

Newsletter of the Maryland Native Plant Society

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With over 300 species in our state, we have our work cut out for us. Grab your favorite field guide or phone app and get started! By Jil Swearingen

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Hairy Lettuce (*Lactuca hirsuta* var. *sanguinea*), previously considered extirpated in Maryland, was recently rediscovered in Garrett County, Maryland. Full story to come in the next issue of *Marilandica*. By Rod Simmons

AROUND MARYLAND 14-15

Nation's Capital Wild Ones Chapter fosters native plant gardening.

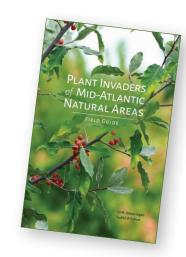
Clickable Native Plant Nurseries Map MNPS is pleased to provide a new tool for finding nurseries that sell native plants in the form of a clickable Google map.

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If something looks a bit different...

Marilandica welcomes a new designer, Liz Fisher! Liz lives in Tunis Mills on the Eastern Shore. A graphic designer for over 30 years, she recently worked with Jil Swearingen to produce Plant Invaders of Mid-Atlantic Natural Areas, Field Guide. Liz is also a native plant enthusiast, and slowly turning her yard into a wildlife habitat. The board would like to express its deep gratitude to Marjorie Paul for producing Marilandica for the past few decades. Thanks Marjie!

Cover: Purple-headed Sneezeweed (Helenium flexuosum). Photo by R.H. Simmons.



Copies of *Plant Invaders* are available for purchase from mdflora.org/publications.

Greetings fellow MNPS Members!

I'm enormously humbled to take my turn as President of the MNPS. I know that I stand on the shoulders of remarkable people. Past and present board members, as well as many MNPS members at large, spend their "free time" promoting awareness, appreciation, and conservation of Maryland's native plants and their habitats and have achieved many remarkable things.

As President, one of my goals will be to empower and inspire members to take action towards supporting our mission. One way I plan on doing this is by sharing stories of other native plant advocates and what they are doing to help preserve Maryland's botanical heritage.

I'll start by sharing a little bit about our two newest board members, Diane Beedle and Pru Foster.

Diane is co-founder of the Community Native Planting Project (www.cheverlynativeplantingproject.org/). This community based project collaborates with the local municipality, institutions, and homeowners to provide stewardship of public spaces by adding native plants and reducing invasives. In just two years over 42,000 sq ft has benefitted from the work of the volunteers and the community! Diane has a long history of advocacy, policy work, and direct service from the local to the national level. She has worked as a community organizer, a recycling program's daily operations manager, a legislative staffer on Capitol Hill, and for a number of nonprofits. She recently completed the University of Maryland Extension's Master Naturalist program. Diane has taken on the role of Treasurer for the MNPS, thank you Diane!

Pru Foster has also recently joined the board. She has written a book called A Drop of Grace: Finding and Protecting our Common Ground and writes a newsletter about the joys of eco-conscious living called The Prudent Lifestyle (prufoster. substack.com/). In her previous life, Pru was a climate change and biodiversity researcher and she brings a scientist's fascination about nature into her writings while encouraging and empowering us all to make more eco-friendly choices. She has also been a lifelong activist working on issues such as great ape rights, community building, and public space gardening. Pru has a diploma from the Royal Horticulture Society in horticulture as well as one in garden design. Pru has agreed to be Secretary for the MNPS this year, has spearheaded our new clickable map of

native nurseries on the MNPS website, and is also helping with the publication of this magazine, thank you Pru!

As you can imagine, it takes many hands

to run this all-volunteer non-profit; I am

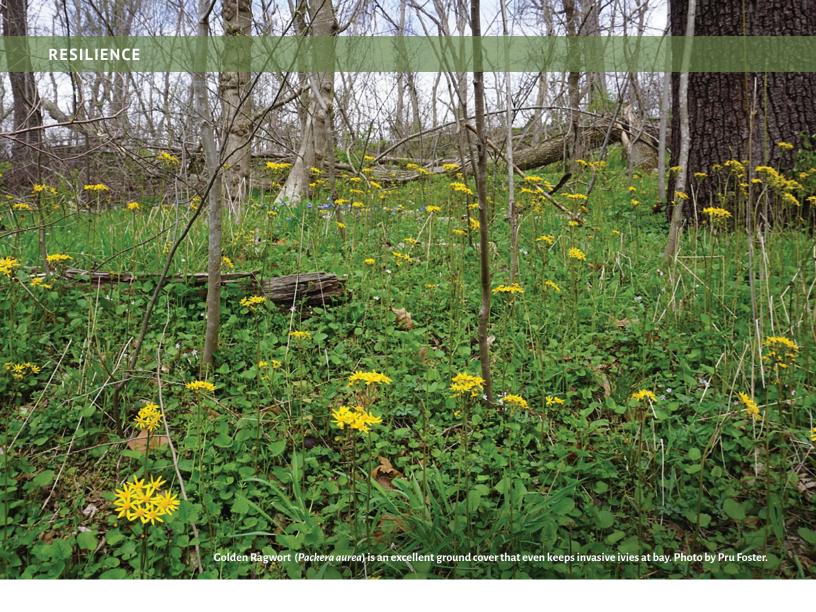
just one part of a great team. I could fill the entire Marilandica with similar stories of MNPS members and other volunteers doing amazing things to help support a movement towards sustainable and regenerative living. Most of these amazing people are not formally trained botanists but plowed ahead, learning while doing, because they care deeply about the places they live and want to make a difference. The fact is, that is how most of our environmental efforts get done! One person with a passion is joined by others, e next thing you know there is a movement, and good

and the next thing you know there is a movement, and good things happen.

I encourage you to get out there and make a difference! All the little things we do add up. If we get our friends and family involved and align our goals, we're sending political or financial signals that collectively make a massive difference. Some actions you could take include: leading a field trip, talking to your friends and neighbors about the beauty and value of an oak tree, planting natives and sharing them with others, joining an invasive removal effort, and keeping watch over our natural spaces. Together, let's make sure they stay wild and healthy.

