Save the Pollinators—September, 2018

Many issues negatively involve the pollinators upon which we humans depend for our wide variety of available foods. The issues include omnipresent chemical pesticides, lack of wildflower forage for pollinators, and climate change. Each of these alone would affect our pollinators, but all three occurring simultaneously are having terrible effects.

Then include the parasitic varroa mite which plague honeybee keepers, and we have a recipe for the current disaster occurring around us.

But the first three issues are human caused. To paraphrase a friend, "The problem is people and what we are doing." The pesticides are human made; the lack of wildflower forage is due to the American love of putting-green-style lawns; and climate change is due to humans burning fossil fuels--creating an ever-thickening layer of carbon dioxide which holds heat and warms our planet—and deforestation.

We humans created these problems and it is up to us to fix them. It is our responsibility to clean up our messes.

Varroa mites, on the other hand, are naturally occurring and many experts say the honeybee will figure out how to handle the varroa. This mite does not affect any other wild bees, of which we have about 400 species in N. VA, nor any of the other pollinators.

Dr. Marla Spivak, a respected bee researcher from the University of Minnesota, said that when the varroa mite entered the U.S. in the mid-1980s, there was the choice of letting the honeybees deal with the problem or treating the mites with chemicals. Leaving it to the honeybees would take 10 to 20 years, but at the end of that time, the honeybees would have "attained behavior resistance." Or the option was "the apiaries could manage mites via chemicals to meet contracts and avoid public outcries of alarm." (by Eric Mader, Xeres Society; Marla Spivak, UM; and Elaine Evans; in *Managing Alternative Pollinators*, published by Sustainable Agriculture Research and Education, SARE, USDA, 2010, p. 15ff) The problem with our choice is that the mites are still here.

The varroa mite does not affect any insect pollinators except the honeybee, and in theory every insect is a pollinator. Look at the flowers growing in your garden. What is crawling around on the flowers? Everything. I have seen ants, flies, gnats, grasshoppers, wasps, you name it. Recent observations reported in *The Washington Post* even show pollen on mosquitoes. Termites seem to be the only insect holdout. Then there are the other non-insect pollinators like spiders, hummingbirds, and even bats. The mite affects none of these.

As an additional thought, the varroa mite is not a human-caused problem, except that we have inadvertently been moving them to places where they haven't been before. They are native to Asia where the honeybees there learned to live with them a long time ago, perhaps centuries. Then someone moved the mites to Europe, and finally here. In essence, we Americans have created the American varroa-mite mess.

So, the lack of pollinators is due to human behavior. In this series of discussions over the months, I will show with research evidence exactly how we humans have caused the problems and how we might correct them.

To facilitate further understanding of these ideas, I am including a link to a YouTube presentation by two Purdue University (PU, W. Lafayette, IN) professors, Dr. Greg Hunt and Christian Krupke: <https://www.youtube.com/watch?v=ChiA5-J-sPo> Last is a second link to the PU Extension web site with articles which may interest you: <http://extension.entm.purdue.edu/beehive/publications.html>

Please contact me at ppopovich@hotmail.com with questions or comments.

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