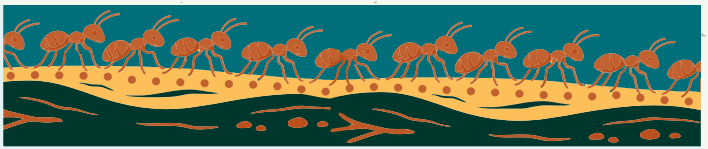
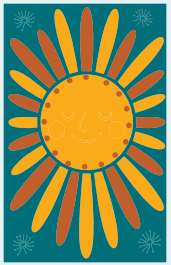





GARDENER'S ALMANAC
for Invertebrate Conservation






HOW YOU CAN HELP BRING BACK THE POLLINATORS

This gardening almanac was created to share some simple seasonal tips to help you create and maintain pollinator habitat. We hope that it inspires you throughout the seasons.

Pollinators, such as bees and butterflies, are essential to life on Earth because they transfer pollen from one flower to another. About 90% of flowering plants need pollinators to create seeds or fruit, including many of the crops we rely on for food. But these important creatures are in trouble: populations of many species are declining, while others have disappeared entirely. Because pollinators are found everywhere that plants bloom, we can all take part in pollinator conservation.

The Xerces Society's **Bring Back the Pollinators** campaign provides a simple framework of four principles that you can adapt to your location. Sign our **Pollinator Protection Pledge** to commit to:

1) GROW A VARIETY OF POLLINATOR-FRIENDLY FLOWERS

Plants provide the foundation of high-quality habitat. Pollinators rely on the pollen and nectar produced by flowers for food, and caterpillars need plants to feed on. When gardening for pollinators, it's best to use plants native to your region and to select a diversity of plants with overlapping bloom times, so several plants are always flowering in your garden from spring through fall.

2) PROVIDE NEST SITES

Pollinators need to be supported throughout their life cycle, including in their immature stages. Have patches of bare soil, free of mulch and lawn, to provide for the 70% of bee species that nest in the ground. Save plants with pithy or hollow stems and stumps and logs for the 30% of bees that nest in tunnels or cavities above ground. You can also support a wide range of pollinators and other invertebrates by leaving the leaves in your yard, which provide protection and insulation during the winter months.

3) AVOID PESTICIDES

Pesticides (like insecticides, herbicides, and fungicides) are a major threat to pollinating insects. It's important to keep pollinator habitat safe for insects by protecting it from pesticides. Keep in mind that 98% of insects are not pests. Chewed leaves and other signs of imperfect plants are a sign of good habitat. After all, caterpillars need to feed on plant leaves to develop into butterflies! There are many non-chemical solutions for managing pests or weeds.

4) SPREAD THE WORD

One patch of habitat absolutely makes a difference, but imagine the difference if more people take action. Engage with your neighbors, local groups like community gardens, neighborhood associations, and HOAs about why you have a pollinator garden. You can also spark conversations by installing "Pollinator Habitat" and "Pesticide-Free" signs—they also act as a "cue to care" that helps show your landscape is intentional! Share resources such as a **Bug Banter** podcast episode, a Xerces webinar on YouTube, the **X Kids** book, or Xerces social media posts with friends and family.

STAFF TIP: YOU CAN'T DO EVERYTHING ALL AT ONCE, BUT YOU CAN DO SOMETHING—RIGHT NOW!

For more information about all four principles, visit bringbackthepollinators.org

To purchase a Xerces sign, visit gifts.xerces.org

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for Invertebrate Conservation


BUG BANTER
with the Xerces Society

XERCES SOCIETY
DONATE
RENEW
JOIN
A ROADMAP FOR BUTTERFLY CONSERVATION
find out how you can help recover the 22% over
STATE OF THE BUTTERFLIES REPORT


WINTER


LEARN
SHARE
CONNECT


BEE CITY USA®
AN INITIATIVE OF THE XERCES SOCIETY

WINTER

When the days are short and the temperatures chillier, what better to do than dream of summer and plan your garden?

STAFF TIP: DIG IN AND LEARN MORE ABOUT POLLINATOR CONSERVATION.

