Letters to the Editor

Scientific Communication: The Burden of Responsibility

A recent perspective by Grosberg and Levitan1 in TREE criticized an earlier historical review by C. Young2, which observed that the recently popularized 'supply-side ecology' has often ignored more than a century's legacy of literature on larval biology and recruitment. Young also documented several cases of research duplication in this field and asked why the modern supply-side papers are suddenly so successful when so many older, available and prescient papers are seldom cited.

The issue at hand may be viewed as a dramatic example of scientific prematurity4 in which the significance of a paper (e.g. Mendel's) is not recognized in its time, in the case of supply-side ecology, an entire literature has been undercited while the field was being rediscovered. Grosberg and Levitan look to the philosopher D. Hull5 for justification. Hull argues that intellectual progress is made only when an idea is presented in a context that the appropriate audience can understand and relate to. That is, the responsibility for both dissemination and assimilation of an idea resides with its advocate. Grosberg and Levitan suggest that a number of the older publications have been unjustifiably ignored because they were published in specialized, hard-to-obtain journals, contained little quantitative data and failed to provide novel theoretical constructs. The implication is that modern ecologists such as Gaines and Roughgarden commit no marketing errors while many of the older authors failed in their responsibility to communicate properly.

In reading the older literature, however, it is clear that many authors addressed general scientific audiences, used the best available quantitative techniques (ANOVA could not be used until it was invented!) and cast their conclusions in general, population and community contexts. Some, such as Hjort6G7, offered theories with broad implications that have seldom been acknowledged outside fishery science. I would add my opinion that many classical papers that are commonly cited remain largelyunread; many citations result from the snowball effects of gossip or by citing without comprehension papers cited by others.

Only a decade ago, these same issues were highlighted by Jackson8 who demonstrated that excellent work in plant ecology spanning nearly a third of a century had been largely ignored by American ecologists. Similar points have been made recently by Oksanen9 in the context of community ecology. Not only is it a tremendous waste of time to reinvent important ideas9, it is grossly unfair to ignore the priority and hard work of the earlier scientists. Grosberg and Levitan's argument is not adequate justification for abandoning our intellectual heritage.

I agree that authors have the responsibility to present their work to a broad audience and in a manner which is of general interest, but I disagree with the extreme position attributed to Hull. This is contrary to the entire concept of priority, basic to the rules of nomenclature, which has been the foundation of scientific reporting. Catchy titles and slick salesmanship should not be required of scientific communicators, but sound scholarship should be. The take-home message of Jackson's, Young's, and Oksanen's reviews is that many very worthy papers are either ignored or cited without indication that they were assimilated. I am concerned that we are seeing a justification for releasing authors from the responsibility of understanding the history of their discipline, and a trend that encourages the mounting of publicity campaigns to sell one's papers.

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Reply from Grosberg and Levitan

Dayton's assertion that we are critics of Young's review baffled us. On the contrary, we praised Young's scholarship and stated, 'The paper makes it absolutely clear that "supply-side" ecology has century-old roots. As such, the paper constitutes an invaluable resource for those interested in reconstructing the history of a now highly influential set of ideas in population and community ecology'. Dayton also says that our article encourages ecologists to be sloppy scholars and 'to ignore the priority and hard work of the earlier scientists.' In fact, we...