

GEOSCIENCE NEWSLETTER

Number 16 January 2009

UPCOMING EVENTS

TEACHERS' FIELD SCHOOL will be held July 12-23, 2009 in Denver, Colorado. Features include tours of geological sites of interest, lectures, and practical exercises. For more information, visit our website at: www.grisda.org/colorado/2009.htm.



View of Pike's Peak, near Colorado Springs.

FAITH AND SCIENCE IN THE CLASSROOM, a conference for university teachers, is scheduled for August 7-10, 2009, in Colorado Springs, Colorado. For more information, visit www.grisda.org or send an e-mail to: jgibson@llu.edu.

BOOK REVIEW

Science Discovers God. Ariel A. Roth. 2008. 251 p. Hagerstown, MD: Review and Herald Publishing. Cloth, \$19.99.

This book is a useful reference for those wanting evidence-based arguments for the existence of a creator God.

The first chapter notes that science developed in a Christian culture, and that most of the founders of modern science believed in God. The next three chapters discuss evidence for design. Examples include the structure of the universe, the

origin of life, and complexity in living systems such as the vertebrate eye.

Chapter five points out that even the long ages of geological time are not adequate for life to develop through evolutionary processes. Chapters six and seven deal with more philosophical questions about science such as the tendency of bandwagon thinking, and the limitations of science in dealing with some areas of human inquiry, such as free will. The final chapter discusses the problem of suffering and how this relates to prejudice against God among scientists.

The book concludes that science is a good enterprise and worthy of support, but scientists should acknowledge the limits of science and the reality of God.

The author, Ariel Roth, was director of the Geoscience Research Institute for 14 years, and has a distinguished career in science and science education. *Science Discovers God* is well-argued and well-documented. The book is recommended reading for anyone interested in relating faith and science.

ORIGINS ON-LINE

ORIGINS #63 is now available on-line. The contents are:

Editorial: *Why Science?* Jim Gibson.

Article: *A Critique of Current Anti-ID Arguments and ID Responses*. Leonard Brand.

Annotations

Literature Reviews

Geoscience Newsletter is an e-publication of the Geoscience Research Institute, 11060 Campus Street, Loma Linda CA 92350 USA. To subscribe, please contact us at newsletter@grisda.org.

EDITORIAL

Creation in the New Year

Questions on origins are likely to be the center of much discussion in 2009. One reason is the expected celebration of anniversaries of Darwin's birth in 1809 and publication of his book in 1859. The anticipated hoopla should not obscure the fact that Darwin's most important thesis – natural selection as the explanation for all levels of biodiversity — has failed scientifically, despite its widespread philosophical and cultural success.

The failure of natural selection is not with respect to its reality; field observations have confirmed that selection does operate in nature. The problem is with its power. The experimental evidence is not friendly to the idea that the low-level changes observed in selection studies have the power to construct new organs and body plans. Random processes will not generate the kind of variation required by evolutionary theory, even if allowed the estimated age of the universe. The lack of power of natural selection is recognized in frequent proposals to invoke divine agency as a means of leaping the gaps in evolutionary mechanisms, such as the origins of body plans and novel genes. However, such ad hoc, unsupported theories are also unsatisfactory.

The Biblical claim of direct, supernatural creation of multiple lineages is far more satisfying, and more consistent with the large-scale patterns of biodiversity and with what is known about genetics. It is also consistent with both Scripture and a modest role for natural selection. This would be a good thing to remember in 2009.

SCIENCE NEWS



An African cichlid. Whozoo.org.

Rapid Minor Changes

Witte F, Welten M, Heemskerk M, Van der Stap I, Ham L, Rutjes H, Wanink J. 2008. Major morphological changes in a Lake Victoria cichlid fish within two decades. *Biological Journal of the Linnean Society* 94:41-52.

Summary. Lake Victoria in Eastern Africa is home to about 500 species of cichlid fishes that are not found anywhere else. The introduced Nile perch, a large predatory fish, decimated the native fishes during the 1980s. Many cichlid species disappeared. During the 1990s, Lake Victoria became more polluted, reducing visibility. Also, the Nile perch were intensively fished, reducing their population, and allowing the remaining cichlid populations to recover. One species, the Victoria cichlid, *Haplochromis pyrrhocephalus* nearly went extinct, but has recovered so well that it is now the most abundant fish in part of its range.

The present population of the Victoria cichlid is morphologically different from its ancestors of twenty years ago. It has a larger gill surface but a smaller head and greater cheek depth. These differences among individuals of the same species living twenty years apart are similar in magnitude to differences observed among some different species of cichlids. This is a much faster rate of morphological evolution than most evolutionists have considered possible.

Comment. Lake Victoria is thought to have been completely dry 15,000 years ago, and the presence of over 500 species of cichlids has seemed to require an

impossibly high rate of morphological change. Although the extent of change observed in this case is not enough to account for all the diversity of Lake Victoria cichlids, the observations reported here suggest that it might be possible to produce a large number of morphological species in a relatively short time period.

“Living Fossils” Still Together

Wisshak M, Newmann C, Jakobsen J, Freiwald A. 2008. The ‘living-fossil community’ of the cyrtocrinid *Cyathidium foresti* and the deep-sea oyster *Neopycnodonte zibrowii* (Azores Archipelago). *Palaeogeography, Palaeoclimatology, Palaeoecology* 271:77-83.

Summary. A “living fossil” is a living species that closely resembles a fossil species, with only minor differ-



Living crinoid. *National Oceanic and Atmospheric Administration*.

ences. *Cyathidium* is a genus of crinoids with a fossil record from Cretaceous to Eocene. In Paleocene Danish deposits, it is often found with the oyster *Pycnodonte*, which is represented in living form by *Neopycnodonte*, which has been known from the fossil record for a long time, but was discovered living only relatively recently. The two genera have been found together in living in rock overhangs in the Azores at depths of 420-500 meters. Not only are the two genera considered “living fossils,” but the association between them can be considered a “living-fossil community.”

Comment. Persistence of association between two species, combined with lack of significant difference between fossils and living species is a good example of

both morphological and ecological stasis. Stasis may be facilitated by the constancy of environmental conditions as long as sea level remains relatively constant, but may also reflect other factors such as lack of time and a protected habitat.

Fossil Turtle With Half a Shell

Chun Li, Xiao-Chun Wu, Rieppel O, Li-Ting Want, L-Jun Zhao. 2008. An ancestral turtle from the Late Triassic of southwestern China. *Nature* 456:497-501.

Summary. *Odontochelys*, a newly discovered fossil turtle from China is the oldest and most primitive known turtle. It has a fully developed plastron, the lower part of the shell, but the upper portion of its shell, the carapace, consists only of neural plates, which form a line down the center of the turtle’s back. The lateral (costal) and marginal plates are absent. This is said to reflect the sequence of embryological development of turtles, in which the neural plates form before the others.

Comment. Variation of species in a group seems often to be correlated with differences in rates of development (heterochrony). If the neural plates form before the costal plates of the carapace, the incomplete shell of *Odontochelys* might result from truncation of its developmental progress at a stage where only neural plates have formed. Other fossil turtles, *Proganochelys* and *Proterochersis*, found in layers only slightly higher stratigraphically, have complete shells.

Dogs provide a modern example of truncation in development. Different rates of development of skull and skeletal bones result in different breeds. Such processes may explain some cases of rapid change in species.



Eocene fossil turtle from Wyoming.