

# Genetic studies show our closest relatives are found in Galicia and the Basque region

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ANCESTRAL LINKS:WHAT DO pygmy shrews, badgers, mountain hares, pine martins and Irish people have in common? All probably originally came to Ireland on boats from northern Spain.

Our closest relatives are found in various parts of Galicia and the Basque country according to genetic studies led by Prof Dan Bradley of Trinity College Dublin's Smurfit Institute of Genetics. He presented his research over the weekend at the American Association for the Advancement of Science annual meeting in Chicago.

He was joined by Queen's University Belfast archaeologist and linguist Prof James Mallory who talked about efforts to link these DNA studies with the transmission of languages across western Europe.

The chair of the session was the Government's chief scientific adviser, Prof Patrick Cunningham.

Prof Bradley and colleagues have done extensive genetic analysis into where the Irish came from and how they got to Ireland. He studies genes associated with the Y chromosome, a genetic inheritance that comes via the father.

By tracking the presence of certain Y chromosome markers he can travel back in time to map our relatedness to others across Europe. He explained how he had also done this with the two main species of cattle, the familiar flat-backed cattle and the hump-backed cattle seen in India and Africa.

The human data definitively showed that our strongest relatedness was with the northern Iberian peninsula, with this genetic signal strongest for the Irish living today in the west of Ireland. These in turn were likely the closest relatives of the migrants who originally settled in Ireland.

Genetic studies of Irish fauna also showed this distinctive signal, he said. "The Irish badgers are Spanish, but the British badgers are not. The fauna of Ireland seems to be divergent. How does one explain this," he asked.

The most likely explanation was that the island was settled by migrants from northern Spain as the glaciers that covered Ireland from the last ice age melted away. "It seems to me that most animals in Ireland came by boat. There seems to have been some communication with southern Europe."

The Book of Invasions from the 8th century talked about an invasion by the Spanish king Milesius, he said.

His group also looked for genetic linkages between people sharing a common surname, something passed along from the male lineage like the Y chromosome.

They found linkages that traced back, to the famous Ui Neill kindred, from whom Niall Noigiallagh, Niall of the nine hostages was descended.

Prof Mallory described attempts to match up the transmission of languages with the dispersal of DNA as people migrated across Europe. It was extremely difficult however due to confounding

influences including language transmission via “elite dominance”.

Settled areas with a unique language later taken over by invaders would see language displacement, with the newcomers imposing their own language. However, the local gene pool would remain and would dilute the genetic influence of the newcomers.

This was possibly the reason why when one looked for genetic evidence of the Celts in Ireland these Celtic genes could not be found. Studies of this dynamic has occurred in what is now Hungary showed a mismatch between the dominant language and the dominant genetic influence. “Modern DNA is no predictor of the modern Hungarian language,” Prof Mallory said.

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