course there is the numbers problem; a teacher cannot engage in research with a large group of students.

A different kind of challenge for me has been reining in the teacher and really allowing the students to guide the work. Sometimes it is difficult not to let my enthusiasm for the project get away from me as I move from the role of supervisor to co-researcher!

All three inquiry approaches have their place in the ecology classroom and their use depends on well-thought-out goals for the students, and the role you wish to have (Table 1). For example, you may want your students to spend more time analyzing a coherent data set and writing a sophisticated research paper—rather than choosing and redefining a problem on their own—and therefore choose to initially direct the class toward a specific question. The approach a teacher uses could also change over the course of the semester. In the lab component of my courses, students often accomplish three projects during the term. I “guide” the first one and the other two are progressively more open-ended. And so the three inquiry approaches may best be viewed as a continuum (Fig. 1), which allows a teacher to be flexible to circumstances of the group and the project, and sense when students can run with the ball or need more guidance.

**Literature cited**


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Our fifth article is one that I know you will want to take notes on. It contains the review of six popular ecology textbooks. Most of us remember our first textbook in ecology, and in fact may still be teaching from it (just kidding). Choosing a good and appropriate text may be the single most important part of teaching ecology. To that end, Ecology 101 is especially solicitous of reviews of textbooks or other works suitable for use in the classroom and lab. So, let’s hear a round of applause for this notable textbook review effort by Drs. Stuart Allison, Central College, Pella, Iowa; William Ehmann, Trinity College, Washington, D.C., Aaron Ellison, Mount Holyoke College, South Hadley, Massachusetts; and John Mull, Northeast Missouri State University, Kirksville, Missouri.—Ed.

**A SYNTHETIC REVIEW OF SEVERAL MAJOR ECOLGY TEXTBOOKS**

At the recent ESA meetings in Snowbird, Utah, several members of the Education Section discussed the need for a comprehensive, comparative review of textbooks used in ecology courses. Requests for advice on which textbooks to use are frequently made on ECOLOG-L, an electronic bulletin board for people interested in discussing academic ecology. Therefore, we have produced a comparative review of several textbooks currently used in ecology courses intended for undergraduate majors in biology or ecology. We polled the readers of ECOLOG-L to find out which texts are most commonly used (Table 1). This review will examine the six most commonly cited texts in that poll.

One of us (A. Ellison) feels we can divide the textbooks into roughly three periods of development in ecology based on the underlying philosophy of each text. Most come from a neoclassical period (1960s to mid-1970s) when the ideas that were ascendant in our field were largely shaped by G. E. Hutchinson, Robert MacArthur, and their students. Texts by Pianka, Krebs, Ricklefs, and Smith fit into this period. A brief modernist period followed in which these ideas were augmented by increasingly sophisticated field studies. Begon, Harper, and Townsend’s text typifies the modernist approach. Finally there is a post-modern period during 1980s when careful experiments and sophisticated statistical analyses often overturned established ecological dogma. The text by Stiling exemplifies this approach. Our review will follow this pattern of development as we examine texts from the differing periods.

**The neoclassical texts**


The current edition seeks to “provide a balanced overview” of ecology while emphasizing field experiments to a presumed audience of undergraduate majors. (Smith offers his Elements of Ecology, third edition [1992] to non-majors.) In the preface, the author asserts that our science has expanded to the point that a 1-year course in ecology is necessary, and in this time frame, his book may serve students well. For a one-semester, majors course, however, it is extremely difficult to cover the entire text. Although a major section on population ecology is very clear and all chapter summaries are among the best in any textbook, students sometimes feel overwhelmed by highly detailed text and expansive tables that sometimes obscure concepts for them.

Special features of the text include a >600-term glossary, approximately 2100 references (only approximately 10% since 1985), a unified index, and...
Table 1. Results of an informal survey of readers of ECOLOG-L, asking which ecology text they currently use for an undergraduate majors course in ecology. A total of 73 readers responded, providing the following data.

