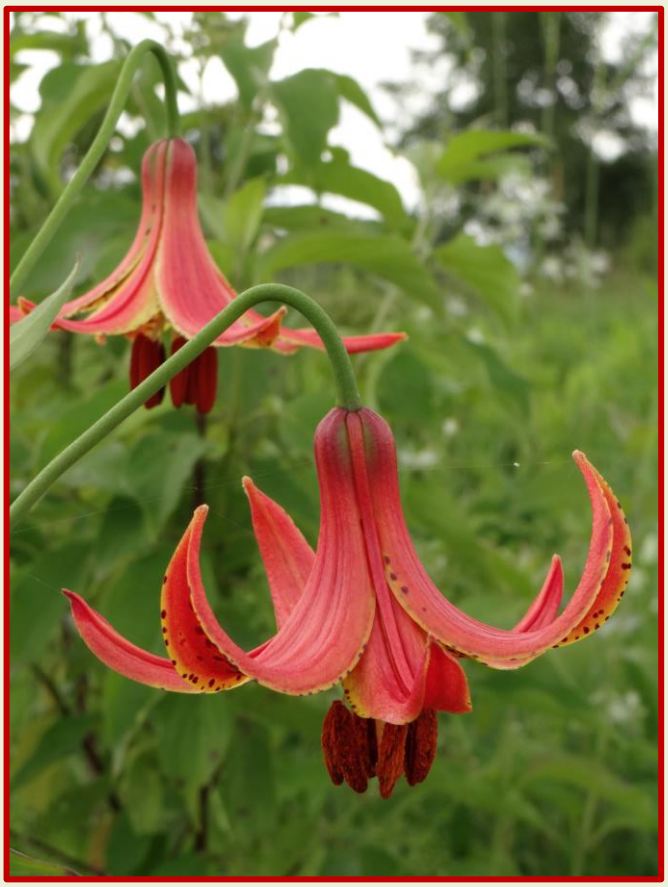
We all should be on the lookout for **Northern Adder's-Tongue Fern** (*Ophioglossum pusillum*). It wasn't always so, but this now may be one of the rarest plants in our region. There were, in the memorable past, a number of places where I could find it in the Ithaca area. Now the closest place I know to see it is on a sandy roadside north of the Adirondacks.

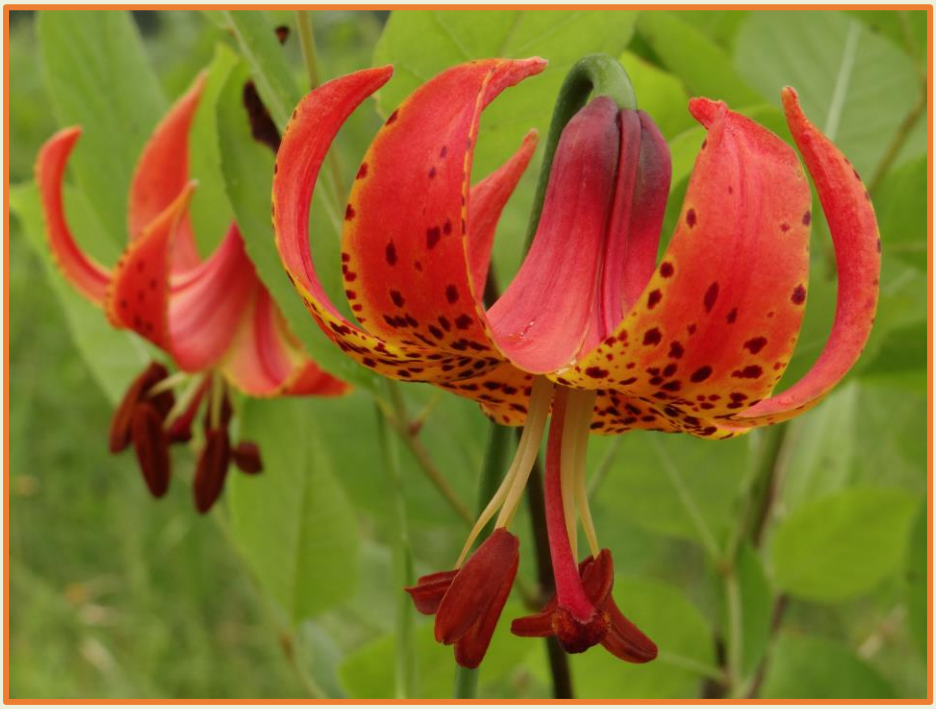
**Showy Ladyslipper** (*Cypripedium reginae*) can be seen in some of our swamps and fens in mid-June.



**Wild lily season is fun, and always much anticipated.**

**Canada Lily** (*Lilium canadense*) grows in some of our marshes, swamps, fens, and forests. Our Canada Lilies are orange-red [*left & below*]. The Canada Lilies of the Adirondacks, Albany area, and New England are yellow-orange [*center left*].

