Great Expectations



Alter drove me to distraction with his wanderings. Once I found him under the arm of the sofa, scrunching along in his striped pajamas. I returned him to his milkweed bouquet thinking he must be disoriented. The next evening he was gone again, and I searched the kitchen in vain. The next morning, I found him hanging from his hindmost set of legs from the underside of an arched amaryllis leaf in the kitchen window. He had chosen a perfect setting to showcase his metamorphosis—still a homely caterpillar, but already vain. I kept an eye on him all day. He remained upside down with his "chin" tucked against his "chest." I checked on him once during the night. He was still a caterpillar. In the early morning hours, in his last larval act, he gyrated until his skin split and beneath it was revealed the chrysalis. In the morning I found his little crisp of skin on the windowsill. The elegant pale green capsule hanging above was studded with gold—little wonder we call this butterfly the monarch.

Within the chrysalis, the Walter I had fretted over had, quite literally, dissolved. The raw materials that were caterpillar would become butterfly. The new Walter would not cling tightly to the material world, but would soar aloft on fragile sails. The new Walter would not be a masticator of milkweed, but a sipper of nectar.

Walter was the great-great grandson of monarchs that spent the past winter in Mexico. In what is among the most astonishing of nature's many astonishing migrations, Walter's progenitors sailed to Mexico last fall from as far away as Nova Scotia. After spending the winter in a monarch colony in the mountains of Mexico, Walter's great-great grandmothers then managed to fly north once again. Somewhere in the American South, sometime in April, they laid their eggs on milkweed leaves, and died soon after. In the course of one month, these eggs hatched into little white larvae that promptly began eating, first their egg casings, and then the leaves they hatched on. Over the course of the next two weeks they became the familiar yellow, black, and white striped caterpillars. Within a month of the eggs appearing, a next generation of monarchs took flight. These butterflies continued traveling north. Walter's parents were probably the fourth generation of monarchs of the year.

The summer monarch generations have an easy life, but a short one. They enjoy drinking nectar and being gorgeous for at most a month or two before their date with the reaper. Water and the other butterflies that emerge at summer's end might live for as long as eight months, but to them falls the duty to make it from here to the mountains of Mexico ahead of the killing frosts, survive the winter in the bitter cold mountains, and launch the next generation of monarchs next April.

There are many mysteries and marvels surrounding the migration of monarch butterflies, and research is beginning to illuminate some of them. Consider my favorite migration question: "How is it possible for such delicate creatures, easily pushed about by a breeze, to travel more than two thousand miles?" Most of us learned as children just how fragile the wings of a butterfly are. Why would such wings not be in tatters part way through such a journey? Monarch researchers have found that, like the migrating hawks, these butterflies take advantage of thermals. Most of their migration takes place during the warm part of sunny days. They proceed nearly effortlessly as they

ride rising air toward their destination.

One day, Walter's chrysalis was no longer green. I could see the folded orange wings beneath the now clear capsule. I don't know how I missed the emergence. I'd been watching all morning, but after a distraction I looked back. and there he was. His wings rumpled, he clung to the sheer remains of his chrysalis. He rocked slowly from side to side testing his new appendages. He coiled and uncoiled his long tongue and slowly pressed wings together and



then relaxed them. After about an hour of this orientation he remained still and seemed to be gathering strength for the next step. It was a couple of hours before he moved again, but when he did, it was decisively. Flapping his wings, he strode up the amaryllis leaf and stepped onto my finger. I was able to admire him eye to compound eye. He was lovely—the velvety black body sported white polka dots, the brand new legs had a metallic sheen, and oh those wings! I saw no spots on the hind wings, though, and realized my mistake. Walter was female.

As I headed to the door, Walter prepared to take off. Once the sun was on those wings, she launched herself confidently skyward. She could fly! She avoided a pine tree and fluttered to land on a nearby locust. From here she will head southwest, and if she's lucky and fit, she'll soar on to Mexico. Bon voyage, Walter!