



Discovering 'citizen science'

By **MATTHEW CAWOOD**



Group science and environment writer

SCIENCE [*'si-ns*]: the intellectual and practical activity encompassing the systematic study of the structure and behavior of the physical and natural world through observation and experiment.

Who better to contribute to scientific understanding of Australia than the people out in the natural world, observing and shaping it: Landcarers?

That idea underpins the "citizen scientists" theme of Landcare Week 2010, set to run from September 6 to 13.

Citizen science engages the public to observe changes in the natural world and report into a central information repository, which can then serve as a benchmark against which all future changes are measured.

For instance, last year's RabbitScan operation collected information on rabbit densities, distribution and damage from 3400 sites around Australia – an invaluable resource for scientists wanting to check on shifts in rabbit populations in the future.

Landcare Australia's chief executive, Heather Campbell, is also a director of Earthwatch Institute, an organisation that links conservation volunteers with environmental restoration projects.



LEFT: Landcare volunteers along a river in Victoria, collecting water quality data. Waterwatch is a national community water quality monitoring network that encourages all Australians to become active in the protection of their waterways.

Earthwatch's latest initiative is ClimateWatch, a citizen science initiative that engages the public in observing changes in the natural world that might help scientists better understand the effects of climate change.

"The idea is to get a huge pool of data that scientists can then use to help determine what is actually happening," Ms Campbell said.

"Landcarers, Coastcarers are out

there as natural observers anyway. While they are out there doing their activities, they can get involved in feeding information back into the science community."

Launched in October 2009, ClimateWatch is an ongoing program, and the plan is that it will run indefinitely to amass the depth of information that allows scientists to identify trends.

Landcare members who contribu-

ted to ClimateWatch or any of the range of citizen science programs – see box – were effectively contributing to the science that informed policy, Ms Campbell said.

In turn, that enhanced scientific and policy understanding could bolster the Landcare concept of community driven environmental repair.

"We're trying to marry the science and the importance of the work being done there with an amazing community movement involving hundreds of thousands of volunteers."

"This is the international Year of Biodiversity. There has been a lot of work being done to show that biodiversity is decreasing, and that climate change will accelerate that."

"This really is a good link between the work of Landcarers in the communities and international efforts to try and come up with initiatives to reduce the impacts of climate change."

In Brief

Landcare gets mobile help:

Australia's official mobile phone recycling program, MobileMuster, and Landcare Australia are combining forces to give Australia's coastline a helping hand this summer.

The two not-for-profit organisations are encouraging all Australians to round up their old and broken mobile phones, batteries and accessories and hand them in for recycling.

For every kilogram of mobile phones received by 31 October, a tree will be planted in five key coastal areas across Australia.

To recycle an old mobile phone, either drop them off at a mobile phone retailer or collection point (to find out where, go to www.mobilemuster.com.au or call 1300 730 070) or post them by picking up a free MobileMuster recycling satchel from Australia Post.

You can even post them by printing off a reply paid mailing label from www.mobilemuster.com.au

Avatar message in action:

The blockbuster film, *Avatar*, carried a big-hitting environmental message that will be given an earthly form in an ambitious program to plant one million trees across the world in 2010.



Earth Day Network and *Avatar* studio, 20th Century Fox, are teaming up with environmental and reforestation organisations in 15 countries to bring attention to bear on the importance of trees in mitigating greenhouse gases.

Landcare Australia has been selected as a partner in the program, which not only seeks to get the trees in the ground, but to ensure they will be cared for until maturity.

Landcare has committed to planting 30,000 trees in Australia as part of the initiative.

■ Updates will be posted on the Landcare website, www.landcareonline.com.au

'Hands' get a lift: The "caring hands" logo that has come to symbolise Landcare has been given a facelift.

The original design has become one of the most recognised symbols in Australia.

The new design for the Landcare, Junior Landcare and Coastcare logos retains the caring hands, but in a setting that reflects the 21st century.

Along with the logo refresh, Landcare Australia has updated its style guide for groups and corporate partners wanting to incorporate the logos into publicity material.

The style guide can be downloaded at www.landcareonline.com.au – look for the Media Centre under the Resources tab.

Get Involved

The list of citizen science programs that Landcare members can contribute to during Landcare Week includes:

- ClimateWatch** www.climatewatch.org.au
- Melbourne Water's Frog Census** (Melbourne) www.frogs.melbournewater.com.au
- Other frog surveys** www.frogatlas.com.au
- Birds in the Backyard** www.birdsinbackyards.net/surveys

- Waterwatch** www.waterwatch.org.au
- RabbitScan** www.rabbitscan.net.au
- Reef Life Survey** www.reeflifesurvey.com – volunteer scuba divers wanted
- Earthwatch Australia** www.earthwatch.org/australia/expeditions
- Barbara Hardy Centre for Sustainable Urban Environment** (Adelaide) www.unisa.edu.au/barbarahardy/research/citizen-science.asp

- Sea Search** (Victoria) www.peopleandparks.org/programs/marine-connections/sea-search.html
- REDMAP** (Tasmania) www.redmap.org.au – looking for input from scuba divers, recreational and commercial fishers
- ECOCEAN Whale Shark Photo-ID Library** (international) www.goearthtrek.com
- Globe at Night** (international) www.globeatnight.org

New phase in rabbit fight: the eyes have it

RABBITS are no longer the focus of stories of nature gone feral, but even at diminished numbers, they continue to wreak havoc on the Australian landscape.

Just one rabbit per hectare can be enough to stop regeneration of all native plants, scientists have found.

Across Australia, rabbits have been estimated to cost the nation \$110 million a year in degradation and lack of regeneration.

All of which makes a great case for Landcare Week involvement in RabbitScan, a "citizen science"

initiative to map rabbits and their influence across Australia.

Last year the Rabbit Management Advisory Group (RMAG), under the chairmanship of David Lord, "Thackaringa", Broken Hill, devised RabbitScan as a way of quantifying Australia's rabbit challenge, to help scientists better address the issue and raise awareness among policymakers.

The idea is simple: wherever they are, people can survey local rabbit populations and report back on the "three Ds" –

density, distribution and damage.

Rabbit locations, and the associated reports, are then put on a Google Earth map to provide a graphic picture of rabbits in Australia.

RabbitScan project manager, Jenny Quealy, said the program had been aiming for 5000 sites in 2009; it got 3400 before it ran out of funding.

Now the Federal Australian Pest Animal Management Program and some corporations, including Woolworths and Toshiba, have helped restart the program.

Ms Quealy said public input into the RabbitScan database would be an important factor in getting a replacement for the rabbit haemorrhagic disease virus (RHDV, formerly known as rabbit calicivirus), now considered past its use-by date.

The concept may also be extended to include other ferals like camels, cane toads and wild dogs.

■ For more information about participating in RabbitScan, visit www.rabbitscan.net.au

– MATTHEW CAWOOD



Landcare Week 6th - 13th September

Landcare Australia is giving every Australian the opportunity to help scientists across the globe study the impact of climate change on our ecosystems by monitoring, collecting and recording data from their own backyards, suburban streets, parks and bushland.

Landcare Week celebrates the efforts and work of over 4,000 landcare groups and countless volunteers. As a Landcare ClimateWatcher you will be part of the landcare community, who are making a positive contribution to their local environment from work, school and home.

To register to be a Landcare ClimateWatcher or for more information about Landcare Week events in your local community, visit www.landcareonline.com.au



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