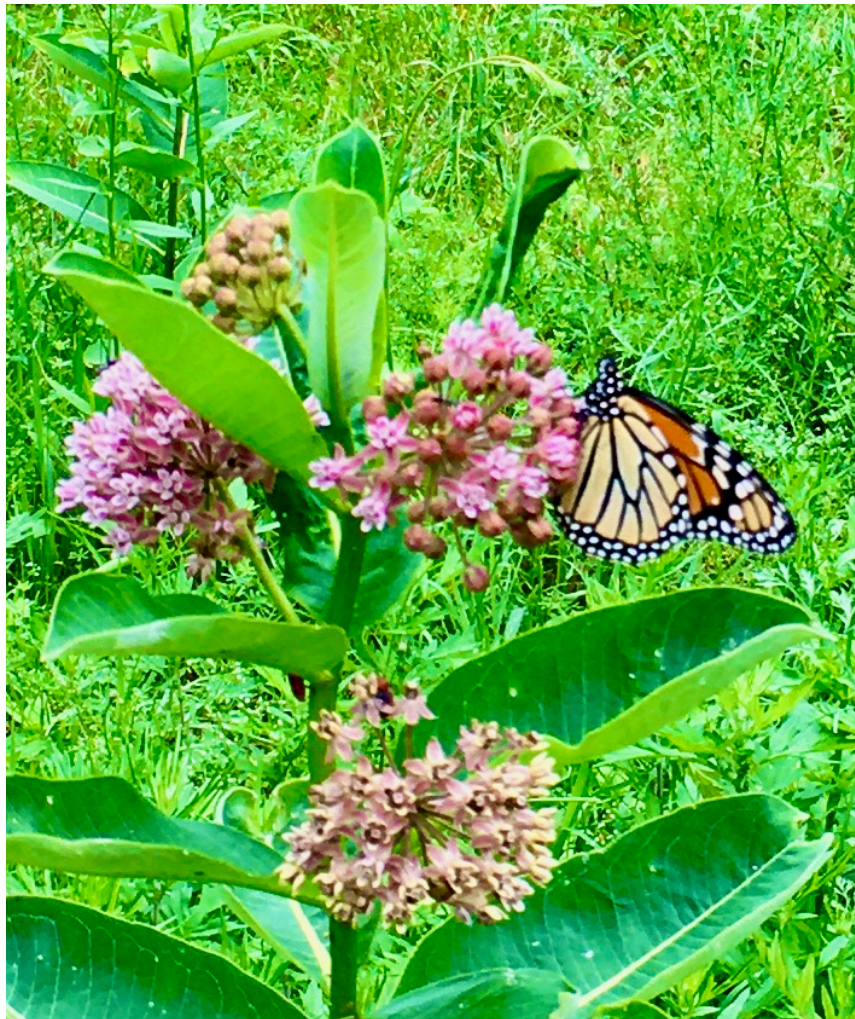


Meadow Notes – Third Week of July, 2021
Carrie Crompton

They're here.

Storm Elsa blew out of town, and the sun returned. A half-hour later, I got my first report of a Monarch on the Way Station. Thanks to Joan and Dennis Foran for noticing it and letting me know!

The rain returned. About a week later, I got this photo.



Monarch Butterfly on Common Milkweed at our Monarch Way Station, July 18

In decades past, her presence would have been delightful but not remarkable, because Monarchs were everywhere in high summer. But they are far less numerous now; in the past two decades, Monarch populations in the Eastern United States have declined by more than

80%. Last December, the U.S. Fish and Wildlife Service put them on the waiting list for an Endangered Species Act listing.

It has been known since the 1930s that Monarchs – unlike most of the other butterfly species we see in Connecticut – are long-distance migrants, seen in the south during the late fall and early spring and in the north during the summer. But it was not until 1976 that the butterfly's wintering grounds in the highlands of central Mexico were discovered.¹ Now we know that Monarchs have a migration route that requires four generations to complete. Each generation takes about 4 weeks to develop from egg to butterfly, via the larval (caterpillar) and pupal (chrysalis) stages.

