

Evolution of Cat History Leaps Forward

Researchers use DNA to explain the origin of modern felines.

Scientists have developed a new family tree for modern cats, revealing that the animals evolved quickly, migrating over several continents during periods of low sea levels.

Domestic cats are the youngest of 37 cat species, tracing their roots back to the first appearance of felines in Asia 10.8 million years ago, according to a report published in the journal *Science*.

Using DNA analysis of current species, a team of researchers led by Warren E. Johnson of the National Cancer Institute in Maryland determined how cats evolved into eight separate lineages, beginning with the panthera category (including lions and tigers) and dividing incrementally into ocelots, lynxes, pumas and other lineages. The scientists were also able to classify four species with previously unknown parentage, such as the Pallas cat and the Serval.

Fossil records helped identify when the cats and their ancestors evolved, leading scientists to conclude that cats spread throughout the world during 10 major migrations, moving across continents on land bridges formed from extremely low sea levels.

The domestic cat lineage first appeared 6.2 million years ago, forming from an ancestor that had either missed the first migration to North America or come back home from the New World. There are seven species within this group. The European wildcat, the African wildcat and the Chinese desert cat are the closest relatives of the domestic cat, all of them evolving about 1 million years ago.

According to the report, previous attempts to trace the history of cats were thwarted by the quick pace of evolution, and because skeletal remains are indistinct.

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