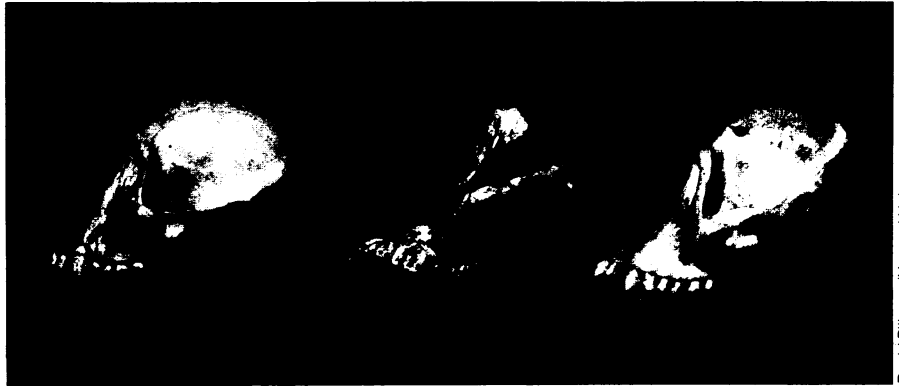


# Fossils Trigger Question of Human Origins



David Pilbeam/Harvard Univ.

The eight-million-year-old skull of a male *Sivapithecus*, a nearly identical contemporary of *Ramapithecus*, is shown at left. In a side view, above, the *Sivapithecus* skull (center) is contrasted with that of a chimpanzee (left) and an orang-utan.

Skull and jawbone fossils, 8 million and 13 million years old, suggest that widely held notions on the very origin of human beings must be altered significantly, according to a Harvard University anthropologist. Analysis of the fossils, discovered in Pakistan by David Pilbeam of Harvard's Peabody Museum, indicate that among other things *Ramapithecus* — traditionally viewed as the earliest known hominid (in the human family)—was not a hominid at all, but rather an ancient indirect ancestor of the orang-utan.

The find indicates further that the man-ape evolutionary split took place at least several million years later than has generally been believed.

"I didn't make a great fuss about the skull when I first found it," Pilbeam told SCIENCE NEWS. "But I now think it is one of the most significant specimens ever found."

Pilbeam reported on the 8-million-year-old specimen in the Jan. 21 NATURE but discussed the implications of that and a yet-unreported 13-million-year-old similar find in a telephone interview. Both specimens (the older one is less complete) clearly show "specialization" of anatomical features of the face and skull identical to those the orang-utan has derived from its ape ancestors, Pilbeam says, although "the orang-utan has changed quite a bit from its Miocene ancestor."

The fossils of *Sivapithecus* — a close, if not identical contemporary of *Ramapithecus* — reveal "a delicate face combined with robust jaws and teeth," says Pilbeam, who is conducting the work along with Harvard colleague Steven Ward. Most of the characteristics of the deep, concave face—the 8-million-year-old face is that of a male — are interpreted as being derived from hominoids (of the super-family containing apes as well as man) and are spe-

cializations shared with the orang-utan.

"This new material from Pakistan really clarifies and crystallizes what we've been thinking," Pilbeam said. "The belief that *Ramapithecus* was a hominid would have meant that hominids and apes diverged at least 14 million years ago; and since about 1975, I have felt that to be increasingly unlikely." Now, Pilbeam says his "best estimate" is that such a divergence occurred 7 to 9 million years ago.

Beyond ruling out *Ramapithecus* as a human ancestor, Pilbeam says the discovery also indicates:

- The common ancestor for Asian and African hominoids is not 8 million years old, as was previously thought by some, but at least 13 million years old.
- African apes also changed substantially,

like their Asian counterparts.

• All living hominoids — not just hominids — have changed greatly since the late Miocene period.

Commenting in the same issue of NATURE, Peter Andrews of the British Museum of Natural History concurs that "*Ramapithecus* can no longer be considered as part of the human lineage but as part of the orang-utan lineage." However, Andrews's assertion that the finding proves "there is no 'missing link' between apes and man" drew a reaction of puzzlement from Pilbeam. "I've always hated that term, 'missing link,'" he said in the interview. "There are thousands of missing links, and every time you find a specimen you double the number of missing links."

—J. Greenberg

## Ability testing absolved of racial bias

Ability tests are not biased against minority group members and can be used to reliably predict performance in school and on the job, according to a national panel. Nevertheless, test scores should never be used in isolation in decisions about educational and employment opportunities, the group recommended.

Concluding a four-year review of the literature on ability testing, the panel of the National Academy of Sciences (NAS) reported rather large differences in the average test scores for racial and ethnic groups but urged that tests not be blamed for social injustice. Instead, educators and employers should recognize that test scores are not a fixed measure of intelligence and that motivation and remedial education can ultimately influence actual performance, the 19-member panel said.

Specifically, the NAS group recommended that no important decision about a child's educational future — including the removal of a child from the regular

classroom for special education — should be based on test scores alone. In addition, the committee urged that, despite the predictive value of tests, scores should not weigh heavily in higher education admissions decisions if they work against demographic diversity.

The panel, convened amidst growing controversy over the fairness of standardized tests and the distribution of social opportunity, concluded that, while test scores should not be worshiped blindly to the disadvantage of minority members, neither should minority scores be artificially inflated in order to guarantee minority candidates a quota of slots in school and the workplace. Noting that rigid affirmative action policies have caused very useful tests to be abandoned, the group called for government guidelines that would allow employers to legally consider test scores as an indicator of future performance while still ensuring equal opportunity.

—W. Herbert