

# BEYOND

## *The Threat of Toxics*

*Seek simple justice  
for water, bird,  
breath and bee--*

The native bee is the world's most ardent cupid, nuzzling intimately among the flowers to carry messages of love from one blossom to another—pollen that is pregnant with nature's essential reproductive spark.

It is the bee's amorous work that creates the ecosystem as we know it. Without bees, 85% of all trees and flowers will not produce the flowers, fruit and seeds needed to create the next generation of plant life.

Native bees are the world's bedrock species.

They are essential to the way an ecosystem functions. Should bees disappear, other species in the habitat will become extinct.

Once abundant throughout North America, the 50 species of native American bees are disappearing. Native bees labor under these ominous labels: critically endangered, threatened, vulnerable, precipitously declining.

The effects of climate change will further exacerbate their peril.

We must take action for the bees and for the balance of the ecosystems that support all life.

Help us  
**Save  
Oregon's  
Bees!**

***A special Beyond Toxics publication***

Photo by Melody Carr

## Not just bees, not just birds— but an entire ecosystem is at risk

Neonicotinoid insecticides (neonics for short) are getting worldwide scientific scrutiny. The recognition of their toxicity is leading to bans and restrictions in many states and countries. The best scientific studies identify neonics as a prime culprit in mass bee die-offs. Neonics are particularly harsh on native bees that live in forests, meadows and our gardens.

Scientific research confirms that exposure to even the lowest level of neonic pesticides is sufficient to harm native bees. When exposed to “legal” levels of neonics, amounts typically measured after a spray, bees’ brains show cellular damage. The poison renders them unable to remember and navigate. The mother bumble bee may fail to nurture the brood cells holding her baby bees.

Further disrupting nature's balance, neonics also kill beneficial insects, including lady beetles that control aphids. When the good bugs are poisoned, damaging insects quickly take over. The result is the disturbance of ecosystems large and small, where the destructive insects outnumber the helpful ones that once kept them in check.

What makes neonics so particularly harmful? Neonics are systemic chemicals that travel through the plant’s entire vascular system and concentrate in its nectar, blossoms, pollen, leaves, and stems. Bees are then exposed to lethal doses during their visit to gather pollen and take a sip from the plant’s tainted nectar and dew.

Slick marketing and visible shelf placement have made neonics the #1 insecticide sold to home gardeners, touted to solve all garden and lawn problems. It’s nearly impossible to avoid them, as they are hidden in all sorts of brand names and packaging. Even the most well-intentioned gardener can be fooled into using neonics.

