

Arrival of Homo sapiens Out of Africa

What is the issue?

\n\n

\n

- New research has pushed back the date of human occupation in Australia and South-east Asia.

\n

\n\n

What is the existing theories of human arrival to India?

\n\n

\n

- There was a super volcanic eruption at Toba in Sumatra, Indonesia, about 74,000 years ago.

\n

- It dumped tonnes of ash all over South-east Asia and South Asia, causing much stress to all life in the region.

\n

- Based on the geological event many theories are proposed for the migration of Humans Out Of Africa (OOA).

\n

- **Early version**-Sapiens arrived from Africa through the Arabian Peninsula before the Toba eruption.

\n

- They entered with middle Stone Age tools such as scrapers and points that helped them hunt their prey, gather food, or make clothes.

\n

- This theory was believed to be more acceptable than the later version.

\n

- **Late version** - It says exact opposite of the early version.

\n

- They had upgraded technology such as microlithic (tiny stone) tools that might have been used to give sharp tips to arrows and spears.

\n

\n\n

What are the evidences for earlier version?

\n\n

- \n
- The earliest modern human fossil in the region is from the Sri Lankan cave of FaHien.
- \n
- Sri Lanka was then linked to the Indian landmass, as sea levels were lower.
- \n
- In India too, there is abundant evidence of microlithic tools from around the same time.
- \n
- Research in Jwalapuram site in Andhra Pradesh, which posed the first big challenge to the 'late version'.
- \n
- Jwalapuram lies in the Jurreru river valley and its significance is in the fact that the river basin holds layers of volcanic ash left behind by the Toba eruption.
- \n
- The archaeologists found middle Stone Age tools dated to around 77,000 years ago and were made by what they believe were modern humans.
- \n
- Those findings created a stir because they frontally challenged the 'late version'.
- \n
- In fact, went on to argue that modern humans could have been in India as early as 100,000-120,000 years ago.
- \n
- The Jwalapuram artefacts are remarkably similar to those made by Middle Stone Age modern humans in Africa.
- \n

\n\n

What are the proposals supporting later version?

\n\n

- \n
- New finding states that modern humans were in Australia, 65,000 years ago, that is about 15,000 years earlier than previous estimates.
- \n
- Using the latest multidisciplinary techniques scientists have confirmed a teeth found in Madjedbebe cave of Australia was belonged to modern humans who lived 63,000-73,000 years ago.
- \n

- This pushes back the dates for modern human occupation of South-east Asia by about 20,000 years.
\n
- The Sumatra and the Madjedbebe findings point in the same direction, that Out of Africa (OOA) migrants made it into South-east Asia before 60,000 years ago.
\n
- Recent studies on current populations using genetic markers and mutation rates, conclude that OOA migrations could not have happened earlier.
\n
- It is clear that in no way that an OOA migration could have happened before the Toba eruption of 74,000 years ago.
\n

\n\n

What are the issues with the recent findings?

\n\n

- \n
- If people were already in Australia and South-east Asia by 65,000 years ago, then they would have had to have left Africa and reached India much earlier.
\n
- Since India having been a key corridor for the OOA migration, this would put the 'late version' in jeopardy.
\n
- There is an attractive meanness to the 'late version' and until now there hasn't been abundant, securely dated evidence against it.
\n
- The 'late version' cites genetics to say that OOA could not have happened before 70,000 years ago.
\n
- But archaeological evidence says humans were already in Sumatra by around then.
\n

\n\n

What are the importance of the human origin theories?

\n\n

- \n
- The first settlers of India are our direct ancestors.
\n
- Most of Indian genetic ancestry comes from the first settlers, with the rest contributed by later migrants from West Asia, East Asia, and Central Asia.

- \n
- The deeply held belief that only tribals (about 8.6% of the population) carry the ancestry of the original settlers couldn't be more wrong.
- \n
- The first settlers of India are, indeed, the bedrock of our population and civilisation.
- \n
- Without getting their origin, it is tough to predict the exact Indian history.
- \n

\n\n

Way forward

\n\n

- \n
- The new findings do not really overturn the 'late version', but only stretch it to the maximum.
- \n
- The lower end of the Madjedbebe study puts the age of the artefacts at 59,300 years that of the Sumatra study puts it at 63,000 years.
- \n
- Theoretically, both could fall within the extreme range of possibilities, with OOA migrants reaching Australia by 59,000 years ago, after having left Africa by 70,000 years ago.
- \n
- Another possibility is that the Madjedbebe and Sumatra people went extinct long ago, leaving behind artefacts and a couple of teeth, but without leaving a mark in the genetic pool as it exists today.
- \n
- The new studies may have given new wind to the early version of OOA, but it will take new fossil finds with older dates for a new consensus to emerge.
- \n

\n\n

\n\n

Source: The Hindu

\n