GEOSCIENCE NEWSLETTER

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UPCOMING EVENTS

Gloria Patri

Gloria Patri is designed to be a conference on how Christians may uplift the God of creation through the study of theology and the sciences. The conference is scheduled for 26-29 June, 2008, and will be held near Cambridge University in England. For more information, visit: *http://cambridge2008.blogspot.com*.

Faith and Learning Seminar

A seminar on the integration of faith and learning in the Christian classroom will be held in Loma Linda,13-25 July 2008. The seminar is designed for college and university teachers.

Creation Seminar in India

Spicer Memorial College will host a creation seminar from 17-20 September, 2008. The seminar is prepared especially for pastors and teachers.

Field School for Teachers

A field school for teachers is planned for 12-23 July 2009, in Denver, Colorado. For more information, please visit our website: *http://www.grisda.info/main/field_trips/teachers_2009.html*

GRI WEBSITE

Reports of recent developments in science and creation can be viewed at: *http://www.grisda.org/links/WHATS-NEW.htm*

A list of scholarly articles relating to creation and science is available at *http://grisda.org/resources/GRI_ref-sda-theo.htm*. This list could be useful as a "reader" for courses in science and creation.

GRI NEWS

Some 200 participants attended the seminar at Universidad Adventista del Plata in Argentina.

Seminar in Argentina

A seminar on creation, science and the classroom was held 4-7 February 2008 at Universidad Adventista del Plata, also known as River Plate University. Nearly 200 participants attended the seminar, most of whom were classroom teachers from throughout the country. Fifteen different individuals presented lectures to the group, on topics ranging from the beliefs of the Jews at the time of Christ to human genetics, catastrophism, and many more.

Dr. Roberto Biaggi, accompanied by former branch office director Carlos Steger, speaks to the group on the field trip.

The seminar was organized by Dr. Roberto Biaggi, Director of the Geoscience Research Institute branch office for South America, which is located on the campus of River Plate University. The main office of GRI was represented by Drs. Raul Esperante, Ronald Nalin and Jim Gibson.

A highlight of the seminar was a field excursion to the nearly arroyo to examine sedimentary features exposed by the action of the small river flowing there.

Research Reports

Several publications have been produced by the Institute staff over the past year. Dr. Raul Esperante's published a report of his research on fossil whales in Peru. Dr. Ronald Nalin's published some abstracts and papers on research on limestones in Italy and New Zealand. Dr. Ben Clausen published an abstract on southern California granites. These publications reflect the commitment of the Institute to study and explore the physical world around us.

Other Activities

GRI staff members were engaged in several other activities during the past three months. Dr. Tim Standish participated in a Faith and Learning Seminar at Avondale College, Australia, in February. Drs. Ben Clausen and Raul Esperante presented a seminar on creation and science at Antillean Adventist University in Puerto Rico in March. Drs. Ben Clausen and Jim Gibson each taught a graduate course at Loma Linda University.

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SCIENCE NEWS

Rapid Evolution?

Herrel A, Huyghe K, Vanhooydonck B, Backeljau T, Breugelmans K, Grbac I, Van Damme R, Irschick D. 2008. Rapid large-scale evolutionary divergence in morphology and performance associated with exploitation of a different dietary resource. Proceedings of the National Academy of Sciences (USA) 104(12): 4792-4795l.

Podarcis sicula ©*Wolfgang Wuster.*

Summary. Five pairs of wall lizards (*Podarcis sicula*) were introduced to a small Croatian island named Pod Mrčaru in 1971. Since that time, the lizards have developed larger heads and stronger bites. Perhaps the most interesting change is development of valve-like structures in the cecum. The valves are associated with an increase in plant food from about 5-10% to about 50-60% of the diet. All these changes occurred within a span of about 30 generations.

Comment. It is known that species may change rapidly, but this report suggests some interesting questions.

First, if living species respond quickly to environmental change, how does one interpret the well-known phenomenon of stasis in the fossil record? The rate of change calculated here is five or six orders of magnitude greater than inferred from the fossil record. Fossil species commonly appear unfazed by inferred environmental changes in the fossil record.

A second question is how could a new structure, cecal valves, appear in only 30 generations? It is highly unlikely that the reported cecal valves were newly evolved. Although cecal valves are uncommon in lizards, they are present in some other lacertid species, as well as in other families. The valves are thought to be useful in slowing movement of plant material through the gut, thereby allowing microscopic organisms to digest the cellulose. The genetic information to produce cecal valves is probably present in many lizard species, but may not be expressed in species with only a small proportion of plant material in the diet.

Questioning Punc Eq

Van Bocxlaer B, Van Damme D, Feibel C. 2008. Gradual versus punctuated equilibrium evolution in the Turkana Basin mollusks: Evolutionary events or biological invasions? Evolution 62:511-520. doi:10.1111/j.1558-5646.2007.00296x

Summary. Fossil mollusks from the Turkana Basin of Ethiopia were studied in a landmark paper by Williamson which concluded they were strong evidence in favor of the theory of punctuated equilibrium. This conclusion was based on the supposition that the fossils were a continuous sequence of in situ species that recorded abrupt changes in morphology at certain periods in the record. These morphological changes are here reinterpreted as artifacts of incorrect identifications and caused by environmental changes rather than evolutionary changes. The Turkana Basin was invaded by new species which replaced the old ones, and were not their descendants.

The Chinese mystery snail, Cipangopaludina chinensis, *a species closely related to one of the Lake Turkana snails in the classic study. Photo courtesy of USGS.*

Comment. Immigration in response to environmental change helps explain why all species of mollusks in the Williamson study experienced a punctuation at the same time. This explanation seems more reasonable than to suppose that many different species would suddenly change in concert. However, the pattern of stasis in the record remains a challenge to theories that link morphological change with environmental change over long periods of time.

A Fossil Frog Out of Place

Evans SE, Jones MEH, Krause DW. 2008. A giant frog with South American affinities from the Late Cretaceous of Madagascar. Proceedings of the National Academy of Sciences (USA)105: 2951-2956.

Summary. A fossil frog from Madagascar apparently belongs to a group that has never been found outside of South America. The fossil is a horned frog, classified in the subfamily Ceratophryinae. The presence of this type of frog in Madagascar is completely unexpected, and appears to support a controversial proposal that Madagascar, India and South America were in contact for most of Cretaceous sedimentation.

Comment. Madagascar is a biogeographical enigma as its living fauna seems to have no connection to its pre-Quaternary fossil record. Several kinds of living or fossil animals are found in South America and Madagascar, but not in the regions between. Examples include certain living fresh-water turtles, iguanid lizards and boas. In addition to the newly discovered fossil frog, Madagascar and South America share certain types of fossil dinosaurs, crocodylians, and extinct mammals. These examples serve as a reminder of how incomplete our knowledge is.

A horned frog, genus Ceratophrys. *Photo © Honolulu zoo. www.honoluluzoo.org/*