

The Bees' Eye View

I once had an intelligent friend who, nevertheless, occasionally said things that left me flabbergasted. For example, he once told me he was surprised that I was worried about the state of the planet. Haven't we cleaned up the air and water in this country? Yes, since the passage of the Clear Air Act and the Clean Water Act in the 1970s, we have seen significant improvement in some important measures of air and water quality; our air appears to be cleaner and our rivers no longer catch fire. The world, to my friend, looked shiny and clean. If this is the bar by which you measure the health of the planet, I encourage you to look at the world from a different perspective—let's say, that of a bumblebee.

If you are a bumblebee in early May, you are a queen. You have spent the winter sheltered under the leaf litter in a state of torpor. Now, with the stronger sun warming the soil, you, magical being, return to life. Because you wear a fuzzy coat, your buzzing wings generate heat that can raise your body temperature enough for flight on even chilly days, so you pollinate the earliest blooms. You will use this energy to start your new colony. If you are lucky, the flowers you find will be of wild shadbush or Dutchman's britches. If you are unlucky, they will be crocuses from bulbs that were planted by a human neighbor. Nearly every bulb, seed, or nursery plant available for sale has been treated with a neonicotinoid pesticide. These pesticides permeate all of the plant's tissues, including the pollen. This toxin will not be enough to kill you outright, but the cumulative effect is likely to cause health problems that could impair your ability to navigate, or reduce the number of workers in your colony. Their health will also be impaired.

We have gone down the bumblebee path as far as I can without buzzing into the unknown. What we know is that for the bumblebees, something is very wrong. A number of bumblebee populations have declined dramatically

since the mid-1990s. Is it just a coincidence that that is when neonics began to be widely used? The rusty patch bumblebee was once common in Vermont. It has been found only a few times in bumblebee surveys recently. Bumblebees are the most effective pollinators for a number of crops, and are used to pollinate them in greenhouses. Unfortunately, the bumblebees used have been imported from Europe, and they did not travel alone—they came with a cargo of European protozoan parasites that have now moved into native bumblebees and may be one of the causes of bumblebee decline. Because bumblebees are large, fuzzy, and slow to sting, we like them. They are studied much more than the many inconspicuous native bees work as sexual couriers for flowering plants. We have little idea how these other pollinators are faring.

The progress made to clean up rivers and reduce air pollution should be celebrated, I told my friend. I then described some of the growing threats to life on Earth. By the end of our conversation, he agreed that I was right to be concerned. I don't think I could make the same inroads with our current EPA administrator. While there may little we can do as individuals to alter the behavior of Scott Pruitt, there is one arena in which we wield significant influence, the way we treat the land around our homes. When you look at your spring yard work, try adopting the perspective of, let's say, a bumblebee. If you do, you will want to avoid raking up leaf litter and debris until the bumblebee queens have emerged. You will want to plant only bulbs, seeds, and nursery plants that were grown organically. You will want to cultivate native plants, since they have the most to offer to the birds and bees they evolved with. You might decide to mow less lawn and mow less often. I have learned these things and more from Tom Sullivan, a landscape designer who plans with pollinators in mind. He will be teaching a workshop on May 12 (see below). May your gardens soon buzz with bumblebees. —Patti Smith