

Letter

The need to redress the geographical imbalance in the publication of conservation science

There is an increasing recognition that we need a stronger link between the work of conservation scientists and the activities of conservation practitioners (Memmott et al., 2010; Milner-Gulland et al., 2010). Both of these Editorials further indicate that a key aspect of this is the need to redress the imbalance that currently exists in the countries from which published articles originate. Milner-Gulland et al. (2010), writing in *Oryx*, argued that the continuing lack of capacity amongst developing country conservation scientists is harmful to global conservation efforts, and Memmott et al. (2010) indicated that it is a strategic objective of the *Journal of Applied Ecology* to encourage its Asian authorship.

The publication of the UN's *Global Biodiversity Outlook 3* (Secretariat of the Convention on Biological Diversity, 2010) and a suite of perspectives (Fisher, 2009; Mooney & Mace, 2009; Sachs et al., 2009) and analyses (Butchart et al., 2010) of progress towards the Convention's 2010 targets have brought our global failings into sharp focus. There are of course many reasons why the 2010 targets have not been met but it is clear that the current work of the conservation science community has not been utilized as fully as it could (or perhaps should) have been. Nowhere is conservation science's haphazard contribution clearer than in our approach to its publication.

Milner-Gulland et al. (2010) and Memmott et al. (2010) highlighted a geographical imbalance that must be rectified and that should be a priority for conservation science publishing. Take, for example, Brazil, India and China. Not only do these countries feature significantly in any ranking of biodiversity importance (Mittermeier et al., 1998; Vie et al., 2008), they are also undergoing dramatic changes as a result of economic development and are arguably the most important economies outside the G8. These three countries exemplify the challenges of balancing biodiversity conservation and economic development. If more conservation scientists from these countries could publish internationally there is a greater chance that their science and their thinking will play a role in the policy and decision-making that affects biodiversity. Even if the articles themselves will not be read as far up the policy-making chain as we would like, the increased credibility accorded to professionals who have an international standing can make a huge difference to the influence they can wield in shaping domestic policy and environmental management.

The overwhelming issue at the moment is the lack of any coherent and realistic mechanism that will allow the numbers of young professionals in developing countries

to gain the publication experience that will allow them to obtain such recognition. There seem to be two significant obstacles to developing self-sustaining and dynamic national conservation science communities that contribute significantly to addressing biodiversity and other major environmental crises. Firstly, there is the difference in intellectual and research cultures. What is accepted as international best practice has largely been developed from Western culture. Other cultures have different approaches to learning and discovery rooted in generations of diverse experiences. Lim (2010) has suggested that a major limiting factor now affecting the Asian technical rise is a shortage of the sort of creativity that is necessary in innovation-led economies. Exactly the same sort of innovation is necessary to address the biodiversity crisis in many countries.

Even if conservationists from Asia and elsewhere overcome this, they encounter a second major hurdle. Conservation science has grown organically in the West, where many of the most prestigious journals are based. This means that whilst many conservationists are developing research projects and programmes that, within their own countries and cultures, are regarded as radical and innovative, their manuscript submissions can be dismissed all too easily as: 'one of those thoroughly worthwhile papers that can rarely be accommodated in XXXX these days because, with an acceptance rate around 25%, we are obliged to choose those with a wider scope' or 'sound and solid, and yields some important insights, but I do not find it to be sufficiently novel or of general interest to be published in our journal'. The editors that pass such judgements are under pressure to secure and publish articles that will be cited widely and this plays to specific kinds of articles that can often come only from countries with a significant tradition in ecology and related disciplines.

One example is illustrative. Jenkins et al. (1963) published what they called a description of a preliminary study of the red grouse. The purpose was to obtain fundamental knowledge of the population dynamics of the species. This was seen as a first step in understanding the decline of the species in parts of Scotland. The article had a significant influence on the development of a wide range of research disciplines as well as, directly or indirectly, land-use management and policy in the UK: i.e. the scale at which such actions must be addressed. It has been cited nearly 300 times in publications included in the Web of Science (as at 14 May 2010) and is still being drawn upon. The challenge facing many colleagues in Asia, for example, is that whilst they may now have sufficient ecological and technical knowledge to carry out such a study (typically in much more challenging field conditions than Scotland!), the so-called international publication agenda has moved on to what is perceived as more exciting and

interesting research questions. This means that the international publication outlets are limited for studies that may have substantial influences on the development of conservation science in various countries and cultures.

Generally speaking, the publication landscape has changed considerably since 1963. Many journals have moved from baseline ecological studies to providing syntheses and exploring hypotheses. These are often the journals that are seen as the best—with high ISI rankings and impact factors. The challenge of establishing new journals that are attractive to authors means that it is increasingly difficult to publish soundly conducted baseline ecological studies. This makes it difficult for emerging conservation science communities to play a full role in international conservation. It also means that the science and scientists of global standing that are needed as advocates for biodiversity are most lacking in exactly the countries where they are most needed. To meet this need several open access online journals have been launched, such as the *International Journal of Galliformes Conservation* (<http://www.pheasant.org.uk>), the *Journal of Threatened Taxa* (<http://www.threatenedtaxa.org>) and the *Cambodian Journal of Natural History* (<http://www.fauna-flora.org/reports.php>). In addition, *Chinese Birds* (www.chinesebirds.net) has been launched recently and is open access at present. However, new journals take time to become established as acceptable forums for communication of findings, opinions and ideas.

There are various initiatives that seek to develop conservation leadership amongst young nationals in biodiverse countries. However, their scope tends to be more direct action, such as awareness-raising or community based activities. Critical as these are there remains no systematic means of improving capacity for scientific publication. Some efforts are, however, underway. For example, the World Pheasant Association held a writing workshop in Beijing (supported by Beijing Normal University and the British Council) before the International Ornithological Congress in 2002, and is currently mentoring Research Associates through the publication process as part of its nurturing tomorrow's conservation leaders project supported by the John Ellerman Foundation. The Conservation Leadership Programme, in collaboration with *Oryx*, has recently held writing workshops in Brazil and India, with follow-up mentoring, and will run another one this year, in Cambodia. The Tropical Biology Association has offered similar workshops in East Africa.

However, the scale of the task is huge and the lack of a systematic drive to eradicate the obstacles that have led to a geographical bias in publication may have significant consequences. For example, data that may affect global conservation assessments are not being fully incorporated

at an international level. More generally, there is a communication barrier that means lessons of all kinds are not being shared quickly between conservation biologists in different countries and ecosystems, and between conservation biologists and practitioners.

Resolving these issues is not easy. Recent moves by some research funding bodies to promote the societal impact of research will hopefully influence both journals and authors so that it is not just citation metrics that are considered of most importance. However, the dismal picture painted by *Global Biodiversity Outlook 3* and our failure to meet the 2010 targets demonstrate starkly that we need much more and quickly. As the UN Secretary-General Ban Ki-Moon states in the Foreword to *Global Biodiversity Outlook 3* 'business as usual is no more an option for humankind'.

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