

Citizen scientists 'helping discover Australia'

November 1 2012

Amateur naturalists and other unpaid "citizen scientists" are playing a huge and vital role in the ongoing 'discovery' of Australia and all that it contains.

"[Citizen scientists](#) are unrecompensed, unsung and rarely officially acknowledged – yet they are making a genuinely profound contribution to our understanding of Australian wildlife, and the state of our environment," says Professor Hugh Possingham, of the ARC Centre of Excellence for [Environmental Decisions](#) (CEED) and The University of Queensland.

Professional science, especially field-based data collection, is expensive – but tens of thousands of amateur researchers and naturalists are helping to fill the gaps in our knowledge of our own country – and often make discoveries of scientific significance, including new species, he says.

Furthermore the work of these citizen scientists can be just as valuable and trustworthy as information gathered by professionals. In a study carried out in South Australia's Mount Lofty Ranges, Prof Possingham and Dr Judit Szabo of [Charles Darwin](#) University found that bird surveys carried out by professional scientists and by amateur birdwatchers yielded results that were 'surprisingly close'.

"There are over 10,000 members of Birds Australia, many of whom take part in regular survey work that helps us to understand the state of our bird life," he says.

"For example the Atlas of Australian Birds is based on around 10 million reports, 420,000 surveys and the work of 7000 dedicated individuals. It's an absolute monument to the love Australians have for their country and its species."

Prof. Possingham said that citizen scientists were also involved in surveys of [native plants](#), frogs, insects, reptiles and marsupials, while anglers were tagging fish and reporting their movements. Some amateur surveys – like the Queensland Wader Study Group surveys of [Moreton Bay](#) - had been running for 20 years or more, providing a remarkable depth of information.

"In the Mt Lofties, for instance, only about 10-18 per cent of the original vegetation remains intact, and the area has lost a large part of its original birdlife – so it is vital to know what is happening to the rest," he explains.

In further research by Dr Szabo and Ayesha Tulloch of the University of Queensland, environmental scientists are studying how amateur observers operate, so as to help them deliver more scientifically valuable data.

Prof. Possingham urges Australian governments, federal and state, to get behind 'citizen scientists', recognise their contribution to the nation's knowledge of itself – and to fund more of their activities, because they represent exceptional value for public money in addition to the side-benefit of encouraging a healthy lifestyle.

"In Britain the Royal Society for Protection of Birds has over a million members. One Briton in every 60 is involved, in some way, in monitoring Britain's bird life, and there are similar levels of engagement by naturalists in other fields of study.

"Given the vast size of our continent, the many species that remain unknown or undocumented by science, the vast pressures of climate change and development, it is essential we build up in Australia an equal or greater enthusiasm among our citizens for recording our native wildlife."

Prof. Possingham says that citizen scientists not only gain a good education about Australia and its biota – but can also make an important contribution to science and hence to more effective national conservation policy.

"Citizen scientists can often spot a disturbing trend – say, species vanishing from a particular area – long before the conservation experts arrive.

"With all the new smart phones and hand-held devices, amateurs can make a major contribution by collecting images, sound and videos using GPS, which could revolutionise this form of study."

Prof Possingham says Australia should consider developing a national partnership scheme to help fund the activities of suitably skilled groups and citizen scientists.

"This way ordinary Australians can play an even greater role in understanding and looking after the land we love, and its unique fauna and flora."

"Like the coast watchers of World War II, citizen scientists offer us early warning of things that go wrong in our environment and how we are managing it."

Provided by ARC Centre of Excellence for Environmental Decisions

Citation: Citizen scientists 'helping discover Australia' (2012, November 1) retrieved 20 September 2024 from <https://phys.org/news/2012-11-citizen-scientists-australia.html>

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