

Random Walking

How Are We Getting Along?

The science of molecular evolution is flourishing, and citations to articles in *Journal of Molecular Evolution* can be found with increasing frequency. Publications on molecular biological topics in various journals are quite often embellished with discussions of the evolutionary significance of the findings. But what is happening "out there," among the general public in the USA? Are we being ignored as merely practitioners of the incomprehensible? I think not. Evolution is regarded with hostility by many people. In an article in *The Scientist*, November 5, 1988, William Provine estimated that 9% of the American public were receptive to the theory of evolution. Public opinion surveys routinely show that the majority of respondents favor teaching "creation science" on an equal time basis when evolution is taught in science classes. One author (Hewitt GC, 1988, *Experientia* 44:297–303) says that if the truth is unpalatable, many people will reject it, and that the concept of human beings and apes having a common ancestor is unpalatable. Indeed, this concept is rejected by an organization that calls itself "American Scientific Affiliation," even though our relationship to apes was one of the earliest and most notorious observations in evolution and it has been reinforced by numerous molecular findings. Currently there is a heated argument among evolutionists as to whether we are more closely related to chimpanzees or gorillas. But apparently the "majority opinion" is that we are not related to either. Belief in paranormal phenomena is far more widespread than acceptance of evolution.

In a recent survey of high school biology teachers (UPI report from Arlington, TX, published September 11, 1988), questionnaires were sent to 400 selected at random from a list of 20,000 provided by the National Science Teachers Association. In the 200 responses, 30% said that, if given the choice between teaching evolution or creationism, they would choose creationism, and 19% think that dinosaurs and human beings lived at the same time (which is, of course, a favorite creationist doctrine),

while 14% were "not sure." We even find that some of our own colleagues speak of "The Search for Eve," when presenting their work on mitochondrial DNA!

As a countermeasure, University of California, San Francisco (UCSF), has started a program in which many scientists at UCSF are each in contact with an individual high school science teacher. The program is organized by Bruce Alberts, and, of course, many high school biology teachers are in the forefront of educating their students about evolution, sometimes in the face of harassment.

Even though the Louisiana law for teaching creationism was struck down by the US Supreme Court, a group in Louisiana has been formed for supplying "educational materials" to schoolteachers who wish to teach creationism.

The Surgeon General of the USA, Dr. C. Everett Koop, has recently been quoted as saying that the human hand is so remarkably constructed that it shows itself to be a product of special creation rather than evolution. Can someone perhaps take Dr. Koop for a walk through the Washington Zoo to show him examples of the homologous forelimb structures in all terrestrial vertebrates, starting with amphibians, 300 million years before us? He might even try a handshake with a chimpanzee. Interestingly, the National Academy of Sciences (1984) used the human hand as an example of evolution, noting that "a person writes, a dog runs, a whale swims, and a bat flies with structures built of the same bones."

I have just been sent a copy of an application by the Institute for Creation Research (ICR) for "full institutional approval of four degree programs" to "prepare teachers for careers in science education." The application is to the California Department of Education, and has received committee approval. ICR wishes to grant MS degrees in astrogeophysics, biology, geology, and science education. The application was filed by Dr. Henry Morris, President, ICR. He is a prolific author. On various occasions, he has stated that "the fractures and scars on the Moon and Mars, the shattered remnants of an erstwhile planet that became the asteroids, the peculiar rings of Saturn, the meteorite swarms . . . reflect

some kind of a heavenly catastrophe associated either with Satan's primeval rebellion or his continuing battle against Michael and his angels" (Morris 1972a). So much for astrogeophysics, ICR style. On the subject of geology, Morris says, "... the so-called geologic ages are essentially synonymous with the evolutionary theory of origins. The latter, in turn, is at its ultimate roots the anti-God conspiracy of Satan himself" (1972b). In the field of biology, the catalog of ICR says that plants and animals were created functionally complete, and did not evolve, also that unbelievers "must ultimately be consigned to the everlasting fire prepared for the devil and his angels."

These are the teachings to which schoolchildren will be subjected by teachers who have been "pre-

pared for careers" at ICR. As we go to press, ICR has been barred from granting master's degrees in Science (Blakeslee, S. *New York Times*, December 8, 1988, p. A17). ICR plans to appeal.

References

- Morris HM (1972a) Remarkable birth of planet Earth. Dimension Books, Minneapolis MN, 111 pp
 Morris HM (1972b) Biblical cosmology and modern science. Craig, Nutley NJ, p 71
 National Academy of Sciences (1984) Science and creationism, Washington DC, 28 pp

Thomas H. Jukes
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