

## Future dilemmas for argumentative conservation biologists

PACIFIC, meaning tending to make peace or conciliatory, is hardly a word that one associates with Harry Recher, the editor of *Pacific Conservation Biology*. Argumentative is far nearer the mark, and for good reason. He is tired, as he said forcefully to many friends in July this year, of the absolute futility of trying to get people and governments to wake up and change. At the time he uttered those words in July 2002 he had just returned from a trip to north-west Australia. Once you reach the cattle country, he said, it is clear that the intent of pastoralists is to convert the entire landscape into a vast paddock void of shrubs and other life forms but introduced grass species and cattle. He also declared that what is happening to the Western Australian pastoral zone equals the destruction occurring in Queensland through land clearing. Thus in a few sentences Recher has put his finger on the central issues of environmental degradation in Australia as identified in both the *Biodiversity State of the Environment Report 2001* (Williams *et al.* 2001) and the CSIRO Report *Future Dilemmas: Options to 2050 for Australia's population, technology, resources and environment* by Barney Foran and Franzi Poldy, which was launched by the Immigration Minister on 6 November 2002 ([www.cse.csiro.au/futuredilemmas](http://www.cse.csiro.au/futuredilemmas)).

The great strength of the *Future Dilemmas* report is the incorporation of population, environment and economic data into a state-of-the-art modelling procedure. The outcome was a set of scenarios that set off a fierce national debate from the first public exposure of the report on 2 November 2002, such as on the front page of the *Sydney Morning Herald*, then on ABC's *4 Corners* on 4 November 2002. In essence, the Report modelled three scenarios for the year 2050, with projections to 2100. In the low population scenario (peak of 20 million people by 2050), Foran and Poldy identified a stabilization of a range of environmental issues and difficulty maintaining economic growth; for the medium population scenario (25 million in 2050, which represents the growth by current immigration rates), the pressures on the environment keep growing and there is relative inactivity in the economy; and for the high population scenario (32 million by 2050, and 50 million by 2100), resource and environmental quality issues are more severe, Sydney and Melbourne are megacities of 10 million people, and there is accelerating economic growth. In their introduction, Foran and Poldy note that different people hold different views, often passionately. They also noted that some believe growth is necessary, while others believe that our population is already too big. They call this a dilemma because we can choose among the scenarios.

When Harry Recher was in Carnarvon, in north-west Australia, he went to his first ever rock concert. He said it was good, but he will never go again because, as a bird watcher, he values his keen sense of hearing too much. It is the only physical attribute, he said, that shows no sign yet of deteriorating. What has deteriorated though is his patience with those who would destroy the Australian environment for what they call economic growth, which is the current philosophy underpinning the management of the

Australian environment. I agree with Harry Recher that there are no physical rewards of old age, but it does have a few compensations. One of them is to be able to see the outcome of the debate on this matter as it ran in the 1960s and 1970s. In my final year at university in 1968, a young American ecology lecturer, Harry Recher, was in contact with the new ideas overseas. As a former student of Paul Ehrlich, he brought Ehrlich's (1968) first book, *Population Bomb*, into view and it matched the new environmental concerns that were just emerging in the milieu of intense social and political agitation over the war in Vietnam.

When the new wave of environmental concern in Australia broke in 1970 I had just taken a job as an education officer with the newly-formed NSW National Parks and Wildlife Service. Paul and Anne Ehrlich (1970) had just published their groundbreaking book *Population Resources and Environment*, which linked population size, and other key demographic attributes such as age structure, to resource use (and overuse) and the decline in quality of the environment. I still have my copy on my bookshelves, and among other reminders of the times, it has a sample of my handwriting in 1970. It was legible then. The Ehrlich's central thesis was that the "explosive growth of the human population is the most significant terrestrial event of the past million millennia". They noted that 3.5 billion people now inhabit the Earth. Since then, in the brief period in the history of the world in which my handwriting has deteriorated through age, the number of people on the planet passed the six billion mark (in 2000). The Ehrlich's had concluded in 1970 that the planet was already grossly overpopulated, that people were starving to death, that attempts to increase food production would accelerate the deterioration of the environment and that the basic solutions involved dramatic and rapid changes in human attitudes, especially those relating to reproductive behaviour, economic growth, technology, the environment and conflict resolution. All this has a very familiar ring in 2002.

