

Field Notes – April 12, 2023
Carrie Crompton

BUDS, continued

Since the beginning of March, the buds of all the trees and shrubs have been taking on color and beginning to swell. Between March 3 and April 12, the sugar maple buds changed from a mahogany color to a golden chartreuse. . .



Sugar Maple (*Acer saccharum*) buds, March 3



Sugar Maple (*Acer saccharum*) buds, April 12

. . . and by the next day, the male flowers were beginning to burst their scales.

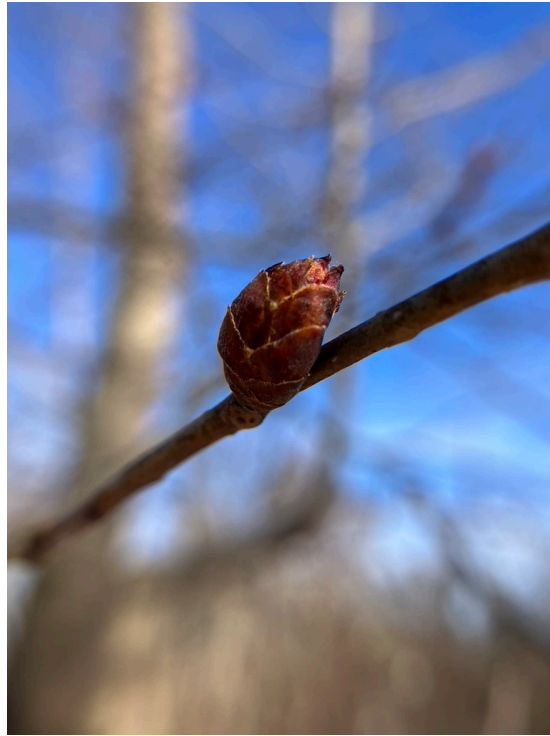


Sugar Maple (*Acer saccharum*) flower buds, April 13.



Sugar Maple (*Acer saccharum*) flowers opening April 14.

Within that same time frame, the American elm buds went from tight bud to fruit!



American Elm (*Ulmus americana*) bud, March 3



American Elm (*Ulmus americana*) samaras (fruits) developing, April 14

The flowering dogwood leaves have burst their buds . . .

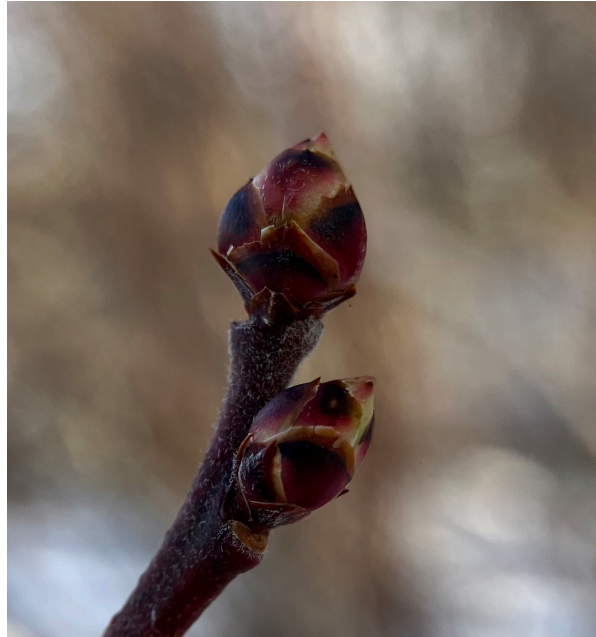


Flowering Dogwood (*Cornus florida*), March 4, 2023



Flowering Dogwood (*Cornus florida*) April 12, 2023

. . . as have the highbush blueberry blossoms.



Blueberry (*Vaccinium corymbosum*), March 3, 2023



Blueberry (*Vaccinium corymbosum*), April 12, 2023

But the swamp azaleas are not ready to commit to the season yet; they look exactly as they did a month ago.



Swamp Azalea (*Rhododendron viscosum*) buds, March 6



Swamp Azalea (*Rhododendron viscosum*) buds, April 12

The white ash buds (one of the last trees to break bud in May) are still tight. . .



White Ash (*Fraxinus americana*), March 3, 2023

. . . just a little bit swollen.



White Ash (*Fraxinus americana*), April 13, 2023

I have been recording bud break and the first flowering of many plant species around Andover for many years – noting dates in journals. This spring, I’m paying special attention to all these events using my iPhone camera, pictures being more trustworthy than shorthand notes.

The first few decades of records in Andover tell me that the time of first flowering for most of our wildflowers is highly variable within a time frame of about two weeks for any given species. My handwritten notes show me that the median first-flowering dates of some of our spring ephemerals are occurring a little earlier than they used to be.¹ For me, that means that the pleasure of seeing them comes earlier after the long winter – my heart leaps up a few days earlier than it would have in the 1990s. It’s impossible to feel anything but joy when I see these old friends.

APRIL FLOWERS

As of April 13 – a day of >80° heat -- I’ve seen the first blooms of nearly all the rhizomatous ephemerals I expect to see in April, and here are my photos:



Bloodroot (*Sanguinaria canadensis*) April 9, 2023, our back yard

¹ For instance, between 1990 and 2000, the dates for Dutchman’s Breeches first bloom varied from April 17 to April 27, with a median date of **April 23**. From 2001 to 2010, first flowering varied from April 6 to April 22, with a median date of **April 20**. From 2011 to 2021, it varied from April 14 to April 26, with a median date of **April 19**. I saw the first fully open “pantaloons” on April 12 in 2022, and April 10 in 2023. It appears that the first bloom dates have advanced by a few days since 1990.