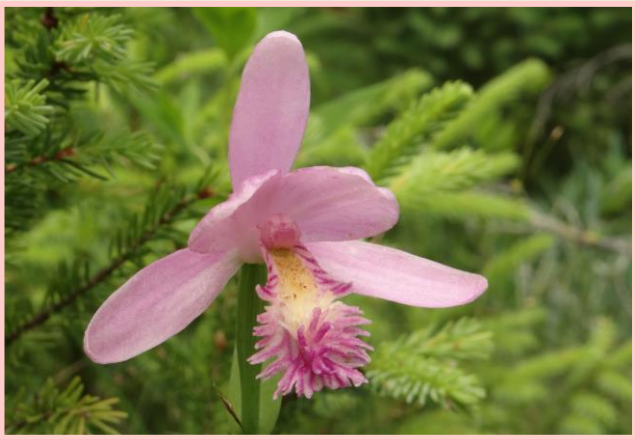




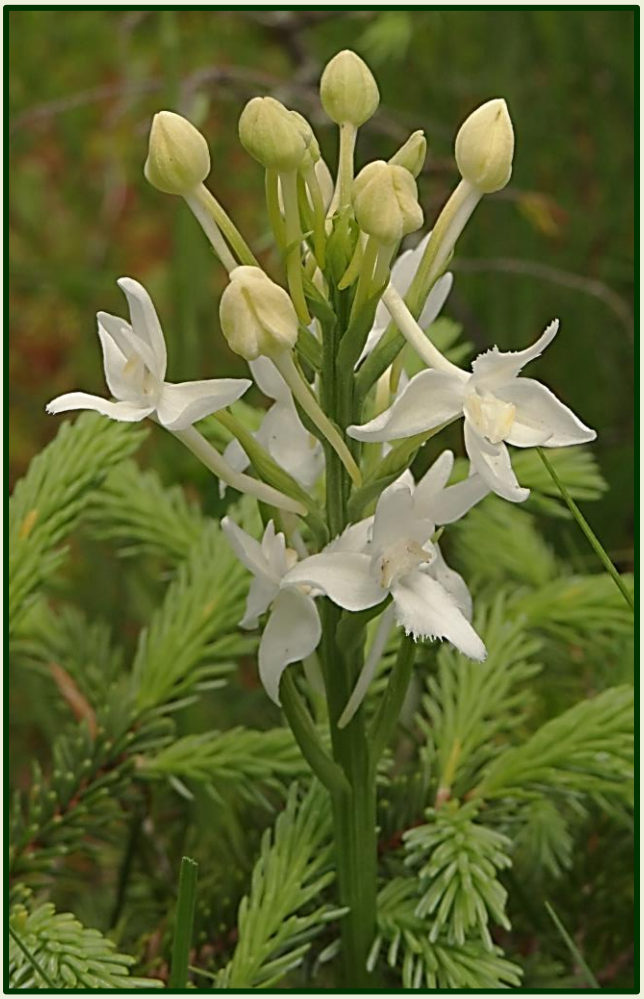
In the past, these have been considered different varieties, rather than separate species or sub-species. But the differences are consistent, predictable, and geographically/edaphically-based, which is most people's definition of a subspecies in vascular plant classification.

I also show a **Michigan Lily** (*Lilium michiganense*) [*left*] because it's here, but really rare. Go out and find some!

**Ragged Robin** (*Lychnis flos-cuculi*) is not native, but is hard not to notice, and even harder not to appreciate. It is a naturalized European plant in the pink family (Caryophyllaceae) that can become so abundant in seasonally wet old fields that it turns the whole landscape pink.



A number of beautiful and much-loved wild orchids grow in our acid bogs. Over the years, we have held occasional field trips to such places, and may do so again. **Rose Pogonia** (*Pogonia ophioglossoides*) [*two left*], **Grass-Pink Orchid** (*Calopogon tuberosus*) [*below*], and the **White-fringed Orchid** (*Platanthera blephariglottis*) [*lower left*] may sometimes grow together, and bloom at about the same time, but it would be a very special site to have them all. **Bog Twayblade** (*Neottia bifolia*) [*right*] is quite a contrast to these other very showy bog orchids. It is exceedingly inconspicuous. You have to work at finding it. All of these occur on the open, floating Sphagnum-moss mat of an acid bog, together with a variety of dwarf shrubs and sedges.



**Large Round-leaved Orchid** (*Platanthera macrophylla*), a beautiful, if odd, rarely seen orchid, grows on hilltops in mature forests.

## Thank You!

**THIS ISSUE** was a joy to create, due the generosity of ***writers*** Audrey Bowe, Diane Florini, Rosemarie Parker, Arieh Tal, David Weeks, David Werier, & Robert Wesley; and ***photographers*** Whitney Carleton (pp. 1-2 & 7), Steve Daniel (p. 8), Robert Dirig (p. 2), OhWeh via Wikimedia (p. 9), Rosemarie Parker (pp. 8 & 10), Arieh Tal (pp. 3 & 5-6), David Werier (p. 4), & Robert Wesley (pp. 11-15).

***Layout & design*** by the Editor, ***proofreading*** by Rosemarie Parker, and ***printing*** by Gnomon Copy. Anna Stalter emailed copies, Pat Curran mailed paper copies, & Rosemarie posted to the web.

Please check our website (www.flnps.org) regularly throughout the summer for announcements and details of walks and other events. Many thanks to our Steering Committee (p. 3) and all of our members for supporting FLNPS and its activities. We are very happy to have resumed in-person programs and walks, and wish everyone in our reading audience a delightful summer filled with joyous outdoor revels with the native flora!

*— Robert Dirig*