

## Editorial

### Fostering the next generation of reviewers in New Zealand ecology

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Peer review is the main quality control process in science. Most would agree that the subjection of scientific discoveries to the scrutiny of expert scientists results in higher quality and more reliable scientific outcomes. Recently, several opinion pieces have drawn attention to a crisis in the peer-review system in ecology (e.g. Hochberg et al. 2009; Donaldson et al. 2010). A key problem is the trouble editors have in finding suitable reviewers to assess manuscripts. This causes delays in the time taken for a decision on manuscripts and forces editors to fall back on an often time-limited coterie of regular reviewers, which results in reviewer fatigue and further exacerbates the problem (Hochberg et al. 2009).

While this reviewing crisis has unfolded, there have been increases in the number of students undertaking postgraduate research degrees. For instance, in New Zealand, PhD enrolments jumped from 4263 in 2003 to 7916 in 2010 (Massaro et al. 2012). However, many of these students will never have reviewed a paper for a scientific journal (Zimmerman et al. 2011). This represents a huge, untapped resource that could help alleviate the shortage of reviewers, but these early-career researchers must first be trained and mentored in peer review. There have been various calls to better involve early-career reviewers (Hochberg et al. 2009; Donaldson et al. 2010; Zimmerman et al. 2011) and some journals, such as *Marine and Freshwater Research*, have already implemented such schemes.

There are many benefits to having early-career researchers review papers (Donaldson et al. 2010). First, reviewing a paper hones critical thinking skills and improves one's own science and scientific writing. Second, reviewing makes an important contribution to the scientific process and participation in this is likely to increase the confidence of early-career scientists. Third, it provides valuable insight into the science publication process. Fourth, reviewing helps scientists keep in touch with cutting-edge science in their field. Finally, it will quickly build the pool of available reviewers, easing stress on an overworked peer-review system. Of course, the best way for students to improve as scientists is to submit and publish their own work in peer-reviewed journals. Indeed, doing so in parallel with acting as a reviewer is important to ensure students provide a realistic critique of the work of others, rather than judging against some idealised standard (Walbot 2009).

Here we announce a trial of a mentoring scheme for new reviewers, based on others suggested elsewhere (e.g. Donaldson et al. 2010; Zimmerman et al. 2011). Early-career ecologists will be paired with an established scientist (e.g. their supervisor) to provide reviewing teams for manuscripts submitted to the *New Zealand Journal of Ecology* (NZJE). The early-career researcher and mentor would each review the paper separately, discuss it and then submit a joint review. That way the student begins to build experience, but the quality of the review is ensured by the mentor until he/she agrees that the student is ready to review papers independently. We are calling for expressions of interest from such reviewing teams (see <http://www.newzealandecology.org/nzje/mentor/> for details) as well as individual early-career researchers and experienced scientists (e.g. from government agencies, industry or Crown Research Institutes, who would be keen to mentor inexperienced reviewers but do not have the same access to students as university academics) who wish to take part in this mentor reviewing scheme. Details will then be entered into a database and considered by the NZJE Editorial Board when seeking reviewers. We also strongly encourage enquiries from more experienced early-career researchers who would be prepared to review for NZJE without a mentor, such as late-stage PhD students and postdoctoral fellows, who have published their own papers, but are not widely known to the New Zealand ecological community.

We look forward to receiving expressions of interest and to fostering the next generation of reviewers in New Zealand ecology!

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