ANTHROPOLOGY NEWS Diary

(AND)

27.10.2021

FOR UPSC CSE MAINS

This series provides compilation of daily CURRENT AFFAIRS of Anthropology. It is aimed at addressing the requirement of aspirants to add contemporary aspects of the subject to the answers. It also helps in understanding the trends of anthropology across India and the world.

NOTE: Please attempt the questions given at the end of the document and can upload on the telegram channel: Sosin for Anthropology Q&A, for peer review.
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Note - For convenience, the respective reference links have been dropped at the end of every topic.
A. BIOLOGICAL ANTHROPOLOGY

1. Sensory Cells
   - There are striking similarities in the development of two types of specialized sensory cells: the so-called 'hair cells' that receive sound vibrations in the inner ear, and the Merkel cells that sense light touch at the surface of the skin. These developmental similarities are a legacy of shared evolutionary history.
   - In the study, PhD student Haoze (Vincent) Yu, postdoctoral scholar Litao Tao, and their colleagues identified a shared mechanism involved in gene regulation or epigenetics that enables stem cells and progenitor cells to differentiate into more specialized hair cells and Merkel cells.
   - In order to begin the process of differentiation, the right parts of a stem cell’s DNA need to be taken out of storage.
   - Each human cell can store around six feet of DNA in its nucleus, because this DNA is wound around tiny "spools" made up of proteins called histones.
   - These spools of DNA and histone protein are further packed together to form what are known are nucleosomes, which are stacked to create chromatin, which is the material that makes up the chromosomes.
   - When DNA is wound tightly into this storage configuration, the chromatin is closed and inaccessible to the protein ATOH1. This protein is a "master regulator" that can activate a network of differentiation genes in the DNA within the chromatin -- but not without first gaining access.
   - Strikingly, there is significant overlap in the specific regions of chromatin that POU4F3 makes accessible to ATOH1 in hair cells and Merkel cells.
   - It’s remarkable that these two cell types, which are both involved in sensing mechanical stimuli but derive from distinct parts of the embryo, both rely on the same ATOH1/POU4F3 mechanism in order to differentiate.

Reference:
https://www.sciencedaily.com/releases/2021/07/210712150320.htm

2. Mental Health & Environment
   - In what is believed to be one of the largest studies of its kind, researchers used longitudinal data relating to 3,568 children and teenagers, aged nine to 15 years, from 31 schools across London.
   - This period is a key time in the development of adolescents' thinking, reasoning and understanding of the world.
   - The study, published in Nature Sustainability, looked at the links between different types of natural urban environments and the pupils' cognitive development, mental health and overall well-being.
   - The environments were divided into what planners call green space (woods, meadows and parks) and blue space (rivers, lakes and the sea), with green space separated further into grassland and woodland.
   - Researchers used satellite data to help calculate each adolescent's daily exposure rate to each of these environments within 50m, 100m, 250m and 500m of their home and school.
After adjusting for other variables, the results showed that higher daily exposure to woodland (but not grassland) was associated with higher scores for cognitive development, and a 16% lower risk of emotional and behavioural problems two years later.

A similar but smaller effect was seen for green space, with higher scores for cognitive development, but this was not seen for blue space. The researchers note though that access to blue space in the cohort studied was generally low.

Examples of other explanatory variables considered included the young person's age, ethnic background, gender, parental occupation and type of school, e.g., state or independent. The level of air pollution might have influenced adolescents' cognitive development, but researchers did not feel these observations were reliable or conclusive, and these require further investigations.

These findings contribute to our understanding of natural environment types as an important protective factor for an adolescent's cognitive development and mental health and suggest that not every environment type may contribute equally to these health benefits.

Forest bathing, for example (being immersed in the sights, sounds and smells of a forest), is a relaxation therapy that has been associated with physiological benefits, supporting the human immune function, reducing heart rate variability and salivary cortisol, and various psychological benefits.

Reference:
https://www.sciencedaily.com/releases/2021/07/210719120313.htm

B. ARCHAEOLOGICAL ANTHROPOLOGY

1. Prehistoric Stone Age Site

Archaeologists in Haryana have estimated that a prehistoric site Faridabad’s Mangar Bani hill forest, from where cave paintings were discovered recently, may be up to a lakh years old.

