

DNA research proves long-term Aboriginal connection to country

- 9 March 2017
- Stephen Fitzpatrick

Aboriginal groups lived in distinct geographical regions for tens of thousands of years, DNA research has found, corroborating scientifically for the first time the basis for indigenous understanding of ancient links to country.

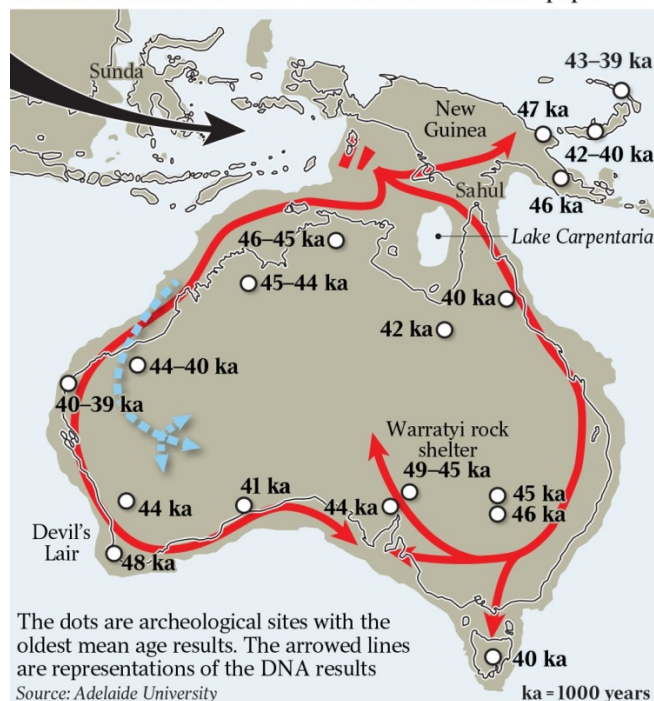
The findings, published today in *Nature*, show that after arriving in northern Australia 50,000 years ago, people quickly spread around the east and west coasts, meeting in the south 45,000-49,000 years ago, from which point communities stayed in relatively stable sites.

Scientists at the University of Adelaide were able to extract mitochondrial DNA from hair samples collected over 50 years from 111 people across three different Aboriginal communities: Cherbourg in Queensland and Point Pearce and Koonibba in South Australia.

The hair was originally collected in expeditions led by Adelaide-based anthropologist Norman Tindale, whose pioneering work from the 1920s made him the first non-indigenous person to establish the nature of language-group boundaries across Australia.

In the process of documenting 5500 people across 48 separate expeditions up to the 1970s, Tindale collected hair samples that were cross-matched against a range of data, including genealogical information.

DNA TRAIL | How and when Australia was first populated



This last element was key to the latest work, since the missions and communities where Tindale conducted many of his interviews contained dispersed peoples from a wide range of places.

However, where it was possible to identify a maternal ancestor pre-dispersal, the use of mitochondrial DNA meant the geographical origin of the line could be established.

Researcher Alan Cooper said matching DNA against known archeological sites enabled the construction of a map showing distinct genetic differences across two major migration trajectories, one clockwise from the north and the other counterclockwise.

“Each of those genetic groups appears in very distinct places on the map, so that tells us there hasn’t been a great deal of movement after that initial colonisation,” Professor Cooper said.

“We’re actually looking right back in time to that initial 50,000-year event. But once they’ve set up, they don’t seem to move again.”

He said the research result “helps explain why there’s such a strong connection to the landscape, and the critical importance of being on country”.