I'll plow ahead as President, learning while doing. Please join me and my fellow board members in our work to promote awareness, appreciation, and conservation of Maryland's native plants and their habitats. And thank you for all that you already do to protect the biosphere. Be in touch if you are interested in learning more about how you can help.

Lauren Hubbard, PhD



Climate Resilient Gardening in Maryland

s a retired climate scientist, and current gardening fanatic, I'm often asked "What should I grow that will survive coming climate change?" My usual articulate response is to murmur something like "Uh", or possibly "Um", and then later hope that I didn't drool. The difficulty is that trying to answer the what-to-grow question is vastly complicated, even without the uncertainty of climate change. Different species of plants have different light, soil, moisture, wind, pollination, and pest requirements. Heck, different strains within a species can have different requirements. Layer on top of that the unique characteristics of a planting site and the habits of the gardener, and it's quite a challenge to

by PRU FOSTER

give good planting advice. Sprinkle in the uncertainty of climate change and it's a wonder that there are indeed some rules of thumb that can help us to create gardens that will thrive into the future.

Let me emphasize that the uncertainty of future climate patterns is not just uncertain, it is wildly uncertain. There is a whole cascade of uncertainties including the scale of future emissions, the earth system's response including possible tipping points, and the complexity of local climates. That said, climate models are our best guess of the future climate and we can query these models' predictions through NASA or NOAA websites.

Of particular interest to gardeners is a new tool produced by the Davey Institute (hardinesszones.daveyinstitute.com) where you can input your zip code and see how your planting zones are likely to change. For example, my 20854 zip code is currently a 7b planting zone, having warmed from a 7a zone just a couple decades ago. Under a best case scenario, my region is expected to warm to zone 8a by the end of this century and, under a 'worst case' scenario to zone 8b. While I am hopeful that we'll avoid the worst case scenario, it is a good idea to choose tree species, in particular, that can survive these warmer temperatures.

In addition to temperature changes, global warming is altering rainfall

patterns. In general, warmer air temperatures mean more rainfall as more water evaporates off the oceans, although some regions will experience less precipitation. In Maryland, and most of the Eastern Seaboard, a 5-7% percent increase in rainfall is expected. That might sound like good news, but unfortunately, most of the additional rainfall is expected to occur in winter months and as more intense rainfall events. This can mean both more runoff and more erosion. Rising summer temperatures will lead to increased evapotranspiration by plants, which are likely to outpace any increases in precipitation. Simply put, we can expect warmer, wetter, and wilder weather, with drier summers that can stress plant growth. Very roughly, these results are expected to be greater or lesser, depending on the level of climatewarming emissions that occur.

Coping with this future climate is a pretty big ask of the plants we put in the ground. Our best strategy is to plant tough species, that is, plants we can put into the ground and largely ignore until they are looking lovely. The tougher the species, the more likely the individual plant will survive climatic shifts. And the greater the genetic diversity, the more likely the plant population will survive the increased stresses, because some strains may have characteristics which are key to the species survival.

Who would these magical superstar plants be? Natives. And, for the genetic diversity that facilitates adaptation to a changing climate, our superstars will perform best if they are "straight species" natives, not cultivars. Cultivars, including nativars, are the result of intentional hybridization and are usually propagated by taking cuttings rather than through sexual reproduction. The resulting plants are thus clones which are genetically identical to their parent plant. Using cultivars instead of straight species thus reduces genetic diversity in the population, and makes a species more vulnerable to extinction.

While sticking to straight native species might sound a bit restrictive, the

good news is that these are the easiest of plants to grow. Native species are already adapted to our climate and soil, as well as to our climate's fluctuations. This is especially true of populations that have been living in the wild near us, the so called local-ecotypes. In general, natives, and especially local ecotypes, won't need to be watered, fed, or mulched, once they are established. They also don't require soil amendments as we plant them, because

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they are adapted and co-evolved with local soil. Further, native plants benefit gardeners because they are resistant to many pest species and they host beneficial insects that are predators of garden pests. True, native plants can also harbor the pests themselves, but in a healthy ecosystem the predators will generally keep the pests at bay. Native plants also provide essential food and shelter that our native birds, turtles, frogs, mammals and other wildlife depend upon for survival. They are an essential part of the nutrient and water flows of our ecosystems.

So locally sourced natives are the gold standard for climate resiliency and native wildlife. But these are not always easy to source! Luckily, the Maryland Native Plant Society has a new google map tool on its website that can help. You can look for native plant nurseries near you at www.mdflora.org/nurseries.html or find announced native plant sales www. mdflora.org/plantsales.html. Another

excellent source of local ecotype natives is through the Wild Ones chapters. For example, the Nation's Capital Wild Ones has plant swaps twice a year and members share seeds throughout the year at meetings. Finding neighbors and new friends with whom to share native plants is an excellent strategy as well.

Another golden rule of resilient planting, including climate resilient planting, is to plant a diverse range of plants. Indeed, for all shocks, and quite possibly for all systems, diversity rules the resiliency roost. This is because if some plants/stocks/peoples/schemes succumb to a given stress others may survive, indeed some may thrive. For the garden, this means diversity in species—goldenrods and bee balm and oaks—but also genetic diversity within a species. For instance, it is beneficial to plant paw paw trees from different lineages, which is also likely to give you more fruit anyway. Research shows, time and again, that diverse ecosystems are far more likely to survive and adapt when faced with stressors. Monocultures can be wiped out in a season—think the potato famine, the loss of 3 billion chestnut trees on the US' eastern seaboard in the 1900s, and the banana's doom.

Beyond resilient plant choices, there are also some gardening practices that can help our gardens to thrive long into the future. With more summer dry spells and intense downpours in non-summer months expected in the coming decades, we can plant densely and nurture the soil. Planting densely is just what it sounds like—putting as many plants as possible into the ground—the less bare soil the better. The more plants in a given area the greater the root mass, which will help to retain your soil, and perhaps somewhat counter-intuitively, reduce water stress. Deeper rooted plants bring water closer to the surface and thus can moisten the upper soil column during dry periods. But that's not the only way dense plantings reduce water stress, a thick canopy also reduces evaporation because soil temperatures are lower, wind is reduced,



and whatever water that is evaporated tends to stay within the dense leaf canopy. A moist canopy environment means there is less of a difference in the water vapor concentration inside the leaf and outside it. Therefore, less water is transpired to the atmosphere. The net result of dense planting is less water loss, less water stress, less runoff, and reduced soil erosion. And, the cherry on top is that dense planting leads to a great reduction in maintenance time—far fewer weeds, no need to mulch, and a reduction in watering requirements.

