Conservation Science and Practice

*Ralf Buckley, Clare Morrison, J. Guy Castley, Fernanda de Vasconcellos Pegas, Alexa Mossaz

International Centre for Ecotourism Research, Griffith University, 4222, Australia

*Corresponding author. Tel.: +61 7 55528675. E-mail address: r.buckley@griffith.edu.au

We agree with Laurance et al. (2012) that conservation can gain when scientists and practitioners share perspectives. We suggest, however, that they already do. Individuals move between research and practitioner organisations, including parks agencies and NGOs. Members of practitioner organisations publish science in top-tier research journals. Members of research organisations also act as practitioners, through advisory boards, government submissions, public media, and paid or free consultancies.

We suggest, however, that the roles of science and practice nonetheless remain distinct. There are differences of degree, between basic and applied science; and differences in method, between formal hypothesis testing and informal accumulation of expertise. Conservation practitioners rely routinely on bodies of knowledge in both natural and social sciences. These, however, are not conservation science specifically: they are much broader fields, such as biology, economics, politics and psychology. We suggest that these fields grow faster, more reliably and more evenly, if their research priorities are set by the underlying structure of science, rather than its immediate conservation applications. Scientists also study conservation practice, including cross-disciplinary aspects, and we agree that this is a valuable exercise; but it is only a small fraction of the science used in conservation.

We would argue that the examples used by Laurance et al. (2012), namely timeliness, wickedness and evaluation, actually illustrate this distinction. Scientists can only provide timely information on most practitioner problems if they had already started relevant research years or decades earlier, long before that specific problem was identified. They can only unravel wicked real-world problems if they can identify subcomponents and test them separately. That is what defines an elegant experiment: it provides a reliable answer to a precisely delimited question. And to evaluate conservation practices reliably, the evaluation – and its controls, replicates, parameters, measurements and analysis – must generally be designed (and budgeted) jointly with the practice itself.

It is worth noting that conservation practice is not limited only by lack of science. It is also limited by lack of funds, and heavily influenced by politics. Subsistence and industrial poaching, wars and terrorism, patronage and corruption, and ideologies both of greed and of social justice can all have adverse effects on conservation.

Academic conservation scientists support and admire the work of practitioners. Certainly, it is important for conservation scientists to know what issues practitioners are facing, and to work directly with practitioners when occasion demands. Contrary to the suggestion of Laurance et al. (2012), however, we suggest that research priorities in conservation science should not be driven by the immediate issues facing conservation practitioners. The most critical contributions of scientists to conservation are firstly to do good science, which adds to primary conservation knowledge; and secondly to train future conservationists, practitioners as well as scientists.

References

Laurance, W.F., Koster, H., Grooten, M., Anderson, A.B., Zuidema, P.A., Zwick, S., Zagt, R.J., Lynam, A.J., Linkie, M., Anten, N.P.R., 2012. Making conservation research more relevant for conservation practitioners. *Biological Conservation* 153, 164–168.