

Asian origins of native American dogs confirmed

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Once thought to have been extinct, native American dogs are on the contrary thriving, according to a recent study that links these breeds to ancient Asia.

The arrival of Europeans in the Americas has generally been assumed to have led to the [extinction](#) of indigenous [dog breeds](#); but a comprehensive genetic study has found that the original population of native American [dogs](#) has been almost completely preserved, says Peter Savolainen, a researcher in [evolutionary genetics](#) at KTH Royal Institute of Technology in Stockholm.

In fact, American dog breeds trace their ancestry to ancient Asia, Savolainen says. These native breeds have 30 percent or less modern replacement by European dogs, he says.

"Our results confirm that American dogs are a remaining part of the indigenous American culture, which underscores the importance of preserving these populations," he says.

Savolainen's research group, in cooperation with colleagues in Portugal, compared mitochondrial DNA from Asian and European dogs, ancient American [archaeological samples](#), and American dog breeds, including Chihuahuas, Peruvian hairless dogs and Arctic sled dogs.

They traced the American dogs' ancestry back to East Asian and Siberian dogs, and also found direct relations between ancient American dogs and modern breeds.

"It was especially exciting to find that the Mexican breed, Chihuahua, shared a DNA type uniquely with Mexican pre-Columbian samples," he says. "This gives conclusive evidence for the Mexican ancestry of the Chihuahua."

The team also analysed stray dogs, confirming them generally to be runaway European dogs; but

in Mexico and Bolivia they identified populations with high proportions of indigenous ancestry.

Savolainen says that the data also suggests that the Carolina Dog, a stray dog population in the U.S., may have an indigenous American origin.

Savolainen works at the Science for Life Laboratory (SciLifeLab www.scilifelab.se), a collaboration involving KTH Royal Institute of Technology, Stockholm University, the Karolinska Institutet and Uppsala University.

More information: rspb.royalsocietypublishing.org/.../1098/rspb.2013.1142

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