Spring Beauty (*Claytonia virginiana*), April 10, 2023 (very first), Parker Bridge Road



Wood anemone (*Anemone quinquefolia*), April 10, 2023 (very first), along Hop River



Hepatica (*Hepatica americana*) April 13, 2023, Townsend Road



Trout Lily (*Erythronium americanum*), April 13, along Hop River



Dutchman's Breeches (*Dicentra cucullaria*), April 13, 2023, our yard

The early-spring nonephemeral wildflowers are coming out at their usual time:



Round-leaved Violet (*Viola rotundifolia*), April 13, Gay City



Common Blue Violet (*Viola sororia*), April 13, 2023, along Hop River



Blue Violet (*Viola cucullata*), April 13, 2023, along Hop River

Marsh



Pussytoes (*Antennaria plantaginifolia*), April 13, 2023, Townsend Cemetery

And of course, pussy willows!



Pussy willows (*Salix discolor*), April 10, 2023 – with bee!

And that brings me to the subject of bees.

APRIL BEES

The only reason a New Englander might be unhappy about earlier-than-average emergence dates of spring ephemerals and wildflowers is that their bloom-time might be out of phase with the emergence of the bees that pollinate them and depend upon them as food sources (nectar = carbs; pollen = lipids and protein).

So now, as I ramble about Andover photographing the earliest bloom dates of flowers, I am also trying to get photos of the bees that frequent them. Easier said than done, because the bees will not pose for me. But so far, it seems to me that the bees are waking up exactly on time.

The earliest bees around here are the cellophane bees. They emerge from a simple hole in the ground, about the diameter of a pencil.



Emergence holes of cellophane bees; the holes were made before April 4.

These bees have been underground since last spring, first as fertilized eggs, then as pupae. I understand that they spend the winter as adults. They pop out in March or early April, before the daily temperatures reach 50° (most bees don't fly at <50°, but these do) and before there is even a reliable source of food (what they mainly need is red maple and/or pussy willow blossoms).

The first order of business for the females is nest-building.



Female cellophane bee at the entrance to her nest, April 2, 2023, Townsend Cemetery.

This female's nest is one of hundreds within a patch of sandy patch of soil in Townsend Cemetery (I think cemeteries are often sited where they are because the soil is easy for humans to dig, too!) I read that the nests can go down as much as 18" under the surface. Once a female has her tunnel ready (she will create a separate chamber for each fertilized egg she lays, along with liquid sustenance for it), she sits at the entrance, waiting for males to come a-courting.

On April 2, when I first noticed an aggregation of nest tumuli in the cemetery, the air was filled with male cellophane bees buzzing madly about a foot above the surface of the soil. I sat down to watch them. It was hard to get a photo, but one came to rest on a warm pebble near me, and I got its portrait:



Male cellophane bee, April 2, 2023, Townsend Cemetery

I can tell the difference between the males and females by their behavior (buzzing around vs. sitting at nest holes), and by the fact that the males are smaller and have longer antennae than the females.

On April 3, I managed to get a photo of two cellophane bees mating. It's not a crisp photo, but it is dated evidence!



Cellophane bees mating, April 3, 2023, Townsend Cemetery

Within a few days, the red maple tree right over the aggregation of cellophane bee nests started to bloom, shedding pollen.



Red Maple flowers (male flowers, shedding pollen), April 8, 2023.

I was greatly relieved to see that the two populations – the bees and the red maples – were in synch. There was almost nothing else in bloom in the cemetery until that time, except for the *Draba verna* that dots the cemetery lawn, which began blooming March 3. I didn't see any bees on the *Draba verna*, but I have seen a photo of a cellophane bee on a *Draba* flower, so I guess it is a ready source of pollen at ground level. Phew again!



***Draba verna* going to seed in Townsend Cemetery, April 6, 2023**

As of April 10, I was seeing mining bees (Andrenids) on the pussy willows down by the Hop River. They're wicked hard to photograph in motion . . .

. . . and only slightly easier when they drop down to a rock. These bees are very small!



Mining bee on a rock in the shadow of the pussy willow shrub. April 10, near Hop River.

Almost all of the ephemeral flowers have their mining bee friends, and I have to say, every patch of bloodroot and spring beauty that I've seen thus far has been a-buzz with fast-moving mining bees. All good.

I saw my first bumble bee queens zigzagging around the edge of the woods, looking for good nesting spots, on April 9. By April 13, they were feeding on the freshly opened Dutchman's breeches and vinca flowers.



Bumble bee on vinca, April 14, our yard

The carpenter bees are also out, enjoying the cultivated plants in our gardens (vinca, daffodils, hyacinth), and I've seen a couple of honey bees. All in good time.

The plants may be flowering a few days earlier than they used to, but the bees are emerging at the same time.

I have been watching the approach of spring, as it lurches from lion days to lamb days and back for many years now. In the past, I trusted that the flowering and bud break dates I observed varied around a constant average. Given the fact of global warming, I think the averages really are moving, but I still trust that our native plants and pollinators know more about what's good for them than I do. So I watch for little spots of color and movement in the landscape just as intensely as ever, while trying to record more of the transitional moments. It's a tough job, but somebody's got to do it. ☺

