ANTHROPOLOGY NEWS DIARY

(AND)

30.09.2021

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. DNA Samples - Anthropological Applications

   Context:
   - Researchers Collect DNA From the Air – Potential for New Ecological, Health and Forensic Applications.
   - Researchers from Queen Mary University of London have shown for the first time that animal DNA shed within the environment can be collected from the air.

   Highlights:
   - The proof-of-concept study, published in the journal *PeerJ*, opens up potential for new ecological, health and forensic applications of environmental DNA (eDNA), which to-date has mainly been used to survey aquatic environments.
   - Living organisms such as plants and animals shed DNA into their surrounding environments as they interact with them. In recent years, eDNA has become an important tool to help scientists identify species found within different environments.
   - However, whilst a range of environmental samples, including soil and air, have been proposed as sources of eDNA until now most studies have focused on the collection of eDNA from water.
   - In this study, the researchers explored whether eDNA could be collected from air samples and used to identify animal species.
   - They first took air samples from a room which had housed naked mole-rats, a social rodent species that live in underground colonies, and then used existing techniques to check for DNA sequences within the sampled air.
   - Using this approach, the research team showed that airDNA sampling could successfully detect mole-rat DNA within the animal’s housing and from the room itself.
   - The scientists also found human DNA in the air samples suggesting a potential use of this sampling technique for forensic applications.
   - What started off as an attempt to see if this approach could be used for ecological assessments has now become much more, with potential applications in forensics, anthropology and even medicine.
   - For example, this technique could help to better understand the transmission of airborne diseases such as Covid-19. At the moment social distancing guidelines are based on physics and estimates of how far away virus particles can move, but with this technique we could actually sample the air and collect real-world evidence to support such guidelines.

   Reference:

2. Creative Genes - Neanderthal, Homo Sapiens

   Context:
   'Creative' genes gave Homo sapiens edge over Neanderthals: study
   - Researchers have discovered a series of creativity-linked genes that may have given Homo sapiens a significant edge over Neanderthals, enabling them to avoid extinction.
Highlights:

● The findings suggest that these genes played "a fundamental role in the evolution of creativity, self-awareness and cooperative behavior".

● Such genes were like "a secret weapon" that gave modern humans "a significant advantage over now-extinct hominids by fostering greater resilience to ageing, injury, and disease.

● The experts identified 267 genes unique to humans, and through genetic markers, genetic expression data and AI-related MRI techniques, found they were related to creativity.

● The scientists were able to identify the regions of the brain in which those genes (and those with which they interacted) were overexpressed.

● These regions are involved in human self-awareness and creativity, and include the regions that are strongly associated with human well-being and that appeared relatively recently.

● Previously, the same team had identified a pool of 972 genes organised into three brain networks, the oldest—which relates to learning habits, social attachment and conflict resolution—dating back 40 million years.

● The second network—which relates to intentional self-control—emerged 2 million years ago, while the newest, governing creative self-awareness, only emerged 100,000 years ago.

● Homo sapiens enjoyed greater physical fitness than now-extinct hominids, providing them with a superior level of resilience to ageing, injury, and disease.

● The finding offers fresh insight into the mystery of why Homo sapiens outlived the Neanderthals and other species.

Reference:

3. Nutritional Disease

● Nutritional disease, any of the nutrient-related diseases and conditions that cause illness in humans. They may include deficiencies or excesses in the diet, obesity and eating disorders, and chronic diseases such as cardiovascular diseases, hypertension, cancer and diabetes.

● Nutritional diseases also include developmental abnormalities that can be prevented by diet, hereditary metabolic disorders that respond to dietary treatment, the interaction of foods and nutrients with drugs, food allergies and intolerances, and potential hazards in the food supply.

● Undernutrition is a condition in which there is insufficient food to meet energy needs; its main characteristics include weight loss, failure to thrive, and wasting of body fat and muscle.
• Low birth weight in infants, inadequate growth and development in children, diminished mental function, and increased susceptibility to disease are among the many consequences of chronic persistent hunger, which affects those living in poverty in both industrialized and developing countries.

• The largest number of chronically hungry people live in Asia, but the severity of hunger is greatest in sub-Saharan Africa.

• Malnutrition is the impaired function that results from a prolonged deficiency—or excess—of total energy or specific nutrients such as proteins, essential fatty acids, vitamins, or minerals.

Reference:
https://www.britannica.com/science/nutritional-disease

B. MARRIAGE CUSTOMS ACROSS ASIA

1. Akha
• The Akha are an ethnic group who live in small villages at higher elevations in the mountains of Thailand, Myanmar, Laos and Yunnan Province in China.
• As the bride ascends the steps leading to the groom’s house, an elder beats the roof above her three times with a bamboo pole while calling out “Cho! Cho! Cho!”.
• The bride then drops the hair clip she keeps in her jacket, symbolising the severing of relationships with her clan.
• The couple sits on low stools while an egg is boiled for them. Under the instruction of the ritual director, the egg is passed back and forth three times before he feeds it to them.
• A small chicken is cooked next, and after eating it, the couple is considered a husband and wife.

2. Bedouin
• The Bedouin, Beduin or Bedu are nomadic Arab tribes who have historically inhabited the desert regions in the Levant, the Arabian Peninsula, Iraq, and North Africa.
• Wedding preparations begin with the bride’s friends decorating her limbs using colourful laylat al henna.
• Guests can expect songs, dances and music played on a one-string rababa violin and deluca, meaning “big drums”.
• The wedding ends with Tawaah, where the bride departs from the groom’s house, perched atop a camel fitted with a houdach, a special saddle.
• One week after the official ceremony, the bride pays a visit to her parents and presents them with sheep, rice, sugar and butter to indicate that she is living comfortably in a household of abundance.

Reference:

UPSC Previous year questions based on today’s concept:
1. Concept of Ethnicity (S.N. - 2008)
2. Neanderthal Man (15 Marks - 2011)

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. Anthropological Applications of Genetic studies. (20 Marks)