

Monarch Joint Venture:

Partnering across the U.S. to protect the monarch migration

In the face of apparent declines in monarch numbers and habitat, conservationists are pooling their efforts under the Monarch Joint Venture to protect monarchs and pollinator habitat.

The Monarch Joint Venture

The Monarch Joint Venture (MJV) is a partnership of federal and state agencies, non-governmental organizations, and academic programs working to protect the monarch migration in the lower 48 United States. The MJV is committed to a science-based approach to monarch conservation work, guided by the *North American Monarch Conservation Plan* (2008), and is focused on activities that support monarch habitat conservation, maintenance and enhancement; education; and research and monitoring.

Monarch Migration

The monarch migration is one of nature's most spectacular events. Much as birds migrate to take advantage of resources available across a large landscape, North American monarchs travel up to an astonishing 3,000 miles in an annual migration from their summer breeding habitat to overwintering grounds.

During the summer breeding season, eastern monarchs spread across the eastern U.S. and into southern Canada, laying eggs on milkweed plants. Western monarchs make use of milkweeds across the western states, primarily west and south of the Rockies, and into southwestern Canada.

In the fall, monarchs feast on late-blooming nectar plants along the way to their wintering sites. The eastern monarch population winters in Oyamel fir forests in the mountains of central Mexico. While the spring migration northward is

completed over the course of two generations, the final generation of the year flies the entire way back to these forests, new to them, but visited by their ancestors a few generations ago. In the same way, monarchs from across the western U.S. return to eucalyptus, Monterey cypress, Monterey pine, and other trees in groves along the Pacific coastline, from Mendocino County south to Baja, Mexico. Climatic conditions at these sites allow monarchs to survive the winter before beginning the return trek to their summer breeding grounds.



Monarchs and Milkweed

Monarch caterpillars require milkweed to grow and develop into butterflies, and they use many of the over 100 species of milkweed native to North America. These plants, key to monarch survival, are found along roads and highways; in yards, parks, and gardens; in old fields; and in pristine native prairies and other natural habitats.

In addition to the important role that milkweeds play in the lives of monarchs, they are valuable nectar plants for a wide variety of native bee species. Enhancing monarch habitat will thus benefit many other pollinators.

Monarchs at Risk?

The monarch migration was listed by the International Union for Conservation of Nature as an endangered phenomenon in 1983. In 2010, the World Wildlife Fund included monarchs on its list of the "Top 10 to Watch in 2010": species that are thought to be in need of close monitoring and protection.

The Monarch Joint Venture Mission and Vision

Recognizing that North American monarch (*Danaus plexippus*) conservation is a responsibility of Mexico, Canada and the U.S., as identified in the North American Monarch Conservation Plan, this Joint Venture will work throughout the U.S. to conserve and protect monarch populations and their migratory phenomena by implementing science-based habitat conservation and restoration measures in collaboration with multiple stakeholders.

This goal will be achieved through a combination of habitat conservation, enhancement and restoration; education; research and monitoring.

The vision of this Joint Venture is abundant monarch populations that can be sustained into perpetuity, and more broadly the promotion of monarchs as a flagship species whose conservation will sustain habitats for pollinators and other plants and animals.

The conservation status of monarch overwintering groves in Mexico receives much attention. However, monarchs face challenges in the U.S. as well. A decline in the number of western monarchs, most of which spend their entire life cycle in the U.S., has been well documented over the past decade. Both eastern and western monarchs are dependent on habitat quality throughout their breeding range in the U.S. Threats faced by monarchs within the U.S. include:

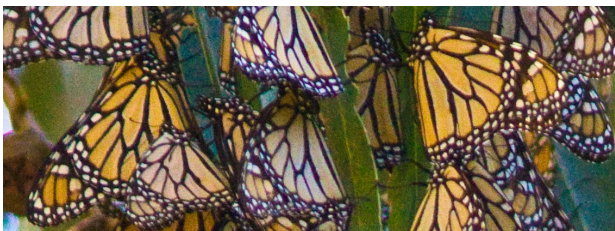
- A decline in breeding habitat quality and availability, as milkweed is reduced in abundance through habitat conversion and changes in land management practices;
- Possible changes in milkweed availability, quality, and distributions due to effects of climate change;
- Pesticide use to control other insects, with unintended harmful consequences for monarchs;
- Habitat conversion in California, resulting in reduced availability and quality of overwintering groves; and
- Shifting overwintering habitat quality, as the trees in California's monarch groves age and senesce.



A Growing Partnership

The MJV is a new and building partnership. Current MJV partners include:

- US Forest Service (International Programs & Region 9);
- Monarch Butterfly Fund;
- Monarchs in the Classroom;
- Monarch Watch;
- Natural Resources Conservation Service (NRCS);
- North American Butterfly Association;
- Pollinator Partnership;
- Texas Parks and Wildlife Department;
- US Fish and Wildlife Service; and
- The Xerces Society for Invertebrate Conservation.



Monarch Joint Venture Conservation Efforts

MJV partners are planning ambitious early projects to support monarch populations, while also building long-term projects to facilitate broader habitat conservation. A few of the MJV's upcoming projects include:

- Increasing the availability of native milkweed seeds for habitat enhancement projects (with the Xerces Society and NRCS);
- Expanding the Monarch Waystation program to increase monarch habitat and citizen engagement in monarch conservation (with Monarch Watch);
- Providing support for data analyses that will yield a better understanding of monarch population trends (with MonarchNet);
- Increasing monarch monitoring efforts (with the North American Butterfly Association and the US Fish and Wildlife Service);
- Installation of pollinator gardens (with the US Forest Service).
- Teacher-training workshops to increase student knowledge of monarch biology and conservation across the migration flyway (with Monarchs in the Classroom and the US Forest Service).

What is a Joint Venture?

In 1986, the largest cooperative effort ever initiated to protect wetlands, waterfowl, and other wildlife was initiated with the North American Waterfowl Management Plan. In a new approach to conservation, six regional, self-directed partnerships were created. These partnerships of agencies, non-profit organizations, corporations, tribes, and individuals—called Joint Ventures—implement conservation plans within a specific geographical area.

The current 18 habitat and 3 species migratory bird Joint Ventures increase the efficiency and effectiveness of conservation by bringing together the science, the people, and the resources needed to develop and implement conservation strategies. Due to their remarkable success, Joint Ventures have been generally accepted as the model for moving bird conservation forward in the 21st century.

The similar migratory nature of birds and monarchs, and their use of multiple habitats across a large landscape, make the Joint Venture model ideal for building monarch conservation efforts.

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