

## GEOSCIENCE NEWSLETTER

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### CELEBRATION OF CREATION EVENTS



Attendees listen to a presentation in the Pacific Adventist University Church.

Two "Celebration of Creation" events were held in May. The first was held at Pacific Adventist University (PAU), near Port Moresby in Papua New Guinea. More than 800 persons attended the event, from May 6-8.

Speakers included Dr. Rodger Jones of PAU, Dr. Gerhard Pfandl of the Biblical Research Institute (BRI), Drs. Raúl Esperante and Jim Gibson of



The modern library at PAU.

the Geoscience Research Institute (GRI), and Dr. David Tasker, Field Secretary for the South Pacific Division (SPD). Pastor Lawrence Tanabose, Secretary of the SPD, gave the Sabbath sermon.

Avondale College, north of Sydney, Australia, was also the site of a Celebration of Creation held May 13-14. A highlight of the program was a

presentation Friday night by Dr. Grenville Kent, of Sydney. On Sabbath, presentations were made by Dr. Pfandl and Tasker, Drs. Tim Standish, Esperante and Gibson of GRI, and Dr. Ross Grant of Australia. Dr. Barry Oliver, President of the SPD, presented the Sabbath sermon.



Dr. Delbert Baker greets the attendees at Avondale College.

The "Celebration of Creation" programs are sponsored by the Faith and Science Council, along with the BRI and the GRI. The first two programs were given at Loma Linda University (California, USA) and Andrews University (Michigan, USA). The next one is planned for Germany in 2012.



The Avondale College Church, site of the Celebration of Creation.

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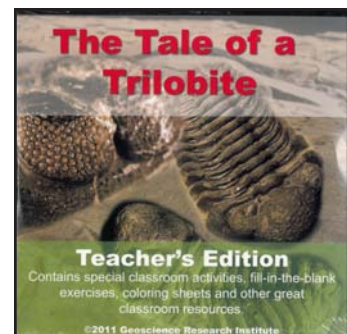
Participants in the teachers' seminar in Namibia.

### SEMINAR IN NAMIBIA

Drs. Ben Clausen and Ronny Nalin visited Namibia in April, where they gave a seminar to a group of about 50 school teachers. While in the area, they also took the opportunity to get acquainted with some of the geological features of southern Africa.

### NEW DVDS

The video, *Tale of a Trilobite*, is now available in DVD format, with teaching aids suitable for classroom use. The DVD is available from GRI: [colmo@grisa.net](mailto:colmo@grisa.net).



A set of five DVDs titled "In the Beginning: Making Sense of the Creation-Evolution Debate" is available online at [http://www.nadei.org/transaction\\_detail.php?id=930](http://www.nadei.org/transaction_detail.php?id=930). The videos contain presentations by theologian Ron Clouzet and biologist Timothy Standish.

## SCIENCE NEWS



*The dinosaur, Utahraptor. Prehistoric museum, College of Eastern Utah.*

### Dinosaur Diversity and Creation

*Senter P. 2011. Using creation science to demonstrate evolution 2: morphological continuity within Dinosauria. Journal of Evolutionary Biology doi: 10.1111/j.1420-9101.2011.02349.x*

**Summary.** Creationists use morphological gaps to identify separately created lineages (baramins), using methods such as “taxon correlation.” A data matrix is prepared and Pearson correlation coefficients are calculated to determine degree of similarity or difference of species. This method was used to test for morphological gaps among the Dinosauria. Results showed morphological continuity among a large group that includes non-dinosaurian ornithomirans, basal members of all three major dinosaurian branches (saurischians, ornithischians, sauropodomorphs, theropods), and others. New discoveries in the past twenty years have filled many previously identified gaps. Creationists must either accept that dinosaurs are genetically related to each other and to birds, or reject their previous work.

**Comment.** Creationists believe the original creation included both morphological and ecological diversity. Changes since the creation may have produced diversification within the various originally created lineages. Morphological gaps are a possible help in identifying separately created lineages, such as the various phyla and classes. However, there is no requirement that created types be separated by any

particular amount of morphological difference. Indeed, people once believed God created in a morphologically continuous “Chain of Being.” However, linkage of birds with dinosaurs suggests that new methodology may be needed to identify different lineages.

### Cambrian Eyes

*Lee MSY, Jago JB, Garcia-Bellido DC, Edgecombe GD, Gehling JG, Pater-son JR. 2011. Modern optics in exceptionally preserved eyes of Early Cambrian arthropods from Australia. Nature 474:631-634.*

**Summary.** Well-preserved fossil compound eyes have been discovered in Cambrian sediments from South Australia. The fossils were found in finely laminated sediments of the Emu Bay Shale on Kangaroo Island. The seven individual eyes are isolated, not associated with a body, preventing identification of their source. Each compound eye is 7-9 mm in diameter and has at least 3,000 individual facets (ommatidia). Living insects have a similar type of eye. Fossil eyes have been found on some Cambrian trilobites, but the fossil eyes are more complex than these, and even more complex than some modern arthropod eyes. These new fossils illustrate the magnitude of the Cambrian explosion

**Comment.** The discovery of eyes comparable in complexity to those of living arthropods is unsurprising in the light of creation. Living and fossil organisms of the same type show similar design features and similar levels of complexity.



*Compound eye of a fly. Photo courtesy of Stephen Klein.*

### Complexity in the “Simple”

*Ullrich-Luter EM, Dupont S, Arbole-da E, Hausen H, Arnone MI. 2011. Unique system of photoreceptors in sea urchin tube feet. Proceedings of the National Academy of Sciences (USA) 108:8367-8372.*

**Summary.** Sea urchins are common marine animals of rocky shores that move slowly by the use of tentacle-like structures known as tube feet. It has been known for some time that the tube feet are also sensitive to light, but the mechanism is known. Recent sequencing of the genome of the purple sea urchin enabled a specific search for the location of photoreceptor cells. These were located primarily in two patches, one at the tip of the tube feet



*Purple sea urchin, showing tube feet. Photo courtesy of KQEDquest.*

and one at the base. The photoreceptor cells are connected to the nervous system. The basal photoreceptor cells are located in a small pit and provide for directional vision. The vision cells are, unexpectedly, similar to those in protostomes (microvillar type) rather than those of vertebrates (ciliary type). As suggested by other researchers, the entire system of photoreceptor cells may function as a huge compound eye.

**Comment.** This study adds to our appreciation of the complexity of even the “simpler” types of animals. The discovery that sea urchin photoreceptor cells are more similar to protostomes than to vertebrates is another reminder that it is risky to assume one can infer the details of an unstudied taxon from knowledge of a different organism thought to be evolutionarily related.