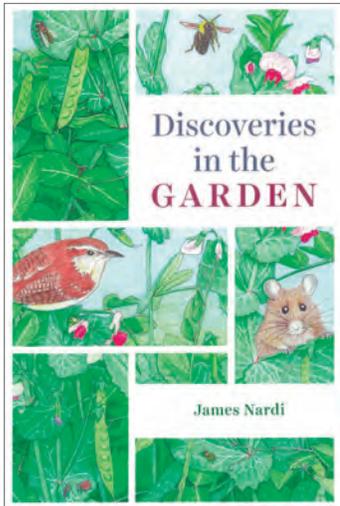


Gardening in Partnership with Nature



Discoveries in the Garden and Life in the Soil—A Guide for Naturalists and Gardeners, James Nardi, PhD
The University of Chicago Press
2018, 288 pages

Life in the Soil: A Guide for Naturalists and Gardeners
James Nardi, PhD
The University of Chicago Press
2007, 336 pages

Dr. Nardi's newest book is *Discoveries in the Garden*. It is arranged as a textbook for a field biologist whose specialty is the garden. But its arrangement may be deceptive if "textbook" means dry and uninteresting, which this is not. *Discoveries in the Garden* leads the reader through topics from seeds to plant parts to plant physiology to ecology—all following a trail of scientific discovery. It is a hands-on learning experience that invites us to observe, describe, and hypothesize as we investigate each topic.

Each chapter is introduced by a drawing that illustrates the ecological context for its topic. This ecological context is one thing that distinguishes these books. Unlike other field guides, *Life in the Soil* examines each soil organism in relation to others and in relation to human farmers and gardeners. In reading it, we gain an understanding of the importance of soil biology to farmers and gardeners. Unlike other botany texts, *Discoveries in the Garden* relates plant biology to the soil, insects, and other consumers, and the aboveground and belowground food webs that shape plants and their communities.

As we follow Dr. Nardi's path from seeds to buds and stems, flowers and fruits, we see the interplay of plant hormones. Other lessons in plant chemistry come from observing plant colors and odors. These lead to hypotheses about photo-

synthesis and interactions among plants (and between plants and other organisms.)

In contrast to prevailing opinions of weeds, *Discoveries in the Garden* values the "wisdom of the weeds"—not only for what we can learn from them, but also for their contributions, including protecting the soil from erosion; conserving nutrients; building soil structure, organic matter, and mineral content; supporting soil biology; sequestering carbon; and encouraging biodiversity. In addition, as the book suggests, observing weeds can teach us about plant strategies for growth, reproduction, and competition.

Dr. Nardi is not the first scientist to learn from his garden. Charles Darwin made observations and conducted experiments in his own garden that taught him about birds, earthworms, plant movements, pollinators, and the interaction of different species. Darwin's theory of evolution was informed by observations in his garden, and *Discoveries in the Garden* leads us in Darwin's footsteps.

Life in the Soil is divided into three parts. The first is an introduction to soil ecology—its mineral and organic components, how soil organisms adapted to their environment, and the relationships among members of the soil community. The last applies knowledge of soil ecology to the soils of farms and gardens. The heart of the book, however, is in the middle part, in which Dr. Nardi introduces us to those creatures who live in the soil—microbes, invertebrates, and vertebrates. Each entry describes a species, genus, or family of organisms—how each makes a living in the soil, relates to other soil organisms, and relates to human gardeners or farmers. Each entry contains a fact box with vital statistics, including taxonomic classification, size, and role in the food web. An interesting characteristic he reports is "impact on gardens," which may be ally, adversary, or neither. Those who are accustomed to viewing microbes and insects as enemies will be surprised to see how many allies we have among those groups.

James Nardi, PhD teaches at the University of Illinois at Urbana-Champaign and "gardens with the help of innumerable soil creatures." If his books are any indication, he is a great teacher.

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