

# Anthropology Case Studies

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# ORIGINS OF CUMULATIVE CULTURE IN HUMAN EVOLUTION

**Source:** <https://phys.org/>

**Dated:** June 17, 2024

**Area of Focus:**

Archeology, Fossil Evidence



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- **Charles Perreault and Jonathan Paige (PNAS, June 2024)** conclude that humans began to rapidly accumulate technological knowledge through social learning around 600,000 years ago.
- Paige and Perreault analyzed changes in the complexity of stone tool manufacturing techniques across the last 3.3 million years of the archaeological record to explore the origin of cumulative culture.
- Cumulative culture arose near the beginning of the Middle Pleistocene epoch, possibly predating the divergence of Neanderthals and modern humans.

***Tip: Always focus on the most relevant information in news article; for eg: in a news related to archeology, focus on researcher and time span of area under research***

# NITI AAYOG'S PROJECT IN GREAT NICOBAR

**Source:** The Hindu

**Dated:** June 25, 2024

**Area of Focus:**

Tribal India



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Tribals, *scan the code.*



- In March 2021, NITI Aayog unveiled a Rs. 72,000 crore plan called 'Holistic Development of Great Nicobar Island at Andaman and Nicobar Islands'. It includes the construction of an international transshipment terminal, an international airport, a power plant, and a township.
- The mega project has been heavily criticised for its ecological costs and for potential violations of tribal rights. The project requires the diversion of about 130 sq km of forest land and the felling of around 10 lakh trees.
- In November 2022, **the Tribal Council of Great Nicobar and Little Nicobar** withdrew the no-objection certificate (NOC) it had provided for the project stating the administration had concealed important information about the use of tribal reserve lands and that they had obtained tribal communities' consent in a rushed process.
- As for the **Shompen**, one of the biggest threats is disease. Since the **Shompen** have had little contact with the outside world, they haven't yet developed immunity to infectious diseases that affect India's general population.

# MYSTERIOUS DENISOVANS MAY HAVE OVERLAPPED WITH MODERN HUMANS ON TIBETAN PLATEAU

**Source:** science.org

**Dated:** July 3, 2024

**Area of Focus:**

Fossil Evidence & Archeology



1 cm

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**Who Discovered:** Huan Xia *et al*

**Reference:** Nature(July 3, 2024)

**Location:** Tibetan Plateau, Baishiya Karst Cave

**Species:** Denisovan > 100,000 years old.

**Fossil Found:** A fragment of a human rib,jawbone

**Dating Technique:** optically stimulated luminescence,

**How:** small mammals and birds, have been found alongside a rib bone belonging to our mysterious relatives in a cave on the Tibetan Plateau.

*Zhang points out that Denisovans survived until modern humans appeared in the region, which makes it possible [the two groups] had genetic communication.*

*Modern Tibetans are possibly that inheritance happened on the Tibetan Plateau.*

# TAMIL NADU'S GRAZING BAN THREATENS RIGHTS, LIVELIHOODS OF FOREST DWELLERS

**Source:** mongabay.com

**Dated:** June 28, 2024

**Area of Focus:**

Tribal India



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- Grazing cattle has traditionally been a major source of livelihood, particularly for forest dwelling communities.
- In March 2022, the Madras HC banned domesticated cattle from grazing in forest areas, in response to a July 2020 public interest petition filed by G. Thirumurugan, a conservationist.
- Thirumurugan had only sought a ban on grazing in the Meghamalai Wildlife Division and Sanctuary, a part of the Srivilliputhur-Meghamalai Tiger Reserve, alleging the risk of transmission of diseases from domesticated cattle to wildlife, and destruction of grasslands.
- However, the court later extended the ban to the entire 22,877 square kilometres of forest area in the state.
- This was done under the provisions related to restricted entry in sanctuaries under the Wildlife (Protection) Act, 1972, and on cattle trespass under the Tamil Nadu Forest Act, 1882.

# Y CHROMOSOME IS EVOLVING FASTER THAN THE X, PRIMATE STUDY REVEALS

**Source:** Down to Earth

**Dated:** May 31, 2024

**Area of Focus:**

Evolution & Genetics



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## Brandon Pickett *et al*, Nature (May 29, 2024)

- Scientists compared the sex chromosomes of five great ape species — chimpanzees (*Pan troglodytes*), bonobos (*Pan paniscus*), western lowland gorillas (*Gorilla gorilla gorilla*) and Bornean and Sumatran orangutans (*Pongo pygmaeus* and *Pongo abelii*) — and one more distantly related to humans, siamang gibbons (*Symphalangus syndactylus*).
- The team studied the chromosomes using **telomere-to-telomere (T2T)** sequencing.
- The chromosomal X and Y sequences of each of the six species were also compared to the human X and Y chromosome, already sequenced in an earlier study with the T2T method.
- The findings revealed that across all the studied species, the Y chromosome evolved rapidly. Even species in the same genus have very different Y chromosomes to one another whereas X chromosome was highly conserved.
- The study did have limitations though; it looked at only a single representative for each primate species, and it couldn't say how much the Y chromosome would vary within animals of the same species, Pickett said.

# NCPCR DECLARES MICA MINES IN JHARKHAND 'CHILD LABOUR FREE'

**Source:** Statesman News Service

**Dated:** July 5, 2024

**Area of Focus:**

Tribal India



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- The 20-year long journey to end child labour from Mica mining in the state has finally entered its last leg as the NCPCR declared that not only all the child labourers from mica mines have been withdrawn, they are also enrolled in schools now.
- Notably, in 2004, a research done by Bachpan Bachao Andolan had found that over 5,000 children were involved in mica mining and collection.
- By 2019, this number had increased to more than 20,000. It was the collaborative effort between children, communities, civil society organizations and government that led to the creation of 'Child Labour Free Mica.'

# NEANDERTHALS DIDN'T TRULY GO EXTINCT, BUT WERE RATHER ABSORBED INTO THE MODERN HUMAN POPULATION

**Source:** livescience.com

**Dated:** July 11, 2024

**Area of Focus:**

Fossil Evidence



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**Bombay Blood Group! Heard about it?**  
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## Joshua Akey *et al*

- The researchers compared the genomes of the three Neanderthals with those of 2,000 modern humans.
- They discovered the Neanderthal genome may consist of 2.5% to 3.7% modern human DNA.
- That is akin to 1 in 30 modern human parents in the ancestral Neanderthal population.
- The research team's analysis suggested that modern human DNA entered the Neanderthal genome during at least two distinct epochs of interbreeding
- One about 200,000 to 250,000 years ago, and the other about 100,000 to 120,000 years ago.
- Interbreeding may have taken place at other times, but such events may not have left any detectable traces in the Neanderthal genome

# PESA BOOSTS FOREST CONSERVATION IN INDIA

**Source:** The Hindu

**Dated:** June 25, 2024

**Area of Focus:**

Tribal India



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and Forest Rights, *scan the  
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***Gulzar, Saad et al, American Political Science Review (2024)***

- They found that “boosting formal representation for ST led to an average increase in tree canopy by 3% per year as well as a reduction in the rate of deforestation.”
- The study also showed that the rise in tree canopy and fall in deforestation only began to happen “after the introduction of PESA elections that mandate quotas for ST.”
- As the authors sum up, “under PESA, ST are able to better pursue their economic interests which in turn leads to better forest conservation, a mechanism we call ‘forest stewardship’.”
- FRA had “no discernible additional impacts” on conservation “beyond those caused by PESA.”