DNA study offers some hints of cat domestication history

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Ginger tabby cat. Credit: Public domain

(Phys.org)—A trio of researchers has presented their preliminary findings regarding a mitochondrial DNA study they have undertaken as part of an effort to learn more about the domestication history of the modern house cat. Evolutionary geneticist Eva-Maria Geigl gave the presentation at this year's International Symposium on Biomolecular

Archaeology at the Oxford University Museum of Natural History.

To learn more about the ancestry of the common house cat, the researchers (which also included colleagues Thierry Grange and Claudio Ottoni) obtained mitochondrial DNA samples of 209 cats from multiple archaeological sites around the world—the ages of the remains ranged from approximately 15,000 years ago to just 300 years ago. After sequencing the samples, the researchers made some interesting discoveries surrounding the history of cats partnering with humans. The first was that there appeared to be two big migration waves—the first occurred not long after the development of agriculture by humans and the second shortly after the domestication of cats in ancient Egypt.

The researchers suggest that the first wave was likely the result of small cats coming into contact with humans due to hunting the increased populations of rodents consuming the grains they grew—the researchers found a link between cats in the Fertile Crescent and other parts of the Mediterranean. The second wave occurred several thousand years later and appeared to be driven by human migrations out of Egypt—the researchers found links between cats there and throughout Eurasia and parts of Africa—likely due, the team suggests, to farmers and seafaring travelers taking cats with them to reduce rat and mouse populations.

There were a couple of other surprises as well—one was that the fierce Vikings apparently had a soft spot for little kitties—one of them was found buried alongside its master in a common grave site that was dated back 1000 years. The other was that tabby cats did not evolve until Mediaeval times.

The researchers noted during their talk that little research has been conducted regarding the domestication of cats, unlike dogs, which means that little is known about their history. They hope their research will be the beginning of a much larger effort.