

those by Lazell) have interesting discussions and colorful digressions.

DANIEL SIMBERLOFF, *Ecology & Evolutionary Biology*, University of Tennessee, Knoxville, Tennessee

THE NATURE HANDBOOK: A GUIDE TO OBSERVING THE GREAT OUTDOORS.

By Ernest H Williams, Jr. Oxford and New York: Oxford University Press. \$65.00 (hardcover); \$26.00 (paper). xv + 263 p; ill.; index. ISBN: 0-19-517929-3 (hc); 0-19-517194-2 (pb). 2005.

This volume is full of somewhat random trivia about patterns, behavior, and sightings in nature. The author admits the collection is idiosyncratic, but the information surveyed is so intriguing (pink snow, plant spirals, and short extremities in cold climates) that one can forgive him. The book examines and explains patterns you may never have even thought to notice, but once attuned, expands your power of observation.

Although it has "guide" in the title, this is not a guidebook in the traditional sense. Readers may be able to look up an observed pattern to get an explanation or an overview of popular hypotheses, but the volume is most useful as a coffee-table book that will increase awareness of phenomena that will have new meaning the next time they are seen. For example, we have all observed animals that exhibit countershading—those that have darker colors on their dorsal or backsides. But once it is explained that countershading may help organisms evade predators, readers will become aware of how predominant the pattern is in nature and consider these organisms from a new angle.

The book has 14 chapters that are organized into three sections (plants, animals, and habitats). Each section is comprised of numerous short segments on various topics. Some of these segments are given names that will be familiar to naturalists or ecologists (mimicry, floral diversity, and elevational zonation) and some that are quite unusual (hot flowers, fairy rings). Several names are not necessarily intuitive to the theme—i.e., "scarce predators" discusses food pyramids and energy transfer through trophic levels. But each topic succeeds at explaining interesting phenomena that are sure to be noticed in nature.

This volume guarantees to stimulate thinking about patterns in nature. It serves as a great catalyst for improving observational skills and hooking readers into pursuing further research on their own. As an interesting read that is full of fascinating trivia, *The Nature Handbook* defines a unique niche among guidebooks and research literature—and does an excellent job of filling it.

CAITLIN MULLAN CRAIN, *Ecology & Evolutionary Biology*, Brown University, Providence, Rhode Island

ECOLOGICAL ECONOMICS: A WORKBOOK FOR PROBLEM-BASED LEARNING.

By Joshua Farley, Jon D Erickson, and Herman E Daly. Washington (DC): Island Press. \$20.00. xvii + 215 p; ill.; index. ISBN: 1-55963-313-1. 2005.

This is an indispensable companion to Daly and Farley's volume, *Ecological Economics: Principles and Applications*. In a previous review (2005, *QRB* 80(3):375), I proposed a series of constructive criticisms of that textbook, some of which this workbook addresses very appropriately.

First of all, this volume does fulfill the mission of providing an applied and understandable path to appreciate some of the rigorously argued points of the textbook. Through a Problem-Based Approach (PSA), it focuses on the tasks of choosing, defining, and structuring a problem of study, analyzing it, and synthesizing and effectively communicating the results of the inquiry. The workbook intertwines, through its nine chapters, very didactic applications of the ideas that constitute the preanalytic vision, capital theory, decision-making tools, valuation schemes, and value theory. It also contemplates aspects of ecological democracy, conflict resolution, and community building that have direct connection with the content of the textbook. This combination provides a potential synergy between the educational process and the theory base that should result in the empowerment of students who may be intimidated or noncognoscenti of economics.

My own experience with an initial application of these two books in an undergraduate ecological economics course last fall brought improved results over the previous year when I used the textbook on its own. The challenge posed by the theoretical economic rigor of Parts III and IV of the textbook was diminished, as students, even if still intimidated, made sense of several of the complex concepts in the text from the examples in the workbook.

Further, this volume expands the range of multidisciplinary analysis of the textbook and incorporates the immediate substrate of cultural capital that makes adaptability between natural and man-made capital possible. There are abundant examples of multicultural scenarios ranging from watershed management problems in Brazil and forestry problems in Australia to resource management problems in the northeastern United States, Philippines, and several other scenarios. Another remarkable contribution in this area is the goal of the book to instill students with psychological empowerment along the lines of the "Viridian" dilemma of the speed of the capitalist system. Thus, the authors insist on reminding readers that complex problems require solutions that honor such complexity. They invite us to overcome the men-

tality of immediate gratification and quick closure, so typical of environmentally and socially aware students in the field today. The authors invite readers to be humble and patient.

