CONSERVATION STEWARDSHIP PROGRAM HANDBOOK 2026

THE CITY OF COLUMBUS RECREATION AND PARKS

Contents

Introduction to Columbus Recreation and Parks Department

Background

Welcome to your Columbus Recreation and Parks Department. What we do is essential to the overall well-being of our community. In addition to just being fun, our parks, programs and services give all of us a chance to improve our physical and mental health to develop our youth, to focus on our environment, and to make a positive impact on our city.

The Department maintains over 400 parks, which includes 25 nature preserves, spanning more than 14,000 acres throughout the City. There are a multitude of engaging activities and services for people of all ages offered by Columbus Recreation and Parks Department – none of which would be possible without the help of nearly 11,000 volunteers who offer their time to the Department each year. Volunteering with the Department is a rewarding way to give back to the City you love and help make our parks safe, open and diverse places for everyone to enjoy. Your efforts are appreciated by the department, the community and those thousands of annual visitors to our parks.

Our Mission

We connect the people of our community through the power of **nature, wellness and creativity.**

Values

- **Joy:** Our programs and activities are fun, celebrate culture and add to our quality of life.
- **Nature:** As stewards of the land, we invest heavily in conserving our natural environment.
- **Legacy:** Our assets are entrusted for generations to come, which is why we plan for tomorrow, not just today.
- **Community:** We embed in our neighborhoods, know our participants and serve as a gathering place for all.
- **Open:** We communicate in multiple languages, design for accessibility, program for inclusion and hire to represent the people we serve.

Contact Information

Conservation Stewardship Coordinators

Jenny Doan, Environmental Planner II**……..……..614-273-4524**

- Available Monday through Friday
- Texting optional

Pam Steck, Conservation Horticultural Specialist II**……..614-483-6213**

- Available during daylight hours
- Texting optional

Alaina Reimer, Development Representative**……614-645-7515**

- Available Monday through Friday
- Texting not available

City of Columbus Resources

Emergency……...DIAL 911

Police Non-Emergency……614-645-4545

311……..…614-645-3111

Overview

What is the Conservation Stewardship Program?

The Conservation Stewardship Program is a volunteer program led by Columbus Recreation and Parks Department's Conservation Section to serve as an extension of our current volunteer offerings. Opportunities within the Conservation Stewardship Program include community science and natural resource management.

The goal of the Conservation Stewardship Program is to connect passionate individuals interested in nature, the environment, and conservation and to empower community members to participate in self-led volunteer work in community science and/ or natural resource management. The Conservation Stewardship Program is intended for routine and reoccurring volunteer work throughout the season.

If you are unable to commit to routine and reoccurring volunteer work, we have other ways for you to positively impact our community. If you are an individual interested in drop-in volunteer opportunities, please visit Columbus Recreation and Parks' VolunteerHub. If you are a corporate group, school, or organization that is interested in scheduling a volunteer event at a CRPD park or facility, please complete the group volunteer request. If you have questions about generally volunteering with Columbus Recreation and Parks, please email volunteers@columbus.gov. We appreciate your interest in volunteering with us.

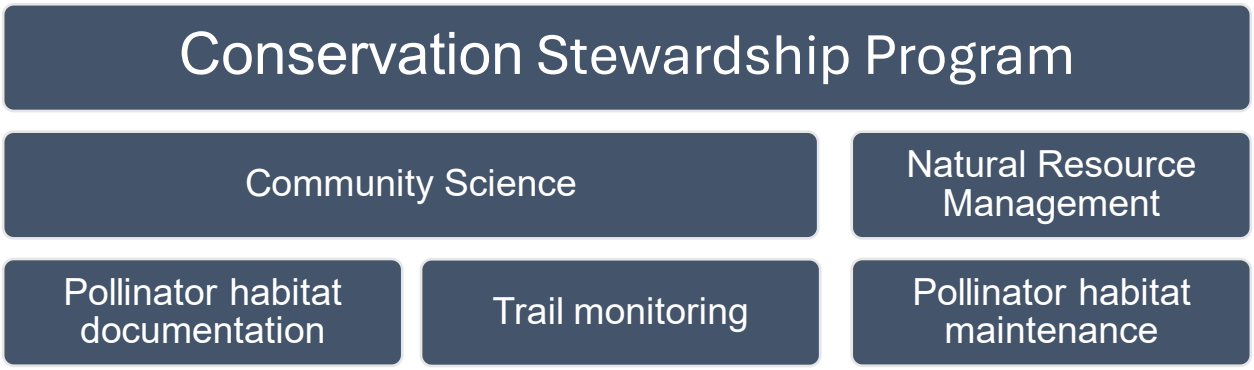
Why Become a Conservation Steward?

Columbus is the 14th largest city in the United States! Increasing development and density within Columbus means that maintaining and creating green space for people to enjoy and for wildlife to inhabit is increasingly important. Volunteering allows you to better connect to your community and have a positive impact on our community and our planet.

Benefits

Becoming a Conservation Steward means helping Columbus Recreation and Parks Staff with ecological restoration but it is also so much more!

- Conservation Stewards will have free core training on invasive and native plant species identification (covered in the Conservation Stewardship Program Training Session).
- Work with the Department's Conservation Section and other Conservation Stewards with similar commitments to conservation.
- Play a key role in caring for Columbus Parks!



Conservation Stewardship Program

The Conservation Stewardship Program is a volunteer program led by Columbus Recreation and Parks Department's Conservation Section that provides hands-on experience and training in community science and natural resource management within CRPD parks.

Community Science – Everyone can get involved in collecting data that makes a difference!

- Pollinator habitat documentation – Explore different pollinator habitats and connect further with nature by observing and identifying plant and pollinator species!
    - Volunteers record plant and pollinator species at pollinator habitats across various parks. Data collected from surveys helps assess the quality of pollinator habitats which informs current and future maintenance and expansions.
- Trail monitoring – Do you find yourself frequently using our trails or would like to explore more trails? This route is great for those who would like to create a positive impact just by sharing what you see!
    - Volunteers monitor trail conditions and report findings to the Department's Conservation Section.

Natural Resource Management – Help manage the spaces that we love and see the impact!

- Pollinator habitat maintenance – Want to be more involved in your local pollinator habitat by getting your hands a bit dirty?
    - Volunteers remove invasives and weeds within pollinator habitats.

Conservation Stewardship Opportunities

Detailed roles and responsibilities allow potential Conservation Stewards (Volunteers) to determine whether an opportunity fits their interests, skills and schedule. They are also critical for effective risk management and serve as an agreement between the organization and the volunteer. Review the protocol for each opportunity you are interested in.

