ANTHROPOLOGY NEWS DIARY

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.
## INDEX

<table>
<thead>
<tr>
<th>TITLE</th>
<th>SYLLABUS</th>
<th>PAGE NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hunter - Gatherer Societies</td>
<td>PAPER I, 3;</td>
<td>03</td>
</tr>
<tr>
<td>Sustainable Fishing</td>
<td>PAPER I, 3;</td>
<td>03</td>
</tr>
<tr>
<td>Menopause &amp; Genetics</td>
<td>PAPER I, 1.1;</td>
<td>04</td>
</tr>
<tr>
<td>DNA Samples - Anthropological Applications</td>
<td>PAPER I, 1.7, 9;</td>
<td>04</td>
</tr>
<tr>
<td>Nutritional Disease</td>
<td>PAPER I, 9.8;</td>
<td>05</td>
</tr>
</tbody>
</table>

**UPSC ANTHROPOLOGY PREVIOUS YEAR QUESTIONS**.................................06

**PRACTICE QUESTIONS FOR PEER REVIEW**...........................................06

*Note - For convenience, the respective reference links have been dropped at the end of every topic.*
1. Hunter - Gatherer Societies

- Short growing seasons limited the possible size of hunter-gatherer societies by forcing people to rely on meat, according to a recent study.
- After looking at population size for the roughly 300 hunter-gatherer societies which existed until quite recently, the researchers found that many of these groups were much smaller than might have been expected from the local ecosystem productivity.
- In regions with short growing seasons, hunter-gatherer groups had smaller populations per square kilometer than groups who depended on abundant plant foods throughout the year.
- Basically, if people had to live through long dry or cold seasons when plant food was scarce, in order to survive they had to depend on hunting a very limited number of animals.
- This led to a seasonal bottleneck in the amount of food available, which then set the overall limit on the population size, no matter how much food there was during the plentiful times.
- The team developed a mathematical model that simulates daily human foraging activities (gathering and hunting) and the resultant carbon (energy) flows between vegetation, animals, and hunter-gatherers in a realistic global environment.
- The researchers then went back to look at the detailed ethnographic observations and found that, although its significance had not been noticed, this finding was well supported by records of hunter-gatherers including the Ache in the tropical forest, the Hiwi in the savannah, and the Bushmen groups in the Kalahari Desert.
- Due to similarities between the lifestyles of contemporary hunter gatherers and those of our foraging ancestors, it is likely that strong seasonality limited population sizes throughout our species’ past. The researchers then went back to look at the detailed ethnographic observations and found that, although its significance had not been noticed, this finding was well supported by records of hunter-gatherers including the Ache in the tropical forest, the Hiwi in the savannah, and the Bushmen groups in the Kalahari Desert.
- Due to similarities between the lifestyles of contemporary hunter gatherers and those of our foraging ancestors, it is likely that strong seasonality limited population sizes throughout our species’ past.

Reference:

2. Sustainable Fishing

- The indigenous tribes of Canada practiced sustainable fishing for a thousand years to ensure that few important species of fish do not become extinct, but their balanced system was destroyed with the arrival of European settlers in the 19th century, a new study claims.
- The people living in Tsleil-Waututh Nation that once thrived in British Columbia used a method of sex selection while fishing, the study said, adding they did it to ensure the population of chum salmon does not go down for the coming seasons.
- The archaeologists analysed fish bones (dating between 400 BC and AD 1200) taken from different sites of Tsleil-Waututh villages around the Burrard Inlet. They found that most of the remains were of male species. The researchers said that this discovery suggests that indigenous tribes released female salmon back into the water.
- If you take a good number of the males out of the system, the remaining males can still mate with the females to no detriment to the population. One male can mate with 10 females and have just as many baby salmon the next year.
 Researchers analyzed fish vertebrae that were collected during excavations in the early 1970s. They used a DNA test to screen for Y chromosomes found only in male fish.

The study said that the process of overfishing started with the arrival of Europeans in the Tsleil-Waututh Nation in the 19th century. The sustainable fishing methods were lost with the arrival of Western settlers.


3. Menopause & Genetics

A series of genetic signals that influence the age women begin menopause has been identified, potentially paving the way to fertility treatment that could extend the natural reproductive lifespan of women.

Researchers scanned the genes of more than 200,000 women and found nearly 300 genetic signals that researchers said could help identify why some women are predisposed to early menopause, the health consequences of going through menopause early and whether these signals can be manipulated to improve fertility.

The study led by scientists from the universities of Cambridge, Exeter and Copenhagen and still in its early stages, found that two genes named CHEK1 and CHEK2 were key to understanding the difference between these women.

When CHEK2 was inhibited in mice, their offspring had a longer reproductive life span.

Similarly, when CHEK1 was overexpressed in the mice that extended the offspring’s reproductive lifespan by enhancing the starting number of eggs in fetal life.

Their data suggested that women who lacked enough CHEK2 protein experienced menopause more than three years later than those who had normal CHEK2 levels.

The researchers also examined certain health impacts of having an earlier or later menopause.

They found genetically that earlier menopause increased the risk of type 2 diabetes and was linked to poorer bone health and increased risk of fractures.

But they also found earlier menopause decreased the risk of some types of cancer, such as ovarian and breast cancer.


4. 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 air DNA 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:

5. 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.

Under nutrition 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

UPSC Previous year questions based on today’s concept:

1. Menopause & its impact (10 Marks - 2015)
2. Biological Adaptation (S.N. - 2002)

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. Menopause studies in Anthropology. (20 Marks)