

The *Australian Zoologist* — successful opportunist in a changing environment?

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CREATIVITY IN SCIENCE

IN the last 10 years, there has been a rapid proliferation of subdisciplines in the biological sciences. Such a burgeoning, especially in ecology and natural resource science, has been matched by the initiation of numerous specialist journals devoted to publishing articles in relatively restricted fields. But few of these new journals explicitly aim at seeking broad parallels in thinking and methodology among these subdisciplines or encouraging synthetic approaches at a time when environmental issues, for example, beg understanding of the big picture. It is therefore reassuring to find a journal (with a long history back to 1914 (Strahan 1994)) such as *Australian Zoologist* that continues to cater to specialists in zoology, but also published frequent articles of broad interest to all scientists. Better still, these papers are often topical and provocative, questioning dogma, pricking consciences, and seeking synthesis of larger issues and of most value is the creativity with which issues are addressed in *Australian Zoologist*.

Let me provide two examples of this creativity. One is the combination of ecology and history as scientists work with historians to reconstruct visions of the environment soon after European settlement. Detection of environmental impacts ideally require at least some knowledge of the environment before impact (Underwood 1995) and by examining old photographs, news clippings and early writing, Recher *et al.* (1993) reconstruct images of the Hawkesbury-Nepean catchment, vividly illustrating the environmental degradation of water and soil from reasonably reliable data. The A4 format of *Australian Zoologist* allows reproduction of photographs, many full page, so that the readers can see the evidence (data) and draw their own conclusions. Not only is this article an interesting case study for local ecologists, but it illustrates to a broader audience an excellent example of the value of less conventional data for detecting impact and change over a longer history than we usually have reliable scientific records. This is a creative solution to the dilemma of understanding environmental change without long-term data sets.

The second example is in Volume 28 (1992), a special edition that deals with communication skills and the debate (still current) on conserving biodiversity. Lunney's editorial (1992:2) identifies the value of effective communication skills in science that perhaps

have never been as important as they are now in capturing public attention in the debate on biodiversity conservation. In other words, there is explicit recognition of the value of communication and education to effective conservation of biodiversity. Several articles deal explicitly with the issue of effective communication of scientific issues (e.g., Stein 1992; Recher 1992). Further more, the issue raises the functional importance of biodiversity of "the other 99% of global species" when we exclude the more familiar vertebrates (Ponder 1992); his plea may have gone some way to our more equitable balance of expertise on the panel dealing with conservation of Australian biodiversity.

Provocative? having recognized the bias towards vertebrates in terms of public attention, the question is raised as to what to do about the bias? Lunney (1992) suggests the onus is on invertebrate workers to publicize the importance and relevance of their research more vigorously (effective communication!) and to demonstrate the value of invertebrates as useful indicators of environmental change. Articles by Chessman (1995), Growns *et al.* (1995) and Faith *et al.* (1995) indicate the successful prophesy.

OPPORTUNISTS IN A CHANGING ENVIRONMENT

Broadly, we are aware of the rapid, often-unwanted changes we see occurring in our physical environment in the form of land, water and air pollution. At the same time, there is changing social environment. Public attitudes to environmental issues have altered markedly in the last decade, and the movement of the political pendulum has often been influenced by these attitudes. Never before has there been such an interest in the environment and the effects of our use of natural resources. Phrases such as "sustainable development" and "total catchment management" are becoming commonplace, the latter exemplifying recognition of the value of managing resources in the big picture. Scientists in the biological sciences are becoming more answerable for their research and spending and the *Australian Zoologist* provides a quasi-scientific forum for this expression.

The *Australian Zoologist* is a successful opportunist because it explicitly recognizes that the "cross-fertilization of ideas keeps zoology as a contemporary discipline" (theme of volume 29, 1994) and as such, is attractive to a wide readership beyond vertebrate zoologists. I think the journal fills a special niche in education and conservation for several important reasons:

- the emphasis is on topical environmental issues and original research articles, and the publication turn-over time is less than a year so that issues are up-to-date,

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- there is a rigorous review process (see Lunney and Dawson 1994),
- there is intense editorial pressure to encourage scientist to express professional opinions about environmental issues — something that few are willing to do (see Fairweather (1994) for discussion),
- articles are edited to a high standard, emphasising clear English and succinct communication,
- A large A4/page format ensures clear reproduction of plates and detailed figures; many articles are illustrated — a trend that is sadly declining in contemporary, text-tight journals,
- balanced viewpoints from different professional practitioners are sought (e.g., articles on issues associated with environmental assessment are written by barristers as well as ecologists).

PROGNOSIS

The editor Dan Lunney and the council supporting members of the Royal Zoological Society of New South Wales are to be congratulated and encouraged for the production of a valuable journal that helps bridge the ever-increasing chasm between the interested public and the enthusiastic scientist. Like most Royal Societies, the emphasis is on rigorous communication of research findings to a broader and often lay audience. Increasingly, ecologists are shouldering their social responsibilities and applying their expertise more widely. The *Australian Zoologist* will continue to play a key role in this process and will continue to exploit the huge niche successfully and opportunistically in response to the rapid changes in the physical, scientific and social environments in Australia.

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Conservation of Australia's Forest Fauna

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CONSERVATION of Australia's Forest Fauna should provide a jolt to both the thought police and the development whisperers. Lunney's editing has elegantly exposed the astounding lack of basic knowledge of our forest fauna and the consequences of poorly researched management decisions.

The book consists of a remarkable collection of papers of the type normally hidden away in journals rarely read by managers. The papers, solicited from working zoologists across the continent, presents critical conservation issues concerning Australian forests. The extraordinarily complex nature of holistic nature conservation is explored while elsewhere practical policy suggestions are offered.

According to the editor, the papers have been arranged with bold reviews and viewpoints being presented first followed by specific studies which give the basis for generalizations. These are then supported by a historical perspective and, finally, new methods, specific applications of ideas, geographical reviews and policy suggestions add further dimensions. The stated purpose is to keep the reader:

“alert to the possibility that a silent nocturnal creature could be sliding to oblivion for want of a few moments in the spotlight.”

The need for further survey and research is repeated mantra-like throughout the book which, unfortunately, will do little to guarantee its popularity with managers. The provocative tone commences with a critical review (Lunney, Chapter 1) of the resource Assessment Commission Forest and Timber Inquiry. It is stated that the draft report of the inquiry “makes little contribution on the subject of forest fauna . . .” and that “it succeeds in perpetuating misconceptions and muddying

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