Community Science Opportunities

Pollinator Habitat Documentation	
Purpose:	To record plant and pollinator species at pollinator habitats across various parks. Data collected from surveys helps assess the quality of pollinator habitats which informs current and future maintenance and expansions.
Requirements:	• All volunteers must sign a yearly liability waiver (through VolunteerHub). • Attend an in-person OR virtual training session held by Columbus Recreation and Parks staff.
Training Materials:	• Pollinator Habitat Documentation Protocol • Pollinator Habitat Documentation Training Slides
Duties:	• Record pollinator and plant species in iNaturalist and Survey123 by walking at least one fixed route in a Columbus Recreation and Parks pollinator habitat.
Qualifications:	• If under 18 years old, must be with an adult when onsite. • Ability to be comfortable working outdoors. • Ability to follow direction of Columbus Recreation and Parks staff. • Demonstrate tact and diplomacy when working with the public.
Equipment:	Mobile device able to take photos and run the iNaturalist App. Optional Materials – watch, pencil and paper (for notes), pollinator and plant guides/ list/ ID Key.
Season:	May through September.

Trail Monitoring – **COMING SOON!**	
Purpose:	To help CRPD staff provide a safe and enjoyable experience for park visitors by acting as a communications link between trail users and staff, by alerting staff to potential problems and hazards.
Requirements:	• All volunteers must sign a yearly liability waiver (through VolunteerHub). • Attend a virtual training session held by Columbus Recreation and Parks staff.
Training Materials:	• Trail Monitoring Protocol • Trail Monitoring Training Slides
Duties:	• Assist CRPD Staff by reporting issues/ hazards on the trails. • Maintain a courteous attitude while volunteering. • Follow park rules and regulations and set a good example for park visitors.
Qualifications:	• If under 18 years old, must be with an adult when onsite. • Ability to be comfortable working outdoors. • Ability to follow direction of Columbus Recreation and Parks staff. • Demonstrate tact and diplomacy when working with the public.
Equipment:	Mobile device able to run Survey123.
Season:	Year round.

Natural Resource Management Opportunities

Pollinator Habitat Maintenance	
Purpose:	To help maintain our pollinator habitats through the removal of invasives and weeds and planting of native plant species.

Requirements:	• All volunteers must sign a yearly liability waiver
	• Must complete a background check (through VolunteerHub).
	• Complete a two-part training
	  ○ Part One: Virtual training session led by Columbus Recreation and Parks Staff (to be offered annually).
	  ○ Part Two: In person hands on training led by Columbus Recreation and Parks Staff.

Training Materials:	• Pollinator Habitat Maintenance Protocol • Pollinator Habitat Maintenance Training Slides (Part One) • Education Materials – Tool use/ Equipment (in Conservation Stewardship Handbook)
Duties:	• Remove woody invasive plant species from pollinator habitats. • Remove non-woody (herbaceous) invasive plant species from pollinator habitats. • Remove non-invasive woody plant species “volunteer trees” within pollinator habitats. • Litter clean-up within and surrounding pollinator habitats. • Seeding within the pollinator habitats. Please only participate in activities that are within your own limits.
Qualifications:	• Possess an interest in nature and ecology. • Ability to follow direction of Columbus Recreation and Parks staff. • Demonstrate tact and diplomacy when working with the public. • Be able and willing to travel to your chosen pollinator habitat site. • Be physically able and willing to use tools and perform moderately strenuous activities to remove invasive plants. • Be personable and detail-oriented; have good communication and recordkeeping skills.
Equipment:	Loppers, soil knives, spades, hand pruners, pruning saws, hand tillers, tarps and gloves.
Season:	March through October.

Education Materials

Please read and refer to the following education materials.

Safety

We ask that Conservation Stewards **only do as much as you are comfortable and only operate within your own limits.**

Please be safe!

- Only complete volunteer work in daylight hours.
- We recommend using the buddy system and not being in parks alone. If you are alone, please notify someone you know where you will be and during what time.
- Be mindful and pay attention to your surroundings
    - If you see signs of homeless activity, please submit a 311 request and notify the Conservation Stewardship Coordinators. Do not touch or try to remove those belongings.
    - If you see someone doing illegal activity, please call 911 if someone is in immediate danger.
    - If you feel uncomfortable, please leave immediately.
    - If there is any type of incident - notify the Conservation Stewardship Coordinators.

Weather

Always monitor the weather prior to stewardship work. Columbus Recreation and Parks operate rain or shine, but events are canceled, postponed, or rescheduled with severe weather (i.e. thunderstorms). If you hear thunder or see lightning that was not forecasted, seek shelter immediately. Notify the Conservation Stewardship Coordinators if you had to cancel a Stewardship Workday due to weather

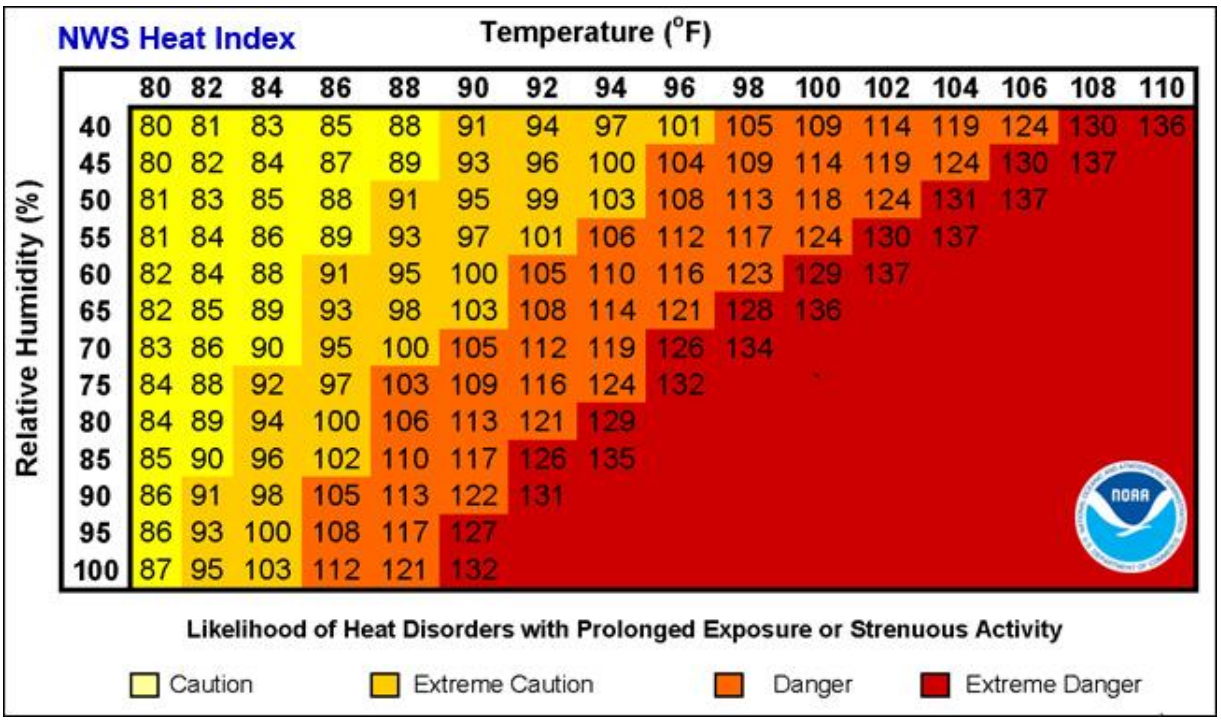
- If the weather is too dangerous to clean up – supplies, yard waste, or brush – when you are in a safe area, notify the Conservation Stewardship Coordinators that supplies were left.

