

New twist in tale of dogs' origins

December 16 2015

The origin of dogs has inspired a lingering controversy in academia. Where and when did dogs first split off from wolves? One of the top dogs in this dispute, population genetics expert Peter Savolainen of Sweden's KTH Royal Institute of Technology, isn't about to roll over. He hopes his latest research will finally settle the matter.

Some researchers say canines first split off from [wolves](#) in the Middle East; others say it happened in Europe. But Savolainen has long held that [dogs](#) originated in South East Asia alone, and he says his team has compiled new evidence that confirms his earlier findings.

The study concludes that the split with wolves occurred about 33,000 years ago.

Savolainen's earlier studies were based on analysis of mitochondrial DNA. But recently other researchers have used data from nuclear DNA to refute those findings, arguing that dogs originated in the Middle East, Central Asia or Europe.

But apparently, those researchers were thrown off the scent, according to Savolainen. The data they relied on did not include samples from South East Asia, he says. So if, as Savolainen says, dogs did indeed come from South East Asia, these studies would not have been able to detect it.

"Which is why we analysed the entire nuclear genome of a global sample collection from 46 dogs, which includes samples from southern China and South East Asia," he says. "We then found out that dogs from South

East Asia stand out from all other dog populations, because they have the highest genetic diversity and are genetically closest to the wolf."

Savolainen says this provides strong evidence that the dog originated in South East Asia, which confirms his earlier studies of Mitochondrial DNA.

"We also found that the global dog population is based on two important events: the dog and wolf populations first began to split off about 33,000 years ago in South East Asia. The global spread of dogs followed about 18,000 years later.

He says one explanation for the split between dogs and wolves 33,000 years ago could be that the wolf population became divided and the south Chinese wolf developed into dogs. In that case, it is possible the global spread of dogs out of South East Asia is associated with domestication.

"The dog's story thus appears to have begun 33,000 years ago, but the exact path to the fully-domesticated dogs that spread throughout the world 15,000 years ago is not yet clear,"

Savolainen, along with 14 other scientists, recently published the scientific article "Out of Southern East Asia: The Natural History of domestic dogs across the world."

More information: Guo-Dong Wang et al. Out of southern East Asia: the natural history of domestic dogs across the world, *Cell Research* (2015). [DOI: 10.1038/cr.2015.147](https://doi.org/10.1038/cr.2015.147)

Provided by KTH Royal Institute of Technology

Citation: New twist in tale of dogs' origins (2015, December 16) retrieved 30 April 2024 from <https://phys.org/news/2015-12-tale-dogs.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.