

Trends That Will Affect Your Future . . .

Bee Gone: The Breakdown of Ecosystems, and the Social Devastation That Must Inevitably Follow

| By Stephan A. Schwartz |

The SchwartzReport tracks emerging trends that will affect the world, particularly the United States. For EXPLORE, it focuses on matters of health in the broadest sense of that term, including medical issues, changes in the biosphere, technology, and policy considerations, all of which will shape our culture and our lives.

Walking in the gardens of our property on Whidbey Island, it is a joy to see the flowers, a sure sign that gray winter's chills are finished. It is a primordial reaction evoked without thought. My wife, Ronlyn, has staged the flowers so that as one species exits, like an actor finished with their scene, another blossoms. Daffodils give way to irises, which, in their turn are replaced by lilies, which are followed by snap dragons, while smaller chords of color from lupin, lady's mantle, and campion—to name the few I can identify—provide a continuing chorus. As the weeks progress, the garden's music for the eyes shifts from yellows to blues and lavenders, to reds. Each solo lasts but a few days or weeks before retiring for the year. Meanwhile, a bass line of rhododendrons and azaleas like stage sets back up the soloists with their enduring tones. There is something soothing in this spectacle that makes me stop thinking, wrestling with research or writing, relaxing me so I enjoy the present. It is a commonplace observation, I acknowledge, one recorded by poets and writers dating back to the deepest history

of our species, but no less peaceful and nurturing for that.

But this year, as in so many other places, one of the support staff, the backstage crew that makes it all possible, is missing. For the second year in a row there are no honey bees. We have bumbles and carpenters, and some kind of brown bee I cannot name, but the earnest creature that for millennia has symbolized the hard work and rewards of the garden is wholly absent.

Beginning in 2006, beekeepers throughout America began to report what came to be known as colony collapse disorder and, since then more than three million bee colonies have disappeared in the United States, a decline of 33.8% in a single year, and billions more honey bees across the world have died.¹ The beekeepers come to check their hives and find . . . nothing. The bees are simply gone. And despite a growingly desperate search for an explanation, scientists are no closer to a real answer than they were when colony collapse disorder was first reported four years ago. It is such a strange phenomenon that the scientists who study it have dubbed it the "Mary Celeste syndrome"—after the two-masted 100-foot brigantine that was found between the Azores and the Portuguese coast on the afternoon of December 5, 1872, floating on the sea, an empty vessel whose crew had mysteriously disappeared, leaving behind all their belongings including the small boats they would have to have used to leave.

And it is not just the loss of the bees, even the flowers are losing their scent. Professor Jose Fuentes, leading a team at the University of Virginia and working on a

grant from the National Science Foundation, reports: "Scent molecules produced by flowers in a less polluted environment could travel for roughly 1,000 to 1,200 metres. But today they may travel only 200 to 300 metres. This makes it increasingly difficult for bees and other insects to locate the flowers."²

When I was a boy, a friend of my father's (another doc), Dr Mott—an ophthalmologist and Dutchman—kept hundreds of hives on four long flatbed trailers that sat in the middle of the fields on my family's farm in Tidewater, Virginia. Dr Mott would come out on the weekends and check them, taking out some of the supers to extract a modest portion of the honey the bees produced. Sometimes I would help him, and through his tender care and the bees fascinating behavior I came to share his love and respect for the little creatures. I asked him once why he kept so many bees, and why he drove the long miles from where he lived in Newport News, across the York River to Gloucester and back. For a hardworking physician, it seemed a needless extra burden.

He told me that when he was a young man in Holland during the Nazi occupation of his country, through a complexity of circumstances he and his father, who taught him the art of beekeeping, came to be part of a network that supported 25 Jewish families—over 100 people. Because the Nazis monitored all the banks, searching for people who withdrew money for just such purposes, this little network eschewed cash for barter. His father was a professor of medicine, and a known liberal, under the close watch of the SS, who

viewed all intellectuals in the countries they occupied as suspect. So it fell to him, a boy of 14, to take the honey to the old tree with a hollow place in a cleft between its branches, where he placed the jars of golden honey as he walked to school.

Because the network was carefully firewalled so that if members were captured they could not betray the others under the inevitable torture, he never knew who picked up the honey, only that when he returned from his classes later that day it was gone.

As he carefully put the supers we had collected into a centrifuge to extract the honey, his thin wiry body now showing signs of age, he said to me, "Every time I put the honey in the tree, I prayed that those 25 families could get through the war safely and, if they did, I pledged I would keep bees as long as I was able and donate the money made from the honey to helping other people in distress."

They did get through. All of them survived unscathed, and he did keep honey in our green fields filled with clover, as the Angus cows we raised for their bloodlines only (neither of my parents could ever bear to sell a cow for meat) grazed peacefully around the bees. The money made from the sale of the honey I helped extract went to the King's Daughters, the charity in Virginia that both Dr Mott and my par-

ents supported, to be used at his specific instruction to help single, desperately poor, pregnant girls carry their children to term with some dignity and comfort.

But the loss of the bees is only one aspect of this tragedy. I could write this same essay with different personal stories about frogs or coral reefs. Increasingly I find myself lost in the image of the Earth as the *Mary Celeste* and wonder whether we are its mad crew. The Earth, like the *Mary Celeste*, will endure—but we may not.

As I write this, we are in the 59th day of the oil spill that is destroying the Gulf of Mexico, and the wetlands that are so critically important to the host of life's network, from plants, to shrimps, to birds, to turtles, and porpoises. It seems so clear to me how wrong this is, and how easy it would be to avoid this happening, if only we would change our world view. Yet inexorably, as individuals and societies, we seem to be insensitive to the alarms the small creatures that are our companions send us by their decrease, and finally, their absence. But we have not ears to hear, nor eyes to see.

There are many things that will change if we lose the bees, and frogs, and coral reefs, and wetlands; so many things that will stop, or never be possible again, but for me, it will always be summed up in the image of a skinny young boy with the jars

of honey in his school bag walking through danger to help people he never knew or saw survive. Why, oh why, can we not see this?

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Stephan A. Schwartz is the editor of the daily Web publication *The SchwartzReport* (<http://www.schwartzreport.net>), which concentrates on trends that will shape the future, an area of research he has been working in since the mid-1960s. He is also the Senior Samueli Fellow for Brain, Mind, and Healing at the Samueli Institute. For over 35 years Schwartz has also been an active experimentalist doing research on the nature of consciousness, particularly remote viewing, healing, creativity, religious ecstasy, and meditation. He is the author of several books and numerous papers, technical reports, and general audience articles on these topics.