Precipitation

- If future forecasts indicate clear weather or light rain, and workable temperatures, Stewards may proceed as planned.
- If future forecasts indicate lightning, thunderstorms, or heavy rain, then reschedule.

Heat

Stewards should exercise caution when working in the heat.



Reference the chart below to follow the OSHA guidelines for work/rest schedules – for every x minutes of work, you'll rest for y minutes.

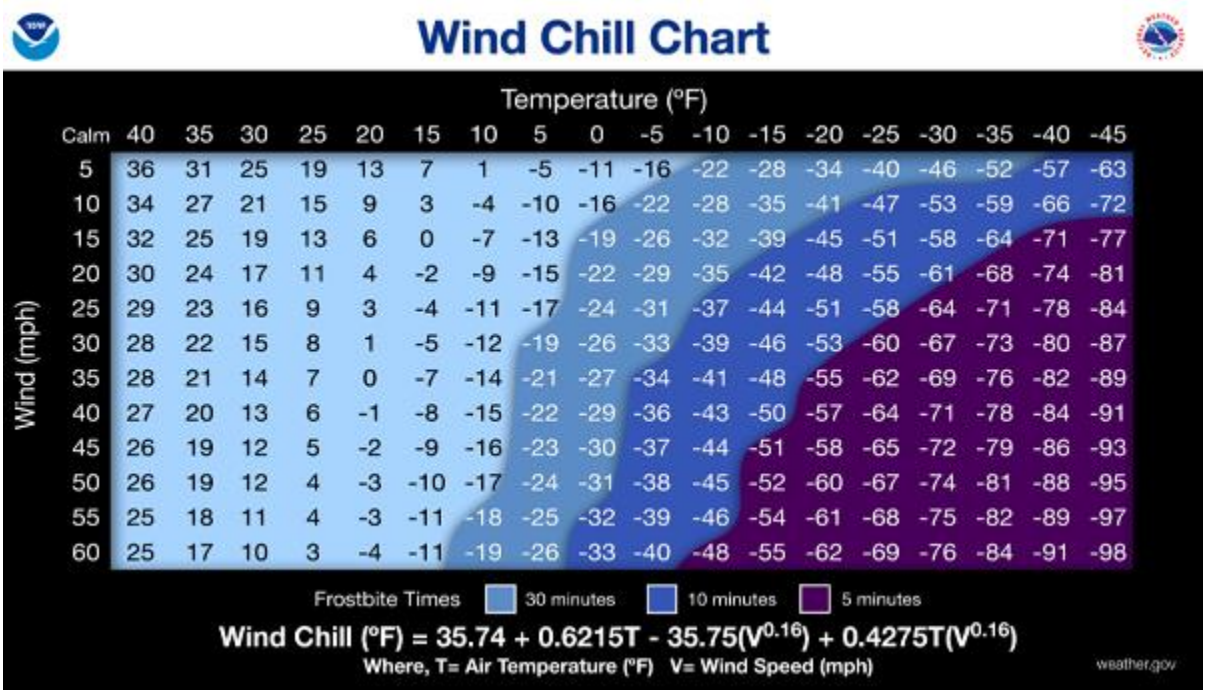
These schedules are based on the intensity of the work being performed.

- Stewards performing Community Science projects would be considered light work. If walking on difficult terrain, then follow the guidelines for moderate work.
- Stewards performing Natural Resource Management projects may be performing at any of the intensity levels. Using small hand tools like pruners would be light work. Using larger hand tools (shovels, hand saws, loppers, etc.) for short periods is considered moderate work, while using larger hand tools for extended periods is considered heavy work.

Temperature (°F)	Light Work Minutes Work/Rest	Moderate Work Minutes Work/Rest	Heavy Work Minutes Work/Rest
90	Normal	Normal	Normal
91	Normal	Normal	Normal
92	Normal	Normal	Normal
93	Normal	Normal	Normal
94	Normal	Normal	Normal
95	Normal	Normal	45/15
96	Normal	Normal	45/15
97	Normal	Normal	40/20
98	Normal	Normal	35/25
99	Normal	Normal	35/25
100	Normal	45/15	30/30
101	Normal	40/20	30/30
102	Normal	35/25	25/35
103	Normal	30/30	20/40

Cold

Stewards may work when the wind chill is at or above 25^{O}F (see the chart below), less than 1 inch of snow and without any precipitation.



Air Quality

Refer to the chart below for Air Quality Index (AQI) categories.

- When the AQI is green, Stewards may work as planned.
- When the AQI is yellow, proceed with caution.
    - Reduce levels of physical activity, especially strenuous and heavy work.
    - Increase the number of breaks especially if working more than 15 minutes.
- When the AQI is orange,
    - Stewards participating in Natural Resources Management projects should reschedule their work.
    - Stewards participating in Community Science may proceed with short tasks and/or increased breaks.
- When the AQI is red, purple, or maroon, Stewards should reschedule their work.

AQI Basics for Ozone and Particle Pollution

Daily AQI Color	Levels of Concern	Values of Index	Description of Air Quality
Green	Good	0 to 50	Air quality is satisfactory, and air pollution poses little or no risk.
Yellow	Moderate	51 to 100	Air quality is acceptable. However, there may be a risk for some people, particularly those who are unusually sensitive to air pollution.
Orange	Unhealthy for Sensitive Groups	101 to 150	Members of sensitive groups may experience health effects. The general public is less likely to be affected.
Red	Unhealthy	151 to 200	Some members of the general public may experience health effects; members of sensitive groups may experience more serious health effects.
Purple	Very Unhealthy	201 to 300	Health alert: The risk of health effects is increased for everyone.
Maroon	Hazardous	301 and higher	Health warning of emergency conditions: everyone is more likely to be affected.

Apparel

Appropriate attire must be worn. Long sleeve shirts and pants made from durable material are recommended. Leggings are not permitted as a primary layer, as they are easily snagged when working in tall vegetation, but may be used as a base layer beneath durable clothing. Boots, mid-to-tall, should be worn, as well as socks that can cover the hem of your pants. Hats and sunglasses are recommended.

