BEE TIME

Mark L. Winston in “Bee Time: Lessons from the Hive” (2014) would convince us that humans can learn much from bees because our species have so much in common.

I can’t quarrel with that because I’ve experienced no “bee time” comparable to Winston’s or the many beekeepers he quotes. I’ve never felt the calming, the patience-inducing opening of the senses, or the heightened awareness of being among honeybees that beekeepers report. Hence I can’t identify with bees as others do – bees with their complex social life, their “selflessness,” their cooperativeness, which lets people believe in their curative effects and mystical dimensions.

For me they’re immensely important creatures whose astoundingly complex instincts have evolved over millions of years. But they’re not thinkers, not choosers as humans are, for better or worse.

Nevertheless Winston’s descriptions of life in the hive are alone worth the price of admission.

Any of the thousands of larvae in the hive can become queen, worker or drone – nurture is everything. When a queen dies, one of these larvae is fed royal jelly – quickly, before the larva is

too developed to switch genetic pathways – and a new queen is created.

If the hive has become overcrowded, this new queen will be needed to accompany a swarm to a new location. Scouts go out, briefly inspect potential sites for a new hive, return and dance a buzzing figure eight. The duration of the buzzing communicates distance from the hive, and the angle of the dance in a straight line relative to the sun shows the direction. Scouts find on average 25 possible sites and the swarm "decides" on the best according to the intensity of the buzzing – more for desirable sites, less for poorer ones.

Only 10-12 worker bees constantly surround the queen, and since she's crucial to the hive's health, though in no way a "leader" in the human sense, they constantly touch their antennae to her while licking her furiously, then repeat this to pass on her pheromones to the entire hive, reassuring them that she's alive and well.

Bees' working lives are serial, and since they change jobs every few days in their 25 to 35 day lifespan, they must adapt very quickly. They start out cleaning cells, then switch to feeding larvae, then to receiving pollen and nectar, move to building comb, proceed to fanning the nest, then guarding the entrance against intruders and finally foraging for 5-10 days at

life's end, when most of us encounter them, ignorant of their working lives' rich history.

But most fascinating to me is the bees' elaborate communication, "a relentless current of news." They're constantly passing along information about the colony and the outside world, touching body parts, vibrating, stroking antennae, licking tongues, heads, legs, exchanging food, circling or creating figure eights. Theirs is a chemical, tactile and movement "language" with a"syntax deep in complexity and rich in nuance."

Winston makes many bee/human comparisons – work, social organization, communication, etc. One I find compelling is between the causes of colony collapse disorder – a synergy of low level stressors, non-fatal in themselves -- and "safe" doses of medications or exposures to toxins for humans, where the effects of combinations are largely unstudied.

Human prosperity and honeybees' are deeply connected, Winston says. Bees and flowering plants made today's biosphere possible, and many species depend on bee-pollinated plants, as do our atmosphere and soil.

Bees distill a region's chemistry in their honey, flower by flower. Wild bees can complement honeybees and enhance their effectiveness -- hence the need for habitat preservation.

According to Winston, bees form a crucial link in “ecosystem services,” which nature freely provides us. We must honor that link by lowering pesticide use and diversifying our fields. Make the world better for honeybees, and they will reward us richly.