Centralized publication scheme

I read with great interest and a feeling of empathy the editorial titled: Metrics of Science: Loosening the Stranglehold[1]. Not just in India, but even in the US (and in Europe and Japan, I am told by colleagues), a perception of scientific impact rules academia. Large volumes, diminishing time and a contemporary culture of instant judgment (take twenty-20 cricket for instance) have meant that even scientists are more willing to be told about the value of a given piece of work, rather than make up their own minds. Add to it the extreme specializations and myriad sub-fields, and it is near impossible for us to objectively judge the merit of anything that is not tightly related to our own research. In fact, the business of apportioning credit based on snap judgments begins early. In this part of the world, letters of reference tend to be overblown, unrealistic and aggressive endorsements. Most faculty recruitment committees scan the CVs of applicants looking for 'top-tier journals'. In this prevailing environment, graduate students and postdocs can hardly be blamed for chasing down high impact journals. Given that the quantum of scientific publications (and journals publishing them) will continue to rise and we are going to have less and less time, such measures of impact are here to stay. But maybe we can make the system more even.

I propose that all scientific journals should be part of a central submission process. All journals will belong to one of say five categories, the top one for instance, being reserved for high impact general journals (*Nature*, *Science*, *PNAS*, etc.) and so on. Additionally, the journals will also be clustered based on specialization, so that manuscripts are reviewed by appropriate peers. A rank-2 journal in the field of neuroscience would then be comparable to one in the field of plant biology at the same rank. When a manuscript is evaluated, the reviewers will also note whether it is suitable for publication in the rank to which it was submitted, or whether it can be accepted as is by a journal in the next rank. In the event that the manuscript is suggested for the next rank, the authors will then have the choice of accepting this decision and benefitting from an expedited publication, or do more revisions and resubmit at their own discretion. Finally, the published article will have the rank displayed prominently on the front page. Any perception of superiority or inferiority can be dispelled easily by the simple realization that ranks already exist in the conscious perception of all scientists, and that ranking essentially has to do with the extent, detail and novelty of the study. This sort of centralized publication scheme will save enormous amount of time and effort that is typically wasted in re-reviews, establish a framework for evaluating impact that, though not perfect by any means, is decidedly better than personal prejudice, and provide a system better integrated with on-line libraries and indexing services. Getting journals to agree to this policy would admittedly be an uphill task, but a similar experiment is ongoing in the field of neuroscience[2]. Ideally, there should be no short cut around writing, reading and carefully evaluating any published material. However, in light of the incessant onslaught of instantaneous metrics, maybe streamlining the publication methodology will help smoothen some of the inconsistencies in the evaluation of scientific output.

1. Balaram, P., *Curr. Sci.*, 2009, **96**, 1289–1290.
2. *J. Neurosci.*, 2009, **29**, 1225–1256.

SUBHABRATA SANYAL

Department of Cell Biology,
Emory University School of Medicine,
Atlanta, GA 30322, USA
e-mail: ssanya2@EMORY.EDU

Effect of forest drought on global warming is enigmatic

The latest study by Phillips *et al.*[1] has shown that drought in the Amazon forests can convert them from a net small absorber to a relatively large net emitter of CO_2. On the contrary, summer drought of a temperate spruce forest in Germany has converted the forest soil surface to a small but surprisingly persistent sink of soil and atmospheric N_2O, a more powerful greenhouse gas in global warming[2]. On a 100-year timescale, global warming potential[3] of N_2O is about 300 times that of CO_2. Earlier laboratory simulations of drying soils with surface leaf-litter mulches at tropical temperatures have also revealed similar soil N_2O sink effects[4,5]. Denitrifying bacteria growing in association with litter[5] convert soil N_2O to N_2. It has been shown in the Amazon flood-plain forests that denitrification activity in the soil surface litter layer was higher than that in the soil[6]. Those observations put us in a dilemma, prompting us to investigate whether or not forests are net contributors to global warming. They also justify the urgent need of simultaneous measurements of CO_2, N_2O and perhaps CH_4, particularly during the rainy periods, in temperate as well as tropical forests. It is also important to study forests under elevated CO_2 scenarios.

1. Phillips, O. L. *et al.*, *Science*, 2009, **323**, 1344–1347.
2. Goldberg, S. D. and Gebauer, G., *Global Change Biol.*, 2009, **15**, 850–860.
3. Rodhe, H., *Science*, 1990, **248**, 1217–1219.
4. Seneviratne, G. and van Holm, L. H. J., *Soil Biol. Biochem.*, 1998, **30**, 1619–1622.
5. Seneviratne, G. and Somapala, K. L. A., *Curr. Sci.*, 2003, **84**, 498–499.
6. Kreibich, H., *Eur. Trop. For. Res. Net. News*, 2001, **33**, 22–23.

GAMINI SENEVIRATNE

Institute of Fundamental Studies,
Hantana Road,
Kandy, Sri Lanka
Present address:
Faculty of Agriculture,
Food and Natural Resources,
The University of Sydney,
Sydney, NSW 2006, Australia
e-mail: gaminis@ifs.ac.lk