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Percent using</th>
<th>Suggested retail (U.S.$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krebs</td>
<td>Ecology</td>
<td>22</td>
<td>70.50</td>
</tr>
<tr>
<td>Begon, Harper, and Townsend</td>
<td>Ecology</td>
<td>20</td>
<td>49.95</td>
</tr>
<tr>
<td>Ricklefs</td>
<td>Economy of Nature</td>
<td>18</td>
<td>42.95</td>
</tr>
<tr>
<td>Smith</td>
<td>Ecology and Field Biology</td>
<td>11</td>
<td>43.00</td>
</tr>
<tr>
<td>Pianka</td>
<td>Evolutionary Ecology</td>
<td>7</td>
<td>53.00</td>
</tr>
<tr>
<td>Stiling</td>
<td>Introductory Ecology</td>
<td>7</td>
<td>53.00</td>
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<tr>
<td>Colinvaux</td>
<td>Ecology</td>
<td>5</td>
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</tr>
<tr>
<td>Brewer</td>
<td>Science of Ecology</td>
<td>4</td>
<td>56.00</td>
</tr>
<tr>
<td>Ehrlich and Roughgarden</td>
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<td>1</td>
<td>76.00</td>
</tr>
<tr>
<td>Ricklefs</td>
<td>Ecology</td>
<td>1</td>
<td>52.95</td>
</tr>
<tr>
<td>No text used</td>
<td>Selected readings</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

The resource manual simplifies some of the same topics presented in T. R. E. Southwood’s Ecological Methods, which students might find useful for framing their own research project. The text itself (922 pages) is grouped into five sections: a thoughtful and interesting 2-chapter introduction including a brief history of ecology; 10 chapters on the ecosystem including energy flow, nutrient cycling, physical factors, and aquatic environments; 11 chapters that competently explore population ecology; a fairly brief 4-chapter treatment of communities; and 6 chapters on comparative ecosystem ecology including freshwater and marine ecosystems. The “individual-level” of organization is folded into the chapters on physical factors, but in other respects the outline was comprehensive. The relative allocation of space is acceptable, though more community-level material would be helpful. While the author has made the attempt to bring in contemporary topics in conservation biology and environmental science, these discussions are brief, and as the pace of research in these areas has quickened, somewhat dated.

Introductory chapters have few photographs (no color plates are used in the text) and red-brown lines and text are used as highlights, so that the book is not eye-catching. Photographs are used more frequently at the end, in chapters concerned with ecosystem comparisons. Throughout, the line drawings are of variable quality and utility. A sketch of a common, broad-scale phenomenon such as a rainshadow only contains two labels (“moist” and “arid”) to illustrate the mechanism, whereas 22 labels are used to detail movement of cesium-137 in one species of poplar, which though important, does not seem to be a “take-home message.” A lack of balance between points in the text and the illustrations is reflected in text that simply states “nutrients taken up by trees are returned to the forest by litterfall, throughfall, and stemflow” while referring the reader to a 24-line, 7-column table of data without further comment.

The section on population ecology (Part 3, 200 pages) is a clear strength of the book, balancing concepts and detail and choosing an appropriate mathematical level. Standard presentation of Hardy-Weinberg equilibrium is followed by calculations for inbreeding coefficients, genetic drift, and life tables. Like other texts, unfortunately, Smith does not discuss modern molecular work, and misses an opportunity for a better discussion of kin selection and other topics in behavioral ecology.

In the final section concerning ecosystems, the book emphasizes comparisons of energy and matter fluxes among ecosystems rather than illustrating various plant and animal adaptations to different biomes. While it is important to remind students of cycling in nature, they may be distracted by switching among nitrogen distribution models, annual cation budgets, litterfall turnover estimates, and standing crop measures, as presented. The life-form comparisons and functional adaptations are of more interest to students in general, and should receive more discussion.

Covering Smith’s text in a one-semester ecology course for both biology and environmental science majors is a difficult undertaking. If students are actually taking a 1-year course and are ecology majors, Ecology and Field Biology might work well. With instructor guidance, these students could use their stronger interest to overcome some of the text’s weaknesses and take advantage of its scope.


In first defining ecology in 1870, the German biologist Ernst Haeckel...
referred to “the economy of nature.” Over 100 years later, we have a much deeper, though far from complete, understanding of nature’s economy. For the past two decades, a text whose title bears this phrase has introduced countless students to the modern science of ecology. First published in 1973 and now in its third edition, Robert Ricklefs’ *The Economy of Nature* is a highly readable and comprehensive textbook whose longevity attests to its value as a general introduction to ecology. Though not reviewed here, Ricklefs’ *Ecology*, also in its third edition (1990), emphasizes similar themes using a slightly different ordering of topics. *Ecology* provides an expanded and more mathematical treatment of many subjects, an approach compatible with more advanced undergraduate ecology courses.

