

# GENERAL SCIENCE NOTES

## CLIMATIC CHANGES AND CHANGES IN POPULATION

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Creationists, though definitely not uniformitarians, often fall unawares into a uniformitarian mode in attempting to explain their views. The impact of climatic changes over measurable periods of time on peoples and cultures is a concept often foreign to the creationist mind. It is almost assumed that climatic conditions familiar to us were the same as those which greeted Noah as he stepped out of the ark. Yet the evidences of significant changes surround us everywhere and must be reckoned with. It is thus interesting to note that a recent article by McIntosh & McIntosh<sup>1</sup> provides some further evidences that climatic conditions and subsequent demography were not always as they are now.

The article is largely an anthropological history of Western Africa above the equator. Written not as a rigorous treatise but as a review for a wider readership, it nonetheless provides an excellent statement that climates do change and that climatic changes are the major factor in widescale movements and settlements of peoples.

When one visualizes Western Africa in one's mind, pictures of barren wastes and scrub come to view with respect to the Sahara and the Sahile. However, recent archaeological finds have shown that these regions once received significantly more moisture and supported a much denser human and animal population. Scattered through this now-arid and desolate region are numerous burial sites, urban dwellings and evidences of domesticated animals. The people appear to have had a complex sophisticated culture. In addition, there are numerous evidences of animal life that once inhabited the area. This is nicely represented by a map showing where the remains of elephants and giraffes can be found, as well as drawings of them done by the past populations. The chart shows that nearly the entire region could once support life that is now restricted to areas farther south and nearer the rainfall from the coast.

The article assumes the conventional interpretation that cultural events require long periods of time for change to take place and that the introduction of new technologies will spread across the continent at a very slow pace. One wonders how valid such suppositions are.

An interesting case is found in a different article by Deetz & Dethlefsen.<sup>2</sup> It is a fascinating piece seemingly far removed from the

creation-evolution controversies, but which, in my opinion, provides some helpful insights into the interpretation of ancient cultures. The authors examine the headstones in cemeteries in Massachusetts from the seventeenth to the nineteenth centuries. At that time three main forms of carvings were used on the tombstones. In the early periods a winged skull or Death's head was often carved. Later, this was replaced by a cherub's head, also winged, and finally, the cherub's head was replaced with an urn and willow tree. Since the headstones contain the date of death of the individual and subsequent placement of the stone, this study provides an interesting view into how a society changes.

The most fascinating part of this work is the observation that change was most rapid in the educated centers. In those communities where the interchange with other communities was limited, the change in style of headstones was more gradual. However, these outlying communities did change rapidly whenever a new stone cutter moved into the community. Thus, stylistic changes could be influenced by only one man joining the community.

This is significant, because it questions the necessity for long periods of time in order to have cultural evolution. It also implies that different cultural levels in a geographic area are not necessarily sequential but perhaps could be contemporaneous. Finally, if climatic conditions have rapidly changed in the past, would not this speed up the amount of cultural interchange and increase the rate of cultural change?

#### ENDNOTES

1. McIntosh SK, McIntosh RJ. 1981. African prehistory. *American Scientist* 69:602-613.
2. Deetz J, Dethlefsen ES. 1967. Death's head, cherub, urn and willow. *Natural History* 76(3):28-37.