SAVING BEE

In June 2014, President Obama appointed a Pollinator Health Task Force to develop strategies for improving the health of insect pollinators. In November the Task Force held public listening sessions and invited written comments regarding best management practices, public-private partnerships, research, education opportunities, pollinator habitat improvements, and other actions. This is an edited version of my submitted comments that was originally published in [Wild Ones Journal](http://www.wildones.org/)(subscription required).

**Best Management Practices: a general statement**

Because I use judiciously applied herbicides to help control invasive plant species in the forest preserves, I respect both the power and usefulness of these toxic chemicals [see note below]. However, out of this respect and long professional and volunteer experience grows a conviction that pollinator, beneficial insect, and general ecosystem health will not improve unless: 1) large scale pesticide use is curtailed on agricultural land, on public land such as roadsides and city parks, on large corporate and institutional campuses, and in private backyards and gardens across the nation; 2) agricultural and landscaping practices designed to enhance biodiversity and ecosystem health are instituted on a large scale in rural, suburban and urban areas; and 3) widespread IPM methods are instituted, again on a large scale.

**The studies, practices and tools already exist to improve pollinator health**

If the EPA and USDA (and Congress) can disengage from the smothering embrace of big agricultural and chemical companies and their lobbyists, the agencies will find that important work is already being done (some of it funded through your own programs and recommended on your own websites (!). We already know that pesticides (particularly broad spectrum, systemic ones such as neonicotinoids) and fragmented and destroyed habitat impair pollinator health. We already know the kinds of farming, gardening and landscaping practices that will foster pollinators and beneficial (pest destroying) insects. Anyone familiar with the work of science-based organizations such as the Xerces Society knows that we know this. Anyone who gardens for biodiversity in their backyard knows this. What is frustrating is that while EPA and USDA sub-groups such as the NRCS are doing good work, a corporate-lobbying-induced blindness seems to prevail at the policy level, which I believe ultimately is damaging to the land and people of our nation. You cannot have it both ways. You cannot continue business as usual and expect to actually halt pollinator declines. If pollinator health is made a priority, to be successful much current policy and practice must change.

**Habitat: The more diverse and native plant-oriented, the better**

* Ramp up efforts to help (require?) large-scale commodity farmers to increase pollinator-friendly, biodiverse native plant areas on their land such as hedgerows, buffer strips, insectaries and the recent USDA sponsored bee-pastures.
* Encourage efforts by municipalities and local organizations. For example, West Cook Wild Ones, homeowners and the park districts of Oak Park and River Forest are planting pollinator gardens, creating a broad east-west corridor between Columbus Park in Chicago and Cook County Forest Preserve land along the Des Plaines River.
* Require conventional farms to establish shelterbelts that keep pesticides in their own fields. Drift from neighboring cornfields should not harm plants and reduce pollinator diversity on land I help care for in central Illinois.
* Increase mixed-use farms that utilize agroecology, agroforestry, managed grazing, and crop rotation and diversity.
* Increase habitat along roadsides and change management practices to favor reduced pesticide use, reduced mowing and increased biodiversity.

**Partnerships: Find people who are already doing good work and help them out**

So much great work is being done by so many individuals and organizations that forming partnerships beyond the usual trade associations and corporate councils should be a huge priority. Seek out these stakeholders who have scientific and practical expertise, who are already partnering with and educating municipalities, farmers and homeowners regarding land management, landscaping practices, use of native plants, and even urban green infrastructure such as raingardens, bioswales, and green roofs. Tap into the local and sustainable food movement.

Besides national organizations such as Xerces Society, Wild Ones, American Community Garden Association, and National Wildlife Federation, others have much to offer, e.g. native plant growers and nurseries; ecological landscaping associations and their member firms; organic farm associations; and conservation organizations.

**Education: Find, encourage, and create formal and informal education programs**

Much of my work is directly involved with teaching others about ecosystem- and pollinator-friendly land use practices. For example, I partner with my school’s environmental science and ecology instructor to lead experiential learning opportunities for students. Our sustainable ag tech program teaches pollinator-friendly farming practice. We are currently collaborating to help a high school in an underserved community create a school food garden that will include perennial native plant areas to serve as pollinator and beneficial insect habitat.

Education needs to start at an early age and include families. I know of school butterfly gardens that have been replaced with turf grass because parents lacked knowledge about pollinators. Children are taught to be afraid of rather than understand and respect bees and other pollinators. Frequently, educators themselves lack the information to be able to teach about these things. Consequently, elementary schools and forest preserve nature programs are a good place to start.

