



Geological Society of Australia media release
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Australia not as geologically stable as many think, medal recipient's research shows

Geological Society of Australia (Victoria Division) Selwyn Medal 2008

The recipient of the prestigious Geological Society of Australia (Victoria Division) Selwyn Medal for 2008 says that, despite popular belief, Australia is a geologically active continent with moving fault-lines, regular seismic activity, and a long history of mountain making.

Internationally respected geologist, Associate Professor Malcolm Wallace from the School of Earth Sciences at the University of Melbourne, received the Medal last night (Thursday night) at the Geological Society of Australia's (Victoria Division) annual Selwyn Lecture 2008.

The Medal is named in honour of Sir Alfred Selwyn, an eminent Victorian pioneering geologist and founder of the Geological Survey of Victoria. It recognises significant ongoing or former contributions of high calibre to any field of Victorian geology.

"Australia is considered by many to be one of the flattest and most geologically stable continents in the world" Associate Professor Wallace said. "But we have discovered substantial evidence of ancient and current mountain building on this continent, and seismic activity which commenced 10 million years ago and continues to this day.

"In fact, there are numerous young faultlines weaving their way across southern Australia, including one that goes right around the perimeter of Adelaide. There are also young faultlines running through the Mornington Peninsula outside Melbourne, the Strzelecki Ranges in Victoria and the Flinders Ranges in South Australia.

"While they may not translate into major earthquakes tomorrow, their seismic activity is generated by tectonic plates pushing up against each other on a daily basis, so it is critically important that scientists and emergency management agencies know of their whereabouts and the potential risks they pose – this is where geoscientists play a crucial role."

Immediate-past Chairman of the Geological Society of Australia (Victoria Division), Associate Professor Stephen Gallagher, said Associate Professor Wallace is respected internationally for his exceptional geoscientific research.

"Malcolm has made, and continues to make, a significant and valuable contribution to our understanding of the geology and geological processes of southern Australia – including in the critical field of understanding just how seismically active southern Australia is. This has made his research extremely important from a public safety viewpoint.

"Most recently Malcolm has been closely involved in the major international discovery of what was once a giant underwater reef, located in what we now know as the Northern Flinders Ranges in outback South Australia. The Oodnaminta Reef is about 650 million years old and is the only known reef complex of this age anywhere in the world. While they are yet to confirm it scientifically, he and his fellow researchers also believe that peculiar fossils of possible multi-cellular organisms found in the reef could be the earliest examples of primitive animal life discovered to-date.

"Malcolm has made other important contributions to geological knowledge in many parts of Australia and overseas. He has excelled in fields as diverse as carbonate sedimentology, lead-zinc mineralization,

meteorite impact structures, Neogene tectonics, submarine canyons, and seismic velocities in petroleum exploration.

“His research has significantly improved the targeting of petroleum reservoirs in the Gippsland Basin and it also has applications for other petroleum basins worldwide. It has led to the better targeting of petroleum exploration wells, thereby improving their success rates and saving millions of exploration dollars.

“Malcolm has also undertaken significant research on the environmental and climatic evolution of the southern Australian margin. Together with others, his work has significantly improved knowledge of the location of brown coals in Victoria – a resource critical to Victoria's energy needs – and his research on greenhouse/icehouse climate and environmental evolution of Victoria for the last 80 million years has formed an important geological analogue for future climate change in Victoria.

“In addition to his many scientific contributions, Malcolm is also a committed and talented teacher. He has been heavily involved in undergraduate and postgraduate teaching at the University of Melbourne since 1991, training Victoria's next generation of geologists for the mineral, environmental and petroleum industries.

“Field teaching is one of his many strengths, and with characteristic passion and commitment he has guided countless students in their development of this essential skill. His former students now have positions all over the world in academia and industry. Recently Malcolm was awarded the University of Melbourne's Dean of Science award for his excellence in teaching.

“Malcolm has also been a keen and regular participant in Geological Society of Australia (GSA) activities. He was chairman of the GSA's Australasian Sedimentologists Group from 1996 to 1998, and a Committee Member of the GSA's Victoria Division from 1991 to 1993.

“Malcolm is highly respected and well-liked by his colleagues and students, as well as by geoscientists outside academia. He is also known for his very high ethical standards.

“We warmly congratulate Malcolm on receiving this prestigious award.”

Request to media: Please mention in any article / interview that Associate Professor Malcolm Wallace received his award at the Geological Society of Australia's (Victoria Division) Selwyn Lecture 2008.

Media interviews: are available with Associate Professor Malcolm Wallace and immediate-past Chairman of the Geological Society of Australia (Victoria Division), Associate Professor Stephen Gallagher.

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