



Reading Nature *Tom Murphy*

Experience the Power of Knowledge

Review of *A Naturalist's Guide to Field Plants: An Ecology for Eastern North America* by Donald D. Cox. Syracuse: Syracuse University Press, 2005.

As I have been working on this column, I have needed to interrupt my work from time to time to blow my nose because I am one of the millions of Americans who suffer from hay fever. Even as I wrote the last part of that sentence, I knew it had the slick, artificial sound of an ad. Does it really matter to pollen whether you are an American or not? And one never just "has" hay fever; one must always suffer from it. Who am I to argue, since I certainly do suffer? Excuse me for a second while I blow my nose.

Donald Cox, in his *A Naturalist's Guide to Field Plants*, talks about pollen allergies and says something I have heard before—that goldenrod is unfairly associated with hay fever because it blooms at the same time as ragweed, the real culprit. But here is what makes Cox's book so valuable: he explains why this is the case in a way that

allows me to understand and learn from it. Goldenrod has showy flowers so we notice the plants, but the flowers are not for our benefit; they are designed to attract insects because goldenrod is insect pollinated not wind pollinated, so little of its pollen is in the air. Ragweed, on the other hand, has inconspicuous, low-lying, narrow spikes of green male flowers because it does not care about insects. It is wind pollinated and produces so much pollen that it covers everything. Cox notes that it sometimes coats goldenrod plants so that folks, as they walk in the late summer fields, think they are reacting to the goldenrod when they are actually reacting to ragweed.

The book's subtitle, *An Ecology for Eastern North America*, describes just what the book does: it explains how things fit together so that fragments of informa-

tion—like the golden rod-ragweed relationship—are put in context and make sense as parts of whole ecosystems. Though line drawings help identify the plants, the book is not intended as an identification handbook. *The Newcomb's Wildflowers Guide* (See *Mountain Home*, June 2008) is handy for that and has helped me identify many of the flowers in the fields around our house. However, chapters in Cox's book like the one titled "Through the Year," which connects plants and seasons, help narrow the possibilities at a given time of the year, though a surprising number of field plants bloom from June to October so that even as the leaves are changing color there is much to see in the meadows and fields.

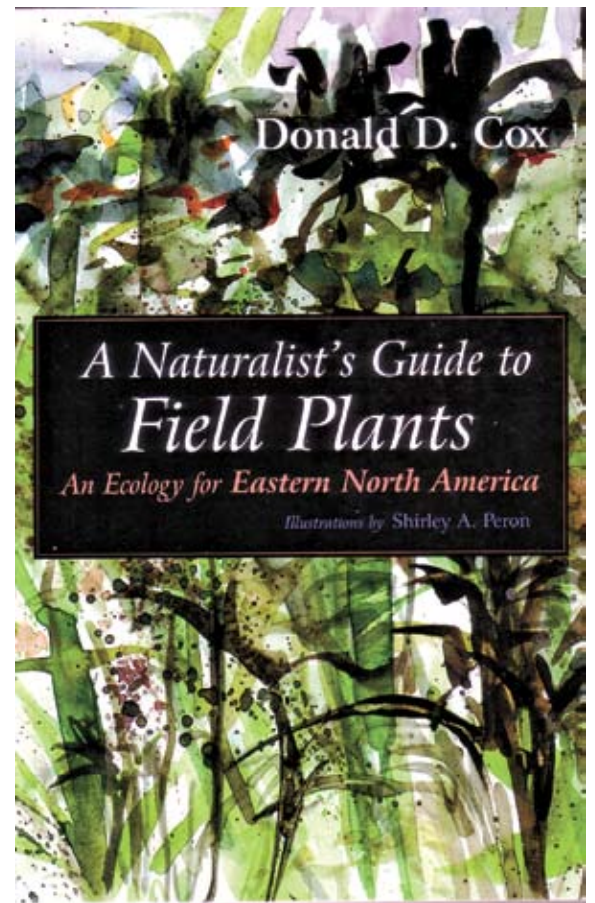
Cox explains not just which plants are poisonous but how they are poisonous. Poison ivy, for example, which becomes an increasing problem around here as the climate warms, contains urushiol (oo-roo-shee-awl), which is an oily resin. It is in all parts of the plant except the pollen (thank goodness!), but because the poison is inside the plant, the allergic reaction does not come merely from touching an undamaged leaf or stem. The canals inside the plant holding the poison must be broken open to create the reaction.

I am always amazed at how little I know. But often I find that while I know bits and pieces about the natural world, the real gold mine of my ignorance is in the way the bits and pieces go together. Sometimes when I learn something, I am astonished at how I missed even asking the questions. I know that sprouts of monocotyledons have one leaf and dicotyledons have two, but I never realized that monocot flowers had petals in units of three, and dicot flowers in units of four or five. Now I can pick a flower and know something about it even before

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5.11. Lyre-leaf Sage (*Salvia lyrata*); 5.12. Philadelphia Fleabane (*Erigeron philadelphicus*); 5.13. Wild Pansy (*Viola rafinesquii*); 5.14. Butter-and-Eggs (*Linaria vulgaris*)



I know its name. Why didn't I wonder if there were differences in the adult plants? Knowledge is power.

So much of life seems random and disorganized, and though the natural world is full of wonderful and frightening surprises, it is also an astonishing network of understandable and beautiful processes, a universe of beings competing and cooperating and shaping each other. Books like this one turn a walk in a field into a much richer experience.

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