Endangered Pollinators and the Endangered Species Act

This September, the U.S. Fish and Wildlife Service announced their proposal to add the rusty patched bumble bee to the endangered species list. It would have been the first bee to be placed on the list. One week later, seven species of yellow–faced bees, native to Hawaii, jumped the line and were awarded the dubious honor.

The Endangered Species Act

Congress passed the Endangered Species Act (ESA) in 1973. Its purpose is to conserve the ecosystems of endangered and threatened species and to provide conservation programs to protect and restore them.

The U.S. Fish and Wildlife Service (overseeing land and freshwater plants and animals) and the National Marines Fisheries Service (overseeing marine wildlife and anadromous fish) administer the ESA.

Five factors are considered when a species is being evaluated:

1. Damage to, or destruction of, a species' habitat
2. Overutilization of the species for commercial, recreational, scientific, or educational purposes
3. Disease or predation (killed by predators)
4. Inadequacy of existing protection
5. Other natural or manmade factors that affect the continued existence of the species

When wildlife is listed as endangered it is illegal to "…harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct." This includes "…significant habitat modification or

degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.” – ESA Basics

The goal is to restore a species to the point it no longer requires protection. Recovery plans are written and implemented by the Fish and Wildlife Service with input and assistance from stakeholders including species experts; academia; other Federal, State, and local agencies; Tribes; and nongovernmental organizations.

Who Are the Stakeholders for Bees?

An argument could be made that every human on Earth is a stakeholder in the preservation and restoration of bees. According to the USDA, about 35% of the world’s food crops depends on pollinators for reproduction, and bees are considered our most important pollinators. We need them.

Generally, we think of commercial honeybees when we think of crop pollination. But bees are not our only pollinator. Wasps, birds, beetles, bats, butterflies, moths, ants, and other animals and insects contribute to pollination as well. Honeybees are only responsible for about 14% of crop pollination. Native bees and other insects are responsible for the majority of the work. These wild bees are being eradicated by pesticides, mono cropping, and habitat destruction.

When it comes to protecting the habitat of wild bees, the U.S. Fish and Wildlife Service will be battling with stakeholders who will come to the table to support their own interests. Pesticide companies and seed companies (companies that sell seeds coated with neonicotinoid pesticides) will do their best to protect their own interests as will commercial growers who will fight to continue mono cropping practices that are known to be destructive to both the soil and our pollinators. But these are not the only concerns for honey bees. In addition to herbicides, pesticides, mono cropping (which leads to

nutritional deficiencies), and habitat destruction, honey bees face the following:

- 23 different known viruses
- Parasitic mites
- Fungal infections
- Bacterial pathogens
- Predators (small hive beetles)
- Chemical exposure (chemicals designed to assist beekeepers have been found to harm the hive)

What Does the Future Hold?

We live in a world with an ever-growing population and a fragile food supply. Climate change and drought are currently affecting crops, and no one knows how this will play out in the years to come. It is said that fewer than 20 crops provide 90% of the world's food supply, and of that 90% more than half is comprised of 3 crops – maize, rice, and wheat.

We scramble to maintain genetic variety and diversity among these crops to prevent a catastrophic collapse due to blight or a parasitic infection. (Remember Ireland's potato famine?)

We want to believe new technologies will save the world from starvation. GMOs, new fertilizers, pesticides, herbicides, new mono crop farming methods, and factory farming practices to raise livestock are touted as the new way – a means to feed the world. But common sense and careful scrutiny show us these practices will only lead to a bleak and unsustainable future.

Herbicides and pesticides are destroying the soil. Animals raised in inhumane, filthy conditions breed disease. Herbicides and pesticides are one of the causes of leaky gut syndrome, which leads to a host of illnesses including a wide array of autoimmune diseases. GMOs and pesticides are also implicated as a causal factor in autism.

We've known that chemicals kill our pollinators for some time. We don't know a lot about the effects of GMOs on pollinators because they were never appropriately tested. Current studies are being conducted on non-bee insect pollinators. Results are showing the non-bee insects are not as dependent on a natural habitat or semi-natural habitat as bees.

While it is encouraging to know bees are not our only pollinators, we can only hope these non-bee pollinators do not give us an excuse to continue destructive practices that are adding to the demise of bees and other pollinators.

We turn a blind eye to corporate greed that is creating a serious health crisis and using human beings to test their genetically altered creations and glyphosate soaked grains. Those of us who protest are being ignored and labeled as anti-science. Wouldn't it be amazing if saving the bees leads to saving us as well?

https://www.youtube.com/watch?v=xRoffLvSG94

Recommended Reading:

- *Understanding and Detoxifying Genetically Modified Foods*
- *Repel Mosquitoes by Cultivating Marigolds*
- *How Vertical Gardening Could Help Save the World*
- *Three Homemade Toothpaste Recipes – Better Oral Health for Less Cost*

Sources:

- *The Endangered Species Act of 1973* – (In its entirety)
- *ESA Basics* – U.S. Fish and Wildlife Services
- The Xerces Society Website
- *Endangered Species • Endangered Species Act | Overview* – U.S. Fish and Wildlife Service
- *You're Worrying About the Wrong Bees* – Wired
- *Non-bee insects are important contributors to global crop pollination* – PNAS

- *Buzzkills: abiotic and biotic stressors of pollinators* – Penn State College of Agricultural Science
- *Exemption Process under the Endangered Species Act: How the God Squad Works and Why* – Notre Dame Law Review