

Protecting the Life That Sustains Us

The Xerces Society's 2019–2020 Annual Report



Reweaving the Fabric of Our Environment

The Xerces Society is dedicated to protecting the natural world through the conservation of invertebrates and their habitats. We work with gardeners, farmers, environmental advocates, scientists, policymakers, businesses, and community groups to protect pollinators, conserve endangered species, reduce pesticides, and create habitat. A central component of our work is to go out to meet people where they live and work, building trust and collaboration. But this year with the onset of the coronavirus, the Xerces Society—like many other groups—needed to adjust our approach.

The coronavirus necessitated moving all our staff to home offices and ensuring that everyone had the tools and technology to successfully do their jobs. An even bigger task was to connect with our constituents remotely, finding new ways to provide people with the information and guidance they need. In May, we launched a new webinar series and created additional conservation resources on our website and social media. So far, the response has been overwhelmingly positive. We are inspired

by the thousands of people who have stepped forward to take action for invertebrates by planting habitat at home, by contributing to community science projects, by spreading our conservation message, and more. We continue to try out new ways to connect during this unprecedented time to make our educational resources widely accessible.

We know that even during a pandemic the vital work of sustaining the health of the natural world cannot be put on hold, understanding that the health of our planet is inseparable from human health. When we protect invertebrates and their habitats, we are also protecting clean water and air, rich soils that grow nutritious foods, and an incredible web of plants and animals that bring meaning to our lives.

To meet our mission, we must make the world safer for the diversity of life: both the human and nonhuman communities that make up our one wild and beautiful earth. Together, we will protect bees and fireflies, freshwater mussels and butterflies, and the many other invertebrates and the places in which they live. Thank you for joining us in protecting the life that sustains us.

“Insects and plants are the fabric of this planet. We’re ripping it to shreds, and we need to knit it back together.” – Executive Director, Scott Hoffman Black

(Photo: Mahan Rykiel Associates/ Xerces Society.)

Diversity, Equity, and Inclusion at the Xerces Society

The Xerces Society is committed to establishing and maintaining a diverse and inclusive community that collectively supports our mission: to protect the natural world by conserving invertebrates and their habitat. We recognize that climate change, biodiversity loss, contamination of water, soil, and air with pesticides and other toxics, and many other environmental challenges have disproportionate negative impacts on communities of color and economically disadvantaged communities.

Invertebrate diversity is vital to sustain life on this planet. Having invertebrates to pollinate nutritious food, process plant and animal waste, help clean our rivers, and feed the myriad animals on the planet will help us all. The benefits of conserving invertebrates truly help everyone—no matter their gender, race, ethnicity, national origin, age, sexual orientation, gender identity, education, or disability. The inverse is also true—to maximize invertebrate conservation, all of society needs to

have a role. The conservation of invertebrates will take an all-hands-on-deck approach and it is vital that diverse communities benefit from this conservation and engage to help protect these essential animals.

The Xerces Society embraces diversity in staffing and in our program services. At the Xerces Society a diverse, inclusive, and equitable workplace is one where all employees and volunteers, regardless of their gender identity, race, ethnicity, national origin, religion, age, sexual orientation, education, or disability, feel valued and respected. We are committed to a nondiscriminatory approach and provide equal opportunity for employment and advancement. We respect and value diverse life experiences and heritages, and work to ensure that all voices are valued and heard. The Xerces Society will strive to increase diversity, equity, and inclusion in our conservation and education programs.

To read our full diversity, equity, and inclusion statement, please visit xerces.org/diversity-equity-inclusion.



Transforming Agricultural Landscapes

With about 40 percent of the Earth's land devoted to agriculture, creating habitat for bees, butterflies, beetles, and other insects on farms and ranches is a critical component of our conservation work. Large-scale farms in intensive agricultural areas often have no natural habitat for miles in any direction. We work with farmers to minimize fencerow-to-fencerow farming, reduce the use and impacts of pesticides, build healthier ecosystems, and counter the conversion of natural habitat to agriculture. By integrating habitat features like wildflower meadows, hedgerows, cover crops, field borders, and beetle banks into their fields, we help farmers support the bees that pollinate their crops and the beneficial insects that provide natural pest control.