Sunscreen is strongly recommended. Follow the manufacturer’s instructions.

First Aid

If a first aid kit is needed, it can be borrowed through the Keep Columbus Beautiful (KCB) Tool Library. A first aid kit should be checked, complete and large enough for the crew and the job at

hand. Above all, it should be taken along while on the job, and crew members advised of its location. Professional assistance may be hours away. Stewards working independently should always carry a first aid kit while volunteering.

Any Stewards who have been prescribed or directed by a medical professional to use allergy medicine, an inhaler, EpiPen, etc. should use them as directed and have them available in the event of an emergency.

Hydration

Stewards are encouraged to bring water bottles. During strenuous activities, excessive heat, and/or long periods in the sun, Stewards should:

- Hydrate before, during, and after work.
- Drink 1 cup of cool water every 20 minutes – even if you aren't thirsty.
- Avoid energy drinks.

Water is recommended, but you may opt for (or need) an electrolyte-containing beverage.

Symptoms of dehydration include dark and strong-smelling urine, pain when urinating (UTIs), dry mouth/lips/eyes, thirst, dizziness, headaches, tiredness, lack of concentration.

Pest Prevention

Insect and Animal Safety

Stewards may encounter a variety of creatures which pose safety hazards ranging from minor inconveniences to potentially life-threatening situations. Common sense and a general awareness of your surroundings are your best defenses.

Insects and Chiggers

- Avoid sitting on rotten logs or stumps. Spiders and ants often use them for homes.
- Wearing long-sleeved shirts, socks, and long pants will help guard against many stinging insects.
- "Bee" aware that not all stinging insects nest in trees. Some bees and other stinging insects nest underground and will become disturbed by earth-moving activities.
- Many stinging insects become more aggressive in the fall.
- Insect repellents containing DEET or Picaridin may help protect against biting or stinging insects. **Please exercise caution when applying insect repellents, especially those containing DEET, which is lethal to amphibians. Apply at a safe distance, and downwind of streams/ponds/wetlands, and follow the manufacture's application recommended application rates.** Over-application *does not* mean more protection.
- If you know you are allergic to insect bites and stings, take the proper medication with you while in the pollinator habitats and other natural areas, and seek proper medical attention immediately if you are stung or bitten.

Snakes

- Wearing sturdy leather gloves and boots at least 10 inches high are good precautions when hiking or working in snake country.
- Do not put your hands or feet into areas you cannot see, such as brush piles or rock crevices.
- All snake bites, whether venomous or not, should receive immediate medical attention. Keep the victim as calm and quiet as possible, keep the wound site inactive and positioned below the level of the heart, and transport the victim to a hospital immediately.

Other Animals

- Do not handle or approach wildlife. Young animals that appear to be abandoned should be left where they are. Resist the temptation to "rescue" young animals.
- Some wildlife such as foxes, skunks, raccoons, and other mammals commonly contract diseases or illnesses such as rabies or mange and may lose their natural fear of humans. Avoid any animal that is encountered, especially those which appear ill, agitated, or disoriented. For help with wildlife-related issues contact a Wildlife Officer.
    a. Ohio Department of Natural Resources (ODNR) Wildlife Customer Service Center
        i. Available Monday through Friday from 8:00 am to 5:00 pm EST to help you with your questions about wildlife, licenses, and regulations.
        ii. 1-800-WILDLIFE (800) 945-3543
        iii. wildinfo@dnr.ohio.gov
    b. ODNR Franklin County Wildlife Officer Contact Information (for questions regarding specific county matters)
        i. Mark Williams
        ii. (614) 902-4212
    c. Ohio Wildlife Center
        i. If you have found a wild animal and need to know how to help it, please follow the questions here (https://www.ohiowildlifecenter.org/found-an-animal/). You'll have a solution in less than three minutes as you walk through these simple questions and answers.
            - To reach a wildlife expert in Central Ohio:
                a. Contact our automated Wildlife Information Line: 614-793-9453
                b. By providing your phone number, you are consenting to receive calls or SMS messages

References: OSHA Quick Card- Rodents, Snakes and Insects: http:///www.osha.gov/Publications/rodents_snakes_insects.html

Tick-borne Disease Prevention

The best defense against tick-borne diseases is to invest time and effort to protect yourself from tick bites. The most common symptoms of tick-borne disease include fever/chills, aches and pains, and rashes, there are many more symptoms of tick-borne diseases that are often disease-specific, for more information, please check the CDC website or ask your healthcare provider. Symptoms appear at different times after a tick bite depending on the disease; the most common tick-borne diseases reported in Ohio and when symptoms appear are:

- Anaplasmosis: 5-21 days after blacklegged tick (deer tick) bite
- Babesiosis: 7-56 days after blacklegged tick (deer tick) bite
- Ehrlichiosis: 5-10 days after lone star tick bite
- Lyme disease: 3-30 days after blacklegged tick (deer tick) bite
- Rocky Mountain spotted fever: 5-10 days after American dog tick bite

Rare tick-borne diseases in Ohio include:

- Powassan virus: 1 week to 1 month after blacklegged tick (deer tick) bite
- Southern tick-associated rash illness (STARI): within one week after lone star tick bite
- Tularemia: 3-14 days after American dog tick and lone star tick bites
- Alpha-gal Syndrome: 2-6 hours after eating meat or dairy products because of a lone star tick bite – *Note: Alpha-gal Syndrome was included on this list due to increased awareness about the disease*

Contact your healthcare provider if symptoms develop. Tell them if you have a tick bite or found a tick on you and tell them about your outdoor activities.

Ticks prefer areas with brush and tall grass, especially ecotones, which are transitional areas between two habitats. While it may be impossible to avoid contact with ticks altogether, these guidelines will decrease your chances of being bitten by a tick.

- Use insect repellent with 20% - 30% DEET on exposed skin and clothing to prevent tick bites.
- Wearing long pants, long sleeves, and long socks will help keep ticks off your skin - Wear light colored clothing to spot ticks more easily.
- Tuck in shirts, and tuck pants legs into socks or boot tops to help keep ticks on outside of clothing.
- If you will be in tick-infested habitat for extended periods, you may consider taping shut the area where your pants and socks meet for added protection.
- Perform periodic “tick checks,” while outside and inspect yourself thoroughly at the end of your outing using a hand held or full-length mirror to view all parts of your body - Remove imbedded ticks with fine-tipped tweezers—monitor yourself for symptoms of Lyme disease (bulls-eye rash, fatigue, fever, soreness, etc.)—consult your physician if you suspect the onset of Lyme disease.

