

ANNOTATIONS FROM THE LITERATURE

ANTHROPOLOGY

Lewin R. 1987. Bones of contention. Controversies in the search for human origins. NY: Simon and Schuster. 348 p.

Summary. Described as the most “insightful and most controversial” book on paleoanthropology, the volume chronicles the never-ending saga of investigations on fossil man and his assumed ancestors. The book not only examines the scientific aspects of the most famous relevant controversies, but also concentrates on the humanness of the investigators involved. Probably no branch of science has been subject to more contention and change than has paleoanthropology, and in this discipline the author, a well-known scientific writer, has found a fruitful area to discuss the “bones of contention”. This is a fascinating volume that is well-documented and provides pertinent details of the controversies.

PALEOMAGNETISM

Courtillot V, Besse J. 1987. Magnetic reversals, polar wander, and core-mantle coupling. *Science* 237:1140-1147.

Summary. The rate of reversal of Earth’s magnetic field was lowest during the Permian and Cretaceous periods. Each of these periods was preceded by a reduced amount of polar wander, and each was followed by continental drifting, an increase in vulcanism, and a major mass extinction. The Deccan flows in India erupted at the end of the Cretaceous, and the Siberian flows apparently originated at the end of the Permian. The authors suggest that thermal instabilities originating in the core-mantle boundary initiated a series of events causing crustal instability. Crustal instability resulted in plate movements and extensive vulcanism, which in turn caused the mass extinctions at the ends of the Permian and Cretaceous periods, respectively.

Comment. The possible linkage between magnetic reversals, vulcanism, continental drifting, and mass extinctions might be useful in developing a model of the catastrophic flood described in the book of Genesis.

SPECIATION

Meyer A. 1987. Phenotypic plasticity and heterochrony in *Cichlasoma managuense* (Pisces, cichlidae) and their implications for speciation in cichlid fishes. *Evolution* 41:1357-1369.

Summary. The relationship between diet and morphology in a species of cichlid fish was tested. Three groups of fish were used. One group was fed Diet A, and a second group was fed Diet B. A third group was fed Diet B for the first 8½ months, then switched to Diet A. The fish were x-rayed at intervals, and measurements of the proportions of the head and jaws were taken from the x-rays. The results showed that fish fed with Diet A and those fed with Diet B had different head shapes. When the diet of the third group was switched, the jaw morphology also changed. By 16½ months, the group originally fed Diet A and the group that was switched to Diet A were statistically indistinguishable, while the group on Diet B was morphologically different.

Summary. This experiment indicates that the environment has the potential to significantly affect morphology. The species flocks of East African cichlids should be studied more to see whether they have been properly classified.