Xerces Pollinator Conservation Planner Sarah Nizzi works with farmers to plant a beetle bank between a field and row crops to naturally protect them from potential pests. (Photo: Iowa Valley RC&D.)



1.25 million acres of pollinator habitat restored on farms over the last decade, including **350,000 acres** in the last year.



Xerces Community Engagement Coordinator Rachel Dunham engages people of all ages in interactive pollinator educational activities at a family-focused event in Oregon. (Photo: Chad Wildermuth.)

Speaking up for Invertebrates

21,000 people learned how to conserve invertebrates through our outreach and education programs.

To reverse insect declines, we need everyone to take action: farmers, gardeners, teachers, policy makers, land managers, government agencies, food companies, and more. We are out in the field meeting farmers and natural area managers, giving presentations everywhere from food industry conferences to local garden clubs, and strategizing with cities and schools on ways to increase habitat and reduce pesticides. In the last year, more than 21,000 people learned how to conserve pollinators, freshwater mussels, fireflies, and other invertebrates through Xerces Society education and outreach programs.

The coronavirus challenged us to rapidly retool to find new ways to connect with people from afar, and as a result, we launched a new Xerces webinar series covering a broad range of pollinator and invertebrate conservation topics. The first 15 webinars we hosted were attended by 3,800 people who learned about topics such as protecting pollinators from pesticides, firefly conservation, gardening for native butterflies, pollinator habitat planning, and community science.

3,800 people reached through Xerces Society webinars.



Farmers gain practical knowledge about how to conserve pollinators on their land from Xerces Pollinator Conservation Specialist Sarah Foltz Jordan at a field day in Iowa. (Photo: Practical Farmers of Iowa.)

Creating Pollinator Habitat Corridors to Withstand Climate Change

25 miles of pollinator habitat corridors planted in California, including more than 6 miles planted last year.

It is impossible to stem biodiversity loss without addressing climate change—and equally impossible to tackle climate change without addressing biodiversity loss. By creating connected habitats across farms, roadsides, and urban and natural areas, pollinators are better able to adapt and move as climate change affects both the quality and quantity of their native habitat. To support populations of diverse pollinators and other native insects, we are restoring and protecting interconnected habitat patches in landscapes across the United States.

Partnering with farmers, farm agencies, and food companies, we planted miles of pollinator hedgerows in California. These diverse linear plantings of native flowering trees, shrubs, perennial wildflowers, and grasses are designed to provide forage, host plants, and nesting habitat for pollinators and other beneficial insects. Many of these habitat corridors are part of the largest-scale farm systems in North America. By creating linkages between habitat areas, over time, we will be able to form expansive corridors for wildlife movement.

A birds-eye view of a pollinator hedgerow in a California almond orchard. This habitat will help sustain healthy pollinator populations as the climate changes. (Photo: Xerces Society / Cameron Newell.)



19 invertebrates protected under state and federal endangered species laws since 2000 as a result of our advocacy, including six species in the last year.



A Lifeline for Endangered Species

We are a voice for the “little things that run the world.” From the world’s rarest butterflies to caddisflies that live solely in one stream, we are dedicated to protecting invertebrates and the ecosystems that depend on them—no matter how long it takes.

Another six at-risk invertebrates have received protection under state and federal endangered species laws as a result of the Xerces Society’s science-based advocacy. These animals include four imperiled bumble bee species in California; the western glacier stonefly, which only persists in the meltwater from rapidly disappearing glaciers in Glacier National Park; and the island marble butterfly, now listed after 17 years.

The island marble butterfly is now protected under the Endangered Species Act. (Photo: Karen Reagan / USFWS.)