That the third edition of *The Economy of Nature* differs noticeably in appearance from its predecessor is due not only to its new outside cover but also to substantive changes in content and design between its covers. Ricklefs has reordered a few topics and added others to reflect recent advances in ecological research. The text now includes expanded treatments of, or new chapters on, systems ecology, coevolution, biogeography, life history theory, foraging theory, mating systems, and the biology of social insects. In addition, chapters are now grouped into seven sections: the physical environment, ecosystems, organisms, populations, species interactions, communities, and ecological applications. The last section comprises two new chapters devoted to applied ecology. As the author suggests, these sections could be read in other sequences for those instructors who prefer a different arrangement of topics.

Three changes in the presentation of material should make ecological concepts more accessible to students. First, reference lists have been updated to include research published since the first printing of the second edition and now appear at the end of each chapter, not at the end of the book. Second, mathematical treatments of some topics have been boxed. This change serves two purposes: It maintains “the flow of the narrative,” as Ricklefs intends, and highlights important quantitative information. Third, figures and tables have changed both in appearance and in content. They are rendered in black and gray colors that provide a sharp contrast with the books’ pages. Both tables and figures now include a citation for the source of the data presented. Examples are drawn from both classic and contemporary studies and are well balanced with respect to taxa and habitat type. The large (28-page) glossary includes not only ecological terms but also those related to the basic chemical and biological processes covered in the book.

The third edition retains its predecessor’s emphases on the physical environment, autecology, and evolutionary biology. In developing a solid foundation of basic chemistry, meteorology, soil formation processes, physiology, and genetics, the text clearly portrays the multi-disciplinary nature of ecology. Ricklefs’ is an organism-centered approach and “stresses . . . that organisms are the most fundamental and natural units of ecology.” Autecological principles are well illustrated through plant and animal examples, and the ecology of individuals is effectively linked with processes at the population, community, and ecosystem levels of organization. Ricklefs also succeeds in weaving a thread of evolutionary thought throughout the fabric of the book. Early chapters emphasize adaptations, middle chapters life history theory, behavioral ecology, and population genetics, and later chapters coevolution, biogeography, and the evolutionary processes responsible for the origin of biological diversity.

Despite the addition of a section on applied ecology and a desire “to convey a sense of humankind’s position in the earth’s ecology,” the text could present a stronger case for the role of ecology in understanding and improving the human condition. The concluding chapter, “Development and Global Ecology,” summarizes the human activities that threaten ecological processes and systems but does not forge detailed links between these problems and areas of ecological theory covered earlier. For example, a clear strength of Ricklefs’ book is its presentation of physiological ecology. Yet in the discussion on increasing atmospheric CO₂ levels and their effect on global temperature, little mention is made of how existing knowledge of plant and animal physiology may help us to understand the response of individual species or entire communities to a warmer and CO₂-enriched planet. Likewise, over-exploitation of renewable resources is mentioned only briefly in this chapter and is not presented in the light of relevant ecological theory on population growth and dynamics. Only slightly more attention (primarily in earlier chapters) is given to biological control, a topic well suited to illustrating the utility of applied ecology.

This criticism notwithstanding, *The Economy of Nature* is an up-to-date and cogent presentation of basic ecological principles that is compatible with a variety of approaches to teaching ecology. Even instructors wishing to place a strong emphasis on applied aspects of ecology will find Ricklefs’ text a useful springboard for doing so.


Charles J. Krebs’ fourth edition of *Ecology*, published in 1994, is the latest version of his widely used textbook, which originated in 1973. From both the subtitle, *The Experimental Analysis of Distribution and Abundance*, and the dedication “to Joe Connell and Bob Paine, ecologists extraordinaire” (role models for many of us in the field), it is obvious that Krebs intends to explore the ecological world through an analysis of rigorous field surveys and experiments. Earlier editions of this book and its
text, *Ecological Methodology* (1989), have done much to promote this type of critical analysis among a couple of generations of ecologists.

Krebs divides his text into four main sections. Section 1, “What is Ecology,” accounts for 5% of the text and provides a very quick description of the science of ecology and the relationship of ecology and evolution. Section 2, “The Problem of Distributions: Populations,” takes up 16% of the text, and though labeled a discussion of populations, includes a fair amount of autecology as well. Section 3, “The Problem of Abundance: Populations” makes up the bulk of the text (40%). This section includes three chapters dedicated to the applied problems of harvesting natural populations, pest control, and conservation biology. Section 4, “Distribution and Abundance at the Community Level” provides a concise exploration of higher order ecological problems in the final 38% of the text. The last three chapters (13% of the text) of this section discuss “Community Metabolism” and provide the only coverage of ecosystem level processes in the book.

