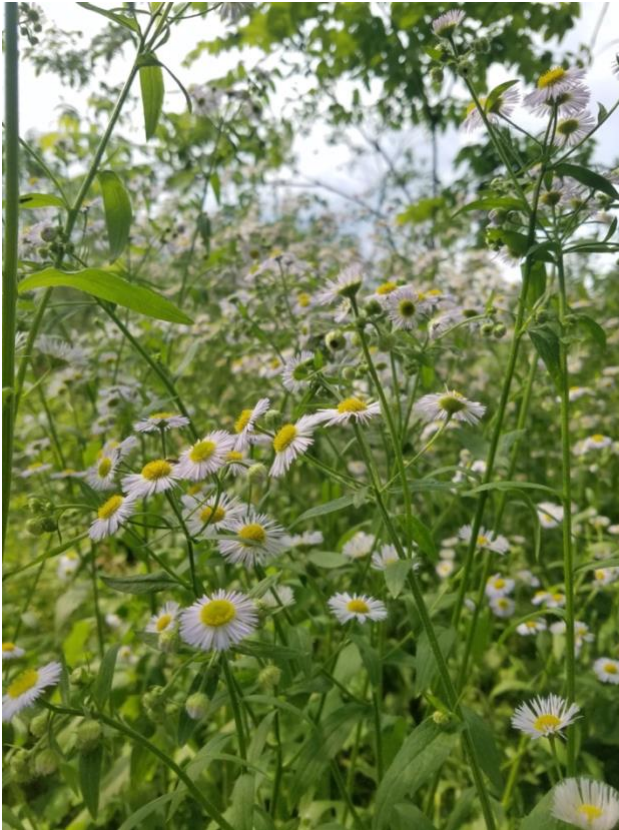


Weeds and Seeds: Building Wild Resilience through Ungardening

By Aubree Keurajian



Daisy Fleabane (*Erigeron philadelphicus*) taking space vacated by multiflora rose and garlic mustard

If you're reading this newsletter, you're probably well aware of the benefits that native plants have for our pollinators. You likely know that pesticides and herbicides have negative impacts to the fauna of our yards as well as unintended side effects to our broader environments. These issues begin to push against the conventional yard and garden industry, but in order to best support our pollinators and other beneficial wildlife, we must do much more, and can accomplish this by turning to nature for our inspiration and ungardening.

Swapping ornamental and invasive plants for natives and going organic with your land care are great first steps, but even managing our yards organically in conventional ways will still create imbalances in our yard. Bagging leaves for removal and laying mulch are two examples that work hand in hand.

Bagging leaves removes not only nutrients, but overwintering pupae and other beneficial insects and fungi. Mulching is necessary to hold in moisture, but doing so prevents our native solitary bees from successfully nesting in the soil. By instead leaving the leaves where you can and ditching the mulch, you keep those protective benefits to the soil, while making nutrient amendments unnecessary. The dead leaves are much less dense, allowing many insects to overwinter, and by spreading them unevenly, as nature does, you can allow soil access for ground nesting insects.

It is important, however, to not just look to what activities to stop, but also seek inspiration on how to proceed. Two ways that our yards and pollinator gardens often differ from wild areas are the density and diversity of plants. Monarchs are not unique in

their specialized relationship with milkweeds; many of our insects are specialists, meaning that they rely on one plant or a small group of plants for some or all of their life cycle. These specialist relationships exist not just for the larvae of pollinators, but insects that spend their entire lives eating foliage, bark, or other plant parts, fungi, parasitic plants, and many other classes of life. These relationships create an ecosystem that is strengthened by many repetitions; many fungi-plant-caterpillar-relationships that allow the ecosystem as a whole to be more resilient. One year may be good for some plants and insects and bad for others, but when there is enough redundancy in the environment, these fluctuations will not cause the ecosystem as a whole to collapse.

Copying nature in this way, and the overhaul it can entail, might seem a bit daunting, but if we lean into nature and agree to let it lead the way, it will. As humans, we like to have an end goal in mind and a time frame for getting there, but this is not how nature works. You can, of course, still make decisions and choose direction for your yard, but to ungarden your yard you have to accept that plants will move and the landscape will change over time, and agree to work with the seasons and the pace that nature sets. Perhaps the most striking contrast between the controlling desires of conventional land care and the ever-changing nature of nature are weeds.