References: Center for Disease Control:
http://www.cdc.gov/ncidod/dvbid/LYME/Prevention/ld_Prevention_Avoid.htm
Ohio Department of Health:
https://odh.ohio.gov/know-our-programs/zoonotic-disease-program/diseases/tickborne-diseases

Poison Ivy

- Poison Ivy grows in different forms; sometimes it is a shrub, sometimes as a plant low to the ground, sometimes as a vine climbing upward (especially on trees).
- Poison Ivy has compound leaves containing three leaflets with coarsely serrated margins and pointed tips. The center leaflet has a longer stem than the two side leaflets. Vines climbing up trees have visibly hairy roots, mature vines can be quite thick.
- Some people are extremely allergic to poison ivy. If seen, others should be alerted to its location, so they can avoid it. A line of Technu® products, available in most drug stores, can help prevent contracting the poison. It is recommended to wear gloves and long-sleeved shirts when working in areas of Poison Ivy.

For more information on Poison Ivy and other poisonous plants, go to the Centers for Disease Control and Prevention web site at www.cdc.gov/niosh/topics/plants.

Tool use/ Equipment

Tool & Equipment Use/ Inspection, Care and Safety

1. Use a tool of the right size - There are various tools available in different sizes and capacities. Before you start using any tools, you must properly assess the stock in question. Try to avoid using tools that are too big for the project and never use a tool that is too small for the project, it exerts extra energy from the user, could cause user injury, and it can damage the tool.
2. Always work at a comfortable pace, rest when tired, and keep your mind on your work.
3. To provide each person with relief from the particular motion and effort required in using one tool, and to enable volunteers to learn new skills, swap tools occasionally and rotate tasks. Fatigue and wandering attention can result in an accident.
4. Inspect all tools before every use for defects and missing parts. Before you use a tool, inspect it thoroughly for any signs of damage. If any part of the tool is loose, bent or broken, or if there are missing blade teeth, you must not use it. Also ensure that no one else uses the tool by marking it as unsafe. Also, inspect tools at the end of the day. A tool that breaks in use can be extremely dangerous.
5. Keep tools clean - For the tool to operate properly, you must keep it clean at all times. Also inspect it for damage and have it repaired or replaced, as required.
6. Keep cutting tools sharp. Dull blades can bounce or glance uncontrollably and make work tiresome, increasing the likelihood of accidents caused by fatigue. If your tools are borrowed and dull, please notify the Conservation Stewardship Coordinators.
7. While working with a tool, always stand in a balanced position. Adjust your stance and tool grip continually to prevent slipping footholds and glancing blows. If the ground is wet, be especially careful. Stop work during rain showers.
8. While working with a tool, anticipate the consequences of every move. Avoid cutting toward any part of your body or another worker.
9. When carrying, loading, or storing a cutting tool, cover the blade with a sheath to protect the edge from being dulled and you and fellow maintainers from accidental cuts.
10. Store in a safe place - You must store your tools in a safe, enclosed place. Also, you must keep children away from the vicinity when you are operating a pruning saw.
11. When transporting tools in a vehicle, secure them to prevent bouncing, sliding, or shifting.
12. When passing a tool to another, always pass it handle first, release it only when the recipient has a firm grip.
13. When working in groups, maintain at least 10 feet between workers, so wild swings, flying chips, and tools slipping out of your hands do not injure others.
14. Carry tools at your side on the downhill side. Grasp the handle at about the balance point with the sharpened blade forward and down. Never carry tools over your shoulder or slung around your neck.
15. When leaving tools at a work site (flat areas), lay them against a stump or downed log with the blades directed away from passing volunteers. If on a slope, lay tools on the uphill side of the trail with heads uphill.
16. Always follow manufacturer's guidelines for inspection and safety features on any tool.

Specific Hand Tool Safety

Soil Knife

Uses: Soil knives feature a blade that is typically 6 inches in length. The knife is useful for digging, weeding, breaking up root bound transplants, and cutting/sawing through thin stems. Use a soil knife to uproot plants, or to dig holes when transplanting. Soil knives often feature a notch on one side of the blade that can be used to cut twine. The blades also often feature depth measurement markings, and a serrated edge on one side.
Tips: When weeding in tough soil or for extended periods of time, a soil knife is often more comfortable and easier to use than a hand trowel.
Safety: Soil knives can be sharp! Soil knives should be kept in a sheath when not in use. Wear gloves when using. Eye protection is also recommended.

Hand Trowel

Uses: Digging, scooping loose soil, weeding. Hand trowels are most useful for transplanting or transferring loose material, such as compost or soil, from one container to another. They can also be used for weeding if you prefer not to use a soil knife, or don't have one on hand.
Tips: When choosing a hand trowel, opt for one with a synthetic or metal handle, which will be less likely to degrade over time and cause potential injury.
Safety: Wear gloves while using, especially when digging in unfamiliar soil, to prevent injury from either the tool or errant rocks/glass/metal. While hand trowels are often not kept in a sheath, they should be stored in a dry place to prevent the edge from rusting.

Garden Rakes

Uses: In contrast to a leaf rake, garden rakes are hard, T-shaped rakes that are primarily designed for moving and breaking up soil. However, they can also be handy in moving mulch or recently cut vegetation, especially woody debris too heavy for a leaf rake.
Tips: The T-shape of the rake provides a flat top end which can be useful for breaking up clumps of soil.
Safety: Wear gloves when using to prevent blisters. Always lay a rake with teeth pointing down.

Spade/Shovel

Uses: Digging up plants by the root, digging holes for transplants, and turning soil. Use your body weight to aid you while digging. This can be achieved by using your foot to press the blade into soil, instead of relying on upper body strength.
Tips: If stored outdoors, spades should be set blade-end up against a wall or fence to prevent rust. However, always ensure the tool is stored securely and cannot be knocked over onto anyone.
Safety: Wear gloves to avoid blisters. Always be conscious of the blade when carrying to avoid accidentally striking others around you. Maintain a straight back and bend at the knees while lifting soil with this tool.

Litter Grabber

Uses: These tools are essential for collecting trash on site. Litter grabbers are typically designed with a clamp that is operated by squeezing a handle on one end.
Tips: Make sure you select a litter grabber that is long enough to relieve you from needing to bend over while collecting litter.
Safety: If you must collect a sharp item while doing maintenance, such as broken glass, always use a litter grabber, remain conscious of any other people in your proximity.

Wheelbarrow

Uses: Moving and dumping large amounts of soil or mulch. Can also aid in transporting other hand tools when walking long distances on site.
Tips: Ensure the front wheel of a wheelbarrow has sufficient air pressure. Operating a wheelbarrow with a poorly inflated tire can make it more difficult to push, and cause damage to the tool. Damage can also be done if too much weight is loaded into the bed of the wheelbarrow.
Safety: Load your wheelbarrow moderately; heavy loads will tire you quickly. Maintain a straight back and bend at the knees while using this tool. Be conscious of rough terrain, and wear gloves to prevent blisters.

