

possible to learn to program with these powerful software packages even if beginning from scratch. The manuals ensure that students will be able to build and test their own dynamic models in minimal time.

Dynamic Models in Biology stands apart from existing textbooks in mathematical biology largely because of its interdisciplinary approach and its hands-on, project-oriented case studies and computer laboratories. In an effort to explore biology in more detail, the authors bravely choose a style that differs from the classical biomath texts of, say, Murray and Edelstein-Keshet, whose focus is more on formal mathematics. The success of a course built around Ellner and Guckenheimer's textbook will depend on the instructor's skill in assessing the diversity of the students' backgrounds and catering to their different needs, but the task will be far easier and more enjoyable with this well-crafted book as a guide.

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STEERING BETWEEN EXTREMES

Infinite Nature. R. Bruce Hull. University of Chicago Press, Chicago, 2006. 258 pp. \$17.00 (ISBN 0226359441 cloth).

Polarized views about the relations between humans and nature, development and preservation, and economy and the environment can paralyze sustainable development initiatives and conservation projects. If these alternatives are framed as an either-or, win-lose choice, then stakeholders and policy-makers are forced to choose between nature and human well-being, and little can be done to integrate environmental

concerns into private and public policy or economic and development decision-making. Bruce Hull, professor of forestry at Virginia Polytechnic Institute and State University, identifies this core problem and offers a radical solution by averring that "there is not one environmentalist position, or one environment" (p. 1). Hull's book dissolves dichotomous positions by portraying a plurality of views about nature and relations between human communities and their environments.

Infinite Nature takes the reader on a kaleidoscopic journey that provides a comprehensive and evocative description of the multiple perspectives from which we observe, understand, and value nature. The journey takes place in the course of 13 chapters that illustrate its anthropogenic, evolving, ecological, finite, economic, human-health, social-justice, spiritual, human-animal, ecological- and animal-rights, aesthetic, and moral dimensions. To address each of these multifaceted dimensions, Hull adopts an effective rhetoric. Each chapter begins with two subsections that present the extreme positions. These are followed by subsections that analyze and integrate these positions into a broader variety of perspectives, and a concluding section that offers Hull's synthesis. The clear structure of the book and the dialectic tension generated by presenting opposite perspectives keep the reader enthralled. What is more, the well-documented narrative is written in a style that makes it accessible to the general public.

The tensions between the dichotomous extreme positions characterize the entire book. For example, to develop the notion of an anthropogenic nature, Hull describes and criticizes the two most radical views about aboriginal peoples. These views present such peoples, on the one hand, as primitive "subhuman savages" (with associated arguments for subjugating them) and, on the other, as environmental "noble savages" (with arguments for respecting and admiring them). For example, the value of the Amerindian environmental culture is epitomized by the accomplishments of the Aztecs, who managed to construct and administer large cities like Tenochti-

tlán. Built around a lake, this city was environmentally sustainable and incorporated a grid of canals connecting islands that were made of rich soil dredged from the lake bottom. This Aztec design supported a highly productive agricultural system. The city also had an aqueduct, sanitation systems, markets, arts venues, and "a zoo that exceeded any known in Europe" (p. 12).

Hull emphatically affirms that Europeans discovered in North America a nature that was cultured, not pristine. But he also criticizes the romantic view that portrays Native Americans as universally in harmony with nature. Hull points out that the widely popularized "Chief Seattle's letter" was not written by Chief Seattle but was instead derived from the script of a long-forgotten film produced by the Southern Baptist Convention (see Callcott 1989). After some debunking, Hull assesses sustainable and unsustainable human behaviors by integrating ecological notions such as resilience with lessons learned from each of the cultural perspectives.

Throughout the book, the presentation of opposing views effectively helps to locate the nuances of complex environmental issues. For example, regarding the finiteness of our planet's resources, Hull opposes "techno-optimists" who believe that human creativity is infinite against "techno-pessimists" who argue that technological solutions inevitably create more problems than they solve. The former are confident that there will always be a technological substitute for depleted nonrenewable natural resources; the latter tend to advocate for the precautionary principle. After introducing the polarized views in this contested domain, Hull analyzes appropriate technologies, emphasizing that the "real world is not nearly so black-and-white; nature is not finite or infinite and technology is not good or bad" (p. 67).