One aspect in which the workbook could have expanded is the necessary dialogical nature of the PSA when it crosses not just cultural, but also wealth and power borders. A dialogical process of immersion and emotional identification promotes critical analysis tools and awareness of the problems of those who are the underdogs (human and nonhuman) in the current global reality in a way that transcends just knowledge acquisition. It derives in an ethical transformation necessary to implement forms of postnormal scientific development as the ones proposed in this book.

Instilling a service-based mentality in students of ecological economics, through contact with the local and global socioecological context, allows them to learn about it in ways that can help build a better world. It promotes a spirit of service in students that will assist in the prevention of some of the risks of problem-based learning.

A problem solver, even if applying a participatory model, is an outsider if the point of reference or initiation of the research comes from outside the socioecological context. Students bring their own biases and diverse types of illiteracies. For example, speaking from my own experience in a college for the liberal arts and the environment, most of our students are privileged, and have been educated within the parameters of the dominant ideology (i.e., high levels of political illiteracy). This illiteracy gets in the way of the appropriate internalization of knowledge.

Further, the PSA can also be a vehicle for very individualized education. Yet, individualism may not be a desirable feature in all cases and situations, especially when dealing with culturally relativistic scenarios. So, there is a risk of creating an overempowered individual who, after graduating and moving away from the protective coating of academia, may find that problem-solving effectiveness is highly context dependent. This graduate may end up getting frustrated by reality, abandoning the ideals behind the PSA, and fulfilling Paulo Freire's educational prophecy that the power of the dominant ideology is always domesticating, and when we are touched or deformed by it we become ambiguous and indecisive.

Yet, beyond these critical pedagogy points, this workbook makes a substantial contribution to plant a seed, change the world, and promote a "learn by doing approach" that is a pressing need in the world today. It breaks ground and challenges the pedagogical monopoly of neoclassical economics at a crucial level. The transdiscipline of ecolog-

ical economics and beyond should be grateful for this volume.

BERNARDO AGUILAR-GONZÁLEZ, *Cultural & Regional Studies Program, Prescott College, Prescott, Arizona*

FROM RESOURCE SCARCITY TO ECOLOGICAL SECURITY: EXPLORING NEW LIMITS TO GROWTH. *Global Environmental Accord: Strategies for Sustainability and Institutional Innovation*.

Edited by Dennis Pirages and Ken Cousins. Cambridge (Massachusetts): MIT Press. \$60.00 (hardcover); \$24.00 (paper). xiii + 268 p; ill.; index. ISBN: 0-262-16231-8 (hc); 0-262-66189-6 (pb). 2005.

Paul Ehrlich first called attention to the potential consequences of runaway human population growth in his 1968 book, *The Population Bomb* (New York: Ballantine Books). Four years later, *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind* (D H Meadows. 1972. New York: Universe Books) further questioned the capacity of the Earth's resources to meet the demands of a growing human population. In 1980, *The Global 2000 Report to the President of the U.S., Entering the 21st Century: A Report Prepared by the Council on Environmental Quality and the Department of State* (G D Barney. New York: Pergamon Press) identified continuing population growth as a major driver of a variety of increasing environmental ills. The common message running through these publications was that population growth would result in major shortages of food, fresh water, energy, and other critical resources that would seriously affect the human condition in the future.

The premise of *From Resource Scarcity to Ecological Security* is that many of these shortages have not materialized and that things that were completely off the radar screen 30 years ago (such as HIV/AIDS, declining and aging populations in industrialized countries, globalization, climate change, and waning biodiversity) now present an entirely new set of problems. Thus, instead of worrying about future shortages, we need to focus instead on the concept of "ecological security," the dynamic relationships among human populations and pathogenic microorganisms, other plant and animal species, other human populations, and consumption levels, resources, and ecological services.

The thesis of ecological security is developed in 12 chapters on current rates of human population growth, changing population age structures, water, food supplies, energy policy, energy technology, climate change, forest degradation, and biodiversity. All of these chapters are informative and well referenced. The authors come from a variety