Hand Tiller

Uses: Loosening compacted soil Pollinator Habitats and garden beds. Use the footplate to push the hand tiller into the ground and twist the handles.
Tips: Use the quick release to knock the soil loose from the hand tiller.
Safety: Gloves should be worn.

Lopper

Uses: Cutting selected limbs or saplings during construction and maintenance phases. Larger models can cut limbs approaching 1-1/2” in size. Do not twist side-to-side to try to get a deeper cut.
Tips: High quality loppers with replaceable parts should be used. Saplings should be clipped flush to the ground and limbs flush to the tree. Loppers must not be thrown on the ground as this may clog the head and dull the blade. At the end of the day, the blade should be cleaned and wiped with light oil. Anvil loppers cut more roughly but bypass loppers may become worn and eventually fail to shear.
Safety: Gloves should be worn. Eye protection and a hard hat are also recommended.

Hand Pruner

Uses: Cutting small branches encroaching on the trail. Also useful for cutting protruding roots that are tripping hazards. Mostly used for trail maintenance.
Tips: Handier and lighter to carry than a lopper when only minor pruning is needed, it should be carried in hand while hiking to clip small branches as encountered.
Safety: Gloves should be worn. Eye protection is also recommended.

Pruning Saw

Uses: Cutting limbs encroaching on the trail, cutting small trees or shrubs at the base, and removing small to medium sized windfalls. Pruning saws come in a wide variety of sizes and tooth patterns, ranging from small folding models with 6” to 8” blades to those with blades of 26” in length. Most blades are curved and cut only on the backstroke, a handy feature when removing hard to reach limbs.
Tips: If the pruning saw can be re-sharpened, it should be re-sharpened often. A light coat of oil should be applied to the blade after each use. For more stability and to get the best results, at each stroke, run the pruning saw along the full length of its blade. Maintain a safe, comfortable distance at all times.
Safety: Except for folding models, pruning saws should be kept in a sheath when not in use. A hand holding a limb or sapling should not be crossed beneath the hand pulling the saw, as this can lead to a nasty cut when the saw comes through the limb sooner than expected. Personal Protective Equipment (PPE) includes gloves; eye protection and hardhat are recommended.

Plants Installed in CRPD Pollinator Habitats

- ***Aquilegia canadensis*** eastern red columbine
- ***Asclepias incarnata*** swamp milkweed
- ***Asclepias speciosa*** showy milkweed
- ***Asclepias syriaca*** common milkweed
- ***Asclepias tuberosa*** butterfly weed
- ***Aster umbellatus*** flat-topped white aster
- ***Baptisia alba*** white wild indigo
- ***Baptisia australis*** blue false indigo
- ***Bouteloua curtipendula*** sideoats grama
- ***Carex comosa*** bristly sedge
- ***Carex crinita*** fringed sedge
- ***Carex grayi*** grey's sedge
- ***Carex shortiana*** short's sedge
- ***Carex vulpinoidea*** brown fox sedge
- ***Coreopsis lanceolata*** lanceleaf coreopsis
- ***Cosmos bipinnatus*** cosmos
- ***Dalea candidum*** white prairie clover
- ***Dalea purpurea*** purple prairie clover
- ***Desmanthuss illinoensis*** Illinois bundleflower
- ***Echinacea purpureum*** purple coneflower
- ***Elymus canadensis*** Canada wild rye
- ***Elymus virginicus*** Virginia wild rye
- ***Gaillardia aristata*** great blanket flower
- ***Gaillardia pulchella*** Indian blanket
- ***Helianthus maximiliani*** maximilian sunflower
- ***Helianthus mollis*** hairy sunflower
- ***Heliopsis helianthoides*** oxeye sunflower
- ***Iris versicolor*** northern blueflag
- ***Juncus effusus*** soft rush
- ***Koeleria macrantha*** June grass
- ***Liatris spicata*** dense blazingstar
- ***Lobelia siphilitica*** great lobelia
- ***Lupinus perennis*** wild lupine
- ***Mimulus ringens*** monkey flower
- ***Monarda citriodora*** lemon mint
- ***Monarda fistulosa*** wild bergamot
- ***Nepeta racemosa*** catmint
- ***Panicum virgatum*** switch grass
- ***Penstemon digitalis*** foxglove beardtongue
- ***Physotegia virginiana*** obedient plant
- ***Ratibida pinnata*** prairie coneflower
- ***Rudbeckia hirta*** black-eyed Susan
- ***Rudbeckia triloba*** brown-eyed Susan

- ***Schizachyrium scoparium*** little bluestem
- ***Solidago nemoralis*** dwarf goldenrod
- ***Solidago rigida*** stiff-leaved goldenrod
- ***Sporobolus heterolepis*** prairie dropseed
- ***Tradescantia ohiensis*** Ohio spiderwort
- ***Tridens flavus*** purpletop
- ***Verbena hastata*** blue vervain
- ***Vernonia missurica*** Missouri ironweed
- ***Zizia aurea*** golden alexanders

Common Invasive Plants

Plants to be removed (**Natural Resource Management Opportunity ONLY**) have been divided into the following categories:

- Invasive woody plants (trees and shrubs)
  - ***Ailanthus altissima*** tree of Heaven
  - ***Elaeagnus angustifolia*** Russian olive
  - ***Elaeagnus umbellate*** autumn olive
  - ***Lonicera spp.*** bush honeysuckle
  - ***Pyrus calleryana*** callery pear
  - ***Rosa multiflora*** multiflora rose

- Invasive vines
  - ***Convolvulus spp.*** bindweed
  - ***Euonymus fortunei*** wintercreeper
  - ***Lonicera japonica*** Japanese honeysuckle
  - ***Vitis spp.*** grape vine (native, but a noxious weed)

- Invasive forbs (flowering/herbaceous plants) and grasses
  - ***Alliaria petiolata*** garlic mustard
  - ***Arctium minus*** common burdock
  - ***Cardamine hirsuta*** hairy bittercress
  - ***Cirsium arvense*** Canada thistle
  - ***Cirsium vulgare*** bull thistle
  - ***Dipsacus fullonum*** common teasel
  - ***Glechoma hederacea*** ground ivy
  - ***Medicago lupulina*** black medic
  - ***Plantago lanceolata*** buckhorn plantain
  - ***Plantago major*** broadleaf plantain
  - ***Rumex crispus*** curly dock
  - ***Securigera varia*** crownvetch
  - ***Stellaria media*** chickweed
  - ***Verbascum thapsus*** common mullein
  - ***Veronica arvensis*** corn speedwell

For a full list of invasive plant species, visit the Ohio Invasive Plant Council website.
https://www.oipc.info/list-of-assessed-species.html

Common Native Woody Volunteers (trees and shrubs)

The plants that are installed in Columbus Recreation and Parks pollinator habitats are sun-loving species. Only select, large pollinator habitats are permitted to have trees *within* the pollinator habitat that were either mature, existing trees or have been planted by the Department. Any other native tree within the pollinator habitats, while occurring naturally, is considered a "**volunteer**" within pollinator habitats.