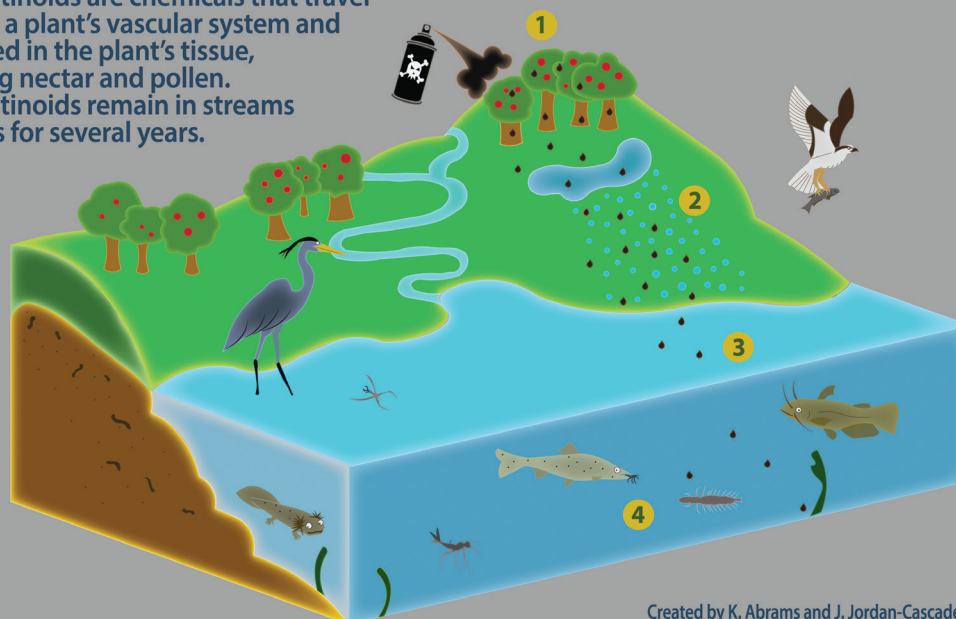


Restricting the general public from buying ultra-hazardous chemicals is the necessary and precautionary action we must take. Consumers mistakenly assume that finding these pesticides on local store shelves means they’re safe in the environment – in the case of neonics, that is a dangerous notion.

It’s time to take neonic pesticides completely off store shelves. Maryland recently passed a law to prevent stores from selling these poisons to the general public. Oregon too can take necessary and precautionary action to protect bees. For the sake of pollinators and beneficial insects, for the sake of food security and for the sake of ecosystem balance, we must demand that bee-killing pesticides be restricted.

## The Neonicotinoid Pathway

Neonicotinoids are chemicals that travel through a plant’s vascular system and are stored in the plant’s tissue, including nectar and pollen. Neonicotinoids remain in streams and soils for several years.



- 1 Neonics are used to kill insects on gardens, orchards and lawns.
- 2 Neonics travel through plant cells and into soils where they runoff into water.
- 3 Once these poisons get into water, they build up and are taken into many aquatic plants and animals.
- 4 Birds and fish are harmed when they eat insects and plants contaminated with neonicotinoids.

Created by K. Abrams and J. Jordan-Cascade

## What can you do to create native pollinator habitat?

In the wild, native flowers typically drop seeds into the soil during the autumn, making fall the best time to plant native wildflowers. Over the winter these seeds freeze then thaw in the spring so that they can better germinate. Fall planting can result in earlier spring blooms—a great way to reduce weed growth. Earlier blooms also provide valuable early nectar sources for pollinators struggling to find food at the beginning of the gardening season. A good rule of thumb is: any time you can provide early or late food for bees, butterflies and birds...



## just do it!

Unlike hives of honeybees working together to provide enough food to survive through winter, our native bumble bees are mostly solitary bees, a mother and her young, helpless brood living by themselves in a hole in the ground. The young queens emerge in spring with very little energy and literally cling to unopened flowers as early as February.

Flowers native to the Pacific Northwest and native bee species evolved together to provide nourishment at just the right time. Without that early source of food, native bees are more likely to die.

This autumn, focus on planting native flowers, such as, yarrow, lupine, camas, self-heal, clarkia, cinquefoil, and buttercup. Late-summer blooming flowers are less common in the Willamette Valley, making them even more important for foraging bumblebees. Canada goldenrod, Douglas aster, and giant hyssop are all great choices for late blooming nectar-rich flowers.

## Bees and the Endangered Species Act

There's no doubt that 2016 will be remembered as the first year native bees were added to the Endangered Species List. Recently, the U.S. Fish and Wildlife Service granted protected status to seven species of bumble bees native to the Hawaiian Islands. However, pollinators around the planet are currently facing similar threats and could also benefit from special protections.

A recent United Nations sponsored report stated that "about 40 percent of pollinator species (such as bees and butterflies) are facing extinction."

It's highly likely that some of Oregon's native bees are threatened to the point of extinction. One of Oregon's native bees, the Franklin's bumble bee, once common to the upland prairies along the southern Oregon Coast Range, hasn't been sighted since 2006. Habitat loss,

pesticides, climate change and diseases are all part of a complex mix of threats. These keystone species need strong protections.

One of our successful projects is making Oregon the first state to declare an annual Native Bee Conservation Day (August 15th). Our efforts are raising awareness about the need for precautionary measures to ensure the survival of rapidly declining native pollinators, such as Franklin's bumble bee.

The disappearance of even a fraction of these endangered species could devastate the world's food supply and disrupt already faltering ecosystems. Sadly, Franklin's bumble bee, an Oregon native, may be the next species to be listed under the Endangered Species Act.