Part of dense planting's magic comes from its role in protecting, aerating, and moistening of the soil column, as well as contributing to the well being of the soil's microbiome. The microbiome within the soil is of paramount importance to plants' health because the soil fungi provide plants with many important nutrients. We can further nurture this underground ecosystem by practicing no dig or low tillage gardening. The old technique of forking over a garden bed is loosing ground (cringe). Turning over a garden bed not only brings weed seeds to the surface, but it also accelerates the loss of organic matter from the soil—important for water and nutrient flow and retention. Digging up the soil also physically disturbs the soil microbiome thereby reducing mineral and nutrient uptake by plants. Not to mention, digging over a garden

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means planting densely,
practicing wildlife
friendly gardening,
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connecting to other
native plant areas.

bed is hard work. Taking care of your soil is another top management tip for a climate resilient garden.

There is even more we can do to make our gardens more climate resilient—and that is to garden with the wider biosphere in mind. By protecting our local ecosystems, our gardens will benefit from regulated water flows, reduced local temperatures, and all the other benefits of a healthy diverse biosphere. Gardeners can help the critters in our garden and beyond by avoiding pesticides and the over application of fertilizers, leaving the leaves, and encouraging wild areas. The base of

many food webs are the critters that live in plant litter. We can not overestimate the importance of local pockets of diversity, especially in light of a recent estimate that we've lost 70% of wild animals in the past 5 decades. That's beyond disturbing. And if you find leaf litter and twigs untidy you may find that after a while your sense of what is beautiful shifts. I now see the garden litter as crinkly and beautiful in its own right. And it is not just because it means I get to see more bluebirds, indigo buntings, bald eagles, barn owls, and red tailed hawks. I like the noises the litter makes, the smells it exudes, and even have come to appreciate the color of decaying leaves on my winter beds.

That's a lot of strategies to make our gardens more climate resilient, but you just need to remember one golden rule. Nurture biodiversity. Biodiversity means both many different kinds of plants and just more plants. Burgeoning comes to mind. Ensuring biodiversity means planting densely, practicing wildlife friendly gardening, nurturing our soil, and connecting to other native plant areas. Here's a rewrite of "Something old, something blue" to amuse us:

Something native, something true. Sometimes dense, a mixed crew A happy planting to ensue.

Happy nurturing!

An Aster a Day, Almost

Members of the Aster Family (Asteraceae) in Maryland

by JIL SWEARINGEN

n Maryland, we have a bounty of "asters", with three hundred and five species reported to occur in the state, according to Knapp and Naczi's *Vascular Plants of Maryland, USA: A Comprehensive Account of the State's Botanical Diversity*, published in 2021. Representatives of this ecologically important family occur from Maryland's mountainous western counties to the eastern shore and Atlantic Ocean, in habitats including forests, shale barrens, serpentine barrens, bogs, grasslands, marshes, swamps, and sand dunes. In short, they're just about everywhere!

The Maryland Native Plant Society chose the aster family (aka Compositae) for its Plant Taxa of the Year for 2023 to encourage members to become more familiar with this extensive and diverse family of plants and to improve their identification skills with them. Among the 305 species are 224 *native* (including 61 rare), 70 *non-native*, 8 *non-native invasive* or *noxious*, and 3 with *uncertain nativity*. State and global ranks for rare species are included. For a description of the Natural Heritage Ranking System and definitions for the state and global rankings, see p. 4 of *Vascular Plants of Maryland*.

The following list of species was obtained, with permission, from Vascular Plants of Maryland, and is grouped according to the Flora of North America's tribes and subtribes. Brief FNA descriptions for each tribe are also provided. A tribe is a taxonomic rank above genus and below family, and is designated by the suffix "-eae"; a subtribe is a subcategory under tribe and is designated by the suffix "-inae." Tribes and subtribes are used to further group species with similar features and genetic characteristics.

Organizing Maryland's asters in this way should help with recognition and identification. With several hundred highly diverse species to work with, we need all the help we can get!

Top right: Mouse-ear Hawkweed (Hieracium pilosella); Right: Short's Aster (Symphyotrichum shortii) and a bee fly. Photos by R.H. Simmons.





Special notes:

- 1. According to Guy Nesom, taxonomists split the genus Aster in the 1990s, based on genetic information, into several genera including Symphyotrichum, which includes the majority of American species, and Aster which was determined to be more appropriately associated with Eurasian species. Other genera split from Aster include Almutaster, Ampelaster, Canadanthus, Chloracantha, Doellingeria, Eucephalus, Eurybia, Oclemena, Oreostemma, and Sericocarpus. Aster ptarmicoides has proved to be a white-rayed species of Solidago (goldenrod). Many of these now newly recognized genera were previously recognized at the subgeneric rank. Wes Knapp adds: "Many of these now newly recognized genera were previously recognized at the subgeneric rank. Fernald (1950) recognized groups under the names Doellingeria and lanthe (now called lonactus) and Gleason & Cronquist (1992) recognized Sericocarpus."
- 2. Prairie Goldenrod, Solidago rigidum var. rigidum, has been changed to Oligoneuron rigidum var. rigidum.
- 3. Species previously in the genus Prenanthes have been moved to the genus Nabalus.

ASTERACEAE IN MARYLAND

Tribe ANTHEMIDEAE

FNA: Almost worldwide, mostly Old World.