The strength of Krebs’ text lies in the clear, concise description of population and community ecology. His analyses of many ecological phenomena such as competition, predation, and succession present the historical development of our knowledge of those phenomena, the shortcomings of many early hypotheses and interpretations, and our current understanding of the processes governing these phenomena. In writing this edition, Krebs thoroughly updated his references, as approximately 30% of the almost 1300 references were published after 1985. Krebs has also done a very good job of including informative discussions of applied problems such as pest control and conservation biology. The chapter on conservation biology is especially well developed as it progresses from a discussion of what is a rare species, to attempts to quantify minimum viable population sizes, effective population sizes, and genetic variability, and ends with a discussion of the complexities involved in attempting to establish wilderness preserves. The chapter really brings home the necessity of good quantitative studies for solving ecological problems.

Unfortunately for such a recent edition, Krebs fails to discuss several areas of current interest to ecologists, many of them areas that have received considerable study in the past 10–15 years. Mutualisms are briefly mentioned in a chapter primarily dedicated to herbivory. The importance of parasitism and disease in regulating population size receives even less discussion. Indirect effects are mentioned in connection with apparent competition, but not related to predation or mutualisms or parasitism. The role of decomposers in ecosystem functioning is only mentioned twice. The contributions of studies of plant physiological ecology to our understanding of ecosystems are not included. Krebs’ text has an animal bias, as most examples discuss animals and there are many fewer examples using plants or other organisms.

Most students find the text easy to read and understand. The figures and tables are very clear and well presented, although the gray and blue print for most of the figures is not especially attractive. More photographs would be helpful, though they would probably make the text prohibitively expensive. The text works very well for students who have some previous experience in biology and who intend to be biology majors. It is highly detailed and rigorous in its explanations, but not so rigorous as to be beyond the grasp of most undergraduates. Krebs text is too long to completely cover in a one-semester course, but with careful selection of chapters, a very good neoclassical overview of the field can be accomplished with Krebs.


Pianka’s text is an excellent introduction to and modest expansion of neoclassical ecology. Like other neoclassical texts, Pianka follows the “standard order” in his presentation of topics: environment (three chapters on meteorology, the impact of climate on vegetation, and resource acquisition and allocation); demography and population growth (two chapters); interspecific interactions (chapters on interactions in general [with the requisite four pages on mutualisms], competition, the niche, and predation); communities and ecosystems (one chapter); and a chapter on the diversity–stability conundrum.

What distinguishes Pianka’s text is its explicit incorporation of evolutionary ideas throughout these chapters, as well as in chapters specifically dealing with the interface between evolution and ecology. Pianka deftly deals with the former by discussing the evolutionary implications of each ecological topic within its respective chapter. He sets the stage for this integration by preceding the chapters on environmental factors and those on population growth with more expansive treatments of evolutionary ideas. These include an early chapter on biogeography and historical constraints; two chapters preceding population growth that discuss (1) very basic Mendelian and population genetics, and (2) evolution, natural selection, and speciation; and a chapter on sociality, behavior, and sexual and kin selection. While Pianka’s discussion of evolutionary ideas barely scratch the surface of contemporary evolutionary theory, they provide a fine introduction for ecology students to its basic building blocks.

The influence of Hutchinson and MacArthur (as well as Pianka’s distinguished career studying lizards) is apparent throughout the text. Despite constant assertions that many different factors regulate population dynamics and community structure, Pianka’s emphasis on competition and predation shines through. This reaches its apex in the chapter dedicated to the niche that culminates in a “crude periodic table of niches” whose two axes are the r–K selection continuum and trophic level. Mutualisms and indirect effects, two
of the most exciting and active areas of contemporary ecological research, are dealt with together in a scant eight pages. Theory of mutualistic interactions is limited to the simplistic modifications of the standard Lotka-Volterra competition equations, while indirect interactions (including competitive and indirect mutualisms and apparent competition) are based on models dating from the late 1970s and early 1980s.

The treatment of ecosystem ecology is similarly dated, and not much more expansive. More current developments in landscape and macroecology are touched on, but rely primarily on single sources (primarily Brown and Maurer 1989 and Holling 1992). Experimental design and the comparative method are covered together in one chapter, anomalously placed in the center of the book, between a chapter on the niche and one on predation and parasitism. The book concludes with a nod toward pressing ecological/environmental problems; genetic engineering, wilderness preservation, nature preserve design, and an “equilibrium economy” are all dealt with in the closing ten pages.