Saving Freshwater Mussels, the Unsung Heroes of Our Waters

Hidden below the water's surface and tucked in among the rocks, freshwater mussels are the animals you never knew you couldn't live without. Like nature's Brita filter, mussels clean gallons of water each day. Despite the valuable ecological services they provide, many of North America's native mussel species are at risk of extinction. We worked with restoration partners to safeguard more than 11,000 freshwater mussels in Pacific Northwest rivers and streams that otherwise would have been lost or harmed by restoration activities.

Biologists survey for freshwater mussels, which have disappeared from nearly one-fifth of the watersheds they once inhabited. (Photo: Xerces Society / Sarina Jepsen.)



11,000 freshwater mussels saved in Pacific Northwest rivers and streams.

Bumble Bee Conservation through Community Science

780 volunteers contributed over **12,000** records of bumble bees in the last year.

Community scientists are helping improve knowledge of bumble bee distribution, abundance, and habitat use that will inform restoration priorities and practices across 300,000 square miles. With this information, we are creating regional and state bumble bee atlases that map where at-risk and rare species are living and document their habitat needs so that we can effectively conserve them. While participating in an atlas project, volunteers learn about the species in their area and enjoy hands-on experiences in nature that empower them to become advocates for these essential animals.

Xerces Endangered Species Biologist Rich Hatfield demonstrates survey techniques for the Pacific Northwest Bumble Bee Atlas project. (Photo: Steve Lenz.)



Growing Native Plants for Monarch Butterflies and Other Pollinators

51,200 plants for monarch butterflies and pollinators distributed in critical habitat areas.

Monarch butterflies have experienced alarming declines, especially in the West. To increase essential habitat for monarchs and other pollinators, we partnered with native plant nurseries to produce monarch and pollinator habitat kits for habitat restoration. We distributed 51,200 plants to farms, ranches, schools, roadsides, and parks in areas of California of importance for monarchs. These kits were specially designed with milkweed and other pollinator-attractive plants that can withstand future climate conditions so that they will continue to provide important habitat for monarchs and other pollinators for years to come.

This habitat kit was planted by California Native Plant Society in Los Angeles County. They have been working hard to help restore the Sepulveda Basin Wildlife Reserve, including removing a lot of invasive plant species. (Photo: Nurit Katz.)



170 species of fireflies studied and conservation actions identified to protect them.



Uncovering the Science of Fireflies

Fireflies are some of our most celebrated insects, but studies and anecdotal reports suggest that they are declining. We released a groundbreaking report and illustrated companion brochure on fireflies that describe where US and Canadian species are found, their life histories, and the threats they face. These resources not only bring these well-loved animals the conservation attention they need, but they provide people with information on adopting firefly-friendly policies and creating and managing their habitat. Through a new collaborative effort with the International Union for Conservation of Nature Firefly Specialist Group, we are also evaluating the extinction risk of the 170 species that occur in the US and Canada.

Fireflies are the focus of the Xerces Society's newest conservation campaign. We are working to understand the threats to populations of these magical animals and how to best conserve them. This image is from our firefly brochure published this year. (Illustration: Jane Kim / Ink Dwell.)