In his approach to contrasting religious perspectives, Hull finds another lucid middle ground between extreme positions. The Judeo-Christian tradition offers both a dualistic view, which emphasizes sharp differences between humans and the rest of creation, and a unifying view, supported by the idea that

humans are created from dust. Further, one finds in the Judeo-Christian tradition a transcendentalist strain, which affirms that "nature is God, and God is nature," encouraging humans to be stewards of the rest of creation. To overcome the paralysis that these confrontational positions might involve, Hull integrates the scholastic and natural-theology schools of thought by invoking sayings such as "God created two great books, the Bible and Nature." In addition, by quoting such documents as a papal decree by Pope John Paul, which in 1990 stated that "environmental degradation damages not just creation, but our human neighbors" (p. 129), Hull brings religious and scientific ecological perspectives into closer alignment.

Most chapters maintain an impartial, descriptive approach to presenting a wide variety of perspectives. However, in "Economic Nature," Hull openly criticizes capitalistic discourses that narrow our understanding of nature. Capitalism conceptually transforms "wildlife" into "livestock" (focusing on living capital rather than on living beings), "forests" into "woods" (reducing forest ecosystems to the materials produced by trees), and "nature" into "natural resources" (overlooking biodiversity by valuing only a few profitable species, and consequently promoting the conversion of diverse ecosystems into monocultures).

What prevail in *Infinite Nature*, however, are critical, balanced, and well-informed positions. Regarding animal rights and the vegetarian debate, for example, Hull judiciously points out that "vegetarian or organic diets are not clear-cut environmental winners. Eating locally grown, pasture-raised beef might be more ecologically benign than eating irrigated soybeans grown thousands of miles away on industrial farms" (p. 174). In addition, being pluralistic does not mean being paralyzed. Even in such chapters as "Human Nature," in which the author espouses a rather eclectic position regarding the similarities and differences between human and nonhuman animals, he emphatically concludes that "our [human] specialness creates a sense of responsibility to develop and implement a moral code that considers and

respects other forms of life on Earth" (p. 156). This statement captures the book's concern not only with "infinite views" about nature but also with taking action to achieve sustainable and respectful relations with other living beings and ecosystems. *Infinite Nature* succeeds in pluralizing nature while providing a valuable textbook for discussion.

My main criticism of the book is that it should be made more explicit that the "infinite" views of nature refer almost exclusively to Anglo-American culture in the United States during the past two centuries. *Infinite Nature* does not pluralize environmental perspectives in general. This focus should be emphasized in order to avoid US centrism regarding environmental views, which might unintentionally hide other rich and diversified environmental traditions, such as those of Latin America and Europe (Jax and Rozzi 2004). At the international scale, ironically, such US centrism counteracts Hull's attempt to pluralize nature. At the same time, even at the North American scale, the rich diversity of perspectives that Hull explores—including gardening and recreation in nature, which are central elements of US identity as well as essential to material and spiritual human well-being—is such that the book holds out hope for finding viable solutions to achieve global sustainability. For example, Hull analyzes lawns around suburban houses, the cultivation of which emerged only some 60 years ago, spawned by a social-climbing middle class that wanted their surroundings to resemble golf courses after Woodrow Wilson popularized the game. Today, lawns are a ubiquitous and significant environmental problem in terms of water consumption and fertilizer use. Awareness of the origins and consequences of lawn cultivation in North America might liberate homeowners from this damaging practice.

Hull's journey through views about nature does not end with a recipe for what we should do. Instead, he leaves us better equipped to accept and understand diverse positions and to integrate the multiple dimensions of our "infinite nature." When combined with complementary readings, *Infinite Nature* should

prove valuable also for high school and university teaching.

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ESSENTIAL ENVIRONMENTAL INFORMATION

The New Atlas of Planet Management. Norman Myers and Jennifer Kent, eds. University of California Press, Berkeley, 2005. 304 pp., illus. \$39.95 (ISBN 0520238796 paper).

The authors of *The New Atlas of Planet Management*, Norman Myers and Jennifer Kent, are an honorary visiting fellow and an environmental researcher and analyst, respectively, at Green College, Oxford University. Each has an admirable résumé of writing about the global environment. Myers has been recognized for his efforts with membership in the US National Academy of Sciences, an ambassadorship for WWF–UK (the United Kingdom branch of the World Wide Fund for Nature), and numerous awards. Kent has coauthored four books with Myers on the interrelationships between the economy and the environment on a global scale. Together the two of them bring vast experience in the global environmental arena to this important text.

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