Pianka’s text serves very well in a sophomore-level, semester-long hybrid course covering ecology and evolution. The basic material that one would want to cover given approximately 7 weeks for “ecology” and 7 weeks for “evolution” is almost all here, and Pianka’s approach of blending the two subdisciplines throughout the book helps students integrate the material better than if they were to use two separate texts. It is thoroughly referenced (>1300 publications in the 65-page bibliography), although the vast majority pre-date 1985. It is very clearly written and students find it reasonably accessible. Except for Pianka’s assertion in his Preface that “major new directions are charted by rare individuals with incredible intellectual prowess” while the rest of us are engaged in “relatively trivial” research (a major turn-off to many students), the text is open and inviting to beginning students.

Tables and graphs are reproduced with little, if any, modification from their original sources, and complement the text nicely. There are no distracting side-bars, and text-boxes are rare (and reserved for formal mathematical treatments of some topics). The production is excellent, and it is printed on recycled paper. It serves as a standard, comfortable text for those of us who entered ecology 15–20 years ago.

A modernist approach


The current text, aimed at “all those whose degree programme includes ecology” (page viii), is among the most widely used according to our poll, due to the encyclopedic coverage of many traditional areas of ecological research cast in an evolutionary context. The authors, known for their work on populations, plants, and behavior, adopt a conversational writing style and attempt to convey some of the complexities of ecology, which they accept as a basis for their fascination with the science. This approach is a great strength if the book is used in an advanced undergraduate or introductory graduate class (400–500 level) with students who already know some ecology and want to develop their own research agendas. However, this approach may become a liability in lower level courses where students may become frustrated by the complexity, uncertainty, and constantly shifting reference points. For any ecology instructor, the book has high reference value.

Special attributes of the text include use of marginal notes to highlight key concepts and conflicts, a modest glossary, an extensive bibliography of approximately 1200 references (approximately 20% dated after 1985), and two useful indexes arranged by taxonomic name and subject. To their credit, the authors do not shy away from basic mathematical descriptions of pattern and process in the text. There is token use of color plates (for illustration of biomes) and extensive use of grayscale figures supplemented by red-brown highlights, presumably to keep production costs down. Although practical, this layout is somewhat unattractive. Drawbacks of this edition include a lack of chapter summaries and review questions for student use and the challenge of covering 844 densely packed pages (divided into 24 chapters) in a semester-long course.

In structure, the text adopts a familiar organism–population–community approach, although the community level also folds in standard ecosystem topics such as matter and energy fluxes. The amount of space allocated to each of these levels is fairly uniform (22, 33, and 28% of the pages, respectively), and a strong evolutionary theme permeates the text. The authors interrupt this tripartite development once, after populations, to spotlight life history strategies and key factor analysis, species abundance patterns, and conservation/management issues for 140 pages. These “supplementary” chapters are so well presented that the break in rhythm is not a bother, and with luck the conservation section will be expanded in the future.

The section on organisms covers environmental conditions, resources, natality and mortality, and migration and dispersal in space and time. The content is of high quality, but the frequent references to future chapters and the many caveats can be distracting. Everything is connected and we are uncertain, but especially at the beginning, many students need some help staying on a particular track. One example of a confusing signal occurs in Chapter 2, which cites temperature as “the single most important condition affecting the lives of organisms” (page 48), whereas Chapter 4 ends with “for the majority of organisms the most important aspects of the environment are the other or-
organisms living alongside them” (page 157). The sections on differences between unitary and modular organisms may be understandable given the backgrounds of the authors, but may be a bit long for others.

The section on interactions (populations) covers intra- and inter-specific competition, predation and predator–prey dynamics, detritivory, parasitism, and mutualism. Unfortunately the authors barely mention amensalism and commensalism and avoid using an interaction matrix approach to place the interactions in context. On the other hand, a section on predator behavior effectively engages both population and behavioral themes, and the authors adroitly describe new work on disease and parasite dynamics. A major omission, however, is modern molecular ecology.

The section on communities covers energy and matter fluxes, competition, predation, and disturbance as structuring forces, and finally island biogeography, stability, and patterns of species richness. Although the authors carefully present basic ecosystem theory (without using the word ecosystem to describe it), along with a description of material cycles and some systems modeling, this section could easily be expanded. It would be helpful if future editions would also explicitly address new work concerning landscape ecology (e.g., how movement patterns and individual behavior structures ecosystems) and the role of historical events in community structure (e.g., assembly rules).

