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

By Tina Hesman Saey

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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.

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