- (1) In early spring, the individuals that overwinter in the central Mexican highlands (known as Generation 4) journey to northern Mexico and across the Gulf to the southern U.S. They mate. Females seek out southern milkweed plants (same genus as our Common Milkweed, but different species) and lay their eggs on the milkweed leaves. These eggs will hatch, develop into caterpillars, pupate, and become Generation 1 butterflies in about a month. The overwintering adults die.
- (2) Generation 1 moves further north through early June. They mate. Females deposit their eggs on milkweed plants and produce a new generation in the middle of the U.S. They may live to sip a little more nectar and fly around, but their work is done. A month later, Generation 2 butterflies eclose (come out of their chrysalises).
- (3) Generation 2 moves further north yet, reaching New England in early July. They find our Common Milkweed, which is just coming into maturity in July, and lay their eggs on the undersides of the leaves. The butterflies that eclose about a month later are Generation 3.
- (4) Generation 3 moves around in the northern U.S. and Canada, and produces Generation 4.²

Generations 3 and 4 are both present in midsummer here in CT. They lay their eggs on milkweed plants that are reaching maturity and flowering in July and August. The last generation, Generation 4, represents the great-grandchildren of the individuals that spent the previous winter in Central Mexico. These Monarchs (and some of the later-eclosed Generation 3 individuals) will migrate from the northern states and Canada to the same spot in Central Mexico where their great-grandparents vacationed last year. This generation builds up its energy for migration by feeding on the nectar of our late-summer flowers. They are not especially fussy about species when it comes to nectar. Nectar = sugar = energy, and energy is what they need. Asters, goldenrods, coneflowers, woodland sunflower, yarrow – these and many other plants, including tall garden annuals like Zinnia and Cosmos, are good nectar sources. (I nearly always see Monarchs on plants with tall stalks, not on low-growing flowers.)

¹ "The Discovery of the Monarch Butterfly Migration," World Wildlife Federation, <https://www.nathab.com/know-before-you-go/mexico-central-america/monarch-butterfly-migration/monarch-guide/the-discovery/>

² "Monarch Joint Venture," <https://monarchjointventure.org/monarch-biology/annual-life-cycle>

Thus, the Monarchs we're seeing right now in Andover are probably Generation 2 butterflies. By mid-August we'll be seeing Generation 3, and by mid-September, Generation 4.

The female Monarch I was looking at yesterday sailed around the perimeter of the Way Station a couple of times before landing on the milkweed. I looked closely at her wing venation, which showed her to be a female; the male would have had thinner veins and a dark spot on the central hindwing vein, as shown below.



Male Monarch showing distinctive spots on hindwings
(<https://dickinsoncountyconservationboard.com/2019/09/09/post-8865/>)

She floated around the Station again a few more times and then flew out of view. I'll be watching for caterpillars in the next couple of weeks.

The Way Station is a small un-mowed area – just about 500 square feet – within a larger apron of land between Route 6 and the Rail Trail near the parking area at the end of Center Street. It's designed to be an oasis for migrating Monarchs, with milkweed plants for eggs and larvae, and nectar plants for adults. The milkweed plants are new this year, and I have to say, there are stronger-looking specimens right across the rail trail.



Milkweed patch conserved by the town mower, July 18

I was thrilled to see that the mower who carefully mowed around the Monarch Way Station area noticed a half-dozen Common Milkweed plants coming up on the other side of the trail, and carefully mowed around them, too. So this is a tiny oasis – no more than 40 square feet –

within easy flying distance of the larger one. The milkweed plants are just coming into flower now, and the traveling Monarchs are visiting them.



A milkweed flower head just opening, July 18, 2021

The Way Station has been in bloom for a couple of months now, and it's attracting other travelers, too, like the Painted Lady.



Painted Lady(*Vanessa cardui*) visiting Lavender Hyssop (*Agastache foeniculum*), July 9

Painted Ladies are another species of migrating butterfly that covers long distances in multiple generations, but they don't seem to have a single congregating winter station, the way Monarchs do. (Perhaps this is why they are more abundant – they're not as subject to habitat loss in a defined area.) Nor are they dependent upon a single genus of host plants for larval growth – they can lay their eggs on a wide variety of plant species from different genera.

I never visit the Way Station without seeing at least a couple of Cabbage White butterflies. Mostly, they flutter along from plant to plant gathering nectar, but now and then, two will join in a courting flight, spiraling together up to ten feet above the meadow. It's always a lively, balletic show.



Cabbage White Butterfly (*Pieris rapae*) resting among the Birdsfoot Trefoil

Like most of the other butterflies we see in summer meadows, Cabbage Whites are considered to be pollinators. They do in fact move pollen from plant to plant as they forage for nectar. But they are not native to North America, and they are bad news in gardens, because their caterpillars are gluttons for the leaves and stalks of practically all cultivated members of the Brassicaceae – broccoli, cauliflower, radishes, cabbage, turnips, and so forth. On the other hand, they also eat wild relatives of the cabbages, including garlic mustard. I'd like to think that the parents of those I see on the Way Station laid their eggs on the invasive garlic mustard that lines the rail trail in the nearby woods. There would be some poetic justice in that.

There is much more to be said about the other insects that enliven the Monarch Way Station with their colors and flight patterns in midsummer, but I will save them for my next post. In the meantime, if you happen to be on the rail trail, do pause to visit the little natural community that has sprung up in the Way Station since mowing stopped in May.



Red Milkweed Beetle dining at the Milkweed Café