

Managing Your Property for Native Pollinators



In the last Conservation Corner, we discussed the role of pollination in the production of certain types of fruit. This time, we will broaden our focus and report on the overall importance of pollination and on the threats facing the pollinators who carry out the process.

Pollinators are animals, primarily insects, who move pollen from the male part of a plant (anther) to the female part of the plant (stigma) or another of the same species. This service provided by the pollinator results in the production of seed and in turn aids in the propagation of that plant. According to the Xerces Society, a non-profit dedicated to invertebrate protection, pollinators provide an essential ecological service to our environment (<http://www.xerces.org/>):

- Pollination is necessary for the reproduction of over 85 percent of the world's flowering plants, including more than two-thirds of the world's crop species.
- The United States alone grows more than one hundred crops that either need or benefit from pollinators, and the economic value of these native pollinators is estimated at \$3 billion per year in the U.S.
- Beyond agriculture, pollinators are keystone species in most terrestrial ecosystems. Fruits and seed derived from insect pollination are a major part of the diet of approximately 25 percent of all birds, and of mammals ranging from red-backed voles to grizzly bears.
- In many places, the essential service of pollination is at risk from habitat loss, pesticide use, and introduced diseases.

Who are these pollinators?

Economically speaking, honey bees are probably the most important pollinator in the



U.S. Pollination by honey bees adds \$15 billion annually to US crops. \$9 billion more is added by other pollinators, such as native bee species, butterflies, some beetles, some flies, and some birds, such as hummingbirds. All of these species play an important pollination role in the greater ecosystem, beyond the scope of agriculture.

Are these species facing challenges?

Definitely. The number of managed honey bee colonies has dropped from 6 million in 1947 to only 2.5 million in 2014. This loss may result from loss of forage, as well as parasites and disease, or exposure to some pesticides, among other possibilities. This phenomenon known as colony collapse disorder (CCD) has resulted in the loss of millions more hives worldwide. CCD has dealt an economic blow to commercial beekeepers, and has increased costs for farmers who rent hives for pollinating their crops. These costs, in turn, are passed on to consumers.

Another important pollinator, the Monarch butterfly, has recently experienced a precipitous decline in population, due to habitat loss in its Mexican wintering habitat and herbicide-related reduction in the number of milkweed plants where it summers in North America. Because of the Monarch's plight, a petition to place it on the Endangered Species List is being considered by the U.S Dept of Fish and Wildlife. Other pollinators face similar challenges, resulting from loss of habitat and threats from pesticides and herbicides.

Concern about the plight of these species has been expressed from the highest levels of government. In June of 2014, President Obama issued a memorandum creating a Pollinator Health Task Force. This group, made up of officials from the Environmental Protection Agency and the US Dept of Agriculture, has been charged with the responsibility of coordinating efforts to research, prevent, and recover from pollinator losses. (<https://www.whitehouse.gov>)

How can landowners have an effect on the plight of these species?

Pollinators, like any species of animal, have two requirements for good habitat: a place for nesting and protection; and a source of food. Landowners can take some simple and inexpensive measures to help these animals.

Wood nesting bee habitat can be enhanced by providing wood blocks with holes drilled in them or tube bundles (drinking straws bundled inside a piece of PVC pipe). Bare ground can be left in the yard or garden for ground nesting bees. Nesting boxes can be provided for bumble bees. (http://www.xerces.org/wp-content/uploads/2008/10/nests_for_native_bees1.pdf). Leaving patches of milkweed will be a bonus for Monarch butterflies.

Food (nectar and pollen) can be provided by planting certain shrubs and flowers. It is best to have a variety of plants, providing flower blossoms throughout the spring, summer and fall. The Natural Resource Conservation Service (NRCS) has published an excellent document entitled *Plants for Pollinators in the Inland Northwest*. The publication, which lists plants by rainfall microclimates and blooming season, also includes additional information on pollination and pollinators. (http://www.nrcs.usda.gov/Internet/FSE_PLANTMATERIALS/publications/idpmstn10799.pdf)

Besides providing a nesting place and a food source, it is important to eliminate or take great care in the use of pesticides. Pesticides will kill pollinators directly or reduce the number of their offspring. Gardens and lawns can be nurtured without chemicals. Moving crops around in the garden from year to year can help prevent the establishment of certain pests. Introducing bioagents, such as ladybugs, will help, as well. If pesticides must be used, avoid spraying on plant when they are in bloom or using more spray than necessary.

The Xerces Society is making strides in its efforts to improve conditions for pollinators, particularly bees and butterflies. The that end, they have published some excellent documents to help landowners , farmers and natural resource managers make informed decisions to help these animal species which are so important to the planet's ecosystems.

The NRCS offers free technical assistance regarding management of native pollinators. Two NRCS programs provide cost-share funds for conservation projects, some of which can be used for pollinator habitat enhancement. Applications for the next funding cycle for NRCS's Conservation Stewardship Program (CSP) and its Environmental Quality Incentives Program (EQIP) are available at the Republic office at 84 W. Delaware (509-775-3473, ext:102). For more information on pollinator habitat improvement, visit the Ferry Conservation District/NRCS booth at the upcoming Conservation Fair on Saturday, April 18 at the Ferry County Fairgrounds.