High school science programs and college sustainability, science, agriculture, horticulture, landscape architecture and design, urban planning, and civil engineering programs should all be educating students about ecosystem health, reconciliation ecology, and practices that promote species diversity, including pollinators, in anthropocentric landscapes. To do this will require professional development and training for instructors, and changes in policy, learning outcomes and curriculum. In addition, interdisciplinary collaboration will be required among departments and instructors.

This work is already being done in many places, but could use encouragement and federal dollars to be successful.

A plethora of other groups desperately need educating, including: Homeowner and condo associations; landscaping companies; golf course managers; school and park districts; large commercial growers; and last but not least, legislators.

**Research: We need more, but already know enough to act**

The scientific research that is presently going on is phenomenal and much basic research remains left to be done. Certainly, studies regarding honeybee health and best practices for beekeepers are crucial. Little is known about the many species of wild native bees that inhabit our continent. And, though much is known about the biodiversity-enhancing practices that enable beneficial insects to thrive so that pesticide use can be reduced, more can be found out. Citizen science programs involving activities such as butterfly monitoring and bee spotting are vital.

However, even though there is a necessity for such large-scale studies as the STRIPS program in Iowa, we already know enough to be able to foster diverse, healthy pollinator populations. Any citizen scientist with moderate natural history skills will observe the following: Areas with few (particularly native) plant species where pesticides are used will have fewer pollinators. This is observable at any scale, from the back yard to large acreage and I, personally, have done so.

For example, an upscale, manicured suburban neighborhood will have fewer pollinators than a less kempt one and a conventional institutional campus will have fewer pollinators than a biodiverse one. (I once planted a small demonstration rain garden in the middle of a large area of turf and concrete walkways. Pollinators immediately showed up.) Conventionally farmed monocultures will have fewer pollinators (or beneficial insects of any kind, or birds) than biodiverse farming operations implementing IPM practices. By extrapolation, millions of acres planted exclusively to corn and soy in Illinois will have fewer pollinators than the biodiverse Chicago region.

In my opinion, at this point we need pollinator-friendly policy and a will to act as much as research.

**Policy: Pollinators should have standing**

Obviously, fostering pollinator health goes far beyond bees into issues of overall ecosystem health, the types of subsidies we give, and the laws we create that favor one type of crop and style of farming or one type of urban/suburban development over another. None of the suggestions I’ve noted above can be widely implemented without good policy and law. Right now, owing to money and legal expertise, the large agricultural and chemical corporations are overly influential on policy. This is made abundantly clear by the types of policies that are enacted and from the resulting toxic-chemical-laden state of our soils and waterways, from our declining bird populations—and poor pollinator health.

When developing policy and law, independent scientists, organic farm organizations and groups such as Xerces Society, Wild Ones and Center for Food Safety should have a place at the table and equal voice. This will be difficult to insure, owing to disparities in organizations’ available funds, but the policy situation will not improve until some kind of parity is created. In addition, when reviewing pesticide effects and environmental impacts, the EPA and USDA should not be relying on studies sponsored by the companies whose products are being reviewed. As a private citizen, I am extremely frustrated and disappointed that large corporations have more say in such matters than the people who have to live with the consequences of corporate-influenced government policy. We would not be in this crisis situation regarding pollinators if other groups had equal influence on policy, and had the ability to help craft policy beneficial to, and indeed prioritizing, land use practices that promote pollinator, and ecosystem, health. Recently, I reread the legal classic “Should Trees Have Standing?” In this case, very clearly, pollinators should have standing.

If pollinators had standing, farm and other policies might shift in surprising ways.

Suggestions:

* Adopt “do no harm” policies regarding chemicals similar to those in the EU.
* Reduce the pesticides available to untrained homeowners.
* Require lawn care companies to make organic lawn care the preferred, default option.
* Require garden center suppliers to label their plants with the types of systemic pesticides used in production. Many concerned gardeners don’t buy these plants because we know that plants treated with broad-spectrum systemics such as neonicotinoids pose a danger to the very pollinators we wish to encourage.
* Prioritize ecosystem and pollinator health in all landscaping of government property, similar to energy-use efficiency and reduction requirements in government buildings.

**In conclusion: ecosystem health = pollinator and other species health = human health**

Thanks again for the opportunity to give input to the Pollinator Health Task Force.

I am sure many other people will be giving the same information and suggestions and hope our collective voice will prove useful to the work of the Task Force. Hopefully the EPA and USDA will create far-reaching policies and prioritize pollinator-friendly practices to the extent that declines of honeybees, native bees, and other pollinators such as monarch butterflies can be halted, that populations of these important creatures can rebound, and indeed, increase. Our lives depend on it.