
Primate Evolution

Organized by: **Morris Goodman** (*Dept of Anatomy, Wayne State Univ Medical School*)

Sponsored by AAAS Section on Biological Sciences

Symposium speakers will present and compare paleontological and molecular perspectives on primate evolution. New fossil finds provide a fresh look at the primates. In turn, evolutionary reconstructions of DNA sequence data from mitochondrial and nuclear genes and from coding and noncoding regions of the nuclear genes are a powerful new source of evidence on primate history. Morphological and molecular pictures of primate evolution show far more congruence than conflict. The congruence in these pictures (e.g., the origins and pattern of evolutionary branching of major primate clades) will be explored as well as the conflicts (e.g., the pattern of branching in the hominoid clade containing humans, chimpanzees, and gorillas).

Eric Delson (*Dept of Vertebrate Paleontology, CUNY, and American Museum of Natural History*)

"Higher primate evolution: A paleontological perspective"

The Anthroidea or higher primates include New and Old World monkeys, apes, humans, and their extinct relatives. The New World anthropoids are known by fossil forms dated to 27, 20-18, and 16-15 Ma (million years ago) as well as distinctive Caribbean forms less than 10,000 years old. Extant evolutionary lineages can be recognized in the 20-15 Ma sites. In the Old World, probable anthropoids of uncertain affinity occur as early as 45 Ma, but species included in living subfamilies cannot be recognized until 12-10 Ma in Eurasia, even younger in Africa. The evolutionary pattern is one of successive overlap and replacement of conservative taxa by slightly more derived ones. Part of this difference in mode may be related to alternating isolation of and competition between lineages across the diverse environments of the Old World.

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