A Gradual Peer-Review Process

WITH MANY THOUSANDS OF SCIENTIFIC papers published every year, peer reviewing of manuscripts is a basic and critical component of science. Many scientists—particularly those who are well established and thus in demand—are less willing to review because of the time required to evaluate the many manuscripts they receive.

In standard reviewing practice, editors send manuscripts simultaneously to several reviewers, whose comments are considered by the editor and then sent back to the author. A basic drawback to this process is that for many manuscripts, all reviewers have to spend time on a text with many problems. Moreover, making trivial corrections may distract reviewers from more substantive critiques.

As guest editor and associate editor for Plant Signalling and Behavior, Communicative and Integrative Biology, and Israel Journal of Plant Sciences, I have decided to change the classic review process into a gradual one. I send submitted manuscripts to a single reviewer and then ask the author to make revisions before I send the paper to the other reviewers. Later reviewers can thus focus on important aspects of the study rather than deal redundantly with trivial problems in the text. This process seems to result in better final papers, and it saves time for all reviewers except for the first. Because reviewer order varies, a broad adoption of this process would save time for many scientists in the form of easier reading and shorter evaluation letters to the editors. This tactic could save precious reviewing time and increase the general willingness to review manuscripts.

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Optimizing Ecosystem Services in China

THE POOL BEHIND THE CONTROVERSIAL Three Gorges Dam (1, 2) on the Changjiang (Yangtze) River in Hubei Province, China, will top off at 175 m above sea level next winter (2008 to 2009) (“Three Gorges Dam: Into the unknown,” R. Stone, News Focus, 1 August, p. 628). With this flood level, former lakes, cities, homes, and farm fields of about 1.5 million citizens will be seasonally under water, and a set of new unique ecosystems will develop. The extent of the impact of this unprecedented amount of wetland under-water, the potential ecological systems that will result on the borders of this reservoir, and possible approaches to minimize the impacts or enhance ecological services are mostly unknown.

Flooding in the pool behind the Three Gorges Dam will extend up to 300 km upstream, almost to the city of Chongqing. The affected area with the most impact on human settlements is on the Pengxi River; it is in this region that a city of 300,000, Kaixian, has actually been relocated to higher grounds. The Pengxi River valley includes 5500 ha of land that will now be seasonally flooded, some for 6 months. Approximately 5% of this newly flooded land is former urban area.

Opportunities exist for optimizing ecosystem services through application of ecological engineering (3). Algal blooms, mainly with Peridinium sp., were widespread in the pools during flooding in 2008, so nutrient management will need consideration. Conventional agriculture can be practiced during periods of low water level on the riparian slopes, with one major exception—no fertilizers should be used, as they will exacerbate the pool eutrophication the next spring. Nor will fertilizers be needed. Sedimentation of nutrients, especially phosphorus, will be significant during flooding, and an agriculture more harmonious with the new conditions might flourish. Cascading terraced ponds and wetlands such as those at the Honghe River (4) are another approach for retaining the water as it recedes, while reducing nutrient loss to the river system. Mudflats will be abundant near or at the river in summer, providing ideal habitat for shorebirds and other wading birds. Commercial enterprises for food production can be designed to utilize the pulsing water. Fish-net systems could be used to capture fish as the flood pulse recedes.

We agree with Stone that there will be a new, though perhaps uneasy, equilibrium between the Three Gorges Dam and its reservoir area in the next several decades as nature adapts with new emerging ecosystems.

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References

Trans-Arctic Invasion in Modern Times

IN THE PERSPECTIVE “THE COMING ARCTIC invasion” (8 August, p. 780), G. J. Vermeij and P. D. Roopnarine discuss the possibility of trans-Arctic biological invasions caused by the recent episode of climate warming. We wish to add that this interoceanic exchange may have already begun (1).

In 1999, the Continuous Plankton Recorder survey, a pan-oceanic long-term marine monitoring program (2), documented the presence of a Pacific diatom (Neodenticula seminae) in the Labrador/Irminger seas, between Canada and Greenland. This planktonic diatom is abundant in the cool waters of the North Pacific and the Bering Sea. The species has since spread south to Georges Bank and east to the south of Iceland. According to records from the deepsea drilling program, Ne. seminae last lived in the North Atlantic between 1.2 million and 528

LETTERS

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Letters to the Editor

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