With that new intellectual framework, the task in 1970 of arguing the case for an expanded system of national parks and reserves as well as for conserving fauna (then only mammals and birds) throughout the other 99% of the state was exciting and rewarding. (At the passing of the initial New South Wales *National Parks and Wildlife Act 1967*, the area of parks and reserves was about 0.75%; it now stands at about 7%). Much has been achieved, but as was apparent at the time, even a vast increase in the area of parks and reserves was never going to be enough to conserve all our flora and fauna. Parks and reserves were more symbols of the value of nature as they were effective custodians of the outcome of our extraordinary evolutionary past. Thus, as in 1970, the *Future Dilemmas* debate has immediate relevance to the future of our wildlife, including its sustained evolutionary potential, and the myriad organisms that do not appear on official lists of species needing special attention.

The Ehrlichs, like Harry Recher and a suite of like-minded argumentative conservation biologists in Australia, do not suffer from a dilemma about the future. With a world population moving from 3.5 to 6.0 billion within our working lifetime, it seems like insanity to embrace population growth as a means of enhancing our well-being. There will be even more cattle in north-west Australia and more clearing in western Queensland. As I typed these words, I heard the familiar ping of an incoming email. It was from Gordon Grigg in Queensland who has a long-term interest in trying to sustain biodiversity in the rangelands (Grigg 2002). In the email, Grigg, another argumentative conservation biologist, asked whether I was enjoying the Farmhand appeal. He said he knows of a woolgrower who is suffering from the drought so is spending four days per week, on a bulldozer, pushing scrub to feed his stock. Grigg adds: "I reckon he should be locked up for vandalism." No faintheartedness here as to what to do, although in all fairness, the notion of pushing over hundreds of hectares of trees to feed stock is a reflection of problems in a society that has not yet produced and/or enforced adequate land management strategies.

Some things have changed since the Ehrlichs burst into print, and some of these changes matter for Australia. The first is that Australia's rate of natural increase is now below zero, so the *Future Dilemmas* debate is based on immigration scenarios. Hence the relevance of the Minister for Immigration launching the CSIRO report. For the ecological future of the continent, the immigration debate is thus of greater significance than solely the humane treatment of refugees. Secondly, we can see that despite all our efforts to set aside many magnificent parks and reserves, and enact additional laws to rescue threatened species and communities, the battle to conserve our biodiversity is being lost. It is in this context that the extraordinary *State of the Environment* reports are so valuable. This brilliant publishing innovation of the 1990s gives balance and a depth to Australia's environmental problems — and it prevents critics dismissing the Rechers and Ehrlichs of the world as being too bleak. Thirdly, the environment as an issue seems to have peaked and by the 2001 federal election it was not even among the nine concerns that swayed voters (Lunney 2002). Further, from my ecological interpretation of the 19th century historical record, even a small human population can cause vast changes. From first settlement of western New South Wales in 1841, to the end of the 19th century, 24 mammal species became extinct, mainly from the impact of ever-increasing sheep numbers in a land quite unable to sustain the impact of a major export industry (Lunney 2001). Thus, while population size matters, dealing with pressing land management, including wildlife management, issues is also utterly vital in any attempt to conserve our biodiversity.

Continued economic growth appears to be a main driver of national decisions, even though community environmental awareness is much more acute and well informed than in 1970. However, there was then, as there still is, a deep well of concern for the bush, for the beaches, and for breathing fresh air. People were, and still are, prepared to protect these natural assets but, as the *Future Dilemmas* report chillingly points out, there are neither the mechanisms nor the skills to be able to select our future paths when confronted with a set of parallel

problems. One of the great difficulties remains in linking all the parts (population, resource use and environmental quality) and the *Future Dilemmas* report has done that well. The report is essential, if difficult, reading.

As for the future, you can vote for a name change for this journal to ACB, *Argumentative Conservation Biology*, or do we need a greater paradigm shift, a revolution, if our wildlife is to be present and flourishing in 2100 with 50 million people in Australia on a vastly more crowded planet? This is where turning to the Ehrlich's book remains relevant. Imagine that you have just gained your degree in ecology or conservation biology, have been appointed as an education officer, or something similar and you have been invited to prepare a position statement for a public exhibition on the conservation of Australia's forest fauna. Would you say that society has the same options that were available in 1970? Can you then answer the question as to how great the options will be when you hand over to your successors in 2050? Read *Future Dilemmas*, leave it on your shelf and keep the ideas in your mind. You could take the Ehrlichs' option and vividly argue your view as what should happen, or you could take the Foran and Poldy position and present scenarios for others to agonize over.

"But what can I do?" This is a familiar question. The best answer I ever heard came from Paul Ehrlich in 1976. He was addressing a conservation meeting about the dangers of nuclear power and the terrible consequences of technical errors combined with bureaucratic bungles and short-sighted national policy. When the familiar question was asked at question time, Paul Ehrlich suggested to the questioner to go and find out everything you can about the subject and then, Ehrlich remarked, you will recognize what needs to be done and what you can do.

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