

Symposium Notes

By Eric Delson (CUNY and AMNH)

On September 21, the American Museum of Natural History (AMNH) hosted a day-long symposium on the interplay between scientists and science writers, entitled "Understanding Human Evolution." Focusing on human (and general) evolution as exemplars of science that interest the public, this symposium convened 4 physical anthropologists and 4 writers who cover human evolution, in two panels moderated by a paleoanthropologist-turned-science-writer. I co-designed the program with Nat Johnson (AMNH Education Department), as part of the museum's celebration of the 100th anniversary of the *New York Times*' purchase by the Ochs-Sulzberger family.

The morning session was organized around the data of human evolution and their presentation to the public. Todd Disotell (NYU) discussed recent advances in the genetic study of human and higher-primate evolution, emphasizing the origin of modern humans and their biological diversity. He explained how numerous analyses of independent nuclear and mitochondrial genes converged to suggest an African origin for all modern humans with a coalescence (or divergence) time of around 200,000 years ago.

I reviewed several "hot topics" in paleoanthropology: fossil evidence for the pongine-hominine split, three new species of australopith in the past two years, three migrations of *Homo* out of Africa and the paleontological views of modern human origins. I questioned the writers as to why the new skull of *Ankarapithecus* (which I consider a rare "intermediate fossil," fitting nicely between the conservative *Dryopithecus* and derived *Sivapithecus* near the base of the pongine clade) received so little press attention, and predicted the eventual recovery of a third species of earliest *Homo* with a larger brain and more modern postcranium than *Homo habilis* but a more *H erectus*-like face than *H rudolfensis*.

Delta Willis, author of *The Hominid Gang* (among many other works), spoke of her Arkansas origins and the problems with explaining evolution today in the United States. Teaching evolution is almost as difficult now as during the Scopes trial of 1925. *New York Times* science reporter John Noble Wilford remarked that he was from Tennessee, where the Scopes trial was held. He discussed some of the problems involved in choosing which

science stories to write, given deadlines and competing "hot areas." This was especially interesting because that morning's paper had carried his story on the new Australian evidence for early human occupation and rock art. Wilford noted that the *Ankarapithecus* find might have come through in a week that he was covering research in astronomy or exobiology and might be put aside until a "critical mass" was reached in ape origins.

Moderator Pat Shipman (paleoanthropologist at Penn State and coauthor of *The Neandertals* and *The Wisdom of the Bones*) then supervised a question-and-answer session in which members of the audience submitted written questions to the morning's speakers. In response to a query about why he "chose" Africa as the source for modern humans, Disotell responded that this was not a choice but the results of detailed research by numerous workers on genetic as well as paleontological data. A teacher asked what points might be the most important to convey to a high-school biology class about human evolution. The panel responded with such ideas as: the genetic and morphological diversity seen across all of modern humanity is low compared with that in other animal species; almost all major events in human evolution occurred in Africa; the human fossil record is quite complete by comparison to those of many other animals; do not teach that evolution is a theory while gravity is a law: "laws" in science are just well tested-theories (in the Popperian sense), and one can speak of the Laws (or Theories) of both Evolution and Gravitation.

In the afternoon session, Matt Cartmill (Duke U) spoke about the apparent antiscience (including but not restricted to evolution) sentiments found not only in the American public but among intellectuals as well. He urged greater dialogue across "the two cultures" and explanation of what it is that scientists do, and why, which requires the involvement of science writers.

Eugenie Scott (National Center for Science Education) reviewed the views of evolution among Americans, most of whom clearly do not understand the topic. She explained some of the problems teaching evolution, given efforts to equate "creation science" or "intelligent design theory" with evolutionary concepts. *Time* assistant editor Andrea Dorfman discussed some of the ways that a national weekly covers science in general.

Roger Lewin (biochemist, former *Science* news writer and author of

many books on paleoanthropology and other topics) reviewed many points made by previous speakers and read from a selection of clippings from science stories in the press, to explain how implications change depending on the scientists cited and their goals. He noted how scientific debates on modern human origins, for example, could be tilted in favor of one view by careful development of a symposium including only proponents of that view and harsh criticism of opponents to science writers covering the event.

During the question-and-answer session, Dorfman responded to questions on that point by indicating that reporters might interview adherents of different views but only quote a sample of their contacts, as a result of both space limitations and the need to explain new material rather than provide full background for a story.

Over 600 students, scientists and interested laypersons attended the presentations, which were video-relayed to the overflow audience in a second auditorium. Audiotapes were made and may be available if demand is high enough. Contact Nat Johnson at AMNH Education, 79th St & Central Park West, New York, NY 10024.