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# What Will Be Covered?

- Honey Bees: Cultural not Ecological
- There are a lot of Species out There
- Native plant Diversity = Diversity of Native Bees
- It is all about Plants, but not about Planting
- Simple Steps for Better Bee (and the insect nation) Habitat Support

Not one Person in the U.S. does NOT know the  
Honey Bee  
The Honey Bee = Not Like Our Native Species  
*not even a little bit*



Having more flowers: Not a stinging issue,  
not an allergy issue



*Halictus  
ligatus* –  
Gone crazy  
on Sunflower  
Pollen



# ~4000 Species of Bees North of Mexico

- 450+ species in Maryland
- ~300 species in P.G. Co.
- Every yard has access to 100 species





# Linking Habitat to Bees



Bees are picky eaters, most only use pollen from only a few plant species



*Megachile mendica*

[https://jarrodfoowler.com/specialist\\_bees.html](https://jarrodfoowler.com/specialist_bees.html)

Family: Subfamily: Tribe: Subtribe	Genus (Subgenus) species	Authority	Recorded states	Status	Season	Host plant Family / Genera
<u>Andrenidae: Andreninae</u>	<i>Andrena</i> ( <i>Callandrena</i> s.l.) <i>accepta</i>	Viereck, 1916	FL-LA-MD-MS-NC-NJ-NY-SC-VA	Rare	Fall	<u>Asteraceae</u> , e.g. <i>Helianthus</i> L.
	<i>Andrena</i> ( <i>Callandrena</i> s.l.) <i>aliciae</i>	Robertson, 1891	CT-DE-GA-MA-MD-NC-NJ-NY-PA-SC-VA-WV	Rare	Summer	<u>Asteraceae</u> , e.g. <i>Helianthus</i> L.
	<i>Andrena</i> ( <i>Parandrena</i> ) <i>andrenoides</i>	(Cresson, 1878)	AL-FL-GA-MD-NC-NJ-NY-SC-VA	Rare	Spring	<i>Salix</i> L.
	<i>Andrena</i> ( <i>Scaphandrena</i> ) <i>arabis</i>	Robertson, 1897	CT-DE-MA-MD-NC-NJ-NY-PA-VA-WV	Uncommon	Spring	<i>Arabis</i> L., <i>Cardamine</i> L.
	<i>Andrena</i> ( <i>Callandrena</i> s.l.) <i>asteris</i>	Robertson, 1891	AL-CT-DE-GA-MA-MD-ME-MS-NC-NH-NJ-NY-PA-RI-VA-VT-WV	Common	Fall	<i>Solidago</i> L., <i>Symphytotrichum</i> Nees
	<i>Andrena</i> ( <i>Callandrena</i> s.l.) <i>asteroides</i>	Mitchell, 1960	AL-GA-MD-MS-NC-NJ-PA-SC-VA	Rare	Fall	<i>Symphytotrichum</i> Nees
	<i>Andrena</i> ( <i>Thysandrena</i> ) <i>bisalicis</i>	Viereck, 1908	AL-CT-DE-GA-LA-MA-MD-ME-MS-NC-NH-NJ-NY-PA-RI-SC-VA-VT-WV	Common- Uncommon	Spring	<i>Salix</i> L.
	<i>Andrena</i> ( <i>Callandrena</i> s.l.) <i>braccata</i>	Viereck, 1907	CT-GA-MA-MD-ME-NC-NH-NJ-NY-PA-RI-VA	Common-Rare	Fall	<i>Euthamia</i> Nutt. ex Cass., <i>Solidago</i> L.
	<i>Andrena</i> ( <i>Conandrena</i> ) <i>bradleyi</i>	Viereck, 1907	CT-DE-GA-MA-MD-ME-NC-NH-NJ-NY-PA-RI-SC-VA	Common- Uncommon	Spring	<u>Ericaceae</u> , e.g. <i>Gaylussacia</i> Kunth, <i>Vaccinium</i> L.
	<i>Andrena</i> ( <i>Cnemidandrena</i> ) <i>canadensis</i>	Dalla Torre, 1896	CT-MA-ME-MS-NC-NH-NJ-NY-RI-VA-VT	Common- Uncommon	Fall	<u>Astereae</u> , e.g. <i>Solidago</i> L.
	<i>Andrena</i> ( <i>Andrena</i> ) <i>carolina</i>	Viereck, 1909	AL-GA-CT-DE-MA-MD-ME-NC-NH-NJ-NY-PA-RI-VA-WV	Common- Uncommon	Spring	<u>Ericaceae</u> , e.g. <i>Vaccinium</i> L.
	<i>Andrena</i> ( <i>Cnemidandrena</i> ) <i>chromotricha</i>	Cockerell, 1899	NC-NY-PA-WV	Rare	Fall	<u>Asteraceae</u>
	<i>Andrena</i> ( <i>Andrena</i> ) <i>clarkella</i>	(Kirby, 1802)	CT-MA-ME-NH-NY-RI-VT-WV	Common-Rare	Spring	<i>Salix</i> L.



# First Simple Priority Changing how you mow



Work in Progress: Quantify what plants you have;  
you can then quantify your impact on insects,  
wildlife, and pollinators



Mowing Contracts: Acreages converted to winter mowing = Acreages of Pollinator Meadow you created





Diversity of **Native** Plants  
= Diversity of **Native** Bees



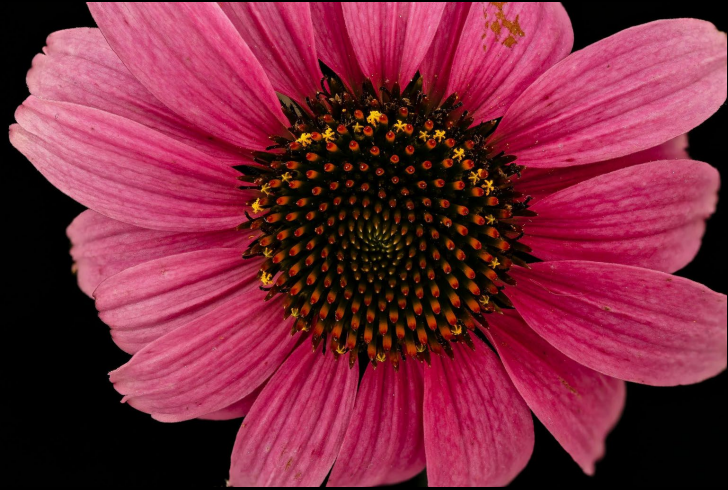


Feather the edge: One mower deck





# Forbs not Grasses (Note: Grasses = Allergies)





# Herbicide only invasives and trees





Remove Invasives from the edges too





# Manage for Shrubs





# Sandy Soils Particularly Important



Most bees nest in the ground as single moms  
Leaving some spots bare/thin is good



*Augochlorella aurata*



# No Birds No Bees



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Gci turf academy from web





All photos by Beth  
Burrous at Glenstone





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