Achillea borealis - American Yarrow

Tanacetum parthenium - Common Feverfew

Artemisia vulgaris - Common Wormwood

Anthemis arvensis - Corn Chamomile

Anthemis cotula - Mayweed

Artemisia abrotanum - Southern Wormwood

Artemisia absinthium - Absinthium

Artemisia annua - Annual Wormwood

Artemisia stelleriana - Hoary Sagebrush

Leucanthemum vulgare - Oxeye Daisy

Matricaria discoidea - Pineapple-weed Chamomile

Tanacetum balsamita - Coastmary

Tanacetum vulgare - Common Tansy

Tripleurospermum maritimum ssp. maritimum - Pineapple Weed

Tribe **ASTEREAE**

FNA: Almost worldwide, mostly temperate. Large genera such as *Erigeron, Symphyotrichum*, and *Solidago* all originated on the continent and subsequently spread to Eurasia or South America. A few genera entered North America from neighboring continents, such as *Aster* in the strict sense (from Eurasia) or *Baccharis* (from Central America). A majority of Astereae genera in the flora of North America are endemic to the continent (more so if Mexico were included).

Baccharis halimifolia - Eastern Baccharis

Boltonia asteroides var. asteroides - Susquehanna Doll's Daisy S1/G5TNR Boltonia asteroides var. qlastifolia - White Doll's Daisy S1/G5T4T5

Chrysopsis mariana - Maryland Goldenaster

Conyza canadensis var. canadensis - Canada Horseweed

Conyza canadensis var. pusilla - Fleabane

Doellingeria infirma - Appalachian Flat-topped White Aster S3/G5

Doellingeria umbellata - Northern Flat-topped White Aster

Erigeron annuus - White-top Fleabane

Erigeron philadelphicus - Philadelphia Fleabane

Erigeron pulchellus var. brauniae - Lucy Braun's Plantain S1/G5T4

Erigeron pulchellus var. pulchellus - Robin's Plantain

Erigeron strigosus var. strigosus - Daisy Fleabane

Eurybia compacta - Slender Aster

Eurybia divaricata - White Wood Aster

Eurybia macrophylla - Largeleaf Wood Aster

Eurybia radula - Rough Wood Aster S1/G5

Eurybia schreberi - Schreber's Aster



Eurybia spectabilis - Eastern Showy Aster S1/G5

Euthamia caroliniana - Carolina Goldentop

Euthamia graminifolia - Grassleaf Goldentop

Euthamia gymnospermoides - Texas Goldentop

Euthamia hirtipes - Marsh Goldentop

Ionactis linariifolia - Flaxleaf Aster

Oclemena acuminata - Whorled Aster

Oligoneuron rigidum var. rigidum - Prairie Goldenrod S1/G5

Pityopsis graminifolia var. latifolia - Narrowleaf Silk-grass

Sericocarpus asteroides - Toothed Whitetop Aster

Sericocarpus linifolius - Narrowleaf Whitetop Aster

Solidago altissima - Tall Goldenrod

Solidago arguta var. arguta - Cutleaf Goldenrod S1?/ G5T4T5

Solidago arguta var. caroliniana - Atlantic Goldenrod S1?/G5T4

Solidago bicolor - White Goldenrod

Solidago caesia - Bluestem Goldenrod

Solidago canadensis - Canada Goldenrod

Solidago erecta - Slender Goldenrod

Solidago fistulosa - Pine Barren Goldenrod

Solidago flexicaulis - Broadleaf Goldenrod

Solidago gigantea - Smooth Goldenrod

Solidago harrisii - Shale Barren Goldenrod S3/G4

Solidago hispida - Hairy Goldenrod S3/G5T5

Solidago juncea - Early Goldenrod

Solidago latissimifolia - Elliott's Goldenrod S3/G5

Solidago nemoralis ssp. nemoralis - Gray Goldenrod

Solidago odora var. odora - Anise-scented Goldenrod

Solidago patula var. patula - Roundleaf Goldenrod S3/G5

Solidago puberula var. puberula - Downy Goldenrod

Solidago racemosa - Racemose Goldenrod S1/G5T3?

Solidago roanensis - Roan Mountain Goldenrod S3/G4G5

Solidago rugosa var. aspera - Roughleaf Goldenrod

Solidago rugosa var. rugosa - Roughleaf Goldenrod

Solidago rupestris - Rock Goldenrod S1/G4?

Solidago sempervirens var. mexicana - Southern Seaside Goldenrod

Solidago sempervirens var. sempervirens - Seaside Goldenrod

Solidago speciosa var. speciosa - Harper's Goldenrod S2/G5

Solidago squarrosa - Ragged Goldenrod

Solidago tarda - Late Goldenrod S1/G4?

Solidago uliginosa - Bog Goldenrod S3/G5

Solidago ulmifolia var. ulmifolia - Elmleaf Goldenrod S3/G4G5

Symphyotrichum concolor - Eastern Silvery Aster S1/G5

Symphyotrichum cordifolium - Heartleaf Aster

Symphyotrichum depauperatum - Serpentine Aster S1/G2

Symphyotrichum drummondii - Drummond's Aster S1/G5

Symphyotrichum dumosum - Bushy Aster

Symphyotrichum ericoides - White Heath Aster

Symphyotrichum laeve var. concinnum - Narrow-leaved Smooth Blue Aster \$1?/G5T4

Symphyotrichum laeve var. leave - Smooth Blue Aster

Symphyotrichum lanceolatum var. lanceolatum - Panicled Aster

Symphyotrichum lanceolatum var. latifolium - White Panicled Aster

Symphyotrichum lateriflorum - Starved Aster

Crooked-stem Aster (*Symphyotrichum prenanthoides*) and a bee fly. Photo by R.H. Simmons.

Symphyotrichum lowrieanum - Fall Aster Symphyotrichum novae-angliae - New England Aster

Symphyotrichum novi-belgii - Longleaf Aster

Symphyotrichum oblongifolium - Aromatic Aster

Symphyotrichum patens - Late Purple Aster

Symphyotrichum phlogifolium - Late Purple Aster

Symphyotrichum pilosum var. pilosum - White Heath Aster

Symphyotrichum pilosum var. pringlei - Pringle's Aster

Symphyotrichum praealtum - Willow Aster S1/G5

Symphyotrichum prenanthoides - Crooked-stem Aster

Symphyotrichum puniceum - Swamp Aster

Symphyotrichum racemosum - Small White Aster

Symphyotrichum shortii - Short's Aster S3S4/G5

Symphyotrichum subulatum - Annual Saltmarsh Aster

Symphyotrichum tenuifolium - Perennial Saltmarsh Aster

Symphyotrichum undulatum - Wavyleaf Aster

Symphyotrichum urophyllum - White Arrow Aster

Aster tataricus - Tartarian Aster

Bellis perennis - Lawn Daisy

Grindelia lanceloata - Narrowleaf Gumweed

Grindelia squarrosa - Broadleaf Gumweed

Heterotheca subaxillaris - Camphorweed Goldenaster

Oclemena nemoralis - Bog Aster

Tribe **CARDUEAE**

FNA: Mostly Old World, especially Mediterranean, some species widely introduced.

Cirsium altissimum - Tall Thistle

Cirsium discolor - Field Thistle

Cirsium horridulum var. horridulum - Yellow Thistle S3/G5

Cirsium muticum - Swamp Thistle S3/G5

Cirsium pumilum - Pasture Thistle

Carduus acanthoides - Spiny Plumeless Thistle

Carduus crispus - Curled Plumeless Thistle

Carduus nutans ssp. macrolepis - Musk Thistle

Cirsium arvense - Creeping Thistle

Cirsium vulgare - Bull Thistle

Arctium lappa - Greater Burdock

Arctium minus - Lesser Burdock

Centaurea cyanus - Garden Cornflower

Centaurea jacea - Brown Star-thistle

Centaurea nigra - Black Star-thistle

Centaurea nigrescens - Short-fringe Star-thistle

Centaurea solstitialis - Yellow Star-thistle

Centaurea stoebe ssp. micranthos - Spotted Star-thistle

Onopordum acanthium - Scotch Cotton-thistle

Tribe **CICHORIEAE**

FNA: Nearly worldwide, mostly in Old World, mostly at temperate latitudes, some species widely introduced.

Hieracium gronovii - Hairy Hawkweed Hieracium marianum - Maryland Hawkweed

Hieracium scabrum - Rough Hawkweed

Hieracium paniculatum - Panicled Hawkweed



Field Thistle (Cirsium discolor) and Metallic Sweat Bee (Agapostemon virescens). Photo by R.H. Simmons.

Hieracium traillii - Shale-barren Hawkweed

Hieracium venosum - Rattlesnake Hawkweed

Krigia dandelion - Potato Dwarf Dandelion S2S3

Krigia virginica - Virginia Dwarf Dandelion

Lactuca biennis - Tall Blue Lettuce Blake

Lactuca canadensis - Canada Lettuce

Lactuca floridana - Woodland Lettuce

Lactuca hirsuta var. sanguinea SU

Nabalus (Prenanthes) altissimus - Tall Rattlesnake-root

Nabalus (Prenanthes) autumnalis - Slender Rattlesnakeroot S1/G4G5

Nabalus (Prenanthes) crepidineus - Nodding Rattlesnake-root

Nabalus (Prenanthes) serpentarius - Lion's-foot

Nabalus (Prenanthes) trifoliolatus - Three-Leaved Rattlesnake-root

Pyrrhopappus carolinianus - Carolina False Dandelion

Youngia japonica - Oriental False Hawksbeard

Chondrilla juncea - Rush Skeletonweed

Cichorium intybus - Chicory

Hieracium aurantiacum - Orange Hawkweed

Hieracium caespitosum - Meadow Hawkweed

Hieracium pilosella - Mouse-ear Hawkweed

Hypochaeris radicata - Spotted Cat's-ear

Krigia cespitosa - Opposite-Leaved Dwarf Dandelion

Lactuca saligna - Willowleaf Lettuce

Lactuca serriola - Prickly Lettuce

Lapsana communis - Common Nipplewort

Sonchus arvensis - Field Sowthistle

Sonchus asper - Spiny-leaf Sowthistle

Sonchus oleraceus - Common Sowthistle

Taraxacum erythrospermum - Red-seeded Dandelion

Taraxacum officinale ssp. officinale - Common Dandelion

Tragopogon dubius - Meadow Goat's-beard

Tragopogon porrifolius - Purple Goat's-beard

Tragopogon pratensis - Meadow Goat's-beard

Youngia thunbergiana - False Hawksbeard

Tribe **EUPATORIAEAE**

FNA: Mostly subtropics, tropics, and warm-temperate New World, also in Old World.

Ageratina altissima var. altissima - White Snakeroot

Ageratina aromatica - Lesser Snakeroot

Brickellia eupatorioides var. eupatorioides - False Boneset

Conoclinium coelestinum - Blue Boneset

Eupatorium album - White Thoroughwort

Eupatorium altissimum - Tall Boneset S3/G5

Eupatorium capillifolium - Small Dog-fennel Thoroughwort

Eupatorium godfreyanum - Godfrey's Eupatorium

Eupatorium hyssopifolium var. hyssopifolium - Hyssopleaf Thoroughwort

Eupatorium leucolepis - White-bract Boneset S2S3/G5

Eupatorium perfoliatum - Common Boneset

Eupatorium pilosum - Vervain Thoroughwort

Eupatorium rotundifolium - Hairy Boneset

Eupatorium rotundifolium var. rotundifolium - Roundleaf Boneset

Eupatorium serotinum - Late-flower Thoroughwort

Eupatorium sessilifolium var. sessilifolium - Upland Boneset

Eupatorium torreyanum - Fringed Boneset

Eupatorium vaseyi - Vasey's Boneset

Eutrochium dubium - Joe-pye Thoroughwort

Eutrochium fistulosum - Hollow Joe-pyeweed

Eutrochium maculatum var. maculatum - Spotted Joe-pyeweed SU/G5

Eutrochium purpureum - Sweet Joe-pyeweed

Liatris helleri - Heller's Blazing Star SH/G3

Liatris pilosa - Shaggy Gayfeather

Liatris scariosa - Devil's Bite

Liatris spicata var. spicata - Dense Blazing Star S1/G5T5

Liatris squarrosa var. *squarrosa* - Scaly Blazing Star S1/G5

Mikania scandens - Climbing Hempweed

Sclerolepis uniflora - One-flowered Sclerolepis S2/G4

Ageratum conyzoides - Yerba de Cabrio

Tribe **GNAPHALIEAE**

FNA: Nearly worldwide, with centers of concentration in southern Africa and Australia, in both Old World and New World, the greater numbers of genera and species in the southern hemisphere.

Anaphalis margaritacea - Pearly Everlasting S3/G5

Antennaria howellii - Howell's Pussytoes

Antennaria neglecta - Field Pussytoes

Antennaria parlinii - Parlin's Pussytoes

Antennaria plantaginifolia - Plantain-leaf Pussytoes

Antennaria solitaria - Single-head Pussytoes S2/G5

Antennaria virginica - Shale Barren Pussytoes

Gamochaeta purpurea - Purple Cudweed

Pseudognaphalium helleri - Catfoot

Pseudognaphalium obtusifolium - Fragrant Cudweed

Filago vulgaris - Common Fluffweed

Gamochaeta pensylvanica - Pennsylvania Everlasting

Gnaphalium uliginosum - Low Cudweed



Tribe **HELIANTHEAE**

FNA: Almost wholly New World, mostly subtropical, tropical, and warm-temperate.

Subtribe Ambrosiinae

Ambrosia artemisiifolia - Annual Ragweed

Ambrosia trifida var. trifida - Great Ragweed

Iva annua - Sumpweed

Iva frutescens ssp. frutescens - Bigleaf Marsh Elder

Parthenium integrifolium - American Feverfew S1/G5

Xanthium strumarium - Rough Cocklebur

Xanthium spinosum - Spiny Cocklebur

Subtribe CHAFNACTIDINAF

Arnica acaulis - Leopard's-bane \$1/G4

Subtribe Coreopsidinae

Bidens bidentoides - Maryland Bur-marigold S3.1/G3G4

Bidens bipinnata - Spanish Needles

Bidens cernua - Nodding Beggar-ticks

Bidens comosa - Strawstem Beggar-ticks

Bidens connata - Purplestem Beggar-ticks

Bidens discoidea - Swamp Beggar-ticks

Bidens frondose - Devil's Beggar-ticks

Bidens laevis - Smooth Bur-marigold

Bidens polylepis - Ozark Tickseed Sunflower

Bidens trichosperma - Northern Tickseed Sunflower S3S4/G5

Bidens vulgata - Tall Bur-marigold

Coreopsis rosea - Rose Coreopsis \$1/G3

Coreopsis tripteris - Tall Tickseed S1/G5

Coreopsis verticillata - Whorled Coreopsis S3/G5

Bidens aristosa - Tickseed Beggar-ticks

Coreopsis grandiflora - Large-flowered Tickseed

Coreopsis lanceolata - Sand Coreopsis

Coreopsis tinctoria - Golden Tickseed

Cosmos sulphureus - Sulphur Cosmos

Subtribe ECLIPTINAE

Borrichia frutescens - Sea Oxeye SH/G5

Chrysogonum virginianum var. virginianum - Green and Gold S3/G5T5

Heliopsis helianthoides var. helianthoides - Smooth Oxeye

Silphium asteriscus var. trifoliatum - Threeleaf Rosinweed S3/G4?

Verbesina alternifolia - Wingstem

Verbesina occidentalis - Yellow Crownbeard

Echinacea pallida - Pale Purple Coneflower

Echinacea purpurea - Eastern Purple Coneflower

Eclipta prostrata - False Daisy

Subtribe GAILLARDIINAE

Helenium autumnale var. autumnale - Common Sneezeweed Helenium flexuosum - Purple-head Sneezeweed Gaillardia pulchella var. pulchella - Common Blanketflower

Left: Boneset (Eupatorium perfoliatum) and Ailanthus Webworm (Atteva aurea). Photo by R.H. Simmons.

Subtribe Galinsoginae

Galinsoga parviflora - Small-flowered Quickweed Galinsoga quadriradiata - Fringed Quickweed

Subtribe HELIANTHINAE

Helianthus angustifolius - Swamp Sunflower

Helianthus decapetalus - Thinleaf Sunflower

Helianthus divaricatus - Woodland Sunflower

Helianthus giganteus - Tall Sunflower

Helianthus hirsutus - Hairy Sunflower S1/G5

Helianthus laevigatus - Smooth Sunflower S1/G4

Helianthus occidentalis ssp. occidentalis - Fewleaf Sunflower S1/G5

Helianthus strumosus - Pale-leaf Sunflower

Helianthus annuus - Common Sunflower

Helianthus debilis ssp. cucumerifolius - Cucumberleaf Sunflower

Helianthus maximiliani - Maximilian Sunflower

Helianthus mollis - Ashy Sunflower

Helianthus tuberosus - Jerusalem Artichoke

Helianthus grosseserratus - Sawtooth Sunflower

Subtribe POLYMNIINAE

Polymnia canadensis - White-flowered Leafcup

Subtribe RUDBECKIINAE

Rudbeckia fulgida var. fulgida - Orange Coneflower S3/G5

Rudbeckia hirta var. hirta - Black-eyed Susan

Rudbeckia laciniata var. bipinnata - Greenhead Coneflower

Rudbeckia laciniata var. humilis - Blue Ridge Cutleaf Coneflower

Rudbeckia laciniata var. laciniata - Common Greenhead Coneflower

Rudbeckia triloba var. triloba - Brown-eyed Susan S3/G5

Rudbeckia hirta var. pulcherrima - Showy Black-eyed Susan

Tribe INULEAE

FNA: Introduced; Old World, especially Eurasia and northern Africa, some species widely introduced and established in local floras.

Inula helenium - Elecampane

Pulicaria dysenterica - Meadow False Fleabane

Tribe **PLUCHEEAE**

FNA: Mostly tropical and subtropical areas of Central America, South America, Africa, Asia, and Australia, some species are widely introduced and established in local floras.

Pluchea camphorata - Marsh Fleabane S1/G5

Pluchea foetida var. foetida - Stinking Camphorweed

Pluchea odorata var. odorata - Scented Conyza



Upland Ironweed (Vernonia glauca) and Metallic Sweat Bee (Agapostemon virescens). Photo by R.H. Simmons.

Tribe **SENECIONEAE**

FNA: Almost worldwide, mostly temperate to subtropical.

Arnoglossum atriplicifolium - Pale Indian-plantain

Arnoglossum reniforme - Great Indian-plantain SH

Erechtites hieraciifolius - American Burnweed

Packera anonyma - Small's Ragwort

Packera antennariifolia - Cat's-paw Ragwort S3/G4

Packera aurea - Golden Groundsel

Packera crawfordii - Crawford's Ragwort

Packera obovata - Roundleaf Groundsel

Packera paupercula - Balsam Ragwort S3/G5

Packera tomentosa - Woolly Groundsel

Senecio suaveolens - Sweet-scented Indian-plantain S1/G4

Ligularia dentata - Orangequeen

Senecio vulgaris - Old-man-in-the-spring

Tussilago farfara - Colt's-foot

Tribe **VERNONIEAE**

FNA: Mostly tropics and warm-temperate regions of New World and Old World.

Elephantopus carolinianus - Carolina Elephant's-foot

Elephantopus nudatus - Smooth Elephant's-foot

Elephantopus tomentosus - Tobaccoweed S1S2/G5

Vernonia gigantea - Giant Ironweed SU/G5

Vernonia glauca - Broadleaf Ironweed

Vernonia noveboracensis - New York Ironweed

Vernonia arkansana - Arkansas Ironweed

Legend: Native taxa / Native rare species / Invasive or noxious weeds / Taxa not native to Maryland / Nativity uncertain

Key to Tribes of Asteraceae: floranorthamerica.org/Asteraceae#Key_to_Tribes_of_Asteraceae

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Fig. 1 Grass-leaved Golden-aster (Pityopsis graminifolia var. latifolia) flower head. Photo by R.H. Simmons.

rass-leaved Golden-aster (*Pityopsis graminifolia* var. *latifolia*) is a striking plant, at least as much for the silvery, silky-pubescent, dense patches of narrow-lanceolate leaves as for the small, bright yellow flowers in August through October. The older common name for this plant—reflecting the distinctive foliage—is "Silkgrass" (Brown and Brown 1984).

Pityopsis: "A genus of about 13 taxa (variously recognized at species or varietal rank), perennial herbs, of se.

North America south to Central America.

Pityopsis is taxonomically and nomenclaturally difficult. The problems include species and varietal concepts in a morphologically and cytologically diverse group, nomenclatural issues involving typification and application (and frequently misapplication) of a plethora of names at specific and varietal ranks..." (Weakley and

by R.H. SIMMONS

Southeastern Flora Team 2022).

According to the 2022 Weakley Flora, the correct name for what was formerly called "Pityopsis graminifolia var. latifolia" and earlier "Chrysopsis graminifolia"—is Pityopsis nervosa: "A number of prominent researchers seem to have somewhat different interpretations of the Pityopsis graminifolia complex. Although there have been a lot of chromosome counts done, there haven't been any molecular studies which could clear up some of the phylogenetic confusion" (Gary Fleming, pers. comm.). Nonetheless, the Flora of the Southeastern United States (2022) provides excellent keys to the Pityopsis genus as currently circumscribed.

Grass-leaved Golden-aster is near the northern limits of its natural range

in Maryland. Its northernmost station is the Coastal Plain of southern New Jersey, while it is historic for Delaware (Weakley and Southeastern Flora Team 2022).

The Maryland Biodiversity Project gives the state's distribution of Grass-leaved Golden-aster as outer and inner Coastal Plain: "Common in sand hill habitats that border the Pocomoke River and Nassawango Creek regions of Worcester and Wicomico counties. Uncommon in sandy interior habitats of Anne Arundel and Prince George's counties."

The inner Coastal Plain habitats are infrequent on Maryland's Western Shore, occurring in deep Cretaceous-aged sands of globally rare pine barrens communities at the Beltsville Agricultural Research Center (BARC) and Patuxent Research Refuge (PRR) to the east in northern Prince George's and Anne Arundel counties, Maryland (Simmons et al. 2008).

An October 4, 2003 specimen was also collected by Brent Steury from a "dry sandy meadow between the Patuxent River and Patuxent River Road, south of [Governor] Bridge Road" northwest of Davidsonville, Anne Arundel County, Maryland. This and an August 19, 2000 collection by Mark Strong from BARC East Farm pine barrens along Beaver Dam Road comprise the sum of Maryland's Western Shore specimens of Grass-leaved Golden-aster at the United States National Herbarium (US), Smithsonian Institution.

Pineland Golden-aster (*Pityopsis aspera* var. *adenolepis*), also a plant of sandy soils in Maryland, is much rarer this far north and is only known in Maryland from St. Mary's County from a single sheet of an old E.H. Walker collection in the DC Herbarium collection at US: *Pityopsis aspera* (Shuttlw. ex Small) Small var. *adenolepis* (Fern.) Semple & Bowers, E.H. Walker 3930, 30 Aug 1945,

"near 'Christmas Hill', 2.2 m. bearing 304 degrees from St. Mary; roadside through pine woods, St. Mary's County, Maryland". This specimen was examined and determined as *Heterotheca adenolepis* (Fern.) Ahles by John C. Semple in April 1978 and represents the northernmost station known for this taxon in the eastern U.S.

This specimen was later examined and annotated as *Pityopsis aspera* var. *adenolepis* by R.H. Simmons on September 26, 2016, merely a nomenclatural update. It was reexamined by Simmons on February 13, 2023, which again confirmed Semple's original determination.

The Digital Atlas of the Virginia Flora cites this species for Northumberland County on Virginia's Northern Neck just opposite the Potomac River from St. Mary's County, Maryland and south of the similar Loblolly Pine (*Pinus taeda*) woodlands of the area near Drayden between the St. Mary's River and Tall Timbers

(Virginia Botanical Associates 2023).

A good reminder of why it is best not to move plant genotypes around, especially from hundreds of miles away and from different physiographic regions, is a reporting from the late 2000s of a Grassleaved Golden-aster breeding program on BARC grounds at the Norman A. Berg National Plant Materials Center (NPMC) in Beltsville, Maryland: "The NPMC had wild collected seeds in the mountains of Tennessee. The resulting cultivar was very aggressive, escaped NPMC grounds, and was found growing along roadsides in the area. I recall it more because of the politics of the situation, where the federal employees that worked at NPMC were debating whether or not the program should be stopped and the escaped plants treated with herbicide" (Sara Tangren, pers. comm.).

Destroying the anthropomorphically caused, aggressive non-native plants and



Fig. 2. Grass-leaved Golden-aster (Pityopsis graminifolia var. latifolia) at edge of globally rare Pine Barrens Pine - Oak Woodland: Pinus rigida - Quercus coccinea - Quercus falcata / (Quercus marilandica) / Gaylussacia frondosa Woodland (USNVC: CEGL006329) on the East Farm at BARC. Photo by R.H. Simmons.



Fig. 3. Pineland Golden-aster (*Pityopsis aspera* var. *adenolepis*). Photo by Gary P. Fleming.

abandoning the Grass-leaved Goldenaster breeding program may well have been the outcome, as no record of it is found in NPMC literature. If so, kudos to NPMC staff for adhering to the chief tenet of ecological restoration: Do No Harm.

As to any concerns that the Western Shore occurrences of Grass-leaved Golden-

aster are all escapes from the NPMC breeding program, the abundance of collections and observations over the past 25 years or so from stations throughout eastward sandy regions of Prince George's and Anne Arundel counties, some quite a distance away, dispels that scenario. Three well-established populations of Grass-

leaved Golden-aster are documented for the PRR North Tract in Anne Arundel County (Bill Harms, pers. comm.), several thriving populations have been noted at the PRR South Tract, many patches are known from the BARC East Farm, including interior sections (Fig. 2), as well as the above cited specimens.

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Wild Ones new to Maryland

Wild Ones is a national organization promoting gardening practices that support our native wildlife. The original Wild Ones was inspired by the work of Lorrie Otto, who helped to establish the US' ban on DDT and the Environmental Defense Fund. Following on from Lorrie's pioneering cries to abandon traditional mowed lawn, Wild Ones today focuses on the preservation, restoration, and establishment of native plant communities.

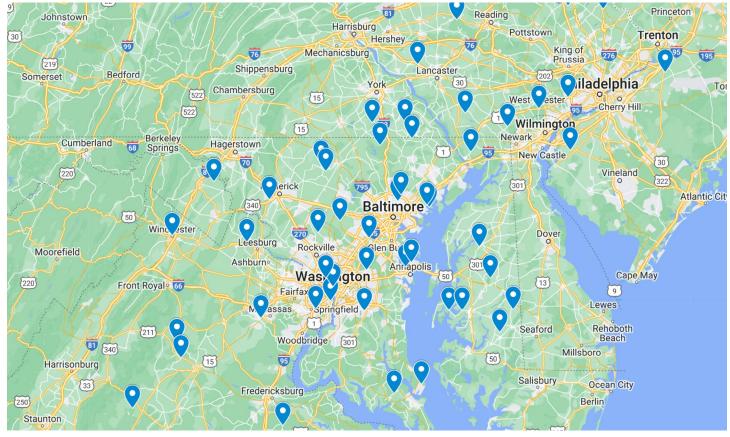
Four years ago, there were no Wild Ones Chapters in Maryland. This inspired Carol Chew, a friend of Lorrie's, to establish the first Maryland Wild Ones Chapter—the Nation's Capital Wild Ones (originally Chesapeake Wild Ones) with the help of longtime Wild One's member-at-large Marney Bruce. There are now two additional chapters, one in Baltimore and the other on the Chesapeake Bay shore. Wild Ones focuses primarily on gardening with natives, with a goal of getting more landowners to plant and grow native species.

Here at the Nation's Capital Chapter, we have a vibrant and welcoming community—about 90 members strong, primarily from Montgomery County, but open to anyone in Maryland. We hold monthly programs and in warmer weather, we visit members' gardens, wander about, and chat about the trials and tribulations of native gardening.

There is usually some form of plant exchange at these gatherings. This winter, we have been lucky enough to meet on the grounds of Glenstone Museum in Potomac for presentations and discussions on topics such as native plant cultivars and wildlife corridors. But the highlight of the year, is our native plant swaps, held twice a year. If the thought of sharing your local natives and getting other local natives fills you with excitement, do get in touch. https://wildones.org/chapters/

New clickable map of area native plant nurseries!

Locate area native plant nurseries at https://mdflora.org/nurseries.html



We took the list of nurseries selling native plants from the MNPS website and created a google map. This new interactive map, with pins on native plant nurseries, allows you to click on a site to get more information including the nursery's website, contact information, and a short description. We will endeavor to keep the map up to date. However, we advise users to call nurseries in advance when planning a visit.





OUR MISSION

Promote awareness, appreciation and conservation of Maryland's native plants and their habitats.

We pursue our mission through education, research, advocacy, and service activities.

Become a member. Join online: www.mdflora.org.



Maryland Native Plant Society PO Box 4877 Silver Spring, MD 20914

UPCOMING EVENTS

MNPS Monthly Programs

April: No Program.

May 23 (7:30PM): Life cycles, landscape practices & growing native plants from seed -

Heather McCord

June 27 (7:30PM): Ecological gardening with climate change to prevent future invasions & assist native migrations - Bethany Bradley

July 25 (7:30PM): Biological control of invasive plants using insects - Ellen Lake

Registration is required. Unless otherwise indicated, all programs are by Zoom and are recorded. Zoom opens at 7:00PM for pre-program board update and member Q&A. Presentations begin at 7:30PM and generally run until 8:45PM. Please check mdflora.org for details, updates, and recordings of past presentations.

Potato Dwarf Dandelion (*Krigia dandelion*).

Photo by R.H. Simmons.