On the basis of tool topology, it can be said that the date of prehistoric habitation at the site may be from about 1,00,000 to about 15,000 years ago.

But they also found evidence of later habitation, even up to the 8th-9th century AD.

It can be said that it may be one of the biggest Palaeolithic sites in the Indian subcontinent, where stone age tools were recovered from different open air sites as well as from rock shelters.

The caves are in an area that is difficult to reach, so we have to plan before going. It is on a high cliff and the terrain is very difficult, it is the maximum difficulty level in terms of climbing. This is probably why the caves and the art survived as well, because people don’t normally go there.

Some of the caves have rock art while others have paintings, but only a few of the paintings are in good condition, the others have deteriorated. The art includes what appear to be symbols, markings, some are drawings that are very old, but what exactly it is, only the archaeology department will be able to tell.

Officials said it is for the first time that a prehistoric site with cave paintings and rock art of a large magnitude has been found in Haryana, though tools from the Palaeolithic age have been identified earlier in parts of the Aravallis. The latest discovery, officials said, will take the history of Haryana further back in time.
• The cave paintings are yet to be dated but at least some of them belong to the Upper Palaeolithic period in all likelihood.

Reference
https://indianexpress.com/article/cities/delhi/mangerbani-cave-paintings-1-lakh-years-old-archaeologists-7407264/

2. Alphabetic Inscription in Israel

• The newly-discovered inscription, which was written in ink on a jug, bears the name ‘Jerubbaal’ in alphabetic script and dates back to 1,100 BCE, the times of the Biblical Judges.
• It was written in ink on a jug, a small personal pottery vessel that holds approximately one liter, and may well have contained oil, perfume, or medicine.
• It contains the letters yod (broken at the top), resh, bet, ayin, and lamed, and remnants of other letters.
• The name ‘Jerubbaal’ is familiar from Biblical tradition in the Book of Judges as an alternative name for the judge Gideon ben Yoash. In Biblical tradition, he is then remembered as triumphing over the Midianites, who used to cross over Jordan to plunder agricultural crops.
• In view of the geographical distance between the Shephelah and the Jezreel Valley, this inscription may refer to another Jerubbaal and not the Gideon of Biblical tradition, although the possibility cannot be ruled out that the jug belonged to the judge Gideon.
• In any case, the name Jerubbaal was evidently in common usage at the time of the Biblical Judges.
• The fact that identical names are mentioned in the Bible and also found in inscriptions recovered from archaeological excavations shows that memories were preserved and passed down through the generations.

Reference:
3. Ring Well
- The State Archaeology department unearthed one more ring well at Keezhadi in Sivaganga.
- According to sources, the ring well was found at a depth of 411 cm. The rim (having a thickness of 3 cm) of the ring well was found with decoration.
- The east-west length is 58 cm and the southern section is 18 cm.
- The department also found the head of a female figurine made of terracotta at 60 cm depth.
- The figurine has bulging eyes, prominent nose, and parted lips. The headgear is portrayed with elongated ear ornaments, forehead ornaments, and a huge hair-bun on the left side of the head.
- The key finds of the phase of excavation in Keezhadi and its cluster villages include dice, gamesman, hot-scotches, weavers tools (spindle whorl), simple ornamentations (beads, ear ornaments, bangles), lavish ornaments (semi-precious stone beads, a golden wire), a unique specimen of weighing stone (made of beryl), terracotta seals, hook, iron nails, a smaller copper ring, stone axe, bone points, potsherds with graffiti marks, intact bowls, pots, debris of bricks, and a small pot, among other things.

Reference:

UPSC Previous year questions based on today’s concept:
1. Scope of Archaeology in Anthropology (10 Marks - 1987)
2. Ecological Anthropology (S.N. - 1997)

DAILY PRACTICE QUESTION/S FOR MAINS 2021.
Pl do not forget to upload your answer sheet for a peer review on the telegram channel:

Sosin for Anthropology Q&A
1. Sensorial Anthropology. (15 Marks)