PLAN

- We have information and resources freely available on our website, **xerces.org**. You'll find region-specific collections of publications such as fact sheets and plant lists, a directory of native plant and seed suppliers, and more. Things you might consider:
  - Do you have flowers that bloom from spring to fall? Can you increase the number or kinds of native plants in your garden?
  - Have you included butterfly host plants in your garden?
  - Are there opportunities to add nesting resources, such as plants with hollow stems and patches of bare ground?
  - Do you know the soil type, moisture levels, and shade or sun conditions of your garden to inform your plant choices?
- Find local suppliers of native plants. Are there organizations (e.g., nature centers, watershed councils) that host plant sales?
- Create signage or purchase a Xerces habitat sign to put in your garden.

LEARN

- The Xerces website has lots of blogs, fact sheets, and other free resources. Check out the recommendations on the back of this almanac!
- Join a Xerces webinar or listen to our **Bug Banter** podcast to learn more about pollinators and how to support them—although you can do those all year, and not only in winter.
- Find a good book about insects or wildlife-friendly gardening, such as Xerces' **100 Plants to Feed the Bees**.

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for Invertebrate Conservation

SPRING

SPRING

A time of rejuvenation: plants turn green, flowers blossom, and wildlife reappears in our gardens.

STAFF TIP: CREATE A PLANT MAP OR MARK AND LABEL PLANTS IN THE GARDEN TO HELP WITH PLANNING AS YOUR GARDEN GROWS.

PREPARE

- One of the most important aspects of creating a pollinator garden is site preparation, whatever season you will be planting. You'll find step-by-step instructions for preparing both small and large sites on the Xerces website.

CREATE

- Many native plants can be planted in the spring, and often native plant sales take place during this season. Seek out native plants that have not been treated with harmful pesticides, and be sure to ask about planting requirements for the species you choose.
- Cut back the dead stems of any perennial plants you kept intact over the winter. Err on the side of cutting high (>12"), so that stem-nesting bees have plenty of space to build nesting chambers.
- Check that you have other nesting resources available, like bare soil for ground-nesting bees and logs or snags.
- Add edging, paths, distinct beds, signage, or other "cues to care" that show your pollinator habitat is intentional.

PREVENT

- Spring is the perfect time to pull weeds when they are small, and the soil is moist. (Weeding is something you'll be doing throughout the growing season, but the more you do now, the easier it will be later.) Be careful not to accidentally pull the plants you want to keep!
- Mosquitoes lay eggs in still water, so removing water collecting in flowerpots, buckets, clogged gutters, etc. will prevent them from breeding. Keeping on top of this will reduce mosquito populations! This is a more effective long-term solution than spraying for adult mosquitoes, and better for pollinators.

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for Invertebrate Conservation

SUMMER


Xerces Society presents
XKIDS AND THE
Incredible Invertebrates
Become an XKid!


POLLINATOR
XERCES SOCIETY
Planted for pollinators and protected from pesticides.
HABITAT

SUMMER

When everything is growing vigorously a little regular attention will give you and wildlife a beautiful place to live.

STAFF TIP: GRAB A FIELD GUIDE AND SPEND TIME WATCHING AND LEARNING ABOUT THE INSECTS IN YOUR GARDEN.

ENJOY

- Go outside and enjoy the beautiful garden you are creating.
- If you have children in your life, summer is a great time to explore your habitat together with the Xerces **X Kids** program!
- Consider contributing to a community science project.
- Host a garden tour to show off your hard work!

MAINTAIN

- Continue weeding; the right tools make it much easier. Keep any bare soil you left for ground-nesting bees clear of weeds while trying to minimize disturbing the soil.
- Water consciously. Supplemental water in the first year or two helps native plants establish, after which most will not need watering.
- Stake and support taller plants to limit flopping into sidewalks and paths.
- As your plants go to seed, collect some seeds to plant or to share with friends and neighbors—but leave enough to feed birds in the winter!

PREVENT

- Keep an eye out for "pest" insects, but remember that low levels of pest species are usually not an issue. Learn about the insects in your habitat to help you determine if something seems out of balance, and when a non-chemical solution to break the pest's life cycle may help.
- Prevention is the best way to address pest problems—give your plants the best opportunities for health by planting them in suitable locations and not overcrowding them.
- Artificial lighting can disrupt fireflies and other nighttime insects. Check your outdoor lighting, install motion-detecting lights and lights that point down, and consider blinds to block indoor light.

