Two articles about the ‘Adam’ of the chimpanzees and the y-chromosome of great apes

---

Redorbit:

[The ‘Adam’ of chimpanzees lived 1,000,000 years ago, study says]

Researchers have found a chimpanzee likely descended from a common male ancestor that lived around 1 million years ago, according to a new report published in the Genome Research journal.

The study team said they were able to date the origin of the genetic ‘Adam’ for chimpanzees by analyzing DNA sequences on the Y chromosome, which is passed from fathers to sons, in 19 chimpanzees, 4 bonobos, 14 gorillas, and 6 orangutans. Researchers also looked at mitochondrial DNA (mtDNA), passed on from mothers, in the same set of primates.

“The ancestor of a Y-chromosome family tree is sometimes called ‘Y-chromosomal Adam’,” said Pille Hallast, a geneticist from the University of Leicester, said in a press release. “We can compare the ages of ‘Adams’ between the species. For humans the age is about 200,000 years, while for gorillas it’s only about 100,000 years. Thanks to two chimps in our sample, Tommy and Moritz, chimpanzees have an amazingly ancient ‘Adam’, who lived over 1 million years ago.
“The Y chromosome tree for gorillas is very shallow, which fits with the idea that very few male gorillas (alpha males) father the offspring within groups,” Hallast continued. “By contrast, the trees in chimpanzees and bonobos are very deep, which fits with the idea that males and females mate with each other more indiscriminately.”

...

Genome Research – CSH Press:

Great-ape Y Chromosome and mitochondrial DNA phylogenies reflect subspecies structure and patterns of mating and dispersal

The distribution of genetic diversity in great-ape species is likely to have been affected by patterns of dispersal and mating. This has previously been investigated by sequencing autosomal and mitochondrial DNA (mtDNA), but large-scale sequence analysis of the male-specific region of the Y Chromosome (MSY) has not yet been undertaken. Here, we use the human MSY reference sequence as a basis for sequence capture and read mapping in 19 great-ape males, combining the data with sequences extracted from the published whole genomes of 24 additional males to yield a total sample of 19 chimpanzees, four bonobos, 14 gorillas, and six orangutans, in which interpretable MSY sequence ranges from 2.61 to 3.80 Mb.

...