Joe-pye weed (*Eutrochium dubium*) is an amazing and desired pollinator plant whose name shows how outdated the term weed is

What is a weed? It sounds trite, but a weed truly is just a plant growing where we don't want it. The plants widely considered weeds are a mix of invasive, naturalized, and native species that share some or all of a set of characteristics. They are often annuals, or are able to reproduce in their first year, usually produce large quantities of seed that is easily spread or can spread easily through other means, can tolerate very poor conditions, and thrive in disturbance and marginalized land. All invasive species are weeds, but not all weeds are invasive. In their native ecosystems, these weedy species function as the immune response of the ecosystem. When a disturbance, such as a fire, wind storm, land slide, or flood happens, killing the existing vegetation and

exposing or eroding the soil, these seeds germinate quickly, hold the soil in place, and allow the area to recover. This ensures a continuous supply of food for the pollinators and other beneficial wildlife in the area, while creating a sheltered environment for slower growing, more long lived plants to germinate from the seedbank, arrive on the wind or by animal, and become established. Over time the weedy annuals become shaded or outcompeted by the perennials, and the ecosystem develops into a more stable community. The initial, “weedy”, species then return to where they came from; some fall back into the soil, ready to germinate when the light reaches them and others drift off on their pappus or in the belly of a bird, to a bare spot where they can grow. Many of our most problematic invasive species fulfil this protective function in their native ecosystems, but separated from the soil fungi, specialist insects, and pathogens that keep them in balance they run rampant.

In our gardens, we simulate disturbance constantly by weeding and maintaining our plants further apart than they are in nature. To the seeds in the soil, the light from the lack of plant density is a cue to germinate, which they do. Between the immense



It's hard to imagine a better pollinator plant than the goldenrods!

number of seeds in the soil and the reinforcements arriving on the wind, keeping a garden weed free is a Sisyphean task of our own creation. If we instead allow the native “weeds” to remain, they will grow to fill the space, greatly slow the constant onslaught of new plants, provide resources to our pollinators and other critters, and allow an environment for native perennials to become established.

Beyond the physical appearance of weeds, the gardener's other common complaint is that these plants outcompete

their horticultural varieties. This is true, but it is another piece of conventional gardening that we should examine if our goal is to provide the best possible habitat for our pollinators and other beneficial wildlife. Wild species have been honed by natural selection to be strong competitors that are highly integrated with the ecosystem in which they evolved. By contrast, our horticultural flowers have been bred or selected by humans concerned primarily with aesthetics. Although quite beautiful, these plants are often quite inbred, making them very weak competitors. Beyond beauty, they offer little in the way of resources to our native pollinators and other critters; some even have been bred to have more petals rather than reproductive parts. Luckily the most local native plants that are the most adapted to your local fauna are free!

So how to go about all of this? Changing something so fundamentally can be overwhelming, so taking things slow is necessary to avoid burnout and build a strong foundation. First, determine the areas where you will begin ungardening and stop doing the traditional yard maintenance discussed above. Consider other acts of yard maintenance critically as well – what is necessary and what is habit? Next, identify the invasive species growing on the land you have access to and begin removing them. At this point, instead of just learning to recognize the invasive species you are dealing with, use them as tools to learn plant identification. The consistency and clarity of scientific names is very helpful to making sense of the world of plants, but even if you want to stick with common names, I suggest learning the plant families and the botanical traits that distinguish them. By learning the shared characteristics of common plant families, you will be able to more easily identify new plants you come across. Once you've removed most of the invasive species and sharpened your identification skills, you can begin to identify the non-invasive volunteers. These plants will either be native or naturalized, which are plants that are introduced, but not invasive. Naturalized plants are great to keep around because they can reduce competition and 'predation' on native plants in a number of ways; as nectar sources for honeybees, as blossoms to decorate our tables while we enjoy the native species from our windows, and as teas, dyes, and so much more. It is, of course, important to pay attention to how a plant acts in your yard in particular, and take steps to manage any introduced species that are aggressive; but many can contribute to our ecosystems and lives in valuable ways.

By ungardening our yards we can help create a natural community that is more resilient in the face of disturbance, and we can begin to better understand our place within that ecosystem as a contributing and benefiting member. We must not, however, allow ourselves to limit this compassion and understanding to the nonhuman world, but examine our interactions with other humans in the same way. I encourage you to connect with the indigenous community on whose land you are living, and, in terms used by many nations on this continent, become in good relation to them, and to look for ways to support all of the members of your community.

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