

# 'INDUS VALLEY SETTLERS HAD A DISTINCT GENETIC LINEAGE'

Relevant for: Pre-Specific History | Topic: History upto Indus Valley Civilization

Tracing the roots: Vasant Shinde, left, and Niraj Rai at the release of the Rakhigarhi project results in New Delhi on Friday. | Photo Credit: [R V Moorthy](#)

Throwing fresh light on the Indus Valley Civilisation, a study of DNA from skeletal remains excavated from the Harappan cemetery at Rakhigarhi argues that the hunter-gatherers of South Asia, who then became a settled people, have an independent origin. The researchers who conducted the study contend that the theory of the Harappans having Steppe pastoral or ancient Iranian farmer ancestry thus stands refuted. The finding also negates the hypothesis about mass migration during Harappan times from outside South Asia, they argue.

Vasant Shinde, the professor who headed the Rakhigarhi Project said on Friday that researchers had successfully sequenced the first genome of an individual from Harappa and combining it with archaeological data, found that hunter-gatherers of South Asia had an independent origin, and authored the settled way of life in this part of the world.

"They do not contain genome from either the Steppe region or ancient Iranian farmers. The genetic continuity from hunter gatherer to modern times is visible in the DNA results," Prof. Shinde, affiliated to the Department of Archaeology, Deccan College Post-Graduate and Research Institute, Pune, said.

The study, he said, finds that the same hunter-gatherer communities developed into agricultural communities and formed the Harappan civilisation.

### Study of ancient DNA throws light on origin of farming, languages

The researchers also suggest that there was a movement of people from east to west as the Harappan people's presence is evident at sites like Gonur in Turkmenistan and Sahr-i-Sokhta in Iran. "As the Harappans traded with Mesopotamia, Egypt, the Persian Gulf and almost all across South Asia, there was bound to be movement of people resulting in a mixed genetic history. India had a heterogeneous population right from the beginning of settled life," Prof. Shinde said. There was a hint that settled life and domestication went from South Asia to West Asia.

The Rakhigarhi study was reported in a paper titled "An Ancient Harappan Genome Lacks Ancestry from Steppe Pastoralists or Iranian farmers" in the journal *Cell* on Thursday.

### Who built the Indus Valley civilisation?

In Europe, ancient-DNA studies have shown that agriculture tended to spread through an influx of people with ancestry in Anatolia, in modern day Turkey.

The new study shows a similar dynamic in Iran and Turan (southern Central Asia), where the researchers found that Anatolian-related ancestry and farming arrived around the same time.

In South Asia, however, the story appears quite different.

### How genetics is settling the Aryan migration debate

Not only did the researchers find an absence of Anatolian-related ancestry, they saw that Iranian-related ancestry in South Asians comes from a lineage that separated from ancient Iranian farmers and hunter-gatherers before those groups split from each other, nearly 9,000 years ago.

The researchers, therefore, concluded that farming in South Asia was not due to the movement of people from the farming cultures of the west and that local foragers adopted it.

“Researchers find no trace of the Anatolian-related ancestry that is a hallmark of the spread of farming to the west, but the Iranian-related ancestry they detected in South Asians comes from a lineage that separated from ancient Iranian farmers and hunter-gatherers before those groups split from each other,” a statement highlighting the findings says.

“Prior to the arrival of steppe pastoralists bringing their Indo-European languages about 4,000 years ago, we find no evidence of large-scale movements of people into South Asia,” David Reich, a geneticist and a co-author of the study, based in the United States, said in a statement.

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