as condors) do their job, we bury the carcass, taking away the meals of these “large undertakers” (p. 91). Worse, Heinrich shows us how we are poisoning these animals, even if inadvertently, via our chemical war on rodents.

The author’s inquisitive eye does not stop at mammals; he is equally curious about what kills the trees in his forest—and what organisms (insects, fungi, bacteria) dismantle them. A similar cycle plays out in rivers—“salmon not only make big bears, they also help make big trees” (p. 155)—and in the oceans.

We humans can readily see the pattern. But, judging from many of our religious beliefs, it seems that a good number of us do not want to be part of nature’s recycling drama. And that is where we are mistaken, Heinrich says. In his eloquent final chapter, Beliefs, Burials, and Life Everlasting, he argues that we are wrong to deny that our bodies are “part of the wheel of life, part of the food chain” (p. 196). And by so doing, we may also be foregoing the greatest comfort in the face of death—the fact that we are “connected to the grandest, biggest, most real, and most beautiful thing in the universe as we know it: the life of earth’s nature” (p. 197). Although the subject matter may seem dark, Heinrich’s musings in this beautifully written and lively collection of essays and reflections are anything but.

Virginia Morell, Ashland, Oregon


Would it not be great if there was a volume you could pull off the shelf every time you bumped into an unfamiliar area of theoretical ecology? This seems to be the question that motivated the creation of the Encyclopedia of Theoretical Ecology. Alphabetically arranged but also nicely organized
into logical subject areas, this collection presents an impressive array of articles covering most of what a theory-curious ecologist might need to understand while reviewing the literature and planning scientific projects.

Although this volume does serve up à la carte information about particular areas of theoretical ecology, it is also organized to allow more deliberate exploration: nine “major theme” articles review the broad areas where theoretical ecology is created or applied, while six subject areas aggregate related articles. Four of these subject areas represent the scalar hierarchy of ecology (individual, population, community, ecosystem), while the remaining two provide background on different theoretical methods and applications of theory. Related topics listed at the end of each article make for easy, logical bouncing between essays.

True to its encyclopedic format, this collection provides few references beyond secondary “recommended readings,” so the reliability of each article hinges on the authority of its author(s). An impressive collection of experts comprise this volume’s author list: in all of the fields with which I am familiar, the choice of author seemed quite appropriate. Although the articles vary quite a bit in their approach, most define the field, lay out a history, establish a domain of importance, and point out frontiers where new research is emerging and/or needed.

Like many theoretical fields—where an abundance of hypotheses overwhelm data available to test those hypotheses—theoretical ecology includes its fair share of controversy. Different articles contend with controversy differently: some use clinical language to describe but not take sides, others try to reconcile differences in opinion, and a few offer up particular opinions. In an encyclopedia, neutrality is an asset, and this one is sufficiently neutral: novice readers do not risk being wrongly biased, but will have to look elsewhere to fully appreciate the breadth of ideas percolating through each theoretical area.

As a reader I can live with the inevitable inconsistencies in authorial voice that plague an edited volume, but this collection suffers from too much heterogeneity of accessibility. Some articles are very accessible: they read like an introductory lecture firmly aimed at the novice. Others are not accessible at all: they read like an isolated expert telling us what he knows. Based on my sampling, more of the articles lean toward the accessible side, but inconsistency lowers this collection’s overall value. Rather heavy in text given their goal of delivering conceptual basics, all of these articles could be made more accessible through better (and more consistent) use of graphic images.

Who are the target users of this large tome?
That is a question that I struggled with, and one that also seems to be at question for the editors. Although they aspire to reach students as well as the interested general public, this collection is not sufficiently pedagogical to attract even the motivated everyday man. More realistically, this is a usable reference for practicing ecologists, graduate students, and very advanced undergraduates with a specific interest in theoretical ecology. For these users, this collection is unprecedented and invaluable.

Christopher X. Jon Jensen, Mathematics & Science, Pratt Institute, Brooklyn, New York