

Field Notes – Third Week of April

The sun was warm but the wind was chill.
You know how it is with an April day
When the sun is out and the wind is still,
You're one month on in the middle of May.
But if you so much as dare to speak,
A cloud comes over the sunlit arch,
A wind comes off a frozen peak,
And you're two months back in the middle of March.

■ from Robert Frost, "Two Tramps in Mud Time"

There were some nippy days last week—the wind came off a frozen peak, and some days felt like March to me—but I got outdoors each day, and enjoyed the relative warmth and stillness within the woods. Nearly the full cast of sun-loving spring ephemerals was on stage this week—Bloodroot, Dutchman's Breeches, Wood Anemone, Trout Lily, Hepatica, Spring Beauty. I see Trillium in bud, but it hasn't opened yet.

The sequence of first bloom in a given locality is not random: I have been writing down "first bloom" dates in Andover since 1990, and find that of this ephemeral group, Bloodroot is always the first on stage, Trillium the last. Each species responds to a number of cues in the environment, and opens when all of its necessary and sufficient conditions have been met. In a "slow" spring, they might all wait until the second half of April to bloom. In Aprils with a smattering of mild days, like this one, the first bloom dates are spread throughout the month in a fairly predictable sequence, like solos and duets in a ballet.

WOODLAND EPHEMERALS

The sun-loving spring ephemerals appear before the trees leaf out in the first week of May. In that short time, their lovely flowers signal to any pollinators in the neighborhood: "Come, let's do a pas de deux!" If the pollinators are flying, they will respond to the colors and scents of the flowers and fertilize at least some portion of the blooming populations. If the weather is cold and gray, and the bees are unwilling to come out, these plants will usually resort to self-pollination before their flowering term is over, so the next generation is a sure thing either way.

In that same short time, the ephemerals must photosynthesize enough carbohydrates to stock up their storage structures—rhizomes, corms, bulbs, stolons, tubers, etc.—until next spring. In some cases, their leaves persist throughout the summer, but with less sunlight to work with.

Dutchman's Breeches. These are pollinated by overwintering queen bumblebees—the only ones out—seeking the nectar in the "pantaloons." In the process, of course, they pick up the yellow pollen at the "waistband." In Andover, I've seen these blooming along Staddle Brook, but I look for them first in our yard, where I can keep an eye on them.



Dutchman's Breeches (*Dicentra cucullaria*), our yard, April 14.

The snow on Saturday didn't bother them a bit. I saw a bumblebee buzzing around them the next day.

Trout Lily. I have read that each flower produces two sets anthers; one set opens one day, the other opens the next. That way, there are two good chances for dances with pollinators.



Trout Lily (*Erythronium americanum*), Hop River Trail, Andover, April 14.
The pollen on these anthers is bright orange . . .



... and this pollen is barn red. . .



... and the pollen on this flower in the same patch is bright yellow. It turns out that there's a lot of variability in Trout Lily pollen color.

Spring Beauty. These are among the very few plants that produce pink pollen. Why don't more plants have pink pollen?



Spring Beauty (*Claytonia virginica*), Parker Bridge Road, April 20.



There were Spring Azures fluttering around the Spring Beauties on Parker Bridge Road on Sunday. If a flash of blue catches your eye in the April woods, it's likely a Spring Azure in

flight; these are among the first butterflies to emerge from chrysalis in the spring. I tried to photograph them, but was unsuccessful, so I offer you a photo from Wikipedia.



Spring Azure (*Celastrina ladon*), photo from Wikipedia.

Hepatica. This flower is not common in Eastern CT. It is happier growing on limestone than in acidic Eastern CT soils. But it does have its “spots” here and there, where it grows in small clumps, usually in full sun. It took me over 20 years to find a patch in Andover! The hepatica flowers appear on downy stems before the leaves unfurl. (The leaves in the photo are unrelated to the flower.) The anthers and pollen are white.



Hepatica (*Hepatica americana*), Townsend Road, April 20.

This week, I got interested in why there's so much variability in pollen colors in the spring ephemerals, and read up a bit online. It turns out that beekeepers have been identifying pollen sources (the plants frequented by honeybees) by color for a long time. I never knew that! But the reason for the variability in color is a mystery. One idea is that it provides a contrast to the petal/sepal color, and the contrast alone is a signal to the insect in search of a pollen protein feast. But that doesn't explain yellow pollen on a trout lily or white pollen on a white hepatica blossom!



White pollen on white *Hepatica acutiloba*, our yard.

I'm going to look more into what the beekeepers know about pollen color.

https://en.wikipedia.org/wiki/List_of_pollen_sources

Pollen Chart

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Trillium. This plant can stay closed for over a week, waiting for the right moment to open. I am waiting for that moment, too



Trillium (*Trillium erectum*) in bud Townsend Road, April 21. These have white pollen, too.

Every year, I marvel at the fact that the spring ephemerals have been blooming in the New England woodlands for thousands of years since the last Ice Age. They have developed relationships with pollinators (mostly bees) and seed dispersers (mostly ants) that perpetuate the lines of all parties through an exquisite choreography every April. I see only the blossoms and leaves, a few bees and ants, and have to imagine the rest.

FERNS

I have only recently begun to recognize the differences among ferns at the fiddlehead stage. They are quite distinctive at this stage.



Cinnamon Fern (*Osmunda cinnamomea*) fiddleheads, Townsend Road, April 14. Notice the thick white gauze that covers the stipe and the scroll.



Sensitive Fern (*Onoclea sensibilis*) fiddleheads, Townsend Road, April 18.



Hay-scented Fern (*Dennstaedtia punctilobula*), our yard, April 14



Christmas Fern (*Polystichum acrostichoides*) fiddleheads, our woods, April 14, 2020

The pace of new growth will pick up quickly soon. Another flush of ephemerals is still ahead – the ones that prefer a bit of warmth in the air and can tolerate a bit of shade from unfurling leaves in the first weeks of May.

The forecast is for more “March” in the last week of April, but I know there will be new things to see every day.

Love to hear from you.

Carrie