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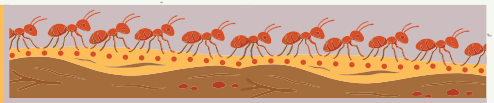
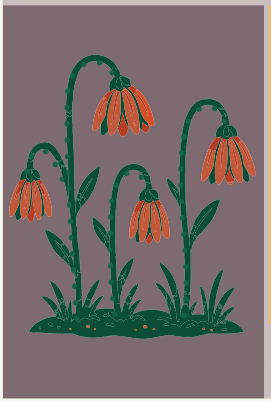
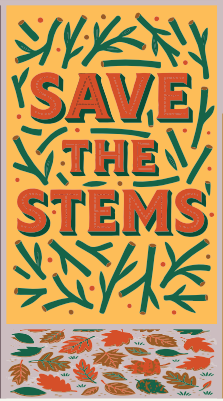



FALL




SAVE
THE
STEMS


LEAVE
THE
LEAVES

FALL

The garden slows down with the arrival of fall. Prepare for winter by making sure wildlife has a place to shelter.

STAFF TIP: DON'T TIDY UP TOO MUCH! WILDLIFE NEEDS PLACES TO SHELTER THROUGH WINTER.

PROVIDE

- Make sure your space has plenty of blooms this late in the season. Pollinators that overwinter as adults need food before they settle in for the winter.
- Leave the leaves to provide overwintering habitat for a wide variety of species, including butterflies, moths, bumble bees, fireflies, beetles, and more. You don't need to leave leaves where they fall or keep them all. You can gently rake or blow them into garden beds, around trees, or pile them in other areas of your yard.
- Save the stems! As the growing season comes to a close, don't cut back or remove old plant growth yet. Seedheads are used as a food source by a variety of wildlife, and saving pithy plant stems will provide nesting resources for cavity-nesting bees next year.

PLANT

- Fall is the best time to plant trees and shrubs and to get plugs of most native perennial plant species into the ground.
- Many native wildflower seeds are best sown in fall, allowing winter conditions to naturally prepare seeds for spring germination, but optimal timing can vary by species and region.
- Consider dividing, pruning, or moving plants that have gotten too large. Giving plants enough space and the right growing conditions can reduce pest or disease worries.

SHARE

- Continue to collect the seeds of late-blooming plant species, and share them with friends and neighbors!

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POLLINATOR CONSERVATION IS A BIG TASK, BUT TOGETHER WE CAN ALL MAKE A DIFFERENCE!

Research shows that pollinators can use a single yard as an oasis, but as more habitat is created in an area, the overall impact of each site is amplified—which is why spreading the word is so important.

Learn more at **bringbackthepollinators.org**. Sign our **Pollinator Protection Pledge** and join a community of people who are committed to protecting pollinators. Pledge signers can opt in to receive e-newsletters and more information, and be alerted to educational opportunities like webinars.

If you have already signed the pledge, there are many other ways to be involved in pollinator conservation. Consider working with your community to join **Bee City USA** or **Bee Campus USA**, or volunteer on a local park or municipal oversight committee to advocate for pollinator-friendly landscaping. Contribute to a community science project, like **Bumble Bee Watch**.

MORE INFORMATION

The Xerces Society has resources to help you. Here are a few:

BRING BACK THE POLLINATORS
bringbackthepollinators.org

BUG BANTER
xerces.org/bug-banter

POLLINATOR CONSERVATION RESOURCE CENTER
xerces.org/pollinator-resource-center

XERCES YOUTUBE
youtube.com/xercessociety

COMMUNITY SCIENCE PROJECTS
xerces.org/community-science

X KIDS
xerces.org/xkids

DONATIONS
xerces.org/give

GIFT CENTER
gifts.xerces.org

XERCES SOCIETY
for Invertebrate Conservation

We make the commitment to you that we will work every day to protect pollinators and their habitat. Will you support our work? Make a tax-deductible donation to the Xerces Society today! Visit xerces.org/give to learn more.

The Xerces Society is a registered 501(c)(3) nonprofit and equal opportunity employer and provider.
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