

New Section: Synthesis and Emerging Ideas

JOSHUA SCHIMEL

Biogeochemistry is introducing a new section entitled “Synthesis and Emerging Ideas.” The journal is doing this to fix what I would describe as a historical imbalance in how we publish science. Science advances on a feedback loop among three elements:

1. Tools: the technology we use for acquiring samples and data, including the computational approaches for analyzing them.
2. Information: the actual data and concrete conclusions that develop from them.
3. Ideas: the theory, hypotheses, and speculation that drives new generations of questions and measurements.

I have often heard it said that our science is technology limited. However, while tools may control the information that we CAN collect, ideas control the information that we DO collect. Thus, advances in biogeochemical information are co-limited by both tools and ideas. In turn, information fuels new ideas, closing the loop that drives research forward.

Historically, journals have focused on publishing papers about tools and information: methods and data papers. These have very structured ways of presenting information, are “objective,” and the peer review process has a manageable time evaluating the reliability and quality of the work. Ideas papers are usually more free form, more speculative, more subjective, and harder for traditional peer review to evaluate whether they are “right.” These kinds of papers have often been developed in symposia that are published as books, where the authors are invited and are entitled to be more personal and speculative in their presentations.

Thus, we have often published our methods and data in journals where they both widely available and credited, and we have often published our important ideas in books that are not necessarily as widely available nor as widely credited. Besides undermining and undervaluing the publication of ideas, this also potentially either inhibits younger scientists from writing such paper or harms them for doing so. I have long seen these issues as a problem because of the importance of new ideas in driving our science: we read Darwin’s “Origin of Species” rather than reading his notebooks, after all!

With increasing electronic access to scientific literature, most of us only rarely physically go into the library anymore. It has therefore become increasingly important to provide more accessible and creditable outlets for

important synthesis and theoretical papers. Hence, Biogeochemistry has created the new “Synthesis and Emerging Ideas” section. We actively invite papers that are theoretical, hypothetical, and/or synthetic. We want to see the papers that advance the concepts involved in Biogeochemistry, that will challenge and expand people’s thinking, and that will therefore lead to developing new tools and information. We are not looking for “traditional” review papers that simply summarize existing knowledge, but rather for papers that synthesize that knowledge to produce new ideas and theory. We expect the same intellectual rigor that is found in “normal” Biogeochemistry papers, but the review/selection process will not focus so much on the “rightness” of the paper as on the rigor, interest, and potential use of the ideas. The key question will be “Will this piece advance biogeochemical thinking and research?”

If you have ideas for a theory/synthesis paper you are considering, please contact me directly:

Joshua Schimel
Editor, Ecology, Evolution & Marine Biology
University of California, Santa Barbara
Santa Barbara, CA 93106-9610
Phone: (805) 893-7688
Fax: (805) 893-4724
E-mail: schimel@lifesci.ucsb.edu