

## Care for cats? So did people along the Silk Road more than 1,000 years ago

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Cats like we know them today accompanied pastoralists in Kazakhstan more than 1,000 years ago. Credit: Maike Glöckner / MLU

Common domestic cats as we know them today might have accompanied Kazakh pastoralists as pets more than 1,000 years ago. This has been indicated by new analyses done on an almost complete cat skeleton found during an excavation along the former Silk Road in southern Kazakhstan. An international research team led by Martin Luther



University Halle-Wittenberg (MLU), Korkyt-Ata Kyzylorda State University in Kazakhstan, the University of Tübingen, and the Higher School of Economics in Russia has reconstructed the cat's life, revealing astonishing insights into the relationship between humans and pets at the time. The study will appear in the journal *Scientific Reports*.

The tomcat—which was examined by a team led by Dr. Ashleigh Haruda from the Central Natural Science Collections at MLU—did not have an easy life. "The cat suffered several <u>broken bones</u> during its lifetime," says Haruda. And yet, based on a very conservative estimate, the animal had most likely made it past its first year of life. For Haruda and her colleagues, this is a clear indication that people had taken care of this cat.

During a research stay in Kazakhstan, the scientist examined the findings of an excavation in Dzhankent, an early medieval settlement in the south of the country that had been mainly populated by the Oghuz, a pastoralist Turkic tribe. There, she discovered a very well-preserved skeleton of a cat. According to Haruda, this is quite rare because normally, only individual bones of an animal are found during an excavation, which prevents drawing any systematic conclusions about the animal's life.

The situation is different when it comes to humans, since usually whole skeletons are found. "A human skeleton is like a biography of that person. The bones provide a great deal of information about how the person lived and what they experienced," says Haruda. In this case, however, the researchers got lucky: After its death, the tomcat was apparently buried, and therefore, the entire skull, including its lower jaw, parts of its upper body, legs and four vertebrae, had been preserved.





Remains of the cat found in Dhzankent. Credit: Ashleigh Haruda / MLU

Haruda worked with an international team of archeologists and ancient DNA specialists. An examination of the tomcat's skeleton revealed astonishing details about its life. First, the team took 3-D images and X-rays of its bones. "This cat suffered a number of fractures, but survived," says Haruda. Isotope analyses of bone samples also provided the team with information about the cat's diet. Compared to the dogs found during the excavation and to other cats from that time period, this tomcat's diet was very high in protein. "It must have been fed by humans, since the animal had lost almost all its teeth toward the end of its life."





The cat's remains were found during an excavation in the settlement of Dhzankent in Kazakhstan. Credit: Ashleigh Haruda / MLU

DNA analyses also proved that the animal was, indeed, likely to be a domestic cat of the Felis catus L. species and not a closely related wild steppe cat. According to Haruda, it is remarkable that cats were already being kept as pets in this region around the eighth century AD: "The Oghuz were people who only kept <u>animals</u> when they were essential to their lives. Dogs, for example, can watch over the herd. They had no obvious use for cats back then," explains the researcher. The fact that people at the time kept and cared for such "exotic" animals indicates a <u>cultural change</u>, which was thought to have occurred at a much later point in time in Central Asia. The region was thought to have been slow



in making changes with respect to agriculture and animal husbandry.

The Dhzankent settlement, where the remains of the cat were found, was located along the Silk Road, an ancient network of important caravan routes that connected Central and East Asia with the Mediterranean region by land. According to Haruda, the find is also an indication of cultural exchange between the regions located along the Silk Road.

**More information:** Haruda A. et al. The earliest domestic cat on the Silk Road. *Scientific Reports* (2020). DOI: 10.1038/s41598-020-67798-6

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