Students in introductory undergraduate ecology courses often find the text difficult to grasp. The text is ideal for advanced undergraduate ecology majors or first-year graduate courses where students already have some basic understanding of ecology and want to be well-versed professionals. At this higher level, the problems of somewhat plain format and the omission of chapter reviews and study questions are diminished, and the wide scope becomes a compelling strength.

Post-modern ecology


Stiling’s text is perhaps the first entry in the category of post-modern ecology texts. Beginning with the dedication (“To Don and Dan”) this book charts a course through the muddy waters of 1980s ecology. The majority of the approximately 1,200 references postdate 1980, and emphasize experimental tests of theory. Rather than presenting the over-arching theory developed by a few individuals, buttressed by a few key corroboration examples, Stiling explicitly and deliberately presents contrasting examples of virtually every theory (not surprisingly, density-dependence receives short shrift). There is also a heavy emphasis on contemporary environmental problems to whose solutions ecological knowledge could be applied.

Stiling organizes his text for instruction to students with little to no ecological or evolutionary background. The opening chapter discusses experimental methods, null hypotheses, and a discussion of questions that are “appropriately addressed” by ecologists. This is followed by three chapters (covering population genetics; selection and speciation; macroevolution, biogeography, and phylogenetics) that provide a workable introduction to that part of evolutionary theory most closely related to ecology in the narrow sense. These are followed by three chapters on behavioral ecology, which include group selection; territoriality and game theory; and sex. One-third of the way in, population ecology debuts. These eight chapters cover physiological ecology; demography and population growth; mutualism (unfortunately brief); competition; predation; herbivory; parasitism; and key-factor analysis and density dependence. Stiling covers community ecology somewhat less thoroughly (four chapters on biomes; diversity–stability; succession and island biogeography; and ecosystems). The text concludes with four chapters (over 100 pages) on contemporary applied ecology: the effects of humans on the environment; patterns of human resource use, land degradation, and park design; waste and pollution; and introduction of exotic species. These issues are highlighted with world maps on the front and back endpapers that illustrate ecological problems related to trade in endangered species, and biodiversity as expressed through the value and origins of selected crops and livestock.

Following from Conner and Simberloff’s (1979) dictum that ecological hypotheses can’t be falsified without data, Stiling beautifully complements the cleanly produced text with graphs and tables (mostly redrawn, modified, or reset from the originals to highlight key points), as well as numerous black-and-white photographs. Legends to all of them are expansive, and enable tables and figures to be self-contained, less reliant on in-text explanations than in many other ecology texts. There are no fancy side-bars or text-boxes; mathematical formulae are incorporated seamlessly into the text. Key terms in the text are boldfaced and explained further in an extensive glossary.

The text is written in standard scientific prose, and it is fairly easy to find an over-reliance on the passive voice. It is possible that a revised edition (if Stiling produces one) actually could be shortened with careful editing. On the plus side, the presentation is broadly inclusive. Stiling’s insistence that experimental rigor has primacy over theoretical musings clearly gets through to students and encourages them to engage actively in producing scientific knowledge. The extensive discussion of the human dimension of ecology is attractive to many college students, most of whom are from urban areas and have little experience with the “natural” world emphasized in classical ecology texts. This text is best suited for instructors...
who are using primarily “active” or “inquiry-based” pedagogy (e.g., Tobias 1992) in their ecology courses, and who are working with students with little knowledge of evolutionary ecology or pristine habitats.

Summary

As should be clear from the reviews of each text, there is no one ecology text which is ideal for all courses and all levels of instruction. Begon, Harper, and Townsend provide the most detailed exploration of ecology, despite giving little space to ecosystems, but the detail is such that the text is best suited for fairly advanced students. Virtually all ecology instructors would find it a useful reference, even if they do not use it as their primary text. Krebs is a thorough description of neoclassical ecology, especially at the population and community level, which is easily understood by most undergraduates. Stiling’s text cannot be matched for a very current view of the complexities of ecology. It has the advantage of being presented at a level within the grasp of most undergraduates. Ricklefs’ *Economy of Nature* is well suited for use with sophomore-level students or students whose primary interest is not ecology, but who nonetheless need a good background in ecology. Pianka’s text will be most useful for hybrid courses covering both ecology and evolution or which are centered on evolutionary ecology. Unfortunately Smith’s text seems to be rather out-dated. Both Stiling, and Begon, Harper, and Townsend are rumored to have new editions in the works, which may well make both texts even more current and useful.

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