- Native woody volunteers (trees and shrubs) – **Pollinator Habitats only**
  - ***Acer negundo*** boxelder
  - ***Celtis occidentalis*** hackberry
  - ***Juglans nigra*** black walnut
  - ***Populus deltoids*** cottonwood

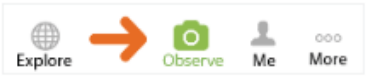
iNaturalist training

If you are unsure on what a specific species is, we recommend checking through an identification application such as iNaturalist. **Please do not touch or remove plant species that you are unsure of.**

Below is a How-To from iNaturalist on utilizing their iNaturalist CLASSIC application.

How to Make an Observation with your iPhone

1. Tap **observe**.



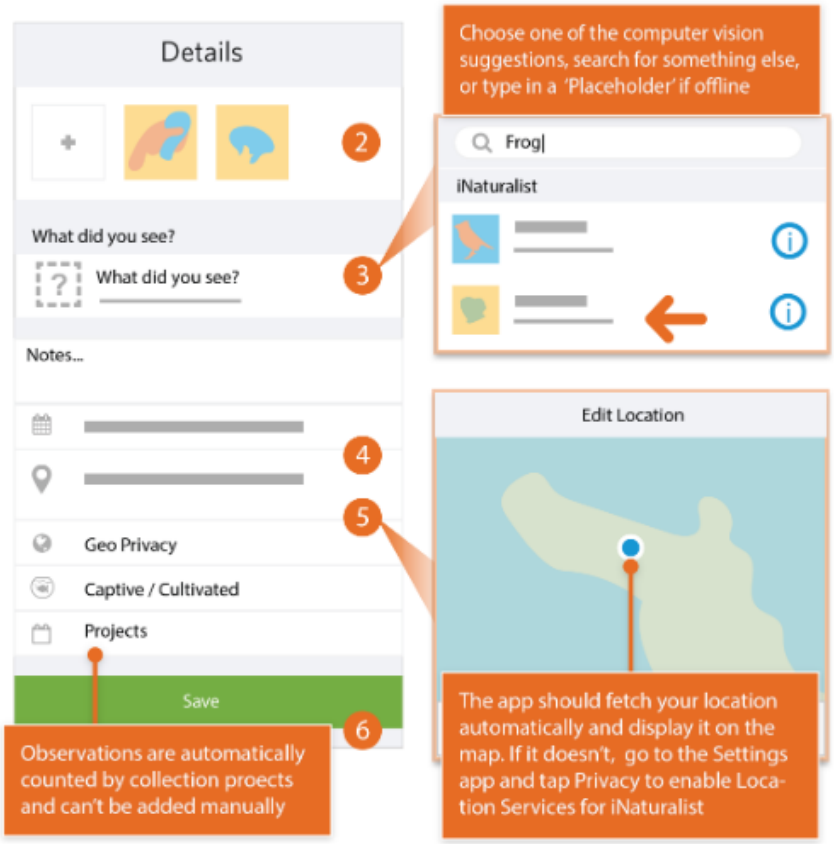
2. Add one or more photos as **evidence**.

3. Choose **what** you saw.

4. **When** you saw it should be added automatically.

5. **Where** you saw it should be added automatically. If it doesn't, check Privacy in the Settings app.

6. **Save** your observation.



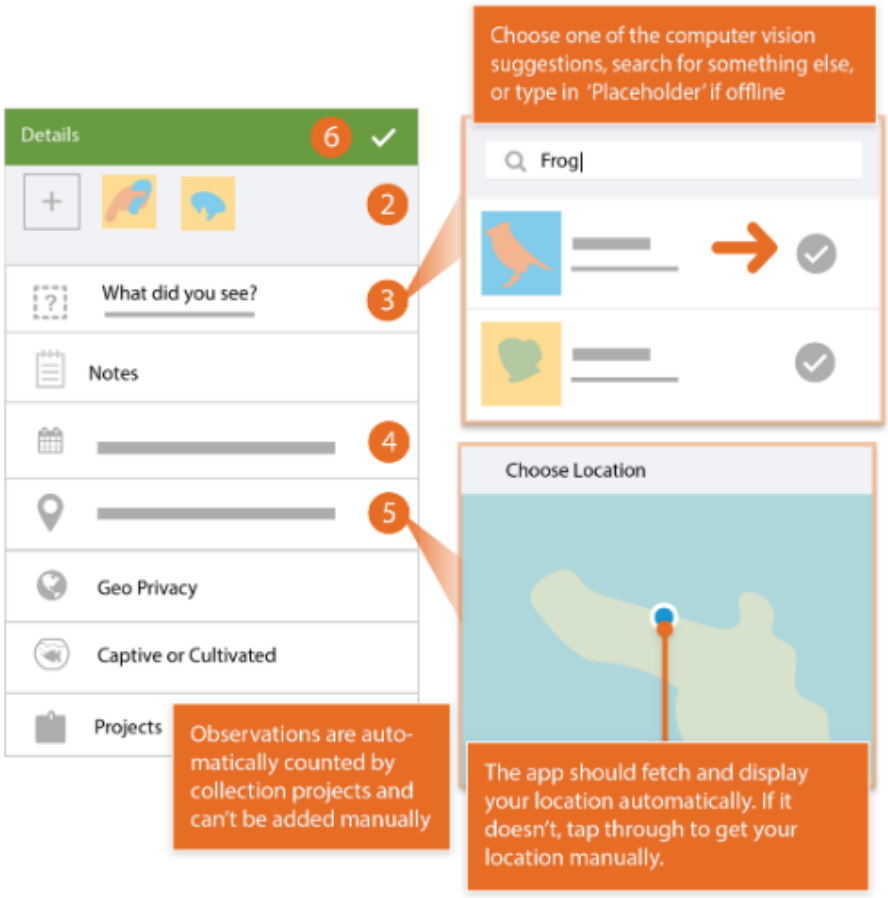
7. **Upload** to share with the community. This should happen automatically. If it doesn't, tap the Upload button. You can turn off automatic upload from the app settings from the Me tab.

8. Check back for **activity** on your observation from the community or be notified by email to the address in your account settings.

How to Make an Observation with your Android

1. Tap the **observe** button from the My Observations tab.

2. Add one or more photos as **evidence**.
3. Choose **what** you saw.
4. **When** you saw it should be added automatically.
5. **Where** you saw it should be added automatically. If this doesn't happen, check app permissions in the Settings app.
6. **Save** your observation.



