

News in Brief: Longhorn cattle ancestors came from Pakistan | Life

New World breeds trace back to both major bovine lineages, genetic analysis shows

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Texas longhorns trace their ancestry to the cattle that Christopher Columbus brought to the New World in 1493. Those first bovine immigrants were long thought to be descendants of taurine cattle, which are European cattle (*Bos taurus*) originally domesticated from wild aurochs in the Middle East about 10,000 years ago.

But a new study shows that longhorns and two other New World cattle breeds also carry a genetic legacy from indicine cattle (*Bos indicus*), an independently domesticated lineage from Pakistan.

David Hillis of the University of Texas at Austin and colleagues analyzed genetic variants from 58 breeds, including Texas Longhorns, Mexican Corriente and Colombian Romosinuano cattle. Those three breeds had a pattern of variation suggesting both taurine and indicine cattle contributed to their pedigrees, the researchers report March 25 in the *Proceedings of the National Academy of Sciences*. That could mean that Columbus imported cattle from Northern Africa, where herds often have mixed heritage.

Genetic contributions from indicine cattle may account for the longhorns' famed drought tolerance and disease immunity, Hillis and colleagues suggest.



EARLY IMMIGRANTS

Texas longhorns (shown) can trace their ancestry back to both major groups of independently domesticated cattle, a new study shows.

Credit: courtesy of David M. Hillis

Suggested Reading

F. C. Canavez et al. Genome sequence and assembly of *Bos indicus*. *Journal of Heredity*. February 7, 2012. doi: 10.1093/jhered/esr153. [\[Go to\]](#)

R. Bollongino et al. Modern taurine cattle descended from small number of near-eastern founders. *Molecular Biology and Evolution*. Vol. 29, March 14, 2012, p. 2101. doi: 10.1093/molbev/mss092 [\[Go to\]](#)