## Take Action Now! Let's make Oregon the 2nd state to take neonics off store shelves!

We rely on bees to pollinate everything from apples grown along the Columbia River Gorge to berries grown in the Willamette Valley, from onions grown in Eastern Oregon to the alfalfa used to feed dairy cows along the Oregon Coast. It's drastic: No bees, no food. The solution starts with protecting bees from neonicotinoid pesticides known to kill bees and decimate hives.

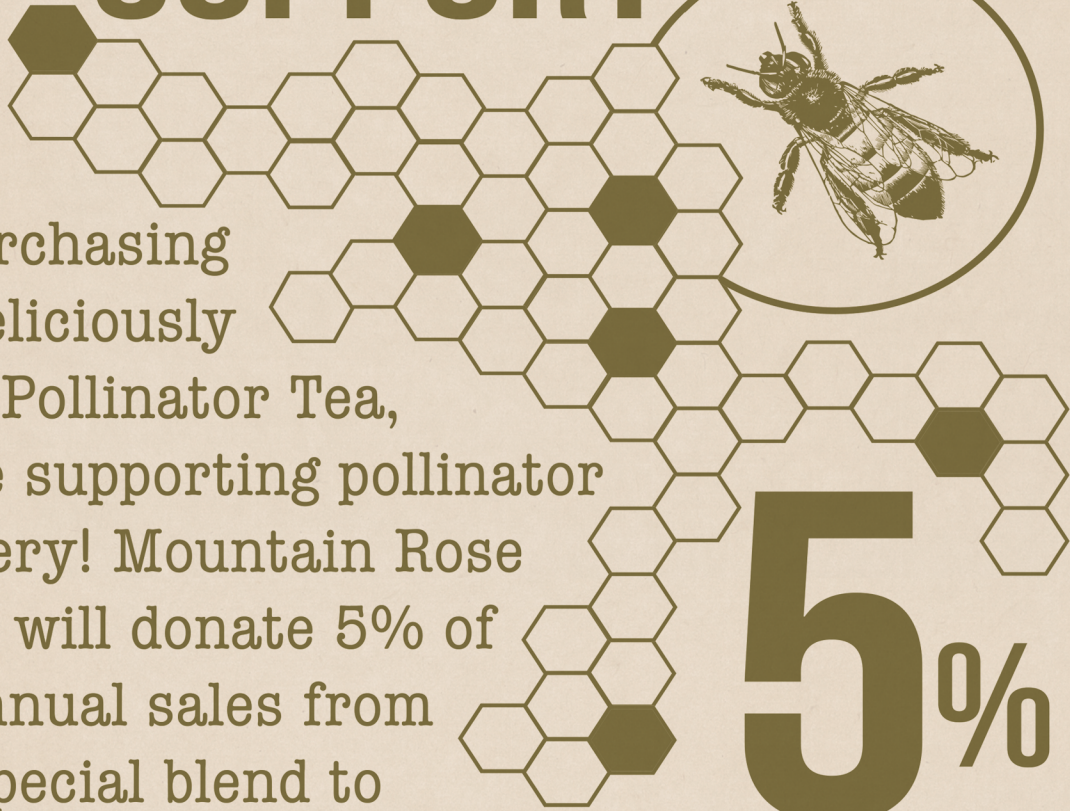
Go to [www.SaveOregonBees.org](http://www.SaveOregonBees.org) to take action now. Sign our petition to stop bee-killing pesticides from being sold from store shelves to unsuspecting consumers. Help us encourage the use of alternatives to neonicotinoids.

Please support Beyond Toxics to do this work with a tax-deductible donation. Your donation creates a future safe from toxic pesticides that kill pollinators, endanger our food supply and harm communities. See our web site for more details: [www.SaveOregonBees.org](http://www.SaveOregonBees.org).



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# POLLINATOR SUPPORT



By purchasing our deliciously floral Pollinator Tea, you're supporting pollinator recovery! Mountain Rose Herbs will donate 5% of the annual sales from this special blend to Beyond Toxics and their campaign to save the bees.

Let's sip tea and support their work! Learn more about Beyond Toxics at **[beyondtoxics.org](http://beyondtoxics.org)**

# 5%

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