7. **Sync** to share with the community. This should happen automatically. If it doesn't, tap the button. You can turn off auto upload from the Settings tab.

8. Check back for **activity** on your observation from the community or be notified by email to the address in your account settings.

Glossary of Plant Terms

A-F

Achene: a small, one-seeded dry fruit

Alternate (leaf arrangement): leaves are arranged one per node and emerge from the stem on alternating sides (see also: leaf arrangement)

Annual: describes a plant that does not persist for more than one year. Instead, it completes an entire growth cycle, from germination to seed, before the end of the growing season and dies when temperatures drop below a certain threshold (see also: perennial).

Awn: a bristle-like appendage on a larger structure, such as on a seed from grass

Axil: the angle between a branch or leaf and the stem from which it grows

Basal (leaves): describes leaves emerging from the base of the plant, as opposed to along the stem.

Bipinnate: a type of compound leaf arrangement wherein the leaflets of the leaf are themselves divided into smaller leaflets (e.g., the leaf of Illinois bundleflower).

Bract: a specialized leaf that contains a flower at its axil and often appears different from other foliage on the plant, occasionally mistaken for the petal of a flower (e.g., the colorful part of a poinsettia)

Broadleaf: describes plants with broad, flat leaves (as opposed to plants with needles or scales)

Bolting: describes a plant's transition to flowering, then to seed, often used when this transition occurs prematurely or at an undesirable time.

Capsule: a fruit structure that dries as it matures, and in doing so splits open (e.g. the fruit of a touch-me-not, or of a red buckeye)

Caryopsis: a specialized achene found in plants like cereal grain

Compound: describes a leaf that features several leaflets arranged on a common leaf stalk; leaflets may be pinnate, trifoliate, or palmate in their arrangement

Cordate (leaf): a leaf that is heart-shaped, where the base of the leaf is notched, akin to the curve at the top of a heart symbol

Cypsela: a dry one-seeded fruit (similar but not the same as an achene); characterizes the fruits of compound flowers of *Asteraceae*

Fibrous (roots): describes roots that form a dense network in the soil, as opposed to a taproot

Follicle: like a capsule, follicles split to release seed; however, they are derived from an ovary with a single carpel

H-P

Herbaceous: describes a plant that never develops any woody stem. Can be annual or perennial. The above-ground structure of perennial herbaceous plants will senesce at the end of the growing season and regrow from rootstock the following year.

Inflorescence: the arrangement of flowers on a plant's stem or branch, encompassing the grouping, positioning, and form of flowers

Invasive: an organism that aggressively spreads to dominate a habitat and is typically not endemic to the area.

Irregular (flowers): A flower in which one or more members of a whorl, or of several floral whorls, differ in form from other members.

Lanceolate: describes leaves that are longer than they are wide, i.e., lance shaped'

Leaf arrangement: describes the pattern in which leaves emerge from the node of a stem (see: opposite, alternate, trifoliate, whorled, and compound leaf arrangements)

Leaf margin: the edge of a leaf

Leaflet: often mistaken for leaves, leaflets are the divisions of a compound leaf (e.g., the three leaflets of poison ivy)

Legume (fruit): the seed pod of a plant in the family Fabaceae

Lenticel: raised pore on a woody stem that allow for gas exchange

Lobe (of a leaf): a section of a leaf, rounded or pointed, that is separated from others but does not meet the midrib

Midrib: the thick vein that runs down the middle of a leaf

Midvein: a synonym for midrib

Node: the part of a stem from which a leaf or leaves emerge

Nutlet: a seed covered by a stony layer (e.g. the seed of a cherry)

Oblong (leaf): describes a leaf that is rounded on each end with parallel sides

Odd-pinnate: describes a leaf that is pinnately compound with a terminal leaflet (as opposed to even pinnate, when there is no terminal leaflet)

Opposite (leaf arrangement): two leaves grow from each node and emerge from opposing sides of a branch

Ovate (leaf): describes a leaf that is widest near the base, and narrows towards the tip

Palmate: describes the arrangement of leaflets in a palmately compound leaf; leaflets radiate from one point (e.g. the leaf of an Ohio buckeye). Palmate can also describe the arrangement of **lobes** on a single leaf (e.g., sugar maple)

Panicle: an inflorescence with many branches; each branch has multiple flowers

P-U

Perennial: describes a plant that will persist for more than two growing seasons (see: annual).

Pinnate: describes the arrangement of leaflets in a compound leaf, when leaflets are arranged on either side of a leaf stalk

Pith: the soft or spongy tissue that runs through the center of a stem; it may be chambered, diaphragmed, hollow (absent), or continuous

Pome: fruit that contains multiple seeds in a core, surrounded by an enlarged fleshy layer with a tough external membrane (e.g., an apple or pear)

Prickle: defensive armature on a plant stem that develops from modified *dermal* tissue (see also: spine, thorn)

Raceme: an inflorescence which lacks branching and with flowers borne on short stalks

Rhizome (rhizomatous): a rhizome is a stem which grows horizontally underground; roots and shoots emerge from a rhizome; a plant that produces rhizomes can be described as rhizomatous

Rosette: a circular arrangement of leaves (or similar structure)

Schizocarp: a dry compound fruit that splits at maturity into several one-seeded carples

Serrate: described a leaf with a margin that is notched like a saw (teeth point towards the leaf tip, generally)

Sessile: describes plants or leaves with lack of stalk

Silique: a long, two-valved seed pod of plants in the mustard family *Brassicaceae*

Simple (leaf): describes a leaf with no lobes or leaflets.

Spine: defensive armature on a plant stem that develops from modified *leaf* tissue (see also: prickle, thorn)

Stamen: the pollen-bearing part of a flower

Taproot: a primary root that grows vertically, tapers, and from which other roots emerge (see also: fibrous roots)

Thorn: defensive armature on a plant stem that develops from modified *stem* tissue (see also: prickle, spine)

Trifoliate: describes a leaf that is made up of three leaflets (e.g. poison ivy)

Tussock: the growth form of grasses which grow in singular clumps/tufts (these grasses are also commonly referred to as “bunch grasses”

Umbel: an inflorescence consisting of several short flower stalks which radiate from a central point (resembles an upturned umbrella)

Understory: the area of growth beneath a forest canopy, and the vegetation contained therein

V-W

Volunteer tree: Any native tree that has spread naturally (in this case in our pollinator habitats) that we did not intentionally plant

Weed: a plant growing in an area where it is not wanted; often plants that exhibit vigorous growth, in competition with desirable species, are characterized as weeds

Whorled: a type of leaf arrangement that is characterized by three or more leaves emerging from each node and encircling the stem