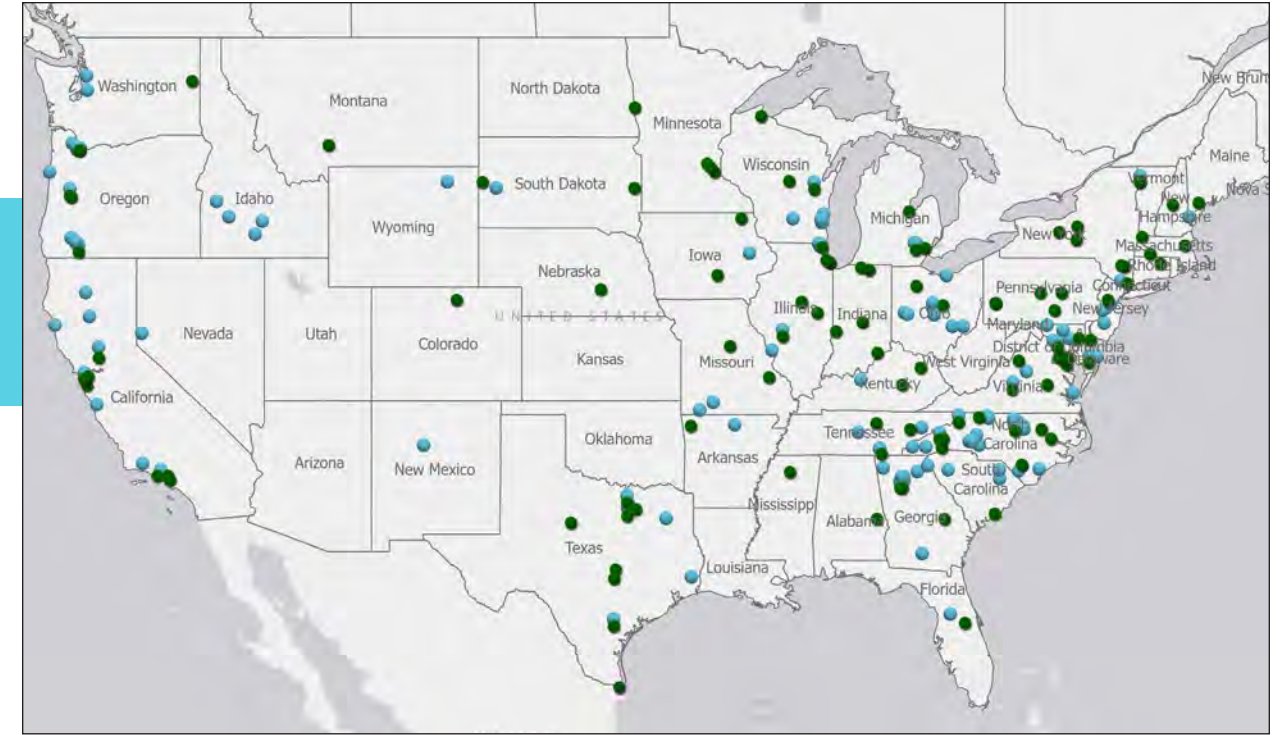
Mobilizing Communities to Support Imperiled Pollinators

200 cities and campuses are improving habitat for pollinators and spreading awareness about these essential animals.

More than 200 communities in 42 states have committed to supporting pollinators by becoming Bee City USA and Bee Campus USA affiliates, including 18 cities and 26 campuses that have joined in the last year. These cities and colleges completed 876 pollinator habitat projects, ranging from school gardens to pollinator meadows and hedgerow plantings, and they found ways to reduce their reliance on pesticides or eliminate pesticide use all together. Over 800,000 people learned about pollinator conservation through events, community habitat projects, campus service learning projects, and classes held by Bee Cities and Bee Campuses.



A group of students plant a pollinator garden as part of Blue Ridge Community College's commitment to being a Bee Campus USA affiliate. (Photo: Carol Ann Lydon.)



Bee City USA (noted in light blue) and Bee Campus USA (noted in dark green) affiliates throughout the United States create safe habitat for pollinators and engage communities to understand their importance.

800,000 people engaged in pollinator conservation projects and events through Bee City and Bee Campus USA.

5 research studies published about insect declines, advancing science-based conservation methods.



Groundbreaking Research on Insect Declines

Xerces' scientists contributed to five newly published studies that help answer key conservation questions. These studies shine a light on whether species are declining and to what extent, the potential risks these animals face, and the actions needed to protect them. Our findings are being used by decision makers, other conservation groups, and the public to craft solutions to protect imperiled pollinators and other insects.

One of these new studies adds valuable information to the discussion of the role pesticides play in the western monarch's decline. Previously unstudied, our findings indicate that key monarch breeding grounds are contaminated with pesticides at harmful levels. We found pesticides everywhere that samples were gathered, on conventional and organic farms, wildlife refuges, and urban areas alike, raising alarms for remaining western monarchs, a population already at a precariously small size. This study highlights the need for continued action to reduce pesticides across all landscapes, and already we have seen an outpouring of support from farmers, gardeners, natural resource agencies, and others who are stepping up to help monarchs.

A monarch butterfly nectaring on prairie blazing star. (Photo: Bryan E. Reynolds.)

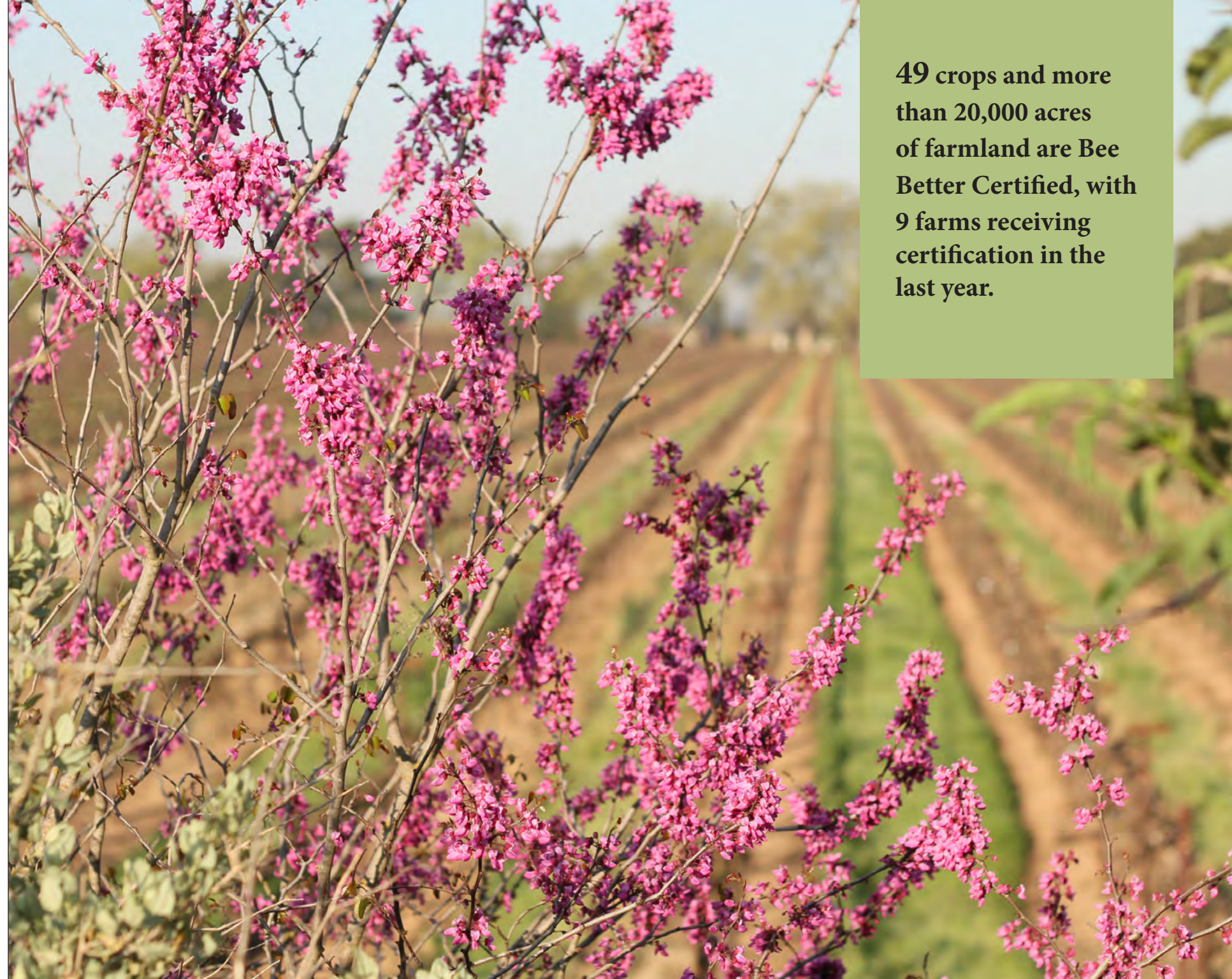
Helping Farms Bee Better

Through Bee Better Certified™, the first and only third-party certified, pollinator-focused farm and food product eco-label, 18 farms are supporting bees, butterflies, and other beneficial insects with high-quality habitat protected from pesticides. Nine of these farms received certification in the last year and created over 690 acres of flowering hedgerows, wildflower meadows, and other permanent pollinator habitat. Since the launch of the certification program in 2017, 49 crops and more than 20,000 acres of farmland has become Bee Better Certified.

Food bearing the Bee Better Certified seal can now be found at local markets, providing consumers with the opportunity to directly support farming that protects bees and other pollinators. New products include organic blueberries and cherries and several flavors of ice cream made with Bee Better Certified almonds.



Bee Better Certified habitat in a vineyard (right) and certified products that hit the shelves of grocery stores this year (above) (Photos: Xerces Society / Cameron Newell [right]; Emily Balius [above].)



49 crops and more than 20,000 acres of farmland are Bee Better Certified, with 9 farms receiving certification in the last year.



Thank You to our Partners, Volunteers, and Supporters

Protecting the millions of invertebrates and the natural world upon which we all depend is a big job and we couldn't do it without you. We would like to thank:

- 14,000 Xerces Society members and donors around the globe.
- Dozens of private foundations that provide financial support to sustain our work.
- Over 40 companies working with us to make our world a better place.
- Hundreds of farmers who partner with us to create and maintain habitat.
- Over 100 scientists from around the world.
- Thousands of community scientists who contribute meaningful data.
- 36 Xerces Ambassadors who help people learn about invertebrates and how they can make a difference in their own communities.
- Over 200 Bee City USA and Bee Campus USA affiliates that are improving habitat for pollinators and increasing awareness.
- Volunteers who help out at our office, assist with research collection, and do other essential projects.
- Dozens of organizations and agencies partnering with us to advance wildlife conservation and sustainable agriculture.
- Our board of directors.
- Everyone who goes out of their way to help invertebrates, from planting more flowers and giving up pesticides, to encouraging their city or town to take action to protect habitat for invertebrates.

A monarch mural being painted on a seven-story building in San Francisco's Tenderloin District by the artists of Ink Dwell studio. The Xerces Society worked with Ink Dwell on this collaborative project to highlight the plight of monarchs and other butterflies. (Photo: Ink Dwell.)

2019 Financial Report

Financial Activities January to December 2019 (Audited)

REVENUE

Foundation & corporate giving	\$2,374,628	37%
Government contracts	\$1,304,459	21%
Individual donations	\$1,740,895	27%
Program revenue & publications	\$ 779,012	12%
Net other revenue & unrealized gain	\$179,978	3%
Total revenue	\$6,378,972	

EXPENSES

Pollinator conservation	\$2,077,403	
Endangered species	\$955,064	
Community engagement	\$386,943	
Pesticide reduction	\$126,231	
Other conservation	\$307,074	
Total programs	\$3,852,715	77%
Development & membership	\$747,572	15%
Management & general administration	\$403,420	8%
Total expense	\$5,003,707	
<i>Net income</i>	<i>\$1,375,265</i>	
<i>End of year net assets</i>	<i>\$6,736,957</i>	

Xerces Society Board of Directors

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