

2023

Pollinator
POWER PARTY

CALENDAR

EPRI



About the Calendar

Our paintings, songs, photographs, and gardens help us acknowledge and celebrate the spiritual, cultural, and emotional connection we have with bees, butterflies, bats, and birds. During our 2022 Pollinator Power Party, we invited you to share music, art, and photography celebrating pollinators. We were thrilled to receive over 90 submissions showing off all types of pollinator art. This calendar highlights just a few of the beautiful photographs, drawings, paintings, and craft items that were submitted.

The art pieces featured here provide a beautiful backdrop to tell the story of pollinators. In the 2023 calendar, we take you through many aspects concerning the equity, importance, and needs of pollinators. We hope the incredible pollinator art will inspire you to provide a home for pollinators in your yard to bring you joy and help you create new pollinator art throughout the year.

- January: Pollinators and Equity
- February: It All Starts with Insects
- March: Conservation is a Team Sport
- April: Non-Native, Naturalized, and Invasive Species
- May: Feed the Trees
- June: We Bee Wild!
- July: That Sweet, Sweet Honey
- August: Lovely Lepidoptera – Butterflies
- September: Lovely Lepidoptera – Moths
- October: Change is Hard
- November: Time to Plant!
- December: Power Companies and Pollinators

EPRI'S Power-in-Pollinators Initiative 2022

Electric power companies have unique opportunities to support pollinators. Through management of large landholdings, there is potential to enhance habitat via well-designed, ecologically meaningful, and cost-effective conservation actions. Looking beyond individual company fence lines, electric utilities can work together, resulting in greater measurable outcomes than would be possible working alone.

The Electric Power Research Institute (EPRI) developed the Power-in-Pollinators Initiative to study the role that power companies have in pollinator conservation. This collaboration is now the largest in North America designed to support power companies and pollinators. The initiative enables participating companies to review the state of pollinator science, evaluate corporate efforts, and implement high-value conservation actions and stakeholder collaborations. www.epri.com/pollinators

Initiative Manager: Jessica Fox, Sr. Technical Executive, jfox@epri.com

2022 Collaborators:



EPRI is an independent, non-profit research organization and does not represent the collaborators.



Guillermo Avalos

About the Pollinator Power Party 2022

In June 2022, we hosted our third Pollinator Power Party to celebrate pollinators and highlight the role electric power companies have in pollinator conservation and protection. In conjunction with National Pollinator Week and Pollinator Partnership, we sought to increase awareness, educate, and highlight accurate science about pollinators and what role they play in our daily lives.

The party was made possible by the Power-in-Pollinators Initiative (described below). We welcomed a flutter of photos, art, questions about pollinator myths, and scientific lectures. We learned about the ways pollinators impact our personal health and well-being, in addition to equity issues worldwide. We listened to a blessing sung by a Tribal Elder, learned how the Cherokee Nation is preserving their culture with heirloom seeds, and how one organization is improving both pollinator and human habitat in the middle of a city. We experienced a honey tasting and began to understand how many types – and flavors! – of honey exist and how honey bees are used in agriculture. We welcomed a group of Lepidoptera experts to broaden our butterfly and moth horizons, and a Pollinator Power Panel of scientists busted some pollinator myths. Based on a post-party survey, 97% of attendees enjoyed the party and will likely attend in 2023.

Our goal was to reach 2.5 million people in one week. WE REACHED 2,709,975!



Scientists, Teachers, Tribes, Honey Producers
The diversity of our speakers mimics the diversity of pollinators!

99 Bottles of Honey in the Hive

To celebrate honey bees and the way honey can compliment our food, Amina Harris showed us how to taste honey and described the 99 possible honey flavors. She also showed us how to use a honey tasting wheel to find just the right word for each flavor and suggested we record all the honeys we try in a special notebook. The University of California Davis bookstore has these and many more items available for purchase, including honey produced throughout the state of California. <https://ucdavisstores.com/home>



Bee a Scientist at Home

Dr. Lucas Garibaldi kicked off the Party by talking about bee health and how it relates to human health. Pollinator-dependent plants, pollinator-derived products, green spaces, and clean air, food, and water benefit pollinators and humans, meaning any actions we take to support pollinators are also improving human health. He detailed how conventional agriculture inputs such as fertilizer or pesticides and the increasing intensity of agriculture are contributing to pollinator decline. He described several ways to improve agricultural production while increasing biodiversity, decreasing external inputs, lowering the overall cost of food production, and protecting pollinators. He also highlighted the nuances of the idea that pollinators provide 1 in 3 bites of our food. But did you know that pollinators are also responsible for over 28,000 medicines? In addition, more than 71 million people would be at risk of Vitamin A deficiency without pollinated foods. These details reveal the link not only between pollinators and human health but also between pollinators and one facet of equity in human society. As Dr. Garibaldi noted, pollinators – and, in particular, pollinator diversity – indicate how good that environment is at sustaining human life. His research confirms that pollinators are an indicator of environmental health. The benefits are especially realized in regions where people directly depend upon pollinated plants for their food and medicines.

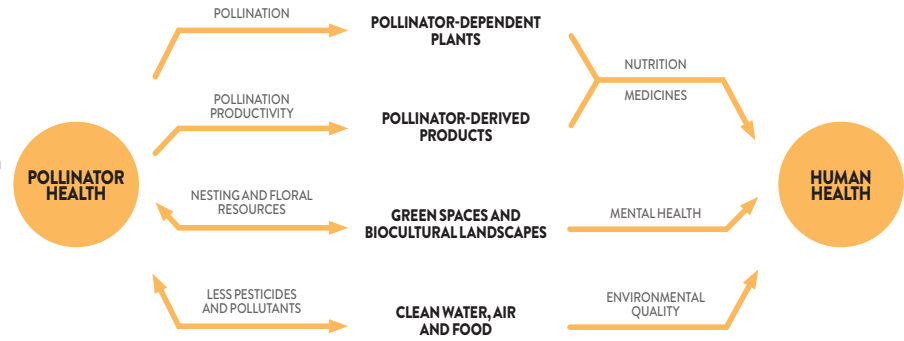


Image credit: Garibaldi, et al. In press. Proc Royal Society.

POLLINATOR HABITAT RESTORATION

Many populations of pollinators including native bees, honey bees, beetles, flies, moths, butterflies and small mammals are in decline due to habitat loss. Other contributing factors include pollution, the misuse of chemicals, disease and changes in climate patterns.

About 75 percent of all flowering plant species need the assistance of pollinators to distribute their heavy pollen grains among plants for fertilization. This is just one reason why restoring pollinator habitat is so important.

Dairyland Power is committed to promoting pollinator habitat by creating native prairie areas at its substation sites. Substations are dual-purpose spaces that provide power to members as well as acres of pollinator habitat.



A Touchstone Energy® Cooperative

www.DairylandPower.com



Black and gold bumble bee on wild bergamot (see below) courtesy of Premier Power & Wetland Restorations LLC

Bombus auricomus, commonly known as the black and gold bumble bee, is one of Wisconsin's native bee species. This species creates above-ground nests in grassland and other open habitat types. Bumble bees feed on many types of plants, including wild bergamot (*Monarda fistulosa*), thistles, echinacea and hoary vervain.



Photo credit: Dairyland Power Cooperative
Asclepias tuberosa is a milkweed plant commonly called butterfly weed because of the butterflies who are attracted by its color and abundant production of nectar.

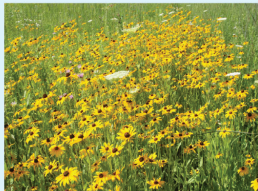


Photo credit: Dairyland Power Cooperative
Black-eyed Susan (*Rudbeckia hirta*) thrives in Upper Midwest prairies due to its hardiness and ability to self-seed. Birds also feed on the seeds.



Photo credit: Premier Power & Wetland Restorations LLC
A monarch caterpillar gorges on a swamp milkweed (*Asclepias incarnata*) plant that contain toxins to help protect the butterfly from predators. This milk-like sap provides the adult monarch butterfly with its vibrant orange color that warns predators the butterfly is not safe to eat.



Photo credit: Premier Power & Wetland Restorations LLC
Wild lupine (*Lupinus perennis*) is the host plant for the endangered Karner blue butterfly. Although adult Karner blue butterflies feed on many different nectar plants, their larvae only feed on the leaves of wild lupine.

The monarch butterfly (*Danaus plexippus*) is a milkweed-dependent species. Habitat loss throughout its breeding range, which includes the Upper Midwest, is considered the primary cause of the monarch's population decline (down 90 percent since the 1990s).



Photo credit: Dairyland Power Cooperative

2022 Pollinator Power Party Sponsor

Funding for the 2022 Pollinator Power Party came from EPRI's Power-in-Pollinators Initiative and from Party sponsor Dairyland Power Cooperative. Dairyland Power Cooperative is a Generation and Transmission Cooperative headquartered in La Crosse, Wisconsin. Serving more than 600,000 customers, Dairyland operates 3,184 miles of transmission line on a 44,500 square mile service area. They established their first pollinator habitat at the Genoa Power Plant in 1994, building a prairie on closed infrastructure at the site. Since that time, they have continued to integrate pollinators and other wildlife habitat into their operations, and now have over 250 acres of pollinator habitat. Learn more about Dairyland's efforts to support pollinators by visiting their website <https://www.dairylandpower.com/pollinator-meadows>

Pollinators and Equity

Pollinator Posse's Victoria Rocha and Derrell Taylor discussed the value of urban pollinator habitat and the ways it provides opportunities to improve equity in urban Oakland, CA. Mr. Taylor shared how he was introduced to pollinators and how his work with Ms. Rocha changed his life by providing an opportunity to begin working toward a larger goal of educating others on the importance of Pollinator Posse's work. They showed the results of their efforts at Lake Merritt in downtown Oakland, and described the ways they are pollinating the city and its people with conservation ideas.





Kevin Atkins



Cathy Streett



Johanne Paquette

Pollinators and Culture

The Pollinator Power Party 2022 was pleased to welcome Tribal Elder Tina Orduno Calderon, a Culture Bearer of Gabrielino Tongva, Chumash and Yoeme descent. Ms. Calderon shared in her ancestral language the Mother Earth Song, thanking the Earth Mother for “everything she gives us to survive, the water, the food, the air. We cannot have anything, we cannot live without our Earth Mother.”

The Party also reaped the benefit of cultural learnings shared by Feather Smith, the Ethnobiology Manager in the Cherokee Nation Secretary of Natural Resources Office. The Cherokee Nation removal action that resulted in resettlement in eastern Oklahoma impacted culture and heritage because not all of their ancestral crops are adapted to the climate there. The Cherokee Nation Seed Bank was started in 2006 as a way to preserve both the culture and the heirloom crop genetics of Cherokee plants for medicines, foods, and utilitarian crops.



The seeds are grown to protect the heirloom genetics of these strains and to allow citizens of the three federally recognized Cherokee tribes to continue the traditions of their ancestors and elders. Ms. Smith also shared the designs that characterize Cherokee gardens, from growing beans with corn to planting sunchokes at the garden margins. The Cherokee Nation Seed Bank continues to research heritage crops with the goal of preserving as many heirloom species as possible for their citizens.

Lovely Lepidoptera

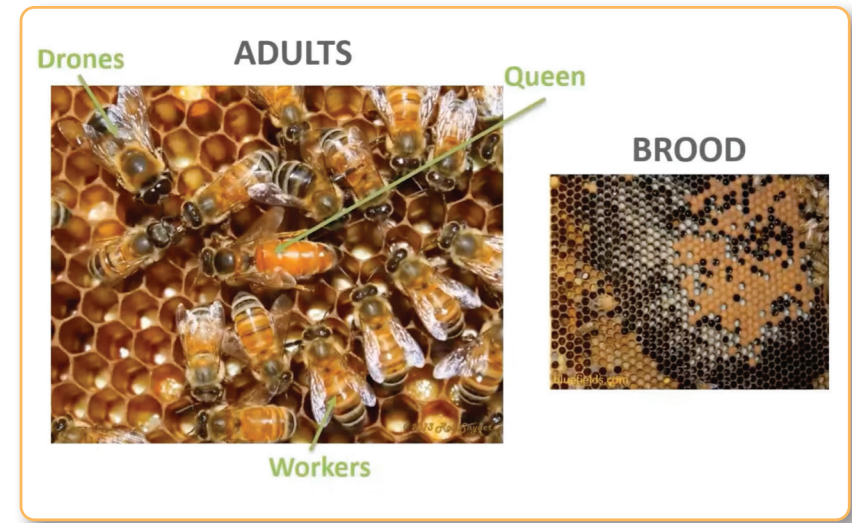
Junaid Khan, Kevin Burls, and Dr. Chip Taylor joined the Party to talk about Lovely Lepidoptera. Mr. Khan taught us much about the similarities and difference between moths and butterflies and explained how to tell them apart by the shape of their antennae. He also talked about the role of Lepidoptera as butterflies, their host plants, and the importance of supporting caterpillars in our ecosystems. Mr. Burls talked about the life cycle of Lepidoptera, letting us know they are picky eaters! Lepidoptera “taste” plants with their feet to make sure they’re on the right type of plant and that the plant is healthy before they eat or lay their eggs. He highlighted light pollution and other threats to the life cycle of Lepidoptera as well as actions we can each take to support them. Dr. Taylor highlighted the complexities of counting monarch butterfly populations, gave an update on the number of monarchs counted during the 2022 migration cycle, and talked about factors affecting the size of the monarch population. Following these discussions, the scientists took part in a Lepidoptera parley to answer even more questions about these lovely creatures: Are they important to ecosystems and to humans? Are butterflies and moths honorary pollinators, or are they real pollinators? Do we understand even a fraction of what there is to know about the role of moths and butterflies in our world?

In a surprising turn of events, the conversation had to be censored when it took an overly reproductive twist!





Kristin Wyatt



Bee My Honey

Dr. Elina Niño joined the Party to talk about apiculture, better known as beekeeping, and the *Apis mellifera*, or European honey bee. She talked about the eusocial nature of honey bees, with their division of labor and their habit of reducing crowded hives by swarming out of the hive and looking for a new place to live. She introduced us to the idea that there are thousands of bee species in the world and noted that honey bees are especially efficient at pollinating food crops such as almonds. Honey bees are also generalist bees, meaning they will collect nectar and pollen from any flower near the hive. The value of honey bee pollination services for almonds alone totals over \$6 billion/year, making them a critical component of the world's food supply chain. Dr. Niño discussed the recent high percentage of colony losses over the past 10 years and the causes of colony loss. She shared her work at the E. L. Niño Bee Lab and her passion to train current and future beekeepers through the California Master Beekeeper Program certification.

Pollinator Power Panel

The Pollinator Power Party welcomed an incredible Pollinator Power Panel with Dr. Kristen Lear, Mace Vaughan, and Dr. Vicki Wojcik to bust some pollinator myths. They answered questions such as these: Do all bees sting? Are bees stings medicinal? Can bees sting more than one time? Are European honey bees naturalized or invasive? Do bats have teeth, and do they bite people? Are vampire bats real? How do scientists predict the changes in our environment that will impact pollinating insects in the near future? The panel shared many different pollinator facts while busting pollinator myths, including the following: the mismatch between the time flowers bloom and pollinators are working, how some flowers refill with nectar after pollinators drink it, that some species of wasps and mosquitoes are pollinators, bees are vegetarian, and some types of insects digest food outside of their bodies. These scientists really powered through at least a dozen pollinator myths!





Mobi Warren

Documentary Film: *Power for Pollinators* (2020)

As electricity flows through the landscape, power companies can help pollinators flow through the ecosystem.

Power for Pollinators is a documentary film beautifully presenting the importance of pollinators, causes of their decline, and conservation efforts of electric power companies as managers of significant land assets. Land managers have a unique opportunity to turn tens of millions of acres into healthy pollinator habitat. In particular, power companies with right-of-way corridors and buffer zones are uniquely positioned to create large pollinator highways. These untapped areas have the potential to become one of the largest pollinator projects in history. If power companies and other land managers choose to work together planting flowers and reducing chemical use across the landscape, we can bring back pollinators and, with them, a host of essential food and ecosystem resources. The film has won multiple awards and been selected for inclusion in film festivals worldwide.

Narrated by Carrie-Anne Moss
Written, Directed & Produced by Mathew Schmid
Produced & Edited by Leila Conners
Filmed & Droned by Harun Mehmedinovic
Executive Producers Jessica Fox & George DiCaprio

Featuring: Dr. Claire Kremen, Sam Droege, Jessica Fox, Lewis Payne, Dr. Eric Lonsdorf, Brian Kortum, Casey Shepard

Narrated by
CARRIE-ANNE MOSS

Written, Directed & Produced by
MATHEW SCHMID

Produced & Edited by
LEILA CONNERS

Cinematographer
HARUN MEHMEDINOVIC

Executive Producers
JESSICA FOX & GEORGE DICAPRIO

Awards & Festival Selections:

- ONIRIOS FILM AWARDS New York AWARD WINNER
- Award Winner American Golden Picture International Film Festival 2021
- MIAMI BEST SHORT FILM POWER FOR POLLINATORS Secondary Film Festival 2021
- Award Winner Nature Without Borders International Film Festival 2021
- WIFI FILM FESTIVAL Award Winning Film 2021
- INDIE STREET FILM FESTIVAL OFFICIAL SELECTION 2021
- AO ART FILM FESTIVAL OFFICIAL SELECTION 2021
- BZN OFFICIAL SELECTION 2021
- Big Sound International Film Festival OFFICIAL SELECTION 2021
- Awareness Festival OFFICIAL SELECTION 2021
- Proxima International Film Festival OFFICIAL SELECTION 2021
- Montreal Independent Film Festival OFFICIAL SELECTION 2021
- Toronto International Festival of CIFT OFFICIAL SELECTION February 2021
- The Lift-Off Sessions OFFICIAL SELECTION 2021



As electricity flows through the landscape, power companies can help pollinators flow through the ecosystem.

A TREE MEDIA SHORT FILM: You can view the film for free on IMDb and YouTube.

POLLINATOR PARTNERSHIP



UC Davis Honey and Pollination Center
at the Robert Mondavi Institute



UC DAVIS
E.L. Niño Bee Lab



2022 Pollinator Power Party Collaborators

EPRI would like to thank the many speakers and organizations who dedicated their time to creating a fantastic 2022 Pollinator Power Party. The phenomenal work they are doing to conserve and protect pollinators, and their dedication for sharing that work with others, made the 2022 Party a fantastic and educational event for us all.

A special thanks to **Pollinator Partnership** for co-hosting the 2022 Pollinator Power Party!! www.pollinator.org

Kelly Rourke, Executive Director, *Pollinator Partnership*
<https://www.pollinator.org/>

Dr. Lucas Garibaldi, *Institute of Natural Resources, Agroecology and Rural Development*
<https://lucasgaribaldi.wixsite.com/lucasgaribaldi>

Victoria Rocha, *Pollinator Posse*
<https://pollinatorposse.org/>

Feather Smith, *Cherokee Nation Seed Bank*
<https://webapps.cherokee.org/SeedBank/Home/Index>

Dr. Amina Harris, *UC Davis Honey and Pollination Center*
<https://honey.ucdavis.edu/>

Dr. Elina Niño, *UC Davis Cooperative Extension*
<https://elninobeelab.ucdavis.edu/>

Dr. Chip Taylor, *University of Kansas*
<https://www.monarchwatch.org/>

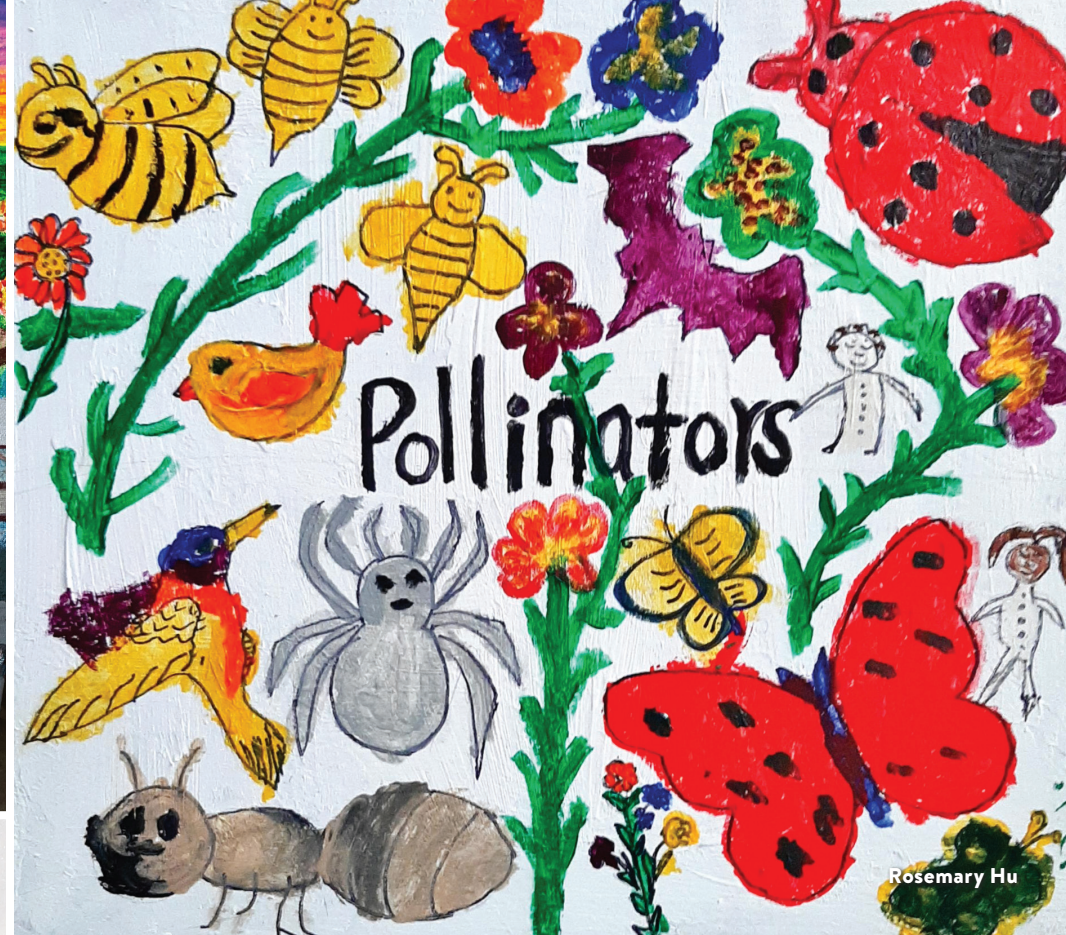
Dr. Kristin Lear, *Bat Conservation International*
<https://www.batcon.org/>

Kevin Burls and Mace Vaughan, *Xerces Society for Invertebrate Conservation*
<https://www.xerces.org/>

Junaid Khan and Dr. Vicki Wojcik, *Pollinator Partnership*
<https://www.pollinator.org/>



David Zito



Rosemary Hu



Hongliang Hu



Luisa Petrich

JANUARY

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 NEW YEAR'S DAY	2	3	4	5	6	7
8	9	10	11	12	13	14
15 MARTIN LUTHER KING, JR. DAY	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

Pollinators and Equity

Most of us don't think about equity when we see bees or butterflies, but it turns out that pollinators are intrinsic to creating an equitable society. Pollinators contribute to the life cycle of 22.9% of fruits, 16.3% of vegetables, and 22.1% of nuts and seeds. If we were to lose pollinators, 71 million people could be at risk for Vitamin A deficiency, 173 million people could experience folate deficiency, and global mortality could increase by 1.41 million deaths per year. Further, 80% of the world relies on herbal medicine and 28,000 of these medicines (84%) are pollinator-dependent.* The people most likely to be impacted by pollinator loss are those with the fewest resources available for alternatives to pollinated foods and medicines, making pollinator health a human equity issue. Taking action to support pollinators is also taking action to support equity in human society.

* Garibaldi et al. Garibaldi LA, Gómez Carella DS, Nabaes Jodar DN, Smith MR, Timberlake TP y Myers SS. 2022. Exploring connections between pollinator health and human health. *Philosophical Transactions B*. 377(1853), 20210158.

Pollinator-Dependent Food: Cabbage

Cabbage plants must be cross-pollinated by insects because each plant recognizes its own pollen.





FEBRUARY

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20 PRESIDENTS' DAY	21	22	23	24	25
26	27	28	1	2	3	4

It All Starts with Insects

Food chains are the relationship between species with regard to food, or who eats what, and many food chains together form a *food web*. It turns out that many of our food chains and webs involve pollinating insects. Insects themselves are food for many species such as other insects or birds. Insects pollinate the plants that are eaten by *herbivores* (plant-eating species), and herbivores are eaten by *carnivores* (meat-eating species). Many humans and other species are *omnivores*, eating both plants and meat. Following food chains back to the beginning shows they start with insects. That means that if we choose not to provide food, water, and nesting places for insects, we are breaking a food chain upon which many humans rely.

Pollinator-Dependent Food: Figs

Fig trees all over the world are pollinated by fig wasps.

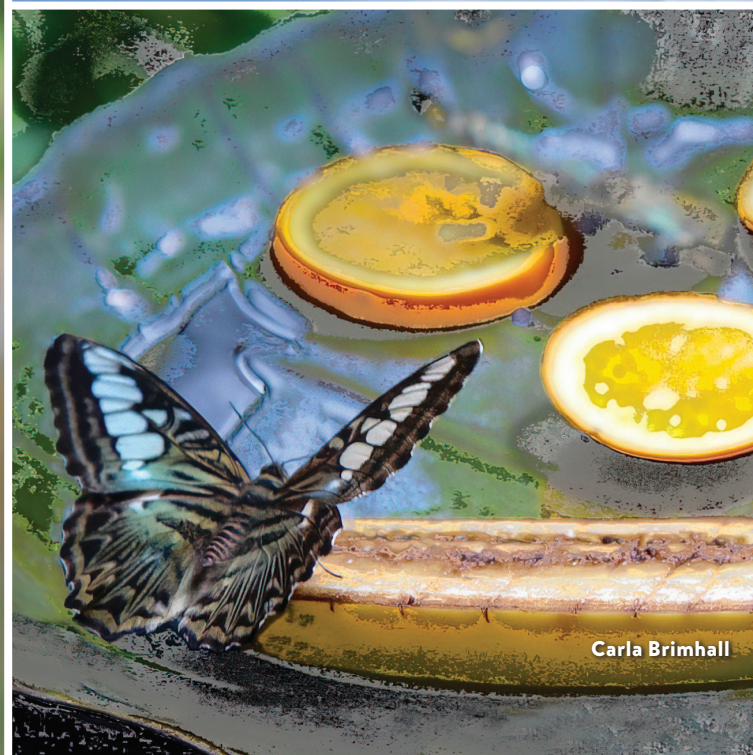




Kristin Szabo



Stephanie Slater



Carla Brimhall



Ann Stone

MARCH

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	1

Conservation is a Team Sport

In order to protect insects, we need to plant with insects in mind. Not many humans own hundreds or thousands of acres that can be turned into plant and insect sanctuaries. Luckily, we can do a lot with just a little bit of space! If each person who has a yard, balcony, or patio were to plant trees, shrubs, grasses, and flowers native to their area, that would be adding to the food and nesting places available for pollinators. Creating safe spaces for pollinators in our yards allows pollinators to roam larger areas. This action alone could possibly even connect the habitat in our human spaces with the natural habitats found in parks and other protected lands. Volunteering with local groups that restore natural areas with native species is another way we can all support the creation of healthy spaces that support our pollinators and build stronger food webs.

Pollinator-Dependent Food: Passion Fruit

Carpenter bees are very efficient pollinators for passion fruit.



Native butterfly on invasive garlic mustard



Janet Staats

Native bumble bee on invasive Liriope (monkey or mondo grass)



Michelle Tinkham

Non-native honey bee on non-native poppy



Mandy Sanders

Native butterfly and moth on invasive Buddleia (butterfly bush)



Donna Brad

APRIL

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Non-Native, Naturalized, and Invasive Species

Non-native species are those living in a place where they did not historically occur. *Naturalized* species are non-natives that live in a place where they do not historically occur without spreading into natural areas. *Invasive* species are non-natives that invade natural areas and crowd out native species by taking the food, water, or nesting areas the native species need to survive. Invasive species can enter an area in many different ways. People plant exotic garden species such as English ivy, Norway maple trees, or Russian olive trees. Insects and spiders hide away in shipments of produce between countries. Millions of reptiles and amphibians are brought to this country as pets and are often set free in the wild. While there are many ways for species to arrive in a new place, the outcome is often the same – they damage the ecosystem by taking from native species and not providing the full array of ecosystem services themselves.

Pollinator-Dependent Food: Coriander

Coriander and cilantro are the same plant. The different words are used in some countries to distinguish the seeds from the leaves and stems.





Natasha Mantle



Lee Owenby



Natasha Mantle



Delia Petrich

MAY

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
30	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27 WORLD BEE DAY
28	29 MEMORIAL DAY	30	31	1	2	3

Feed the Trees

Most people think about flowers when they think about pollinators, but pollinators need native trees too. Trees can be a source of nectar while they're flowering, function as places for pollinators to sleep and to nest, and many provide seeds, fruits, or nuts for birds during winter months when other food sources are scarce. Trees are also good for the environment because they help keep soil cool and moist with their shade, hold soil in place with their roots, use carbon dioxide while producing oxygen, and serve as host plants for butterflies or moths. Oak trees alone host over 400 species of butterflies and moths, as well as birds, squirrels, and countless other animals. Learning the proper way to plant, grow, and care for native trees is an important part of building a healthy habitat to support local wildlife.

Pollinator-Dependent Food: Buckwheat

Buckwheat is neither a wheat nor a grain, but is part of the smartweed family of plants.





Kristin Wyatt



Mandy Sanders



Rita Tomassetti

JUNE

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	
28	29	30	31	1	2	3	
4	5	6	7	8	9	10	
11	12	13	14	15	16	17	
18	19	20	21	22	23	24	
	← NATIONAL POLLINATOR WEEK AND POLLINATOR POWER PARTY →						
	JUNETEENTH						
25	26	27	28	29	30	1	

We Bee Wild!

Did you know there are over 4,000 species of native wild bees in North America? Most people can identify the big, fuzzy, yellow and black bumble bees and of course honey bees (*Apis mellifera*). Honey bees were imported from Europe in the 1600s as a way to produce wax and honey in North America. Today, they are an important part of modern crop pollination and are actively managed, including housing in human-built boxes that are easily transported between agricultural fields. Some research indicates that honey bees can out-compete wild bees for nectar and pollen resources. We can help wild bees thrive by planting more native flowers, grasses, shrubs, and trees to provide natural food for them.

Pollinator-Dependent Food: Apricot

Apricots can pollinate using pollen from flowers on a single tree rather than requiring many trees.





Cyndi Shepherd



Lora Dal Bo



Stephanie Slater

JULY

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
25	26	27	28	29	30	1
2	3	4 INDEPENDENCE DAY	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

That Sweet, Sweet Honey

Honey is sold in supermarkets, farmers markets, and by local beekeepers throughout North America. A lot of this honey is produced by European honey bees, or *Apis mellifera*, as less than 5% of native wild bee species produce honey. Honey bees are social insects that live together in large hives. Each hive has a single queen bee, female worker bees, and male drone bees. The worker bees collect nectar and build the waxy honeycomb, then the queen mates with the drone bees and lays eggs in each cell of the comb. The workers collect nectar from flowers and bring it back to the hive, where young worker bees take it to mix into honey. The young workers then place the honey into the outer cells of the honey comb and seal the cell with a little bit of wax. The honey is stored as food for the hive during the winter when no flowers are available.

Pollinator-Dependent Food: Honey

Honey bees create and store honey in their hives so they have food available to survive in winter.

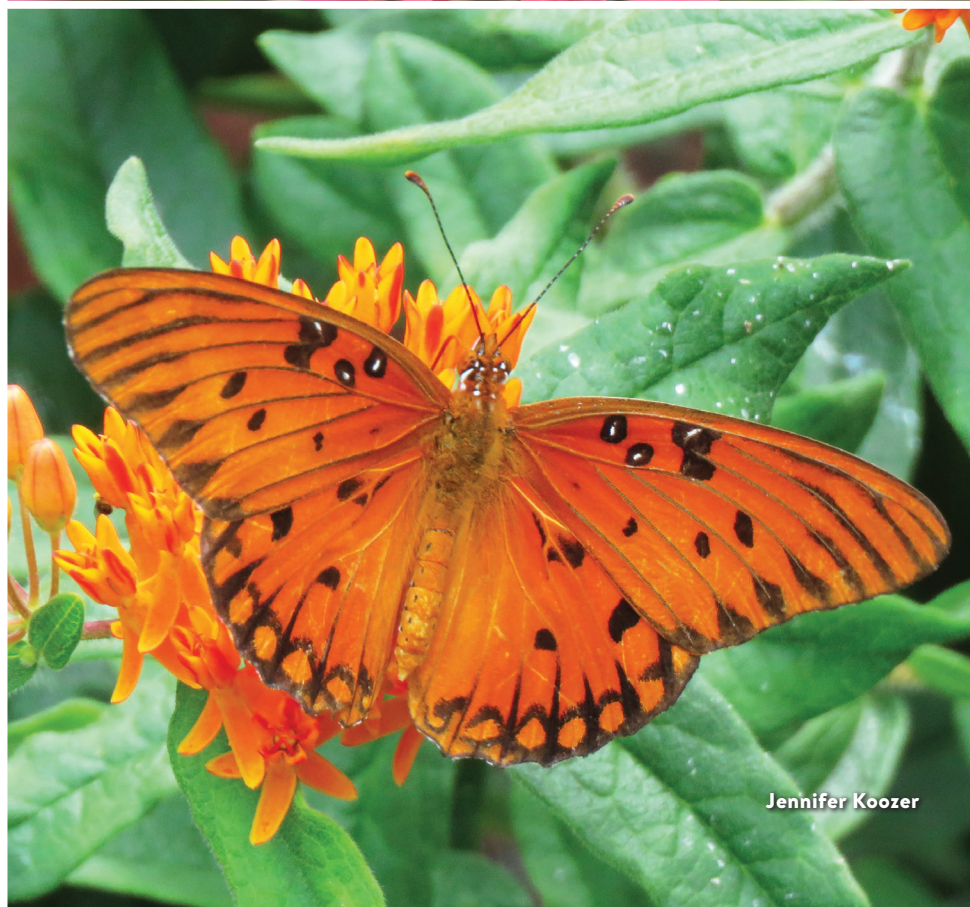




Kathy Potthoff-Hare



Jennifer Micucci



Jennifer Koozer

AUGUST

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
30	31	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

Lovely Lepidoptera – Butterflies

What has four wings, three body segments, taste buds on their feet, and no ears? Butterflies! The 17,000+ species of these beautiful creatures occur on every continent except Antarctica. Butterflies go through four stages of life, starting as an egg that hatches into a caterpillar. The caterpillar eats and eats the host plant where it lives, and when it gets full, it creates a chrysalis and enters the pupa stage before finally exiting the chrysalis as an adult butterfly. Some caterpillars and butterflies have very bright, colorful patterns, while others have wings that are designed to camouflage them because they serve as a tasty snack for many other creatures. Butterflies drink flower nectar as their primary food, but also need nutrients that do not come from flowers. If you see butterflies sitting on rotten food, wet soil, or feces while slowly moving their wings, they are getting the nutrients they need to thrive and reproduce.

Pollinator-Dependent Food: Okra

While okra does not require pollinators, it often produces more and bigger pods and more seeds per pod when it is pollinated by insects.





Cyndi Shepherd



Marisa Erkekdjian



Angela Byars



Andrea Badke

SEPTEMBER

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
27	28	29	30	31	1	2
3	4 LABOR DAY	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Lovely Lepidoptera – Moths

Worldwide, an estimated 160,000 species of moths can be found compared with 17,500 species of butterflies. Just like butterflies, many moths have a favorite host plant for laying eggs and hatching caterpillars. Moths come in all sizes, from those with wingspans of less than an inch to species like *cecropia* moths with wingspans of 5 to 7 inches. Many moths can be recognized by their large, feathery antennae. Some, like the yucca moth, are important pollinators, but almost all moths are a food source for birds, bats, frogs, lizards, and small mammals. So many creatures like to eat moths that they have many tricky ways to make themselves look like anything but food! Because many moths are active at night, they are affected by *light pollution*. We can help moths work by minimizing outdoor lights and choosing outdoor light colors that do not look like the moon to insects.

Pollinator-Dependent Food: Turnips

Turnips are an edible root eaten around the world. Their leafy stems, known as turnip greens, are also considered food in many countries.





Christine Fortuin



Katrina Feracini



Kathy Potthoff-Hare

OCTOBER

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1	2	3	4	5	6	7
8	9 INDIGENOUS PEOPLES' DAY COLUMBUS DAY	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

NATIONAL BAT WEEK



Change is Hard

Sometimes it can be difficult to make changes. For example, it can be challenging to overcome the perspective that many native plants are “weeds” while natural beauty means showy exotic plants from other places in the world. Grass lawns and non-native landscaping creates a wildlife *food desert*, or an area without access to nutritious and plentiful food necessary to support a habitat. Now that we know our lawns and landscaping are not supporting pollinators, we can begin replacing exotic plants with native species and reducing the size of our lawns. We can add native trees, shrubs, grasses, and flowers to our property through landscaping or in pots on patios and balconies. And we can all begin talking to our friends, families, and neighbors about how small, individual changes can lead to big results for our native pollinators and protection of our food supply in the process.

Pollinator-Dependent Food: Mustard

While some humans don't like mustard, honey bees love it!





Katrina Feracini



Cathy Streett



Johanne Paquette

NOVEMBER

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	30	31	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18 VETERANS DAY
19	20	21	22	23 THANKSGIVING	24	25
26	27	28	29	30	1	2

Time to Plant!

The late fall seems like a time when everything is ready to sleep for the winter, but it turns out this is a great time to start growing native plants. Installing plants in the late fall allows them to acclimate to their new location without excessive stress from high temperatures and dry conditions. The foliage on many native plants is dormant in the fall and winter, allowing the plant to focus energy on growing deeper and stronger roots for the next season. This is also a good time of year to start seeds in mini greenhouses, in plastic milk jugs, or even spread directly on the ground and covered with a thin layer of soil and mulch. Sowing seeds in the late fall or early winter allows the seeds to go through a natural process where they are exposed to very cold temperatures, then as the weather warms in the early spring they begin to sprout as they would in the wild. You can trade seeds with members of your local native plant society or buy from reputable native seed suppliers. When buying seed mixes, check that all of the species in the packet are native to your area – some generic mixes may contain non-native species for your area.

Pollinator-Dependent Food: Prickly Pear Cactus

Many native bees are happy to pollinate prickly pear, and humans are happy to eat it!





AEP Apple Blossom Wind Farm, MI



Amen Illinois



APS Pollinator Seed Balls



ConEd Governor's Island



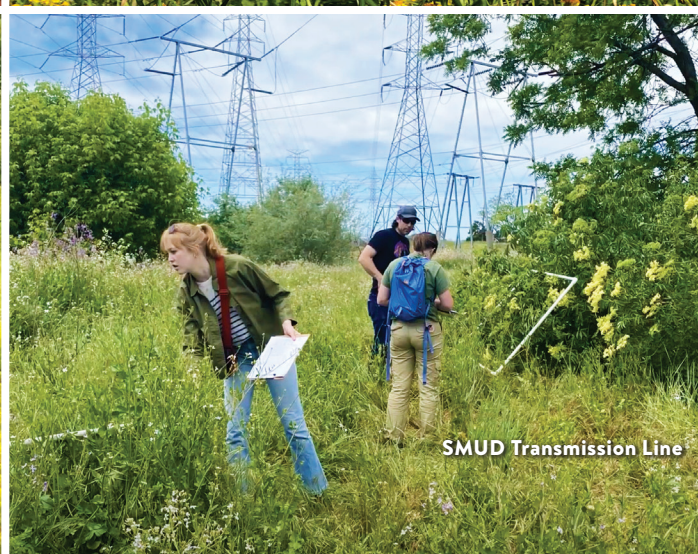
Cooperative Energy Transmission Line



LADWP Hollywood Reservoir



NYPA Transmission Line



SMUD Transmission Line



TVA Transmission Line

DECEMBER

2023

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	1	2
3	4	5	6	7 HANUKKAH (DEC 7 - 15)	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25 CHRISTMAS	26 KWANZA (DEC 26 - JAN 1)	27	28	29	30
31	1	2	3	4	5	6

Power Companies and Pollinators

During the 2022 Power Pollinator Party, we heard from 10 companies about how they are working to support pollinators. American Electric Power (AEP), Ameren, Arizona Public Service, ConEdison, Cooperative Energy, Los Angeles Department of Water & Power (LADWP), New York Power Authority (NYPA), Sacramento Municipal Utility District (SMUD), Tennessee Valley Authority (TVA), and Party sponsor Dairyland Power Cooperative all shared stories about the actions they are taking to use their lands for pollinator conservation. Companies discussed how integrated vegetation management that supports pollinators also supports corporate goals for environmental stewardship, biodiversity, and sustainability. They highlighted projects on utility rights-of-way and other managed lands that have been designed to create early-successional habitats such as grasslands and meadows that pollinators love. You can view the Dispatches from the Field videos and hear about the steps these power companies are taking to protect pollinators by visiting the Party website: www.eprievents.com/pollinatorparty2022.

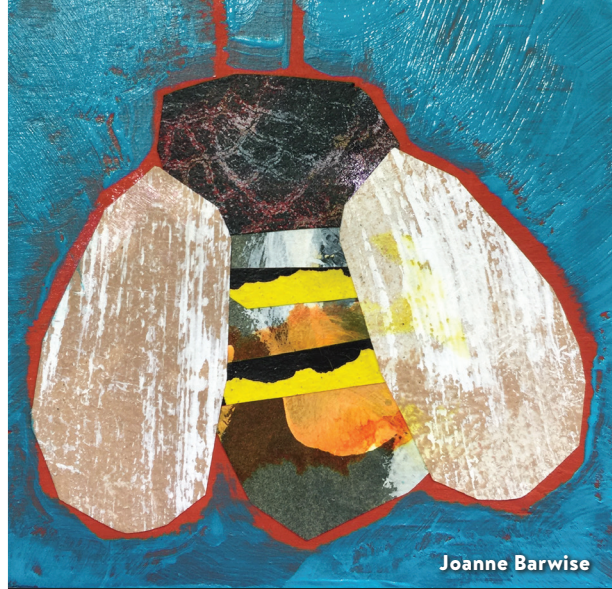
Pollinator-Dependent Food: Coconuts

While coconuts can be wind pollinated, insects play a significant role in pollination of this fruit.





Mandy Sanders



Joanne Barwise



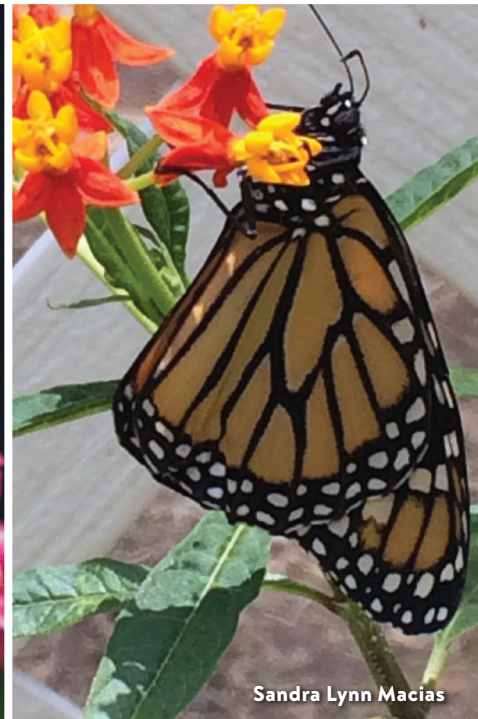
Jennifer Slezak



Elayne Bozick



Aerielle Kackos



Sandra Lynn Macias

Artists and Photographers

We were invited to submit their work for the Pollinator Power Party 2023 Calendar to help us celebrate the beauty and joy that pollinators bring to our lives. We were thrilled by the number and diversity of submissions and wanted to show off as many of these wonderful pieces as possible.

“We’re gonna pump you up about pollinators!”

Kelly Rourke (left), Pollinator Partnership and Jessica Fox (right), EPRI



Did You Miss the Party?

You can check out the [Party Recap video](https://www.youtube.com/watch?v=4LxnuxOHyoE) (https://www.youtube.com/watch?v=4LxnuxOHyoE)

or watch the whole party on [YouTube!](https://www.youtube.com/playlist?list=PLphKrncF69UsJL80NBWrVntoi4xVF4Cm) (https://www.youtube.com/playlist?list=PLphKrncF69UsJL80NBWrVntoi4xVF4Cm)

EPRI and Pollinator Partnership have developed these guides to help you learn about pollinators.

You can download the Bee ID guide by visiting <https://www.epri.com/research/products/000000003002022284>

You can download the Lepidoptera Fact Sheet by visiting <https://www.epri.com/research/products/000000003002025068>

BEE IDENTIFICATION GUIDE

Bees are beneficial insects that pollinate flowering plants by transferring pollen from one flower to another. This is important for plant reproduction and food production. In fact, pollinators are responsible for 1 out of every 3 bites of food you take. While the honey bee gets most of the credit for providing pollination, there are actually about 4000 species of bees in North America!

EPRI ELECTRIC POWER RESEARCH INSTITUTE

Pollinator

POWER PARTY

POLLINATOR PARTNERSHIP

How to Identify Bees

All bees have three body segments, a **head, thorax, and abdomen**. The head is where large multi-faceted eyes, long slender antennae, and mouthparts are found. The thorax is the middle segment where the wings and legs attach. Last is the abdomen, which for female bees ends in a stinger for some types of bees..

Special **pollen-carrying hairs** unique to female bees resemble dense broom bristles, and are commonly found on the rear legs or the underside of the abdomen. Some carry pollen in an almost hairless, flattened **pollen basket** on the rear legs.

Using this Guide

This card provides key features needed to identify 10 types of bees found in home landscapes. The approximate size of each bee is listed in millimeters. The following symbols will help along the way:

Common nesting locations.

Identifying behaviors to watch for.

Additional ID features that may be seen with the aid of a hand lens.

<div style="display: flex; align-items: center;"> <div style="margin-left: 5px;"> <p style="font-weight: bold; font-size: 0.9em;">Honey Bee</p> <p style="font-size: 0.8em;"><i>Apis mellifera</i> 12-15mm</p> <p style="font-size: 0.7em;">Light to dark brown body with pale and dark hairs in bands on abdomen. Pollen basket present. Abdomen barrel-shaped. Head heart-shaped.</p> </div> </div>	<div style="display: flex; align-items: center;"> <div style="margin-left: 5px;"> <p style="font-weight: bold; font-size: 0.9em;">Bumble Bee</p> <p style="font-size: 0.8em;"><i>Bombus</i> spp. 8-21mm</p> <p style="font-size: 0.7em;">Black body, extensively covered with black and yellow hairs on all body segments. Pollen basket present. Robust body. Long face.</p> </div> </div>
<div style="display: flex; align-items: center;"> <div style="margin-left: 5px;"> <p style="font-size: 0.7em;">Colonies nest in human-made hives, in the open, and in cavities. Swarm to locate new nest.</p> </div> </div>	<div style="display: flex; align-items: center;"> <div style="margin-left: 5px;"> <p style="font-size: 0.7em;">Colonies often nest underground, commonly in old rodent burrows.</p> </div> </div>

POLLINATOR PARTNERSHIP

Lovely Lepidoptera

Pollinating Butterflies and Moths

What are Lepidoptera?

Moths and butterflies belong to the same biological group, Lepidoptera. Globally 180,000 species of Lepidoptera have been described, but considering we discover many new species each year, it's estimated that global species are closer to 300,000 to 500,000. The vast majority of these are moths, as scientists estimate there are ten times more moth species than butterfly species.

A white-lined sphinx moth

What is their life cycle?

Moths and butterflies follow the general life cycle of egg to caterpillar to pupa to adult. For some species, such as the migratory monarch butterfly, these stages can all take place within a few weeks. Some species typically remain in their cocoon (moths) or chrysalis (butterflies) for the whole winter before emerging as adults in the spring. Other species spend the winter as adults, producing alcohol to use like antifreeze and huddling into old trees and other hidden nooks to keep warm.

What are the differences between moths and butterflies?

Although we think of moths and butterflies as distinct animal



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#PowerInPollinators



Save the Date! June 19-23, 2023

Pollinator Power Party 2023: June 19-23, in collaboration with National Pollinator Week. Get your art, music, and photographs ready for 2023!

Thank You!

All the artists, musicians, and photographers who shared and the 2022 Power-in-Pollinators Initiative collaborators who made this possible!

Editors: Lea Millet & Jessica Fox

www.epri.com/pollinators

About EPRI

Founded in 1972, EPRI is the world's preeminent independent, nonprofit energy research and development organization, with offices around the world. EPRI's trusted experts collaborate with more than 450 companies in 45 countries, driving innovation to ensure the public has clean, safe, reliable, affordable, and equitable access to electricity across the globe. Together, we are shaping the future of energy.

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