

Third International Conference on Geoscience Education: Dedicated to Teaching and Learning

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The Third International Geoscience Education Conference (GEOSCIED III) was held in Sydney, Australia, 16-21 January 2000. Previous conferences have been held at Southampton, England, in 1993 (Morgan and Ferguson 1993) and in Hilo, Hawai'i, in 1997 (Morgan 1998). Unfortunately, timing and expense (because of distance) seemed to have had an impact on the attendance at the Sydney meeting, which only had 170 participants. This is substantially below the two previous meetings in Britain (~350) and in Hawai'i (~240). Almost 100 papers were presented on a variety of topics in both oral and poster sessions. Delegates were present from 23 countries with 35 from the United States, 14 from Japan and 5 from Canada. The largest contingent (70) was from Australia, and included 22 teachers, 11 student participants and 19 industrial and government "partners".

The conference was held at the University of New South Wales, a large and very "uphill" modern campus — excellent for an early morning workout in 30+°C temperatures — but with good accommodation and some fine lecture room facilities. Many delegates chose to present using the built-in computer projection facilities and I am sure that more than a few were really impressed with some of the better PowerPoint presentations.

What was the nature of the papers and how were they presented and received? The organisers decided to run with keynote addresses for the first 40 minutes of each day. These were well attended by practically all the delegates: keynote addresses started at the not unreasonable time of 9 a.m., following which the delegates moved to a choice of

three simultaneous sessions in three adjacent theatres in the same building.

The three keynote addresses were by Michael Archer, Ian Clark and Rosemary Haffner. Archer's talk was most enthusiastically received. He commented on the interrelationships of Biology and Earth sciences particularly in respect to the marsupial megafauna of northern Australia, and the land degradation that had resulted from poor agricultural practice in much of the country due to irrigation and the use of "European farming" methods. A real eye-opener is that the amount of land area in the southern continent made derelict by poor agriculture is orders of magnitude greater than the amount of environmental devastation created by all mining activities in the same region! This is a topic that should be developed by those concerned with the poor image created by mining in almost any area of the world.

The various break-out sessions covered a wide variety of topics aimed at all educational grades from Kindergarten through to university teaching. Approximately 90 oral presentations were made and several other delegates contributed to a limited poster session. Canadian participants contributed by commenting on EdGEO activities in Canada (Eileen Van der Flier-Keller and Fran Haidl); Paleobiology and its applications to classroom teaching (David Rudkin); the role of the Canadian Geoscience Council and the growth of geoscience outreach and education activities in Canada (Alan Morgan) and the Toronto Geoscape Project (Kathleen Kemp and eight others). These, and most of the other extended abstracts, are presented in the Abstract Volume of the Third International Conference on Geoscience Education (Clark 1999). This is well worth looking at for those interested in delivery styles and content of various educational initiatives. Topics ranged from "Cognitive aspects of studying the water cycle in an Environment context" through "Student responses to geoscience models and simulations at Earthworks, an interactive science exhibition in New Zealand" to "Concept maps and constructivism in developing an introductory structural geology course." Others include "Geotourism, a new perspective for public awareness on geology"; "Earth Systems

Science for Elementary and Middle School Education majors" to "Holding a poster session in place of a final exam for an introductory geology class." For those interested in "hands-on" activities, presentations were also made on building a polarising microscope out of waste materials, and constructing a handmade seismogram system (both from Japan). The BLUEsat project commented on a student project at the University of New South Wales which hopes — if it flies in 2002 — to obtain wide-angle digital images of Earth from a 10 kg satellite in an 800 km high polar orbit.

I will comment only briefly on Field Trips, since the only one I participated in was the mid-conference field trip for all attendees. Field trips were run pre- and post-meeting for participants. My understanding is that these were not particularly well attended (again, expense and the timing of the conference made it difficult for many involved in teaching to be away from their home institutions for an extended period). The best-attended long-distance field trips were into central Australia (Ayers Rock and Alice Springs), and to New Zealand. Another was run to the Canberra region of Australia.

The one-day mid-conference field trip was long (16 hours) and fascinating. The first stop was at the Homebush Olympic site where Sydney (rather like Toronto proposes) was able to use the Olympics to clean up a lot of environmental problems. Homebush was the principal dumping ground for most of Sydney's wastes — municipal and industrial — until 1981. The cattle yards and abattoirs used this area as a dump until 1961, and it was also the site of former brick pits. There was some discussion about the remediation efforts before the buses turned away for the Blue Ridge Mountains and the overlook at Katoomba. Our ultimate destination was the Jenolan caves and some interesting observations of karst scenery both above and below ground. Most participants arrived back feeling tired and fulfilled although there was a lot of later discussion on the merits of "show and tell" *versus* "observational" field trips. It is a point that will have to be carefully considered by the organizers of the next conference.

It would be remiss for me to close without thanking the organizers of

GEOSCIED II. Malcolm Buck, Ian Clark, Gary Lewis and Sonia Cousins, ably assisted by Canada's Kathleen Kemp from the University of Toronto, did a superb job in welcoming guests to Australia, sorting out a diverse program and generally "looking after" the attendees. GEOSCIED IV, to be held in Calgary 10-14 August 2003, will have a hard act to follow!

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