

Hot Type

Section: RESEARCH

OUT IN THE OPEN: With open access and open review, and running on open-source software, a science journal opened for business last month. PLoS ONE (<http://www.plosone.org>), the latest offering from the open-access pioneer Public Library of Science, officially began on December 20 with a new twist: All papers will be open to public comment as well.

The online journal's inaugural group of posts included some 90 papers, on topics as varied as sounds generated by hydrothermal vents deep in the ocean, fine-scale structure of an enzyme targeted by antimalarial drugs, and how syntax lends meaning to gibbon songs. The barrier to publication was intentionally set low. Any study based on valid methods--a judgment made by a single member of the editorial board--will be posted. The value of the contribution will be left for the wider community to decide.

"If a manuscript reports work that should be published, then it can be published in PLoS ONE," says Christopher Surridge, who is managing editor. "We're not looking at a transparent way of deciding what papers should be published or not. What we're interested in is using papers not as the end point, but rather making the scientific paper the beginning of the discussion."

The site is in trial status, but registered readers will soon be able to rate each article on merit. The idea is that the best papers will bubble to the top; the wisdom of the masses (or, at least, of interested readers of science) rather than a set of editors will determine which are the most important contributions.

For now, anyone who registers on the site may comment on any of the posted papers or even flag specific passages. Such notes, indicated by blue "conversation" balloons within the text, include links to potentially useful databases and challenges to particular assumptions made by the authors.

Participation, so far, has been underwhelming. The site highlights the five most annotated papers, which can change from moment to moment. Late last week, as The Chronicle went to press, articles on that list averaged just five comments, in some cases including amendments by the authors.

One paper that elicited several substantive comments found a greater diversity of birds in exurban developments than in undisturbed forest, although both environments held a far greater variety of birds than did plantations of single species of trees grown for paper or timber.

That paper's senior author, David G. Haskell, an ecologist at Sewanee: the University of the South, chose PLoS ONE for its open-access policy because he hopes to reach an audience beyond the academic community. "I wanted this paper to be available to folks in the developing world and people at NGO's, since the paper was on issues they would be interested in," he says.

Mr. Haskell welcomes discussion, although he is concerned that the wide-open format might tempt people employed by the timber industry, for example, to publicly disparage his results. "It could be, for controversial papers, people just grinding axes without much scientific rigor," he says.

"One of the challenges of a publication such as ours is to encourage the right sort of commenting," says Mr. Surridge, the managing editor. "We're not looking to see quick, glib, sort of knee-jerk commenting."

CLOSING COMMENTS: The editors of the journal Nature have recently ended their own experiment with open review. A report posted on their Web site on December 20 (<http://www.nature.com.spot.lib.auburn.edu/nature/peerreview/debate/nature05535.html>) concluded that the comments they had received fell short of the kind of guidance that editors seek in deciding which papers to publish.

Nature's editors dismiss 60 percent of papers they receive without seeking peer review. In the open-review period, editors offered authors of manuscripts that cleared that first hurdle the option to post their papers online for open, signed reviews, while the work was being evaluated by the usual confidential process.

Although just 5 percent of authors made that choice, that proportion was larger than expected. "I was surprised that that many chose to have their papers posted," says Linda J. Miller, the journal's U.S. executive editor. Those authors risked being scooped or having another prestigious journal, like Science, subsequently decline to review a paper that had been posted but was not accepted.

If participation by authors was greater than anticipated, the posted remarks were disappointing. "What we were hoping for was comments that would reach the level of attention and detail" that scientists meet when asked to do a formal review, says Ms. Miller. Nearly half of the papers received no comments at all. Most of the messages made reasonable but minor points. Others, such as "nice work," were far from useful.

Ms. Miller believes that greater incentives may be needed to encourage thoughtful reviews, which she acknowledges require considerable time. But she also observes that the open-review format itself may be either too unfamiliar or too public. Scientists may be more comfortable questioning a method or conclusion of a colleague by e-mail or telephone than through a public posting, she says.

"As people who are used to using the Web for all kinds of communication, people who are now using MySpace and Facebook begin to infiltrate the ranks of the serious scientists, they'll be more comfortable doing this kind of thing," she says. "What didn't work well now may work better later on."

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