msnbc.com World's first dog lived 31,700 years ago, ate big

Discovery could push back the date for the earliest dog by 17,700 years



Getty Images In shape, the Paleolithic dogs most resembled the Siberian husky (as the one shown here), researchers say, but in size, they were somewhat larger, probably comparable to large shepherd dogs

By Jennifer Viegas

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An international team of scientists has just identified what they believe is the world's first known dog, which was a large and toothy canine that lived 31,700 years ago and subsisted on a diet of horse, musk ox and reindeer, according to a new study.

The discovery could push back the date for the earliest dog by 17,700 years, since the second oldest known dog, found in Russia, dates to 14,000 years ago.

Remains for the older prehistoric dog, which were excavated at Goyet Cave in Belgium, suggest to the researchers that the Aurignacian people of Europe from the Upper Paleolithic period first domesticated dogs. Fine jewelry and tools, often decorated with

depictions of big game animals, characterize this culture.

If Paleolithic dogs still existed as a breed today, they would surely win best in show for strength and biting ability.

"In shape, the Paleolithic dogs most resemble the Siberian husky, but in size, however, they were somewhat larger, probably comparable to large shepherd dogs," added Germonpré, a paleontologist at the Royal Belgian Institute of Natural Sciences.

For the study, which has been accepted for publication in the Journal of Archaeological Science, the scientists analyzed 117 skulls of recent and fossil large members of the Canidae family, which includes dogs, wolves and foxes.

Skeletal analysis revealed, "the Paleolithic dogs had wider and shorter snouts and relatively wider brain cases than fossil and recent



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wolves," said Germonpré, who added that their skulls were also somewhat smaller than those of wolves.

DNA studies determined all of the canids carried "a substantial amount of genetic diversity," suggesting that past wolf populations were much larger than they are today.

Isotopic analysis of the animals' bones found that the earliest dogs consumed horse, musk ox and reindeer, but not fish or seafood. Since the Aurignacians are believed to have hunted big game and fished at different times of the year, the researchers think the dogs might have enjoyed meaty handouts during certain seasons.

Germonpré believes dog domestication might have begun when the prehistoric hunters killed a female wolf and then brought home her pups. Recent studies on silver foxes suggest that when the most docile pups are kept and cared for, it takes just 10 generations of breeding for morphological changes to take effect.

The earliest dogs likely earned their meals too.

"I think it is possible that the dogs were used for tracking, hunting, and transport of game," she said. "Transport could have been organized using the dogs as pack animals. Furthermore, the dogs could have been kept for their fur or meat, as pets, or as an animal with ritual connotation."



Mietje Germonpre
The skull of what may be the earliest known dog, which dates to 31,700 years ago. The prehistoric skull was excavated at Goyet Cave in Belgium.

Ancient, 26,000-year-old footprints made by a child and a dog

at Chauvet Cave, France, support the pet notion. Torch wipes accompanying the prints indicate the child held a torch while navigating the dark corridors accompanied by a dog.

Susan Crockford, a University of Victoria anthropologist and an evolutionary biologist at Pacific Identifications, Inc. in Canada, told Discovery News that "this is an important paper."

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Crockford, however, is not convinced the Aurignacians domesticated dogs. She instead suspects dogs may have undergone "self-domestication" from wolves more than once over history, which could explain why the animals appear and then seemingly disappear from the archaeological record.

Crockford details the possible process in her book, Rhythms of Life: Thyroid Hormone and the Origin of Species. She theorizes that the genes that control thyroid rhythms, allowing individuals to adapt to changing environmental conditions, can, over time, lead to the evolution of new species.

"I think that for these Paleolithic-age canids, the process got started and then stopped, leaving some individual wolves with a few of the features of early dogs, but not all of them," she said.

Germonpré does not dismiss Crockford's theory, which she described as "a very interesting model." She hopes more information will come to light in the future about these very early canines. An extensive study on their teeth and jaws is already in the works.

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