

Increasing Biodiversity One Yard at a Time

*Robin Madel
Sue Williams*

*Website: chesapeakebay.wildones.org
Email: wildoneschesapeakebay@gmail.com
Facebook Group: Wild Ones Chesapeake Bay*

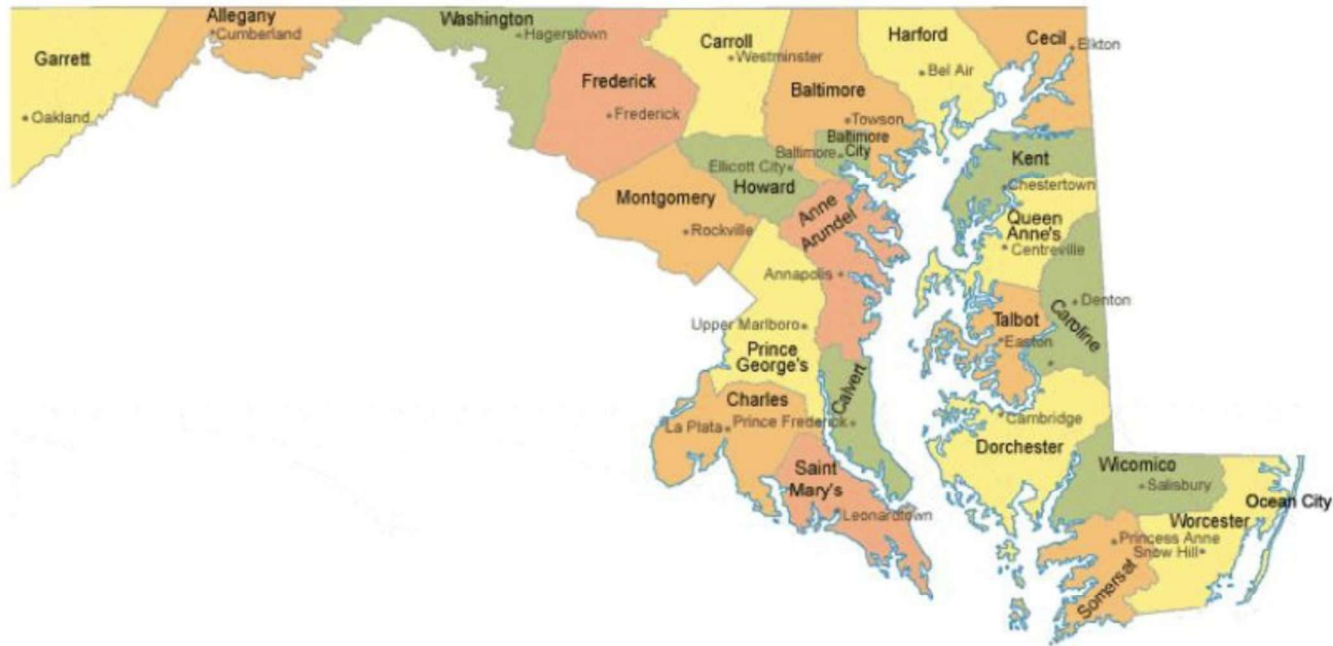


Agenda

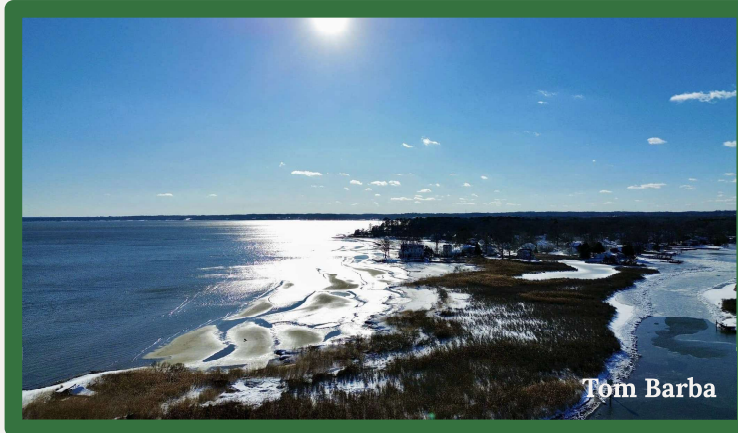


- Who should plant native plants?
- Where are we?
- Why native plants?
- How do I go native?
- How do I choose plants?
- Responsible Sourcing
- Connect With Us

Where Are We?



What is our Watershed?



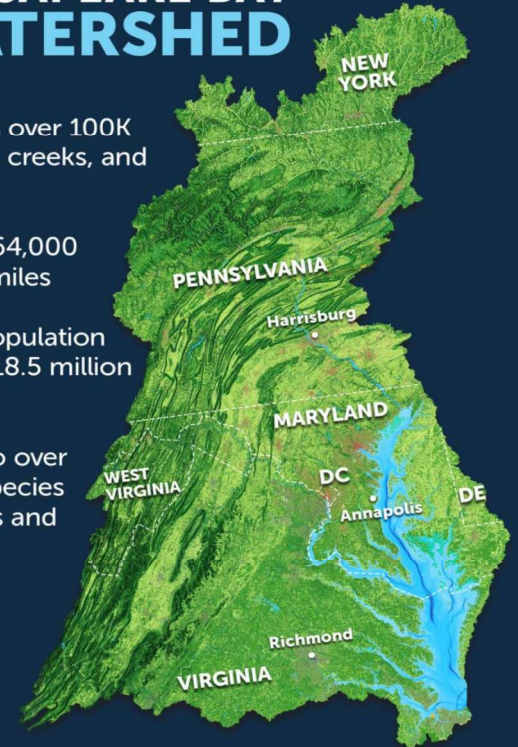
CHESAPEAKE BAY WATERSHED

Includes over 100K
streams, creeks, and
rivers

Covers 64,000
square miles

Has a population
of over 18.5 million
people

Home to over
3,600 species
of plants and
animals



<https://www.chesapeakebay.net/discover/watershed>



What is a Critical Area and Buffer?



Critical Area

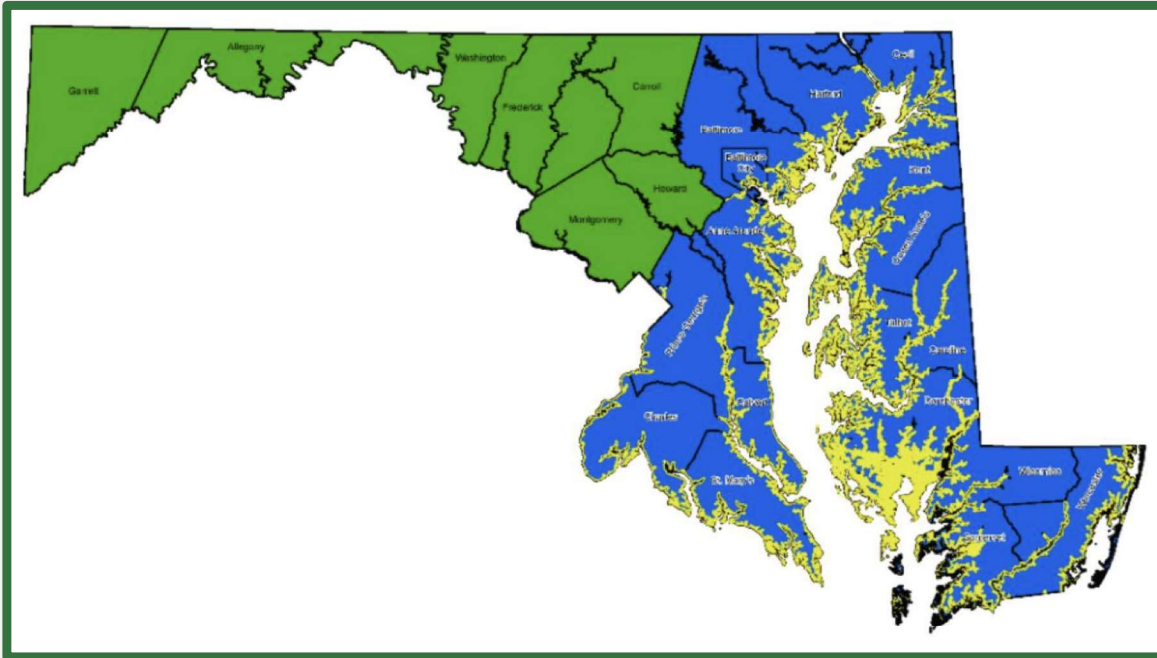
All land and water areas within 1,000 feet landward of tidal waters or tidal wetlands.

Buffer

A minimum 100-foot zone along the shoreline, created to protect water quality and wildlife habitat and address land development impacts on habitat and aquatic resources.



Critical Area



Critical Area Commission Briefing

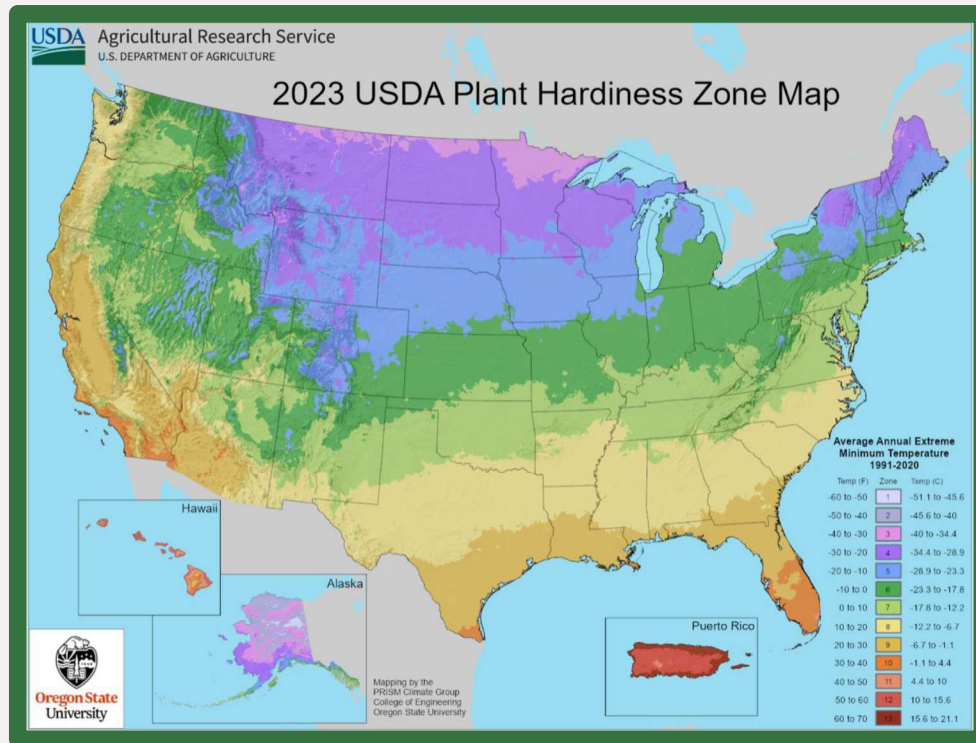
- https://mgaleg.maryland.gov/meeting_material/2024/ent%20-%20133505799454684437%20-%201.24CAC_Briefing.pdf

Critical Area Planting Guidelines

- <https://dnr.maryland.gov/criticalarea/Documents>



USDA Plant Hardiness Zones



Hardiness zones **are not**
how native plants grow.

<https://planthardiness.ars.usda.gov/pages/map-downloads>



What is our Ecoregion?

Plants do not use human boundaries for their range. Ecologists developed ecoregions to show native plant ranges. The bplant.org range maps illustrate the regions.

The following slides show our ecoregions from Level I down to Level 4:

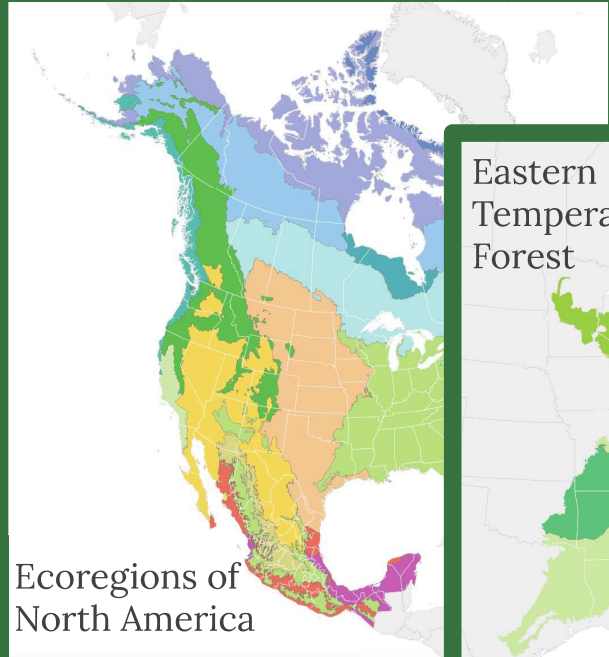
- Eastern Temperate Forests
- Southeastern USA Plains
- Southeastern Plains
- Chesapeake Rolling Coastal Plain



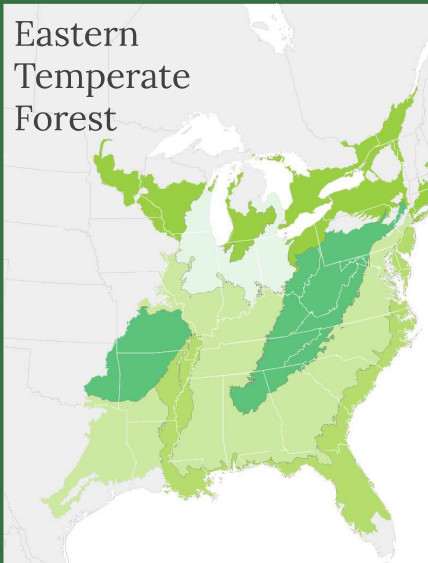
<https://bplant.org/regions.php>



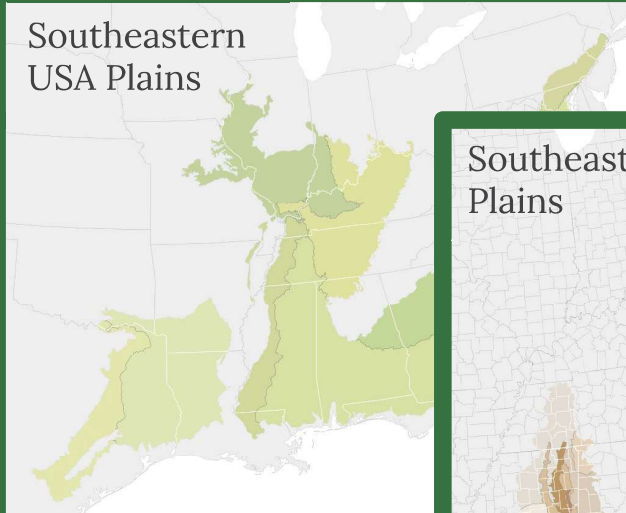
Our Ecoregions



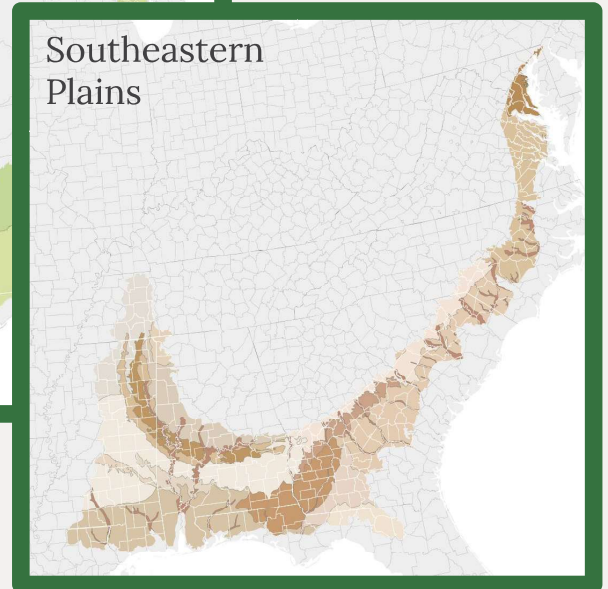
Eastern
Temperate
Forest



Southeastern
USA Plains



Southeastern
Plains



<https://bplant.org/regions.php>



The Chesapeake Rolling Coastal Plain



Map Legend & Subregion List

This list will help you navigate the regions in case you have problems with viewing or clicking the interactive map above.

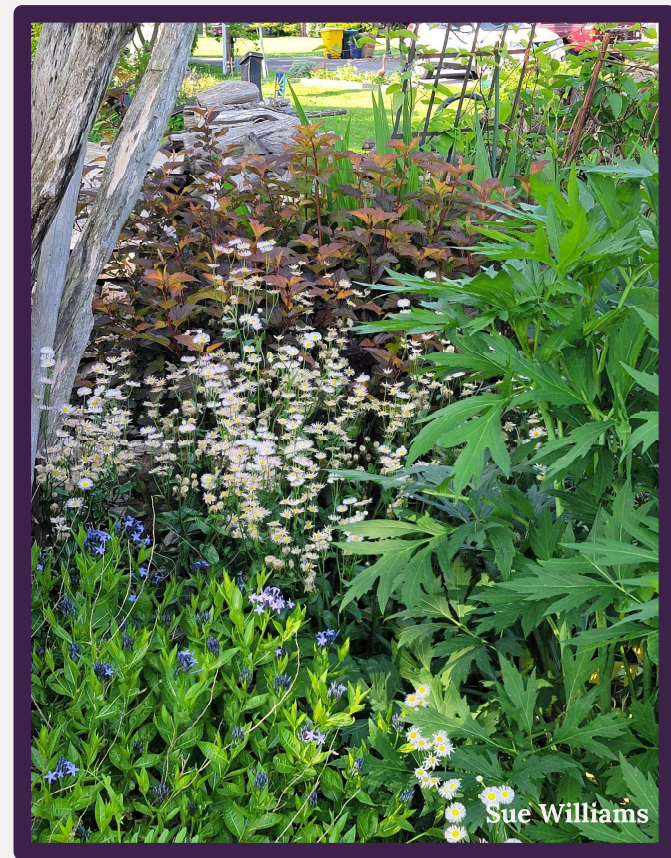
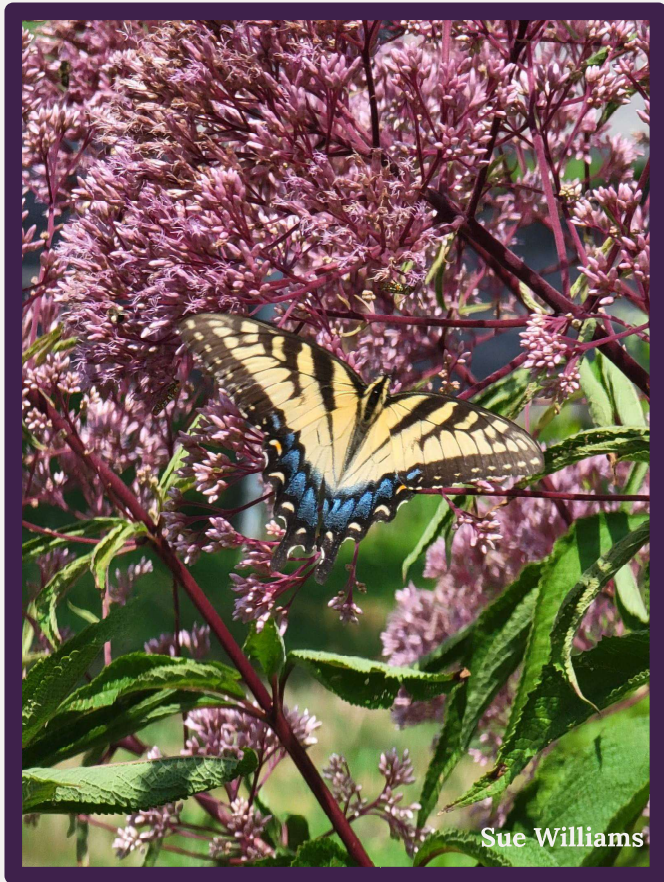
Name	†	Color on Map	EPA Code‡
Blackland Prairie	o		65a
Flatwoods/Blackland Prairie Margins	o		65b
Sand Hills	o		65c
Southern Hilly Gulf Coastal Plain	o		65d
Northern Hilly Gulf Coastal Plain	o		65e
Southern Pine Plains and Hills	o		65f
Dougherty Plain	o		65g
Tifton Upland	...		65h
Fall Line Hills	o		65i
Transition Hills	o		65j
Coastal Plain Red Uplands	o		65k
Atlantic Southern Loam Plains	o		65l
Rolling Coastal Plain	o		65m
Chesapeake Rolling Coastal Plain	✓		65n
Tallahassee Hills/Valdosta Limesink	o		65o
Southeastern Floodplains and Low Terraces	o		65p
Buhrstone/Lime Hills	o		65q
Jackson Prairie	o		65r

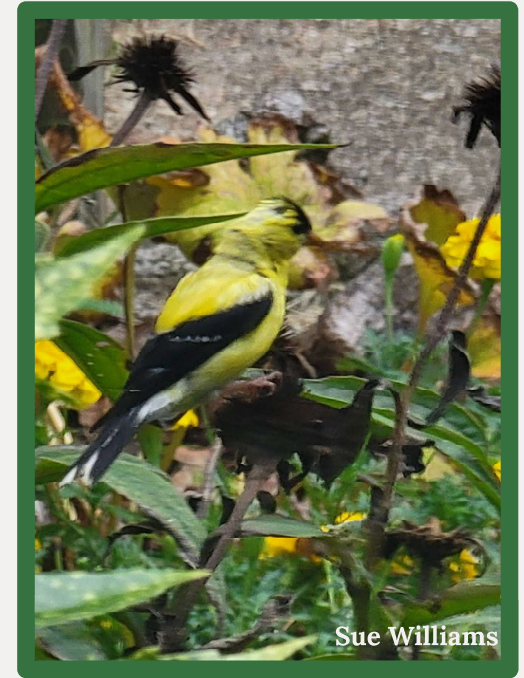
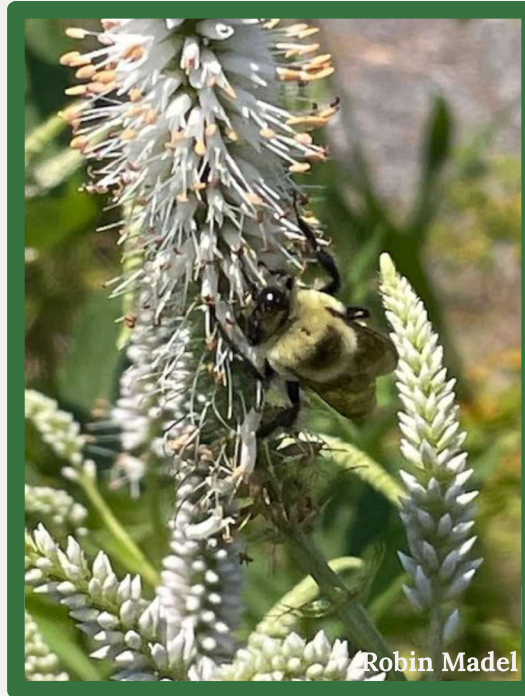
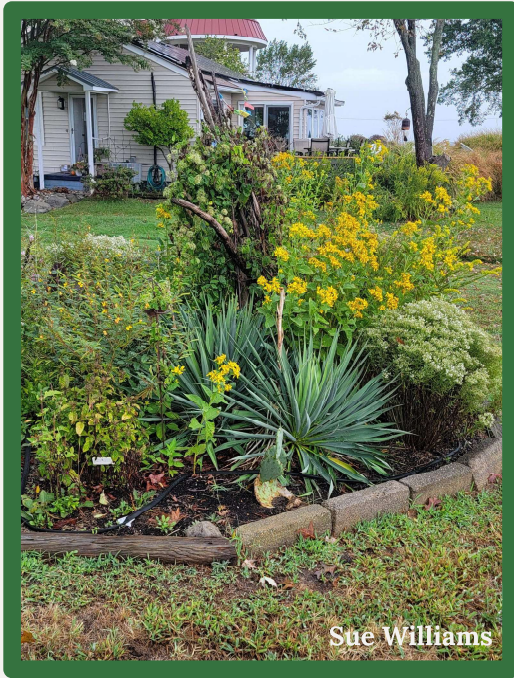


<https://bplant.org/region/123>



Why Native Plants?





*Native Plants → Insects → Birds
= a Healthy Ecosystem*



Biodiversity

Biodiversity is the variety of life in a habitat or ecosystem.

For example, a single pair of breeding chickadees needs to find 6,000 to 9,000 caterpillars to raise one clutch of baby birds. A native white oak tree is host to 557 different species of butterflies and moths whereas the non-native ginkgo tree supports just five.

In addition, once established, native plants require little or no fertilizer and no harmful chemicals, they don't need mowing and they use far less water than lawns and ornamental plants.

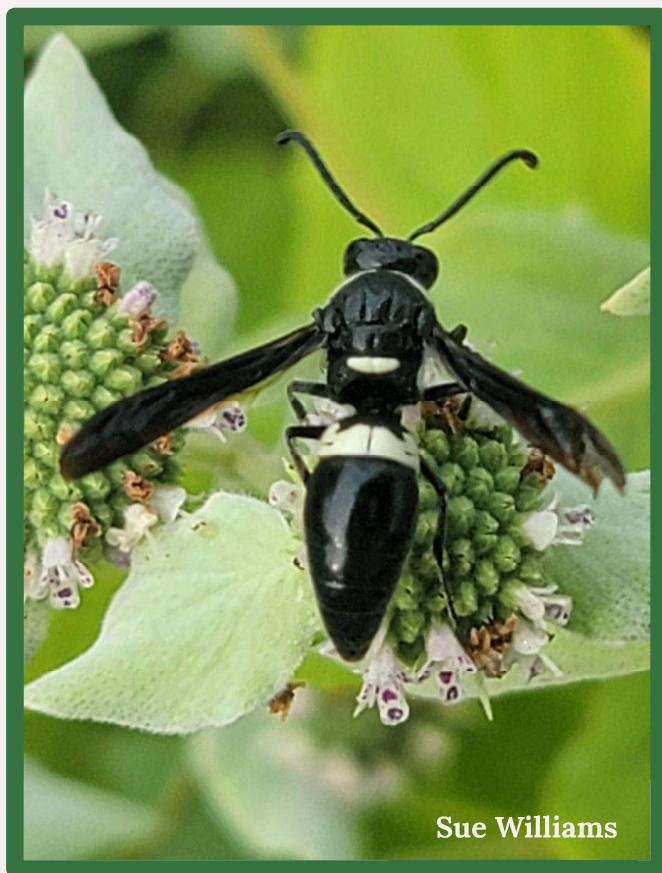
University of Delaware

<https://www.udel.edu/udaily/2018/october/non-native-plants-birds-insects-washington-chickadee-desiree-narango-doug-tallamy/>



University of Delaware





Biodiversity Loss

Dwindling biodiversity is a threat to the foundation of life on earth. In the last century alone, we've lost millions of acres of diverse ecosystems to urbanization.

Native plants help protect and restore biodiversity, improve air and water quality and provide wildlife with quality food and shelter. Our vision is native plants and natural landscapes in every community.



Nature's Best Hope

Doug Tallamy



“Across the United States, millions of acres now covered in lawn can be quickly restored to viable habitat by untrained citizens with minimal expense and without any costly changes to infrastructure.”

— Douglas W. Tallamy, *Nature's Best Hope: A New Approach to Conservation that Starts in Your Yard*

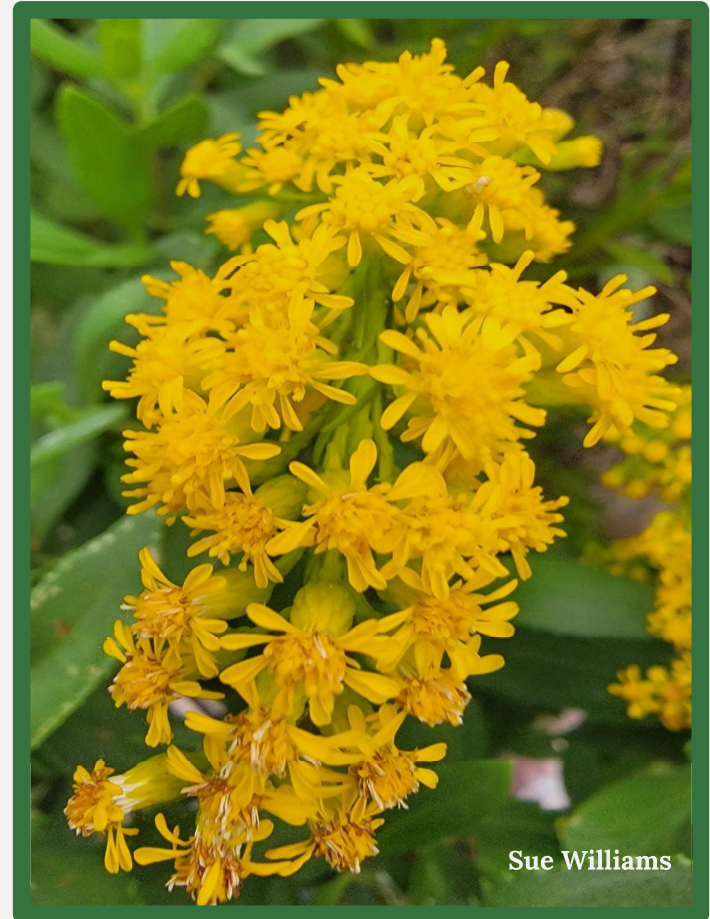


Keystone Plants

Keystone plants are those on which an ecosystem depends to thrive. Oaks support more lifeforms than any other North American tree.

In the **Maryland Coastal Plain**, keystone plant species include White Oak, American Beech, Goldenrod, Asters, and Lanceleaf Tickseed (Coreopsis).

Ten species of native goldenrods support 77 moths and butterflies, 93 specialist bees, 15 other insects, and 6 birds. – Doug Tallamy



Sue Williams

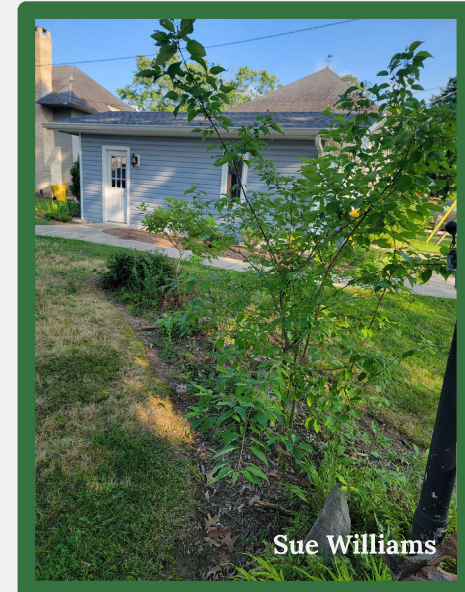


How Do I Go Native?

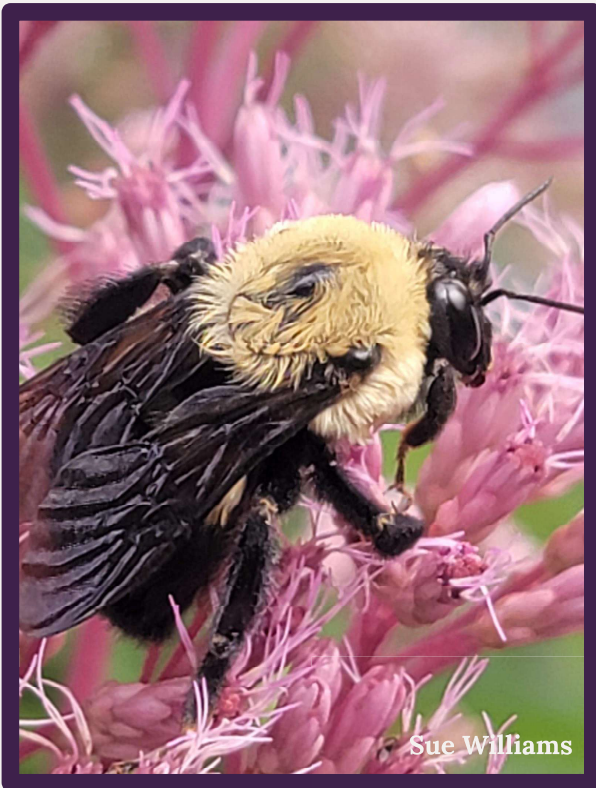


Increasing Biodiversity in Your Yard

- Remove invasive species that take space away from native plants.
- Remove your lawn, a little at a time.
- Avoid pesticides and herbicides.
- Add native plants to provide food, shelter and nesting space.



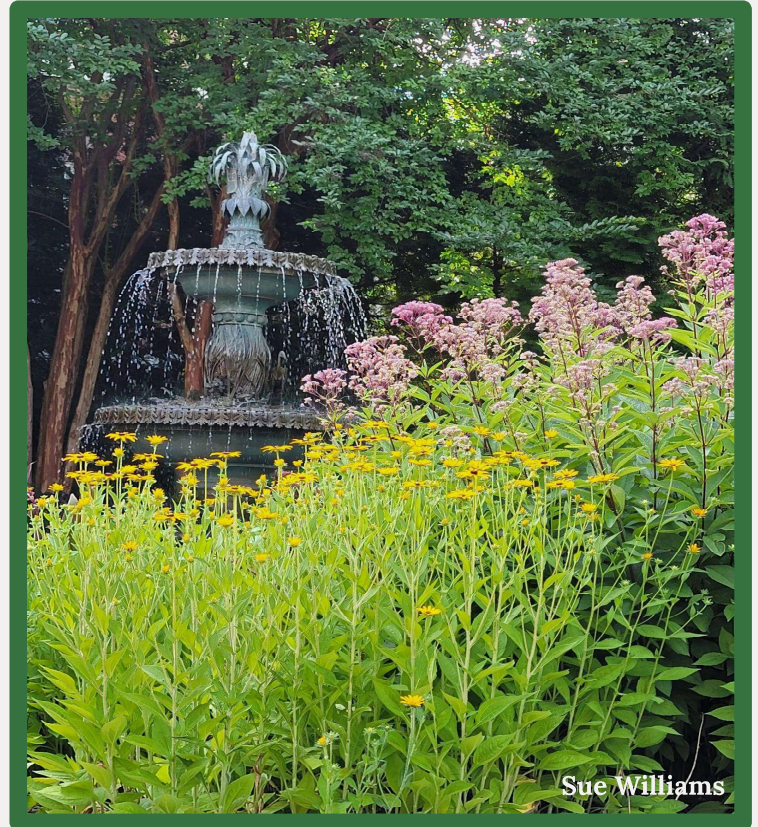
How Do I Choose Native Plants?



Right Plant, Right Place

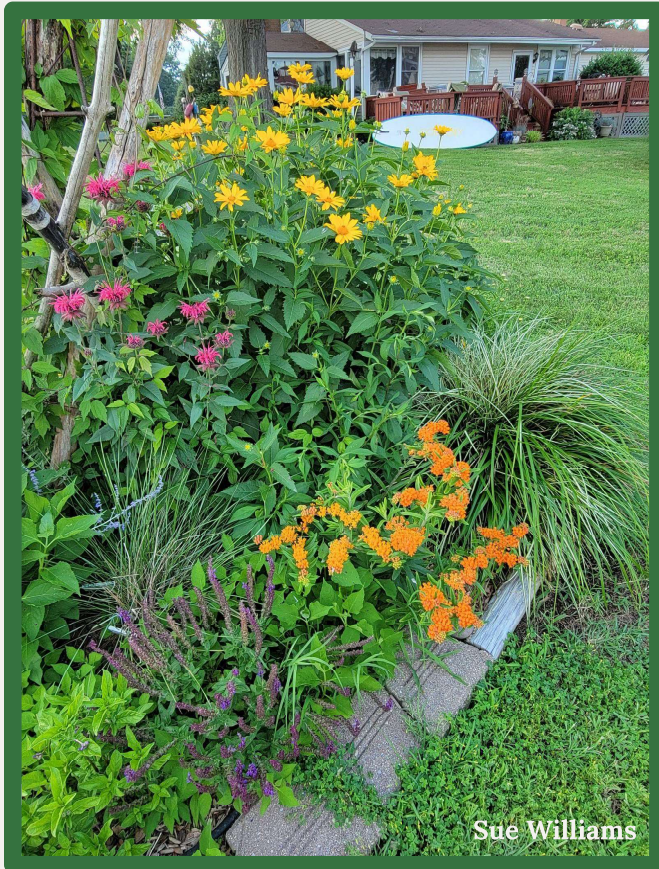
Things to consider:

- Seasonality
- Light: sun/part/shade
- Soil type: clay/loam/sand
- Soil moisture
- Space availability
- Planting in drifts
- Surrounding area
- Proximity to water
- Sociability
- Start small!



Sue Williams





Sun

- 6+ hours of direct sunlight.
- Focus on seasonality.



Part Sun versus Part Shade



Part Sun: 4-6 hours, primarily sun in pm

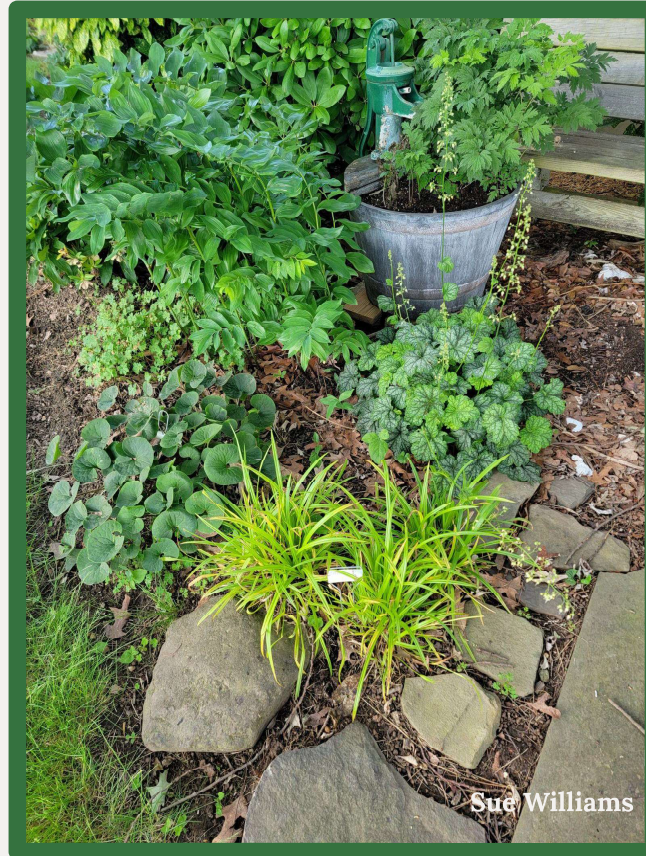


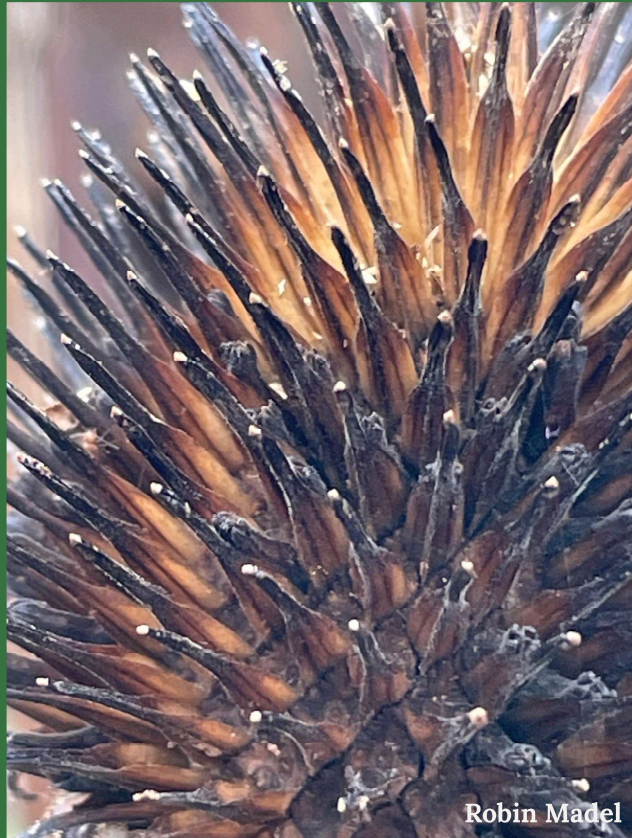
Part Shade: 4-6 hours, primarily sun in am



Shade

- Less than 4 hours of direct sunlight.
- Focus on texture rather than flowers.





Robin Madel

Sociability

Plant Sociability Index (Benjamin Vogt):

- 1: Plant is primarily a behaved clumper that stays where it is, only growing in stature over time.
- 2: Plant will creep or self sow lightly.
- 3: Creeping is moderate or self sowing is more liberal but it won't take over.
- 4: In 5 years, the plant will easily dominate the landscape.

<https://www.monarchgard.com/thedeepmiddle/using-sociability-rankings-for-successful-natural-garden-design>



Community Gardens

Wilds Ones is involved with
all types of **Community Gardens**
in the five **Southern Maryland Counties**.

Schools
Churches
Libraries

Animal Shelters
Museums
Parks



Pollinator Gardens



Butterflies and Moths need **TWO** kinds of plants to complete their life cycle.

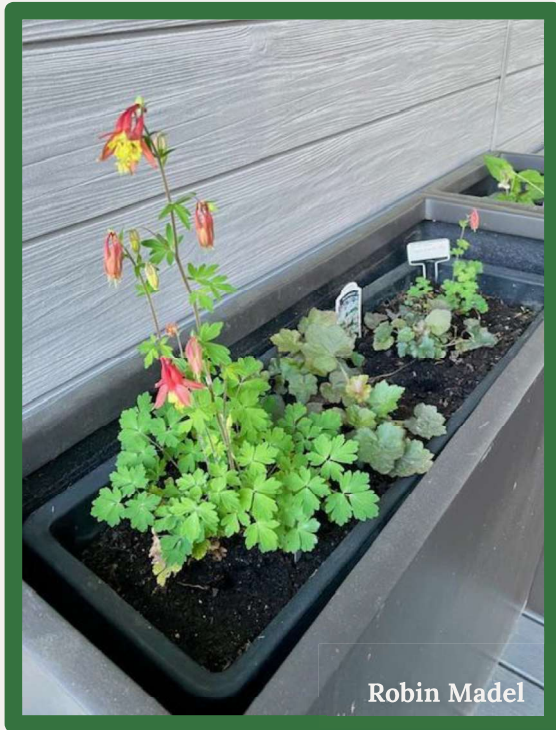
HOST PLANTS are those needed for the developing caterpillar. (Think Milkweed and Monarchs)

NECTARING: Adults butterflies and moths need food (nectar).

Sometimes these are **NOT THE SAME SPECIES**.



Container Gardens



Shade



Sun



Rain Gardens

Rain gardens collect and soak up water that flows off hard or impermeable surfaces like a rooftop or a driveway. They can improve water quality, decrease flooding and increase property values.

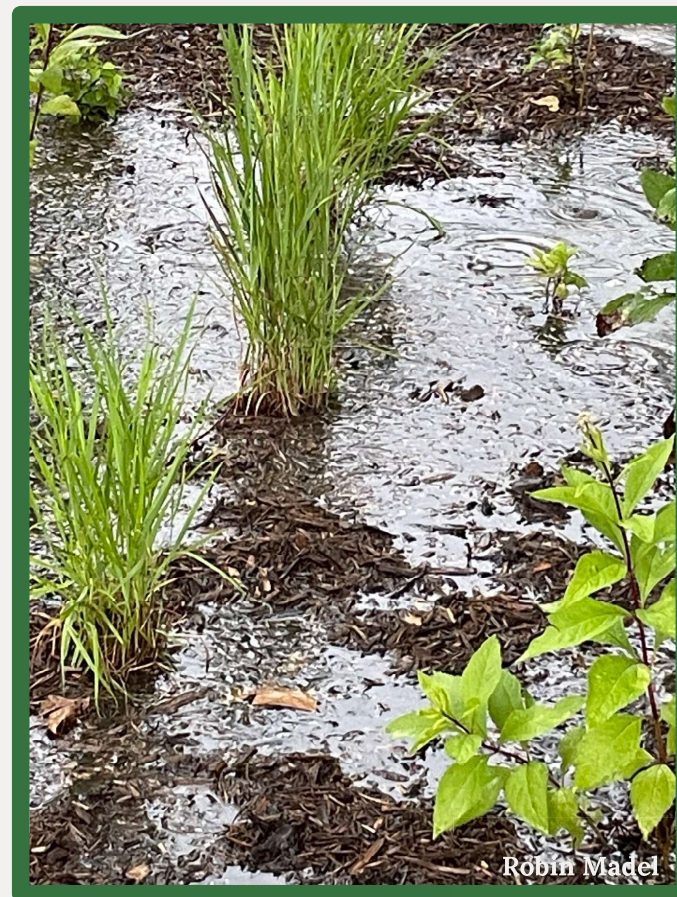
- Typically designed as shallow depressions that contain loose or permeable soil, mulch, sometimes stone, and native plants;
- Plants take up water;
- Beds hold water for up to 48 hours, allowing it to absorb slowly into the ground instead of running off into surface water sources; and
- Rain gardens are **NOT** ponds or water gardens.

The UMD Extension Office how-to manual: **Rain Gardens Across Maryland**

<https://extension.umd.edu/sites/extension.umd.edu/files/publications/Rain-Gardens-Across-Maryland.pdf>

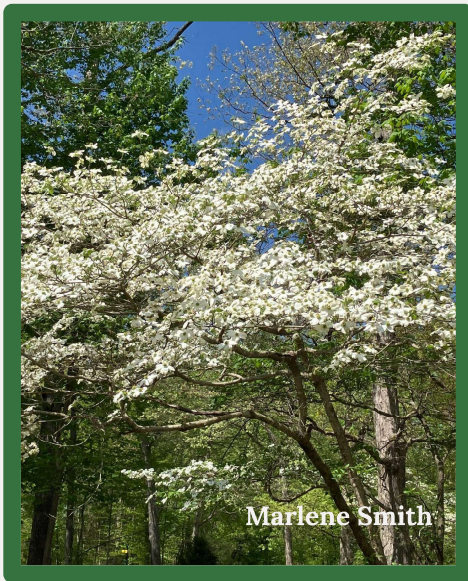


Rain Gardens

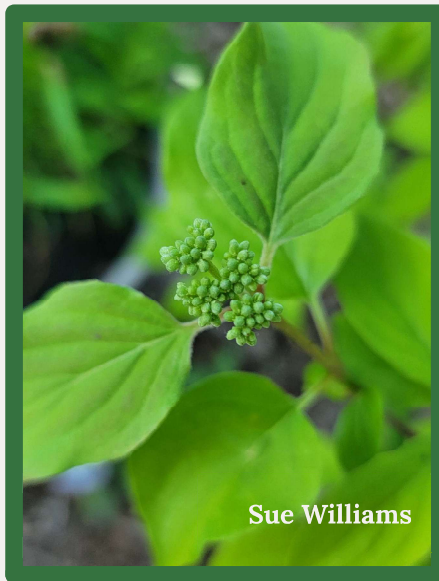


Understory Trees and Shrubs

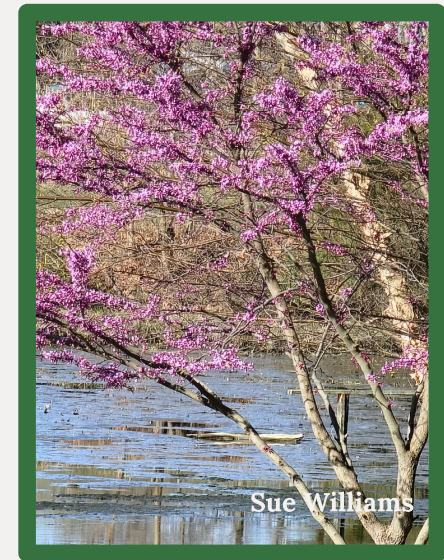
Understory trees are shade-tolerant trees that grow under the crowns of taller trees, typically between 15 and 50 feet tall. They are often stunted by lack of light, and can include small trees, shrubs, vines, and saplings. They are often found at the edges of mature forests.



Cornus florida
Flowering Dogwood



Cornus racemosa
Gray Dogwood



Cercis canadensis
Redbud



Ground covers



Native Violets are often thought of as weeds, but they are pollinator plants and serve as a perfect green mulch. In addition, different insects use violets in different ways.

- Caterpillars of several fritillary butterflies feed on violet foliage.
- Various insects pollinate the flowers, which also serve as food sources for bees, butterflies, moths, birds and small mammals.



Responsible Sourcing

Local Ecotype Natives - sometimes referred to as LEN (e.g., Chesapeake Natives)

Plugs - smaller plants but economically feasible to cover large spaces (e.g., Butterfly Alley and Providence Center)

Cultivar vs. Straight species - if it has a name in English, e.g., 'Jacob Kline' it is a cultivar (e.g., Mt. Cuba extensive research on Cultivars)

Scientific name vs common name - know which plant species you're talking about (e.g., Bottle Brush Grass - non-native vs native)

Native Plant Swap/Share/Sales - many locally (e.g., Cape Conservation Corp Fall Native Plant Sale)

Native Plant Nurseries - Native plant nurseries approved by the Maryland Native Plant Society
<https://mdflora.org/nurseries.html>

Maryland's Best - Native plant nurseries verified by the Maryland Native Plants program
<https://marylandsbest.maryland.gov/maryland-native-plants-for-consumers/>



Connect With US

Wild Ones Chesapeake Bay:
Robin Madel
Sue Williams

Email: wildoneschesapeakebay@gmail.com
Website: chesapeakebay.wildones.org
Facebook Group: Wild Ones Chesapeake Bay

Take Our Survey



Save the Date

From Bloom to Buzz:

Protecting Pollinators and Beneficial Insects Amid Climate Change

Madeline E. Potter, M.S.

Faculty Specialist for Entomology & IPM
University of Maryland Extension
Home and Garden Information Center
mpotter@umd.edu

UNIVERSITY OF
MARYLAND
EXTENSION



HOME & GARDEN
INFORMATION CENTER